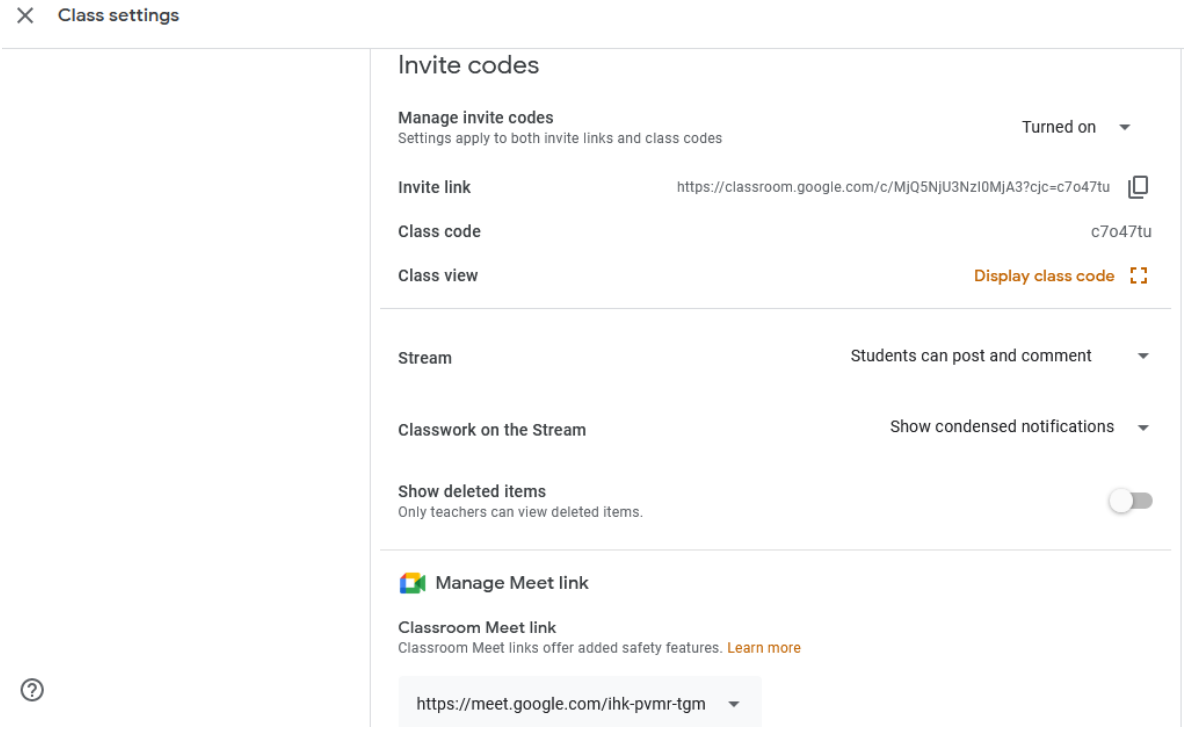
AAA COLLEGE OF ENGINEERNG AND TECHNOLOGY
(Accredited by NAAC with 'A' Grade, An ISO 9001:2015 Certified Institution)
(Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai)
Kamarajar Educational Road,
Amathur, Sivakasi – 626 005.

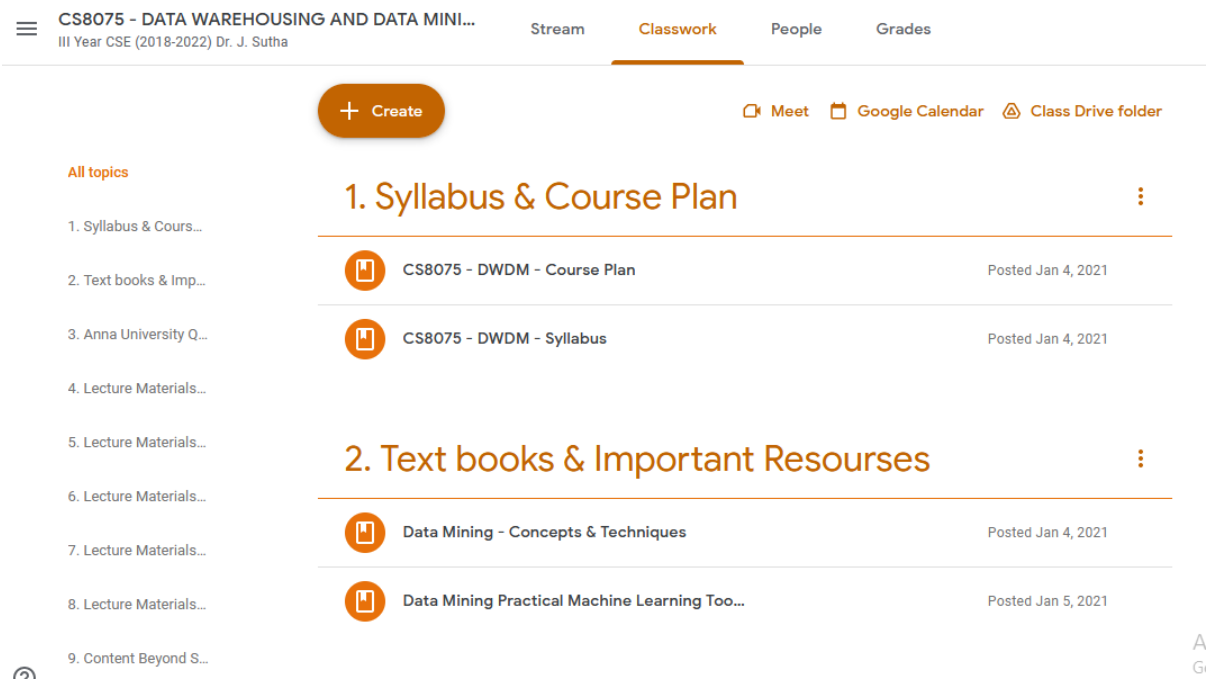
6.5.1. INTERNAL QUALITY ASSURANCE SYSTEM

ONLINE PLATFORM

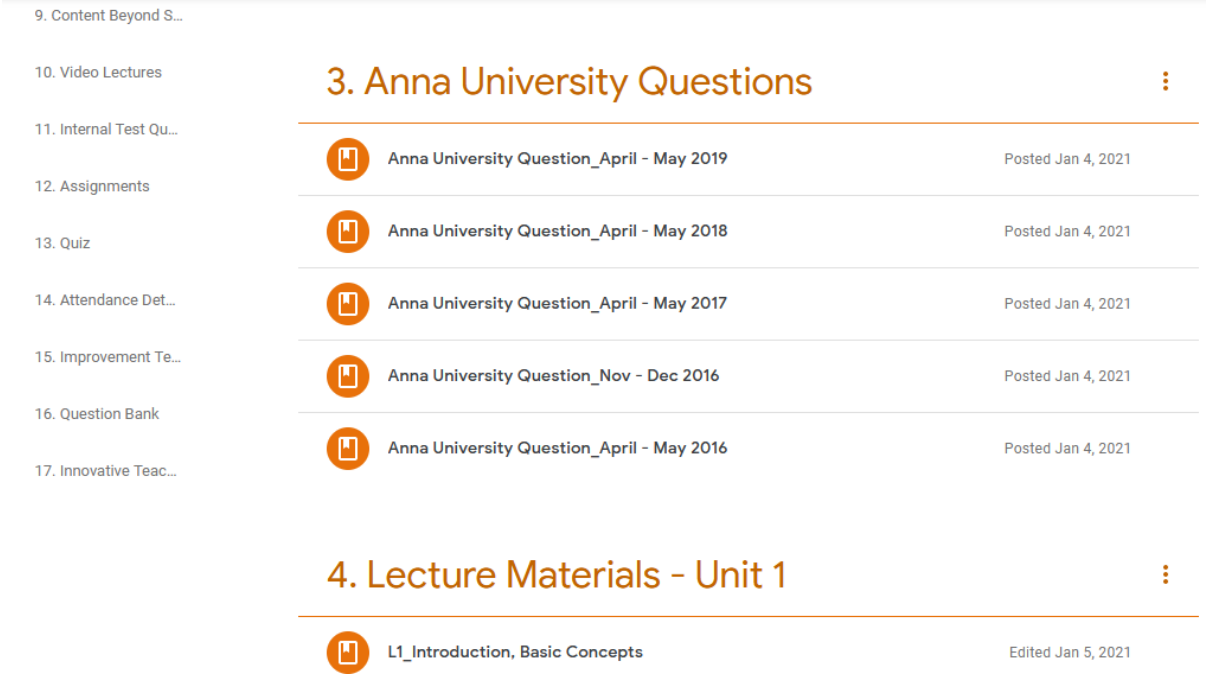
GOOGLE CLASSROOM INVITATION & CLASS CODE



GOOGLE CLASSROOM – SYLLABUS & TEXT BOOKS



GOOGLE CLASSROOM – ANNA UNIVERSITY QUESTION



4. Lecture Materials - Unit 1

L1_Introduction, Basic Concepts	Edited Jan 5, 2021
L2_Data Warehousing Components	Edited Jan 6, 2021
L3_Building a Data Warehouse	Edited Jan 7, 2021
L4_Database Architecture, Parallel DBMS V...	Posted Jan 5, 2021
L5_Multidimensional Datamodel	Posted Mar 2, 2021
L7_Concept Hierarchies	Posted Mar 2, 2021
L8_Characteristics of OLAP Systems, OLAP ...	Posted Mar 2, 2021
L6_Datawarehouse Schemas for Decision S...	Edited Mar 4, 2021

5. Lecture Materials - Unit 2

L10_Introduction to Data Mining	Posted Mar 6, 2021
L11_Data Mining Techniques	Posted Mar 6, 2021
L12_Issues and Applications	Posted Mar 6, 2021
L13_Data Objects and Attributes types	Posted Mar 9, 2021
L14_Statistical Description of Data	Posted Mar 9, 2021
L15_Data Preprocessing_Cleaning, Integrati...	Posted Mar 6, 2021
L16_Data Reduction, Transformation, Discre...	Posted Mar 6, 2021
L17_Data Visualization	Edited Mar 18, 2021

6. Lecture Materials - Unit 3

L19_Mining Frequent Patterns	Posted Mar 27, 2021
L20_Associations & Correlations	Posted Mar 27, 2021
L21_Mining Methods_Apriori Algorithm	Posted Mar 27, 2021
L22_Mining Methods_FP_Growth & Vertical ...	Posted Mar 27, 2021
L23_Pattern Evaluation Methods	Posted Mar 27, 2021
L24_Pattern Mining in Mutlilevel Association	Posted Mar 27, 2021
L25_Mining Multidimensional Association	Posted Mar 27, 2021
L26_Constraint Based Frequent Pattern Mini...	Posted Mar 27, 2021

7. Lecture Materials - Unit 4

L28_Classification, Decision Tree Induction	Posted Apr 20, 2021
L29_Bayesian & Rule Based Classification	Posted Apr 20, 2021
L30_Backpropagation, SVM, Lazy Learners	Posted Apr 20, 2021
L31_Model Evaluation, Selection, Improve Cl...	Posted Apr 20, 2021
L32_Clustering, Partitioning Methods	Posted Apr 20, 2021
L33_Hierarchical & Density Based Methods	Posted Apr 20, 2021
L34_Grid Based Methods, Evaluation of Clu...	Posted Apr 20, 2021
L35_Clustering High Dimensional data, Clus...	Posted Apr 20, 2021
L36_Outlier Analysis, Detection Methods	Posted Apr 20, 2021

8. Lecture Materials - Unit 5

Lecture 39_Data Sets	Posted May 9, 2021
Lecture 40_Introduction to WEKA	Posted May 9, 2021
Lecture 41_The Explorer_Getting Started	Posted May 9, 2021
Lecture 42 & 43_Exploring the Explorer	Posted May 9, 2021
Lecture 44 & 45_Learning Algorithms	Posted May 9, 2021
Lecture 46_Clustering Algorithms	Posted May 9, 2021
Lecture 47_Association Rule Learners	Posted May 9, 2021

GOOGLE CLASSROOM – CONTENT BEYOND SYLLABUS & VIDEO LECTURES

9. Content Beyond Syllabus

Lecture 37_CBS_Deep Learning Architectur...	Edited Jul 16, 2021
Lecture 38_CBS_Convolution Neural Networ...	Edited Jul 16, 2021

10. Video Lectures

Video Lecture_Lecture 40_Introduction to ...	Posted May 17, 2021
Video Lecture_Lecture 41_The Explorer_Get...	Posted May 17, 2021
Video Lecture 42 & 43_Exploring the Explorer	Posted May 18, 2021
Video Lecture 44 & 45 Learning Algorithms	Posted May 19, 2021

11. Internal Test Questions

Internal Test I Question	Due Mar 20, 2021, 8:30 PM
Internal Test I_Answers	Posted Mar 22, 2021
Internal Test II Question	Due Mar 30, 2021, 9:00 PM
Internal Test II - Answers	Posted Apr 6, 2021
Internal Test III Question	Due Apr 24, 2021, 3:30 PM
Internal Test III - Answers	Posted May 12, 2021
Internal Test IV Question	Due May 12, 2021, 4:00 PM
Internal Test IV - Answer Key	Posted Jul 22, 2021

GOOGLE CLASSROOM – INTERNAL TEST QUESTION

AAA COLLEGE OF ENGINEERING AND TECHNOLOGY
Amathur, Sivakasi – 626 005.

INTERNAL TEST IV

Course Code & Name : CS8075 – Data Warehousing and Data Mining **Dept :** CSE

Course Instructors Name & Department: Dr. J. Sutha & CSE **Class / Semester** : III/ VI

Date of Exam & Session : 12.5.2021 AN

Duration : **1.30 Hours** Max. Marks : **50**

Answer **ALL** questions

Part A **5 x 2 = 10 Marks**

1)	Differentiate between eager learners and lazy learners.	UN,CO4
2)	Suppose the original training set contains 100 positive and 1000 negative tuples. Find out the new training set to solve Class-Imbalanced data problem using oversampling and undersampling approach.	AP,CO4
3)	The confusion matrix for the cancer database is given below. Find out precision and recall measures for the database.	AP,CO4

Classes	*yes*	*no*	*Total*	*Recognition (%)*
yes	90	210	300	30.00
no	140	9560	9700	98.56
Total	230	9770	10,000	96.40

4)	Compare agglomerative clustering with divisive clustering.	UN,CO4
5)	Calculate the Euclidean Distance between the two data points A(1,3) and B(2,3)?	AP,CO4

Part B **5 x 8 = 40 Marks**

6) Design the classifier using decision tree induction method for the following training samples. — AP,CO4

RID	*age*	*income*	*student*	*credit_rating*	*Class: buys_computer*
1	youth	high	no	fair	no
2	youth	high	no	excellent	no
3	middle_aged	high	no	fair	yes
4	senior	medium	no	fair	yes
5	senior	low	yes	fair	yes
6	senior	low	yes	excellent	no
7	middle_aged	low	yes	excellent	yes
8	youth	medium	no	fair	no
9	youth	low	yes	fair	yes
10	senior	medium	yes	fair	yes
11	youth	medium	yes	excellent	yes
12	middle_aged	medium	no	excellent	yes
13	middle_aged	high	yes	fair	yes
14	senior	medium	no	excellent	no

7	Design Naïve Bayes classifier for the following training samples for the class label status. *department* / *status* / *age* / *salary* / *count* sales / senior / 31...35 / 46K...50K / 30 sales / junior / 26...30 / 26K...30K / 40 sales / junior / 31...35 / 31K...35K / 40 systems / junior / 21...25 / 46K...50K / 20 systems / senior / 31...35 / 66K...70K / 5 systems / junior / 26...30 / 46K...50K / 3 systems / senior / 41...45 / 66K...70K / 3 marketing / senior / 36...40 / 46K...50K / 10 marketing / junior / 31...35 / 41K...45K / 4 secretary / senior / 46...50 / 36K...40K / 4 secretary / junior / 26...30 / 26K...30K / 6	AP,CO4
8	Design the classifier using rule-based classification method for the following training samples. Outlook / Temperature / Humidity / Windy / Class sunny / hot / high / false / N sunny / hot / high / true / N overcast / hot / high / false / P rain / mild / high / false / P rain / cool / normal / false / P rain / cool / normal / true / N overcast / cool / normal / true / P sunny / mild / high / false / N sunny / cool / normal / false / P rain / mild / normal / false / P sunny / mild / normal / true / P overcast / mild / high / true / P overcast / hot / normal / false / P rain / mild / high / true / N	AP,CO4
9	Discriminate between k-Means clustering algorithm and k-Medoids clustering algorithm and appraise which algorithm is best for clustering data sets.	AN,CO4
10	Compare and contrast the different methods of clustering high dimensional data.	AN,CO4

CO No.	Remember (RE)	Understand (UN)	Apply (AP)	Analyze (AN)	Evaluate (EV)	Create (CR)	Total
4	-	4	30	16	-	-	50

Prepared By
(Dr. J. Sutha)
Course Instructor

Approved By
HoD-CSE

GOOGLE CLASSROOM – INTERNAL TEST RUBRICS FOR EVALUATION

Internal Test IV Question

/50

1. Differentiate between eager learners and lazy learners. (UN,CO4) /2

Four Instructions set

2 differences	2 pts	One difference	1 pt	Not written or Wron...	0 pts

2. Suppose the original training set contains 100 positive and 1000 negative tuples. Find out the new training set to solve Class-Imbalanced data problem using oversamplin... /2

Eight Addressing Modes

Correct answer for ...	2 pts	Correct answer for ...	1 pt	Not written or Wron...	0 pts

3. The confusion matrix for the cancer database is given below. Find out precision and recall measures for the database. (AP,CO4) /2

Four Segment Registers

Correct answer for ...	2 pts	Correct answer for a...	1 pt	Not Written or Wro...	0 pts

4. Compare agglomerative clustering with divisive clustering.(UN,CO4) /2

Correct Answer

Any 2 comparison ...	2 pts	Any 1 comparison ...	1 pt	Wrong Answer	0 pts

5. Calculate the Euclidean Distance between the two data points A(1,3) and B(2,3)? (AP,CO4) /2

Correct Answer	2 pts	Step mark	1 pt	Wrong Answer	0 pts

6. Design the classifier using decision tree induction method for the following training samples. (AP,CO4). /8

100% Stepwise Full...	8 pts	75% Partially correc...	6 pts	50% correct answer	4 pts	50% correct answer	2 pts	Wrong answer/not ...	0 pts

7. Design Naïve Bayes classifier for the following training samples for the class label status. (AP, CO4) /8

100% Stepwise corr...	8 pts	75% Stepwise corr...	6 pts	50% correct answer	4 pts	25% correct answer	2 pts	Wrong answer or n...	0 pts

8. Design the classifier using rule-based classification method for the following training samples. (AP, CO4) /8

100% Stepwise corr...	8 pts	75% Stepwise corr...	6 pts	50% correct answer	4 pts	25% correct answer	2 pts	Wrong answer or n...	0 pts

GOOGLE CLASSROOM – INTERNAL TEST ANSWER KEY

AAA COLLEGE OF ENGINEERING AND TECHNOLOGY
Amathur, Sivakasi – 626 005.

INTERNAL TEST IV

Course Code & Name : CS8075 – Data Warehousing and Data Mining **Dept:** CSE

Course Instructors Name & Department: Dr. J. Sutha & CSE **Class / Semester** : III/ VI

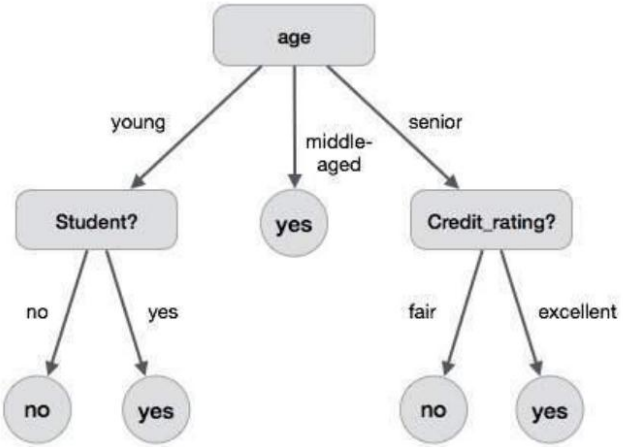
Date of Exam & Session : 12.5.2021 AN

Duration : **1.30 Hours** Max. Marks : **50**

ANSWER KEY

Answer **ALL** questions

	Part A	**5 x 2 = 10 Marks**
1)	**Differentiate between eager learners and lazy learners.** **Lazy learning (e.g., instance-based learning):** Simply stores training data (or only minor processing) and waits until it is given a test tuple. **Eager learning (the above discussed methods):** Given a set of training set, constructs a classification model before receiving new (e.g., test) data to classify Lazy: less time in training but more time in predicting **- 2 marks**	**UN,CO4**
2)	**Suppose the original training set contains 100 positive and 1000 negative tuples. Find out the new training set to solve Class-Imbalanced data problem using oversampling and undersampling approach.** **Oversampling approach :** Resample the positive sample by replicate samples and form a new training set consists of 1000 positive and 1000 negative tuples. **– 1 mark** **Undersampling approach :** Randomly eliminate the negative samples to decrease to 100 negative samples and form a new training set consists of 100 positive and 100 negative tuples. **– 1 mark**	**AP,CO4**
3)	**The confusion matrix for the cancer database is given below. Find out precision and recall measures for the database.** *Classes* / *yes* / *no* / *Total* / *Recognition (%)* *yes* 90 210 300 30.00 *no* 140 9560 9700 98.56 Total 230 9770 10,000 96.40 The precision of the classifier for the yes class is 90 / 230 = 39.13%. **- 1 mark** The recall is 90 / 300 = 30.00% **- 1 mark**	**AP,CO4**
4)	**Compare agglomerative clustering with divisive clustering.** **Agglomerative clustering :** This bottom-up strategy starts by placing each object in its own cluster and them merges these atomic clusters into larger and larger clusters, until all of the objects are in a single cluster or until certain termination conditions like desired no. of clusters are satisfied **Divisive clustering :** This top-down strategy does the reverse of Agglomerative hierarchical clustering by starting by placing all objects in one cluster and subdivide them into smaller and smaller clusters, until each of the object forms cluster of its own or until certain termination conditions like desired no. of clusters are satisfied **– 2 marks**	**UN,CO4**
5)	**Calculate the Euclidean Distance between the two data points A(1,3) and B(2,3)?** **Answer :** sqrt((1-2)^2 + (3-3)^2) = sqrt(1^2 + 0^2) = 1 **- 2 marks**	**AP,CO4**

	Part B	5 x 8 = 40 Marks
6)	**Design the classifier using decision tree induction method for the following training samples.** | RID	age	income	student	credit_rating	Class: buys_computer
---	---	---	---	---	---
1	youth	high	no	fair	no
2	youth	high	no	excellent	no
3	middle_aged	high	no	fair	yes
4	senior	medium	no	fair	yes
5	senior	low	yes	fair	yes
6	senior	low	yes	excellent	no
7	middle_aged	low	yes	excellent	yes
8	youth	medium	no	fair	no
9	youth	low	yes	fair	yes
10	senior	medium	yes	fair	yes
11	youth	medium	yes	excellent	yes
12	middle_aged	medium	no	excellent	yes
13	middle_aged	high	yes	fair	yes
14	senior	medium	no	excellent	no | **Decision tree :**  **Extracting Classification Rules from Trees** • Represent the knowledge in the form of IF-THEN rules • One rule is created for each path from the root to a leaf • Each attribute-value pair along a path forms a conjunction • The leaf node holds the class prediction • Rules are easier for humans to understand 1. IF age = "<=30" AND student = "no" THEN buys_computer = "no" 2. IF age = "<=30" AND student = "yes" THEN buys_computer = "yes" 3. IF age = "31…40" THEN buys_computer = "yes" 4. IF age = ">40" AND credit_rating = "excellent" THEN buys_computer = "no" 5. IF age = ">40" AND credit_rating = "fair" THEN buys_computer = "yes"	**AP,CO4**
7	**Design Naïve Bayes classifier for the following training samples for the class label status.**	**AP,CO4**

department	status	age	salary	count
sales	senior	31...35	46K...50K	30
sales	junior	26...30	26K...30K	40
sales	junior	31...35	31K...35K	40
systems	junior	21...25	46K...50K	20
systems	senior	31...35	66K...70K	5
systems	junior	26...30	46K...50K	3
systems	senior	41...45	66K...70K	3
marketing	senior	36...40	46K...50K	10
marketing	junior	31...35	41K...45K	4
secretary	senior	46...50	36K...40K	4
secretary	junior	26...30	26K...30K	6

$X = (\text{Department} = \text{Systems}, \text{Age} = [26\text{-}30], \text{Salary} = [46\text{-}50])$

$P(X|\text{Status} = \text{Junior}) = P(\text{Department} = \text{Systems} \mid \text{Status} = \text{Junior}) \times P(\text{Age} = [26\text{-}30] \mid \text{Status} = \text{Junior}) \times P(\text{Salary} = [46\text{-}50] \mid \text{Status} = \text{Junior})$

$= \frac{2+1}{113+4} \times \frac{49+1}{113+6} \times \frac{23+1}{113+6} = 0.0174$

$P(X|\text{Status} = \text{Senior}) = P(\text{Department} = \text{System} \mid \text{Status} = \text{Senior}) \times P(\text{Age} = [26\text{-}30] \text{ Status} = \text{Senior}) \times P(\text{Salary} = [46\text{-}30] \text{ Status} = \text{Senior})$

$= \frac{8+1}{52+4} \times \frac{0+1}{52+6} \times \frac{40+1}{52+6} = 0.0019$

$P(X|\text{Status} = \text{Junior}) \times P(\text{Status} = \text{Junior}) > P(X|\text{Status} = \text{Senior}) \times P(\text{Status} = \text{Senior})$

$0.0174 \times \frac{113}{165} > 0.0019 \times \frac{52}{165}$

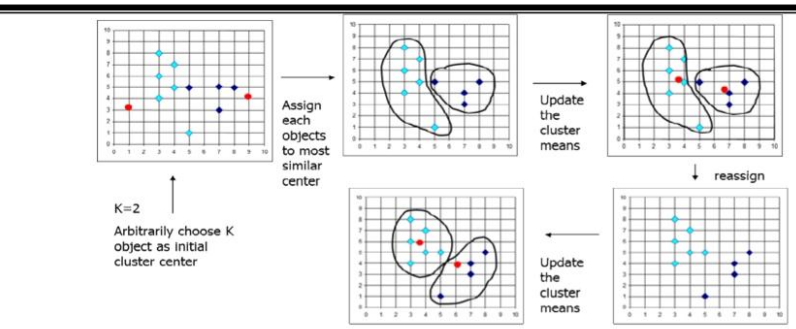
$0.0079 > 0.0006$

therefore,

$P(\text{Status} = \text{Junior} \mid X) > P(\text{Status} = \text{Senior} \mid X) \Rightarrow$

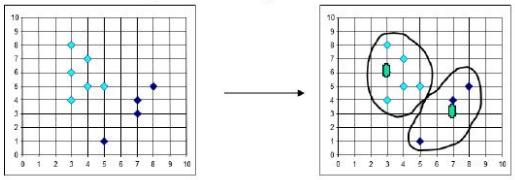
Employee status = Junior

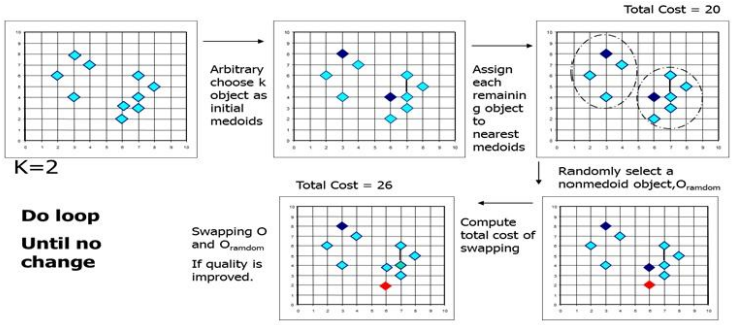
8	**Design the classifier using rule-based classification method for the following training samples.** 	Outlook	Temperature	Humidity	Windy	Class
---	---	---	---	---
sunny	hot	high	false	N
sunny	hot	high	true	N
overcast	hot	high	false	P
rain	mild	high	false	P
rain	cool	normal	false	P
rain	cool	normal	true	N
overcast	cool	normal	true	P
sunny	mild	high	false	N
sunny	cool	normal	false	P
rain	mild	normal	false	P
sunny	mild	normal	true	P
overcast	mild	high	true	P
overcast	hot	normal	false	P
rain	mild	high	true	N | **Rules :** |	Attribute	Rules	Errors	Total errors
---	---	---	---	---
1	outlook	sunny → no	2/5	4/14
		overcast → yes	0/4	
		rainy → yes	2/5	
2	temperature	hot → no*	2/4	5/14
		mild → yes	2/6	
		cool → yes	1/4	
3	humidity	high → no	3/7	4/14
		normal → yes	1/7	
4	windy	false → yes	2/8	5/14
		true → no*	3/6			
9	**Discriminate between k-Means clustering algorithm and k-Medoids clustering algorithm and appraise which algorithm is best for clustering data sets.** Both the k -means and k -medoids algorithms are partitional (breaking the dataset up into groups). K-means attempts to minimize the total squared error, while k-medoids minimizes the sum of dissimilarities between points labeled to be in a cluster and a point designated as the center of that cluster. **k-Means clustering algorithm :** Given k, the k-means algorithm is implemented in four steps: • Partition objects into k nonempty subsets • Compute seed points as the centroids of the clusters of the current partition (the centroid is the center, i.e., mean point, of the cluster) • Assign each object to the cluster with the nearest seed point • Go back to Step 2, stop when no more new assignment	**AN,CO4**



k-Medoids clustering algorithm :

Instead of taking the mean value of the object in a cluster as a reference point, medoids can be used, which is the most centrally located object in a cluster.





Drawbacks of K-Means algorithm:

1) To find K-Value is difficult task.

2) It is not effective when used with global cluster.

3) If different initial partitions has been selected than it may vary the result for clusters.

4) Different size and different density cluster is not handled by the algorithm.

K-Medoids is better than K means?

k-medoid is more robust to noise and outliers as compared to k-means because it minimizes a sum of pairwise dissimilarities instead of a sum of squared Euclidean distances.

10	**Compare and contrast the different methods of clustering high dimensional data.** **Applications of Clustering high-dimensional data :** • text documents, DNA micro-array data **Major challenges:** • Many irrelevant dimensions may mask clusters • Distance measure becomes meaningless—due to equi-distance • Clusters may exist only in some subspaces	**AN,CO4**

Clustering high-dimensional data is the search for clusters and the space in which they exist.

Thus, there are two major kinds of methods:

- **Subspace clustering approaches** search for clusters existing in subspaces of the given high-dimensional data space, where a subspace is defined using a subset of attributes in the full space.
- **Dimensionality reduction approach**es try to construct a much lower-dimensional space and search for clusters in such a space. Often, a method may construct new dimensions by combining some dimensions from the original data.

Subspace clustering approaches

They generally can be categorized into three major groups:

- Subspace search methods,
- Correlation-based clustering methods, and
- Biclustering methods.

- A subspace search method searches various subspaces for clusters.
- Here, a cluster is a subset of objects that are similar to each other in a subspace.
- The similarity is often captured by conventional measures such as distance or density.
- For example, the CLIQUE algorithm is a subspace clustering method.
- It enumerates subspaces and the clusters in those subspaces in a dimensionality-increasing order, and applies antimonotonicity to prune subspaces in which no cluster may exist.
- A major challenge that subspace search methods face is how to search a series of subspaces effectively and efficiently.

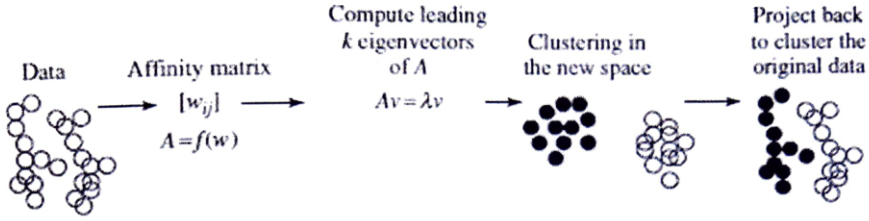
Generally there are two kinds of strategies:

- **Bottom-up approaches** start from low-dimensional subspaces and search higher dimensional subspaces only when there may be clusters in those higher-dimensional subspaces.
- Various pruning techniques are explored to reduce the number of higher dimensional subspaces that need to be searched.
- CLIQUE is an example of a bottom-up approach.

- **Top-down approaches** start from the full space and search smaller and smaller subspaces recursively.
- Top-down approaches are effective only if the locality assumption holds, which require that the subspace of a cluster can be determined by the local neighborhood.
- Example : PROCLUS, a top-down subspace approach.
- PROCLUS is a k-medoid-like method that first generates k potential cluster centers for a high-dimensional data set using a sample of the data set.
- It then refines the subspace clusters iteratively.
- In each iteration, for each of the current k-medoids, PROCLUS considers the local neighborhood of the medoid in the whole data set, and identifies a subspace for the cluster by minimizing the standard deviation of the distances of the points in the neighborhood to the medoid on each dimension.

Dimensionality Reduction Methods and Spectral Clustering

- Subspace clustering methods try to find clusters in subspaces of the original data space.
- In some situations, it is more effective to construct a new space instead of using subspaces of the original data.
- This is the motivation behind dimensionality reduction methods for clustering high-dimensional data.



CO No.	Remember (RE)	Understand (UN)	Apply (AP)	Analyze (AN)	Evaluate (EV)	Create (CR)	Total
4	-	4	30	16	-	-	50

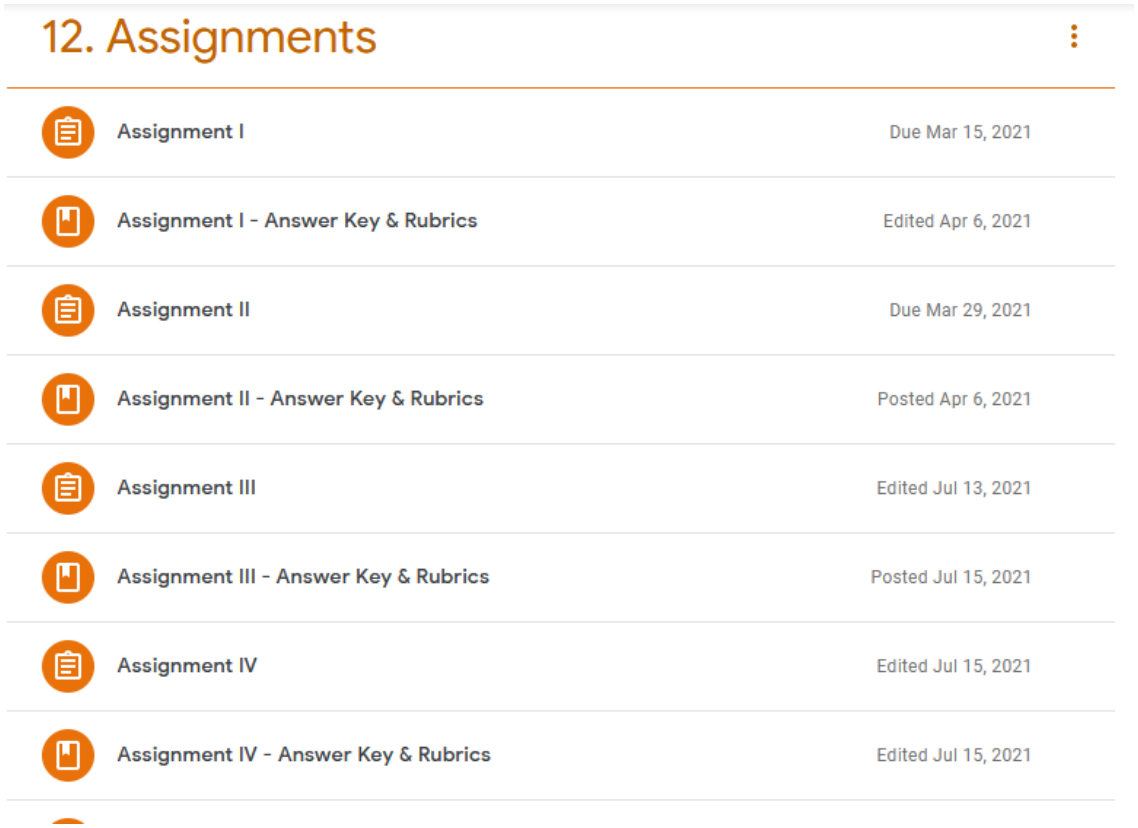
12/5/21

Prepared By
(Dr. J. Sutha)
Course Instructor

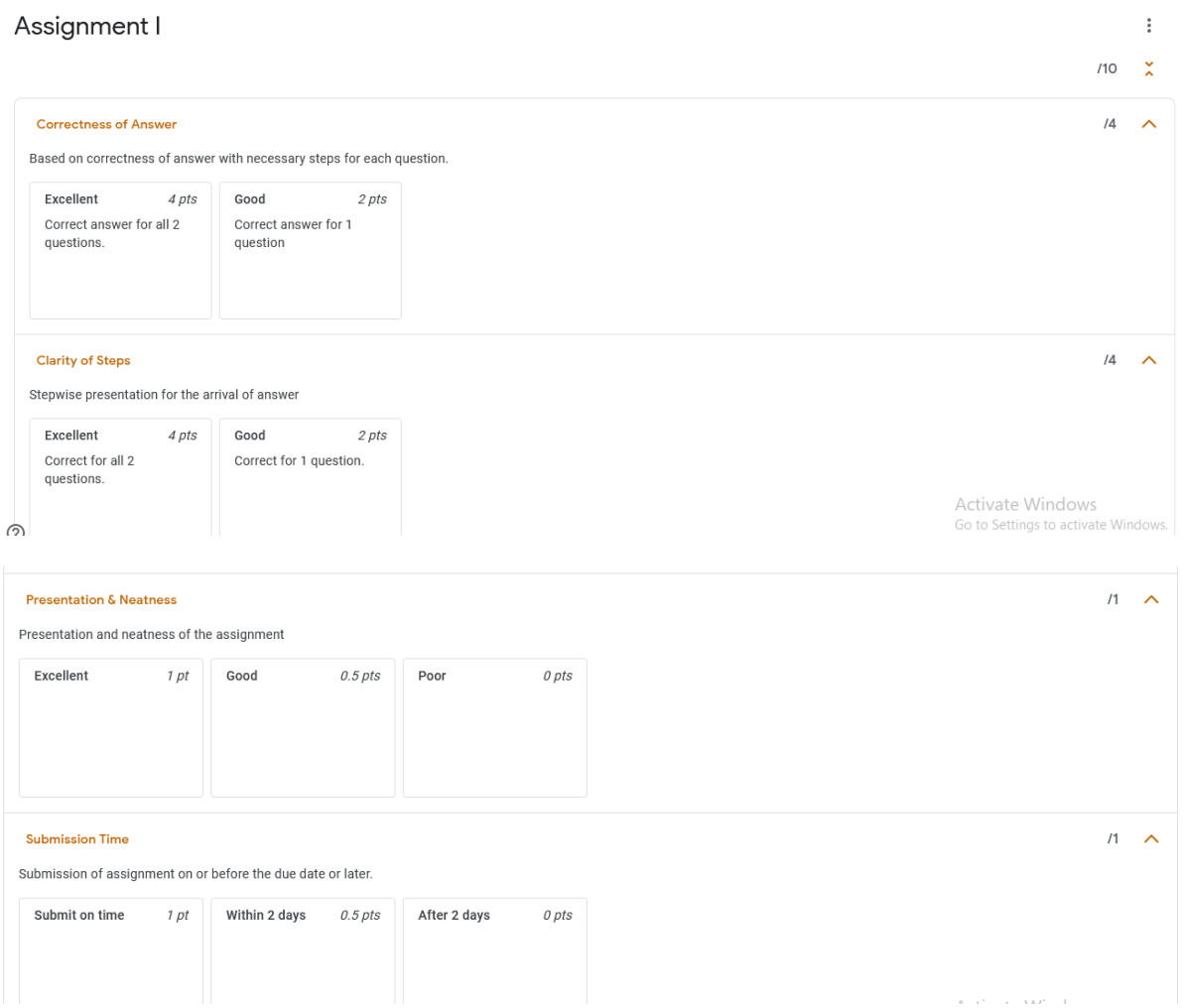
12/5/21

Approved By
HoD-CSE

GOOGLE CLASSROOM – ASSIGNMENT



GOOGLE CLASSROOM – ASSIGNMENT – RUBRICS FOR EVALUATION



GOOGLE CLASSROOM – ASSIGNMENT QUESTION

	AAA COLLEGE OF ENGINEERNG AND TECHNOLOGY **Kamarajar Educational Road,** **Amathur, Sivakasi – 626 005.** **DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING** **ASSIGNMENT I**	**Regulation : 2017** **Revision: 1** **Date : 18.2.2021**

Name of the Course Instructor: **Dr.J.Sutha** Class / Semester : **III Year / VI Semester**

Course Code & Name : **CS8075 DATA WAREHOUSING AND DATA MINING** Academic Year : **2020 – 2021 EVEN**

Topic Covered : Multi-dimensional Data model **Marks : 10**

Date of Announcement : 5.3.2021 **Date of Submission : 12.3.2021**

Qn. No.	Question	BT,CO
1	Suppose that a data warehouse consists of the four dimensions date, spectator , location, and game ,and the two measures count and charge ,where charge is the fare that a spectator pays when watching a game on a given data. Spectators may be students, adults or senior , with each category having its own charge rate. i) Draw a star schema diagram for the data warehouse ii) Starting with the base cuboid (date , spectator, location ,game) what specific OLAP operations should one perform in order to list the total charge paid by student spectators at GM-place in 2000.	AP, CO1
2	Design a multi-dimensional data model for hospital data warehouse consist of three dimensions Time ,doctor and patient and the two measures count and charge , where charge is a fee that a doctor charges a patients for a visit. i) Enumerate three classes of schema that are popularly used for modelling data warehouse. ii) Draw a schema diagram for the above data warehouse.	AP, CO1

Prepared By
(Dr. J. Sutha)
Course Instructor

Approved By
HoD-CSE

GOOGLE CLASSROOM – QUIZ

13. Quiz

Quiz_ITM_Unit V	Edited Jul 12, 2021
Quiz_ITM_Unit IV	Posted May 11, 2021
Quiz_ITM_Unit III	Posted Apr 22, 2021
Quiz_ITM_Unit II	Posted Apr 6, 2021
Quiz_ITM_Unit I	Due Mar 12, 2021
L3_Quiz_7.1.2021	Due Jan 7, 2021, 1:00 PM
L2_Quiz_6.1.2021	Due Jan 6, 2021, 5:00 PM
L1_Quiz_5.1.2021	Due Jan 5, 2021, 1:00 PM

L2_Quiz_6.1.2021

rajanpcr@aaacet.ac.in Switch account

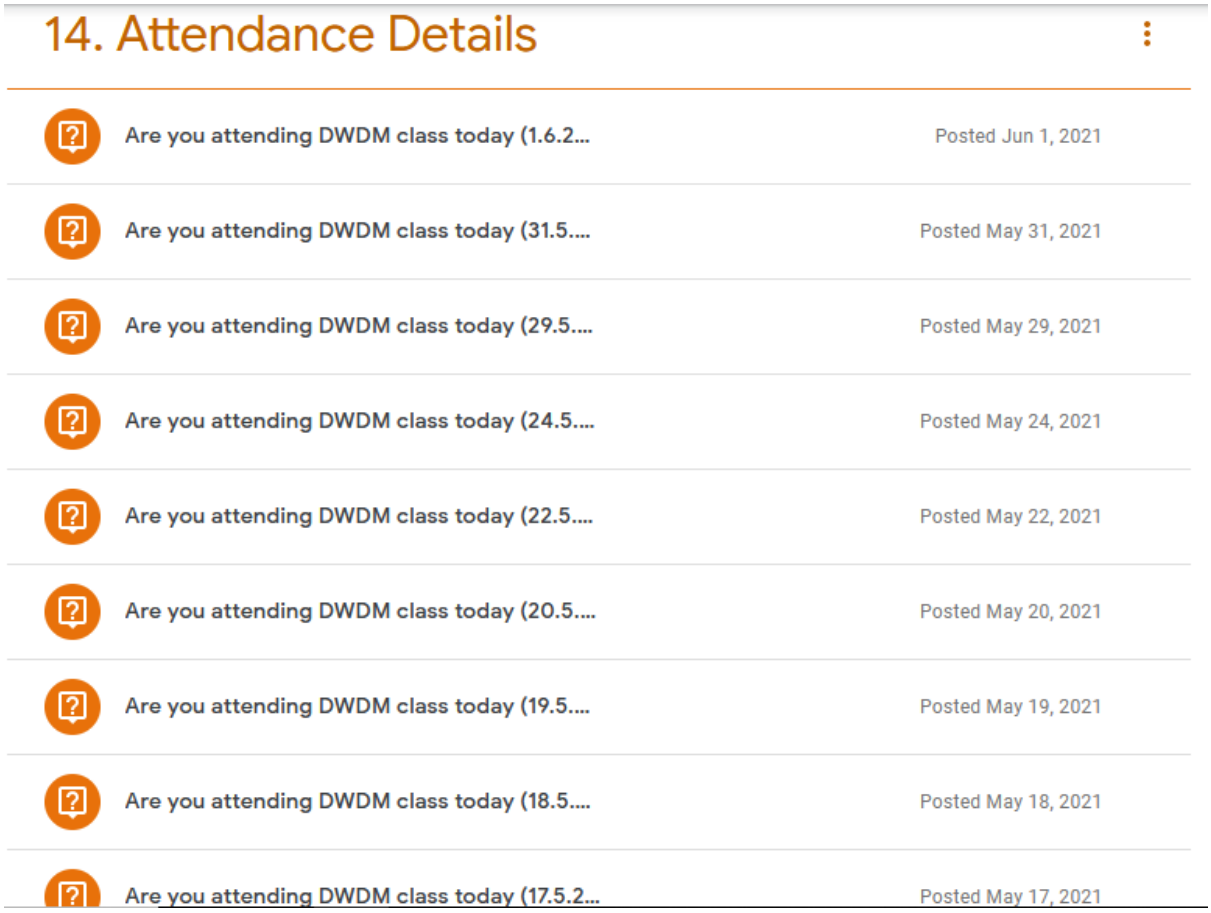
Your email will be recorded when you submit this form

1. Data warehouse architecture is based on _____. 5 points

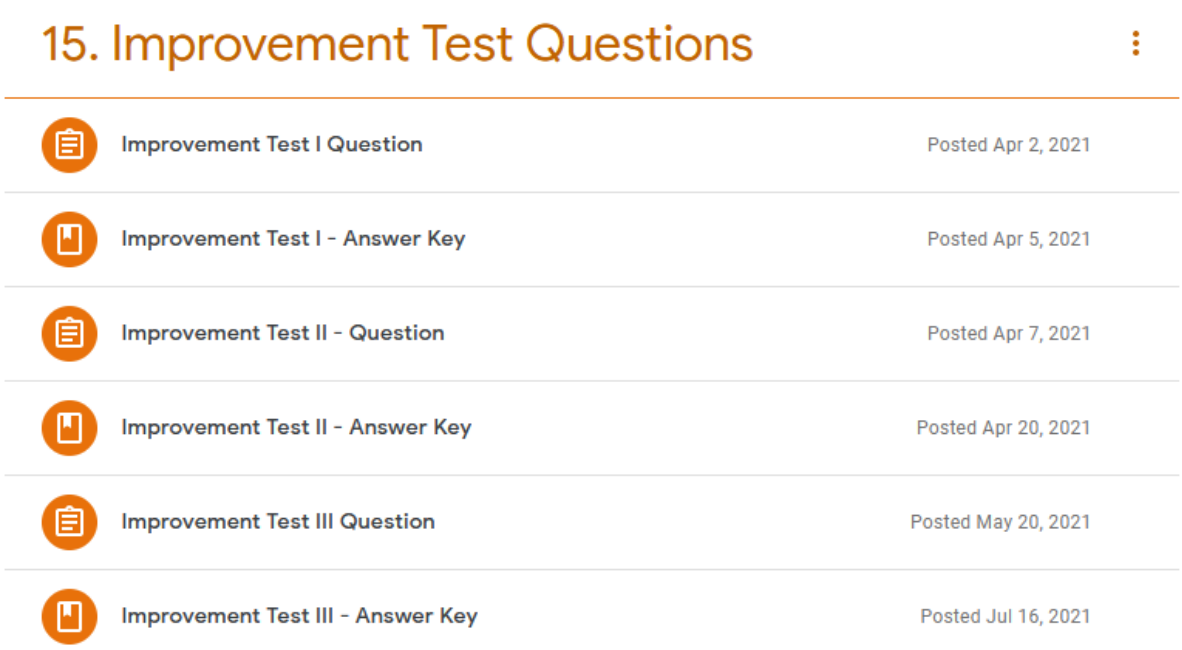
- A. DBMS.
- B. RDBMS.
- C. Sybase.
- D. SQL Server.

2. _____ contains information that gives users an easy-to-understand perspective of the information stored in the data warehouse. 5 points

- A. Financial metadata
- B. Operational metadata
- C. Technical metadata


14. Attendance Details
Are you attending DWDM class today (1.6.2... Posted Jun 1, 2021
Are you attending DWDM class today (31.5.... Posted May 31, 2021
Are you attending DWDM class today (29.5.... Posted May 29, 2021
Are you attending DWDM class today (24.5.... Posted May 24, 2021
Are you attending DWDM class today (22.5.... Posted May 22, 2021
Are you attending DWDM class today (20.5.... Posted May 20, 2021
Are you attending DWDM class today (19.5.... Posted May 19, 2021
Are you attending DWDM class today (18.5.... Posted May 18, 2021
Are you attending DWDM class today (17.5.2... Posted May 17, 2021

GOOGLE CLASSROOM – IMPROVEMENT TEST



AAA COLLEGE OF ENGINEERING AND TECHNOLOGY

Amathur, Sivakasi – 626 005.

IMPROVEMENT TEST FOR INTERNAL TEST - I

Course Code & Name: **CS8075, Data Warehousing and Data Mining**

Branch/Year/Semester: CSE/III/VI

Max. Marks : 50

Course Instructor Name & Department: **Dr.J.Sutha, Professor & Head/CSE**

Answer **ALL** questions

Part A **5 x 2 = 10 Marks**

1.	List out various category of users of data warehouse.	[UN,CO1]
2.	What do you mean by virtual warehouse?	[UN,CO1]
3.	Mention any 4 parallel DBMS vendors.	[UN,CO1]
4.	Draw the 3-D cuboid of annual sales of washing machine in India according to the dimensions product, date and country.	[AP,CO1]
5.	Write the syntax for defining dimension table and fact table in DMQL.	[UN,CO1]

Part B **2 x 13 = 26 Marks**

6 a)	Explain in detail about database architectures for Parallel Processing with neat sketch.	[UN,CO1]
	(OR)	
6 b)	i) Write the tangible and intangible benefits of data warehouse. (7 marks)	[UN,CO1]
	ii) Explain the contents of metadata repository in detail. (6 marks)	[UN,CO1]
7 a)	i) Explain with examples the role of concept hierarchy in representing dimensions in data warehouse. (7 marks)	[UN,CO1]
	ii) Write notes on different kinds of applications of data warehouse. (6 marks)	[UN,CO1]
	(OR)	
7 b)	i) Differentiate between OLAP & OLTP. (7 marks)	[UN,CO1]
	ii) Explain in brief the following OLAP server architectures a. ROLAP (2 marks) b. MOLAP (2 marks) c. HOLAP (2 marks)	[UN,CO1]

Part C **1 x 14 = 14 Marks**

8 a)	i) Write the information's used by data warehouse designers and administrators from meta data repository and the information that gives users an easy-to understand perspective of the information stored in the data warehouse. (7 marks)	[UN,CO1]
	ii) Discuss in detail about the access tools used in data warehousing to provide information to business users for decision making. (7 marks)	[UN,CO1]
	(OR)	
8 b)	Write the results of the following OLAP operations for AllElectronics database which contains sales value for 3 products for the quarters Q1, Q2, Q3 and Q4. i) Roll up ii) Drill down iii) Slice and dice iv) Pivot	[AP,CO1]

CO No.	Remember (RE)	Understand (UN)	Apply (AP)	Analyze (AN)	Evaluate (EV)	Create (CR)	Total
1	-	48	16	-	-	-	64

Prepared By
(Dr. J. Sutha)
Course Instructor

Approved By
HoD-CSE

AAA COLLEGE OF ENGINEERING AND TECHNOLOGY
Amathur, Sivakasi – 626 005.
IMPROVEMENT TEST FOR INTERNAL TEST - I
ANSWER KEY

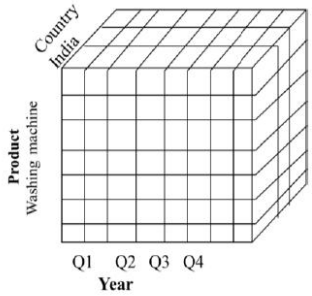
Course Code & Name: **CS8075, Data Warehousing and Data Mining**

Branch/Year/Semester: CSE/III/VI Max. Marks : 50

Course Instructor Name & Department: **Dr.J.Sutha, Professor & Head/CSE**

Answer **ALL** questions

Part A **5 x 2 = 10 Marks**

1.	**List out various category of users of data warehouse.** **[UN,CO1]** The users of data warehouse data can be classified on the basis of their skill level in accessing the warehouse. There are three classes of users: • Casual users • Power Users • Expert users **- 2 Marks**
2.	**What do you mean by virtual warehouse?** **[UN,CO1]** A virtual warehouse is a set of views over operational databases for efficient query processing, only some of the possible summary views may be materialized. A virtual warehouse is easy to build but requires excess capacity on operational database servers. **- 2 Marks**
3.	**Mention any 4 parallel DBMS vendors.** **[UN,CO1]** • Oracle Parallel Server • Informix runs on unix platforms • IBM DB2 Parallel Edition • SYBASE • Microsoft SQL server **List any 4** **- 2 Marks**
4.	**Draw the 3-D cuboid of annual sales of washing machine in India according to the dimensions product, date and country.** **[AP,CO1]**  **- 2 Marks**
5.	**Write the syntax for defining dimension table and fact table in DMQL.** **[UN,CO1]** **Cube Definition (Fact Table)** define cube <cube_name> [<dimension_list>] <measure_list> **- 1 Mark** **Dimension Definition (Dimension Table)** define dimension <dimension_name> as (<attribute_or_subdimension_list>) **- 1 Mark**

Part B **2 x 13 = 26 Marks**

6	a)	**Explain in detail about database architectures for Parallel Processing with neat sketch.** **[UN,CO1]**

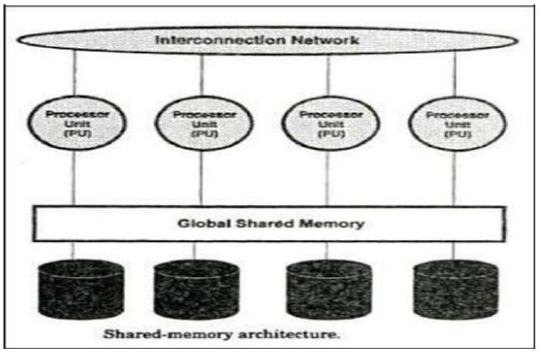
There are three DBMS software architecture styles for parallel processing:

1. Shared memory or shared everything Architecture
2. Shared disk architecture
3. Shred nothing architecture **- 1 Mark**

Shared Memory Architecture :

Tightly coupled shared memory systems, illustrated in following figure have the following characteristics:

- Multiple PUs share memory.
- Each PU has full access to all shared memory through a common bus.
- Communication between nodes occurs via shared memory.
- Performance is limited by the bandwidth of the memory bus.



Shared-memory architecture.

Parallel processing advantages of shared memory systems are these:

- Memory access is cheaper than inter-node communication. This means that internal synchronization is faster than using the Lock Manager.
- Shared memory systems are easier to administer than a cluster.
- A disadvantage of shared memory systems for parallel processing is as follows:
- Scalability is limited by bus bandwidth and latency, and by available memory. **– 4 Marks**

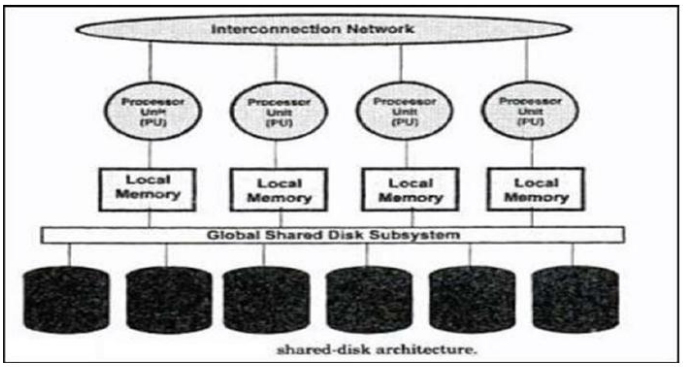
Shared Disk Architecture :

Shared disk systems are typically loosely coupled. Such systems, illustrated in following figure, have the following characteristics:

- Each node consists of one or more PUs and associated memory.
- Memory is not shared between nodes.
- Communication occurs over a common high-speed bus.
- Each node has access to the same disks and other resources.
- A node can be an SMP if the hardware supports it.

Bandwidth of the high-speed bus limits the number of nodes (scalability) of the system.
Parallel processing advantages of shared disk systems are as follows:

- Shared disk systems permit high availability. All data is accessible even if one node dies.
- These systems have the concept of one database, which is an advantage over shared nothing systems.
- Shared disk systems provide for incremental growth.



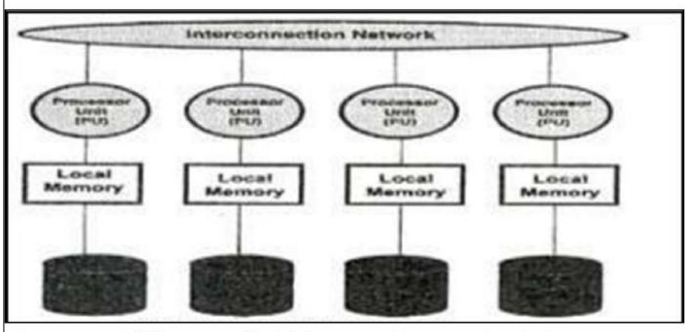
shared-disk architecture.

Parallel processing disadvantages of shared disk systems are these:

- Inter-node synchronization is required, involving DLM overhead and greater dependency on high-speed interconnect.
- If the workload is not partitioned well, there may be high synchronization overhead.
- There is operating system overhead of running shared disk software **- 4 Marks**

Shared Nothing Architecture

- Shared nothing systems are typically loosely coupled. In shared nothing systems only one CPU is connected to a given disk. If a table or database is located on that disk, access depends entirely on the PU which owns it. Shared nothing systems can be represented as follows:



Shared nothing systems are concerned with access to disks, not access to memory. Nonetheless, adding more PUs and disks can improve scale up. Oracle Parallel Server can access the disks on a shared nothing system as long as the operating system provides transparent disk access, but this access is expensive in terms of latency. **- 4 Marks**

(OR)

6 b) i) Write the tangible and intangible benefits of data warehouse. (7 marks) [UN,CO1]

The benefits can be classified into two:

Tangible benefits (quantified / measureable) : It includes,

- Improvement in product inventory
- Decrement in production cost
- Improvement in selection of target markets
- Enhancement in asset and liability management **- 4 Marks**

Intangible benefits (not easy to quantified): It includes,

- Improvement in productivity by keeping all data in single location and eliminating rekeying of data
- Reduced redundant processing
- Enhanced customer relation **- 3 Marks**

ii) Explain the contents of metadata repository in detail. (6 marks) [UN,CO1]

It is data about data. It is used for maintaining, managing and using the data warehouse. It is classified into two:

- Technical Meta data
- Business Meta data

Technical Meta data:

It contains information about data warehouse data used by warehouse designer, administrator to carry out development and management tasks. It includes,

- Info about data stores
- Transformation descriptions. That is mapping methods from operational db to warehouse db
- Warehouse Object and data structure definitions for target data
- The rules used to perform clean up, and data enhancement
- Data mapping operations
- Access authorization, backup history, archive history, info delivery history, data acquisition history, data access etc., **- 3 Marks**

Business Meta data:

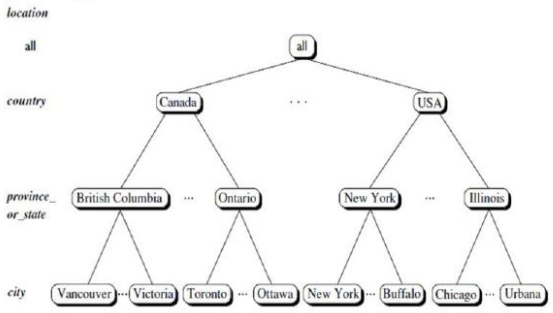
It contains info that gives info stored in data warehouse to users. It includes,

- Subject areas, and info object type including queries, reports, images, video, audio clips etc.
- Internet home pages
- Info related to info delivery system
- Data warehouse operational info such as ownerships, audit trails etc., **- 3 Marks**

7 a) i) Explain with examples the role of concept hierarchy in representing dimensions in data warehouse. (7 marks) [UN,CO1]

A concept hierarchy defines a sequence of mappings from a set of low-level concepts to higher-level, more general concepts. Consider a concept hierarchy for the dimension location. City values for location include Vancouver, Toronto, New York, and Chicago. Each city, however, can be mapped to the province or state to which it belongs.

For example, Vancouver can be mapped to British Columbia, and Chicago to Illinois. The provinces and states can in turn be mapped to the country (e.g., Canada or the United States) to which they belong



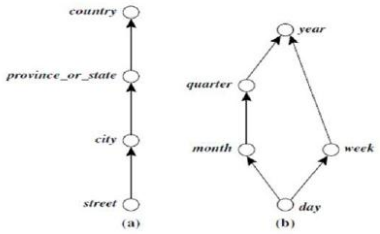
- 4 Marks

Attributes in warehouse dimensions

- **Hierarchical structures**
- **Lattice structures**

(a) **a hierarchical structure for location and**

(b) **a lattice structure for time.**



- 3 Marks

ii) Write notes on different kinds of applications of data warehouse. (6 marks) [UN,CO1]

Three kinds of data warehouse applications

Information processing

- Supports querying, basic statistical analysis, and reporting using crosstabs, tables, charts and graphs **- 2 Marks**

Analytical processing

- Multidimensional analysis of data warehouse data
- Supports basic OLAP operations, slice-dice, drilling, pivoting **- 2 Marks**

Data mining

- Knowledge discovery from hidden patterns
- Supports associations, constructing analytical models, performing classification and prediction, and presenting the mining results using visualization tools.

- 2 Marks

(OR)

7 b) **i) Differentiate between OLAP & OLTP. (7 marks) [UN,CO1]**

	OLTP	OLAP
users	clerk, IT professional	knowledge worker
function	day to day operations	decision support
DB design	application-oriented	subject-oriented
data	current, up-to-date detailed, flat relational isolated	historical, summarized, multidimensional integrated, consolidated
usage	repetitive	ad-hoc
access	read/write index/hash on prim. key	lots of scans
unit of work	short, simple transaction	complex query
# records accessed	tens	millions
#users	thousands	hundreds
DB size	100MB-GB	100GB-TB
metric	transaction throughput	query throughput, response

- 7 Marks

	ii) Explain in brief the following OLAP server architectures [UN,CO1] **a. ROLAP (2 marks)** **b. MOLAP (2 marks)** **c. HOLAP (2 marks)** **Relational OLAP (ROLAP)** • Use relational or extended-relational DBMS to store and manage warehouse data and OLAP middle ware • Include optimization of DBMS backend, implementation of aggregation navigation logic, and additional tools and services • Greater scalability **- 2 Marks** **Multidimensional OLAP (MOLAP)** • Sparse array-based multidimensional storage engine • Fast indexing to pre-computed summarized data **- 2 Marks** **Hybrid OLAP (HOLAP) (e.g., Microsoft SQLServer)** • Flexibility, e.g., low level: relational, high-level: array **- 2 Marks**

Part C **1 x 14 = 14 Marks**

8 a)	**i)**	**Write the information's used by data warehouse designers and administrators from meta data repository and the information that gives users an easy-to understand perspective of the information stored in the data warehouse. (7 marks) [UN,CO1]** The information's used by data warehouse designers and administrators from meta data repository stored in the data warehouse are technical meta data. It contains information about data warehouse data used by warehouse designer, administrator to carry out development and management tasks. It includes, • Info about data stores • Transformation descriptions. That is mapping methods from operational database to data warehouse. • Warehouse Object and data structure definitions for target data • The rules used to perform clean up, and data enhancement • Data mapping operations • Access authorization, backup history, archive history, info delivery history, data acquisition history, data access etc., **- 4 Marks** The information's that gives users an easy-to understand perspective of the information stored in the data warehouse are business meta data. It contains info that gives info stored in data warehouse to users. It includes, • Subject areas, and info object type including queries, reports, images, video, audio clips etc. • Internet home pages • Info related to info delivery system • Data warehouse operational info such as ownerships, audit trails etc., **- 3 Marks**
	ii)	**Discuss in detail about the access tools used in data warehousing to provide information to business users for decision making. (7 marks) [UN,CO1]** Purpose of data warehousing is to provide information to business users for decision making The users interact with the data warehouse using front-end tools. he tools can be grouped into five major groups • Data query and reporting tools • Application development tools • Executive information system (EIS) tools • Online analytical processing tools • Data mining tools **- 2 marks**

Data query and reporting tools :

Can be divided into 2 groups

a. Reporting tools
   i. Production reporting tools : Used to generate operational reports
   ii. Desktop report writers : Desktop tools designed for end users
b. Managed query tools : It reduces the complexity of using SQL queries by inserting meta layer between users and database
c. Meta layer is a software that provide subject –oriented views and supports point-and-click creation of SQL **- 1 Mark**

Application development tools :

Use a familiar application development approach to build a query and reporting environment for the data warehouse **- 1 Mark**

Executive information system (EIS) tools :

Use a executive information system tools to provide information. **- 1 Mark**

Online analytical processing tools

These tools based on the concepts of multidimensional databases and allows the user to analyze the data using views **- 1 Mark**

Data mining tools

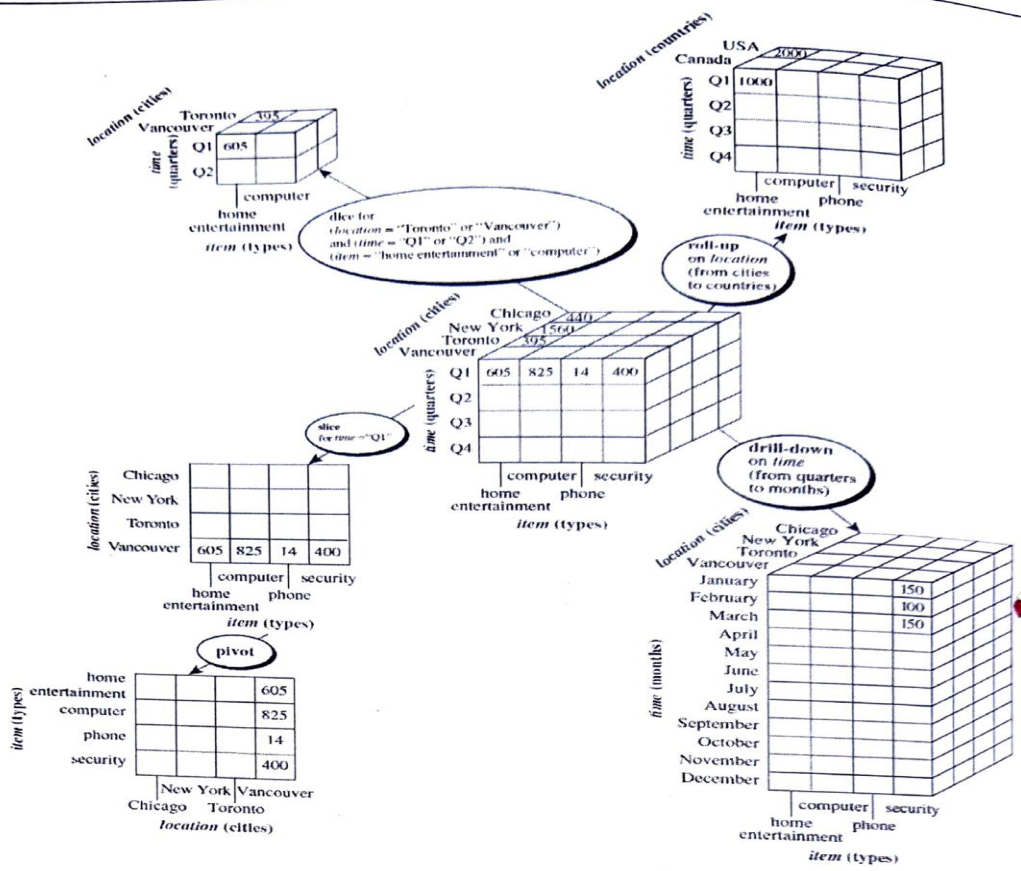
Used to extract the hidden knowledge that resides in the data

Used to

a. Discover knowledge : To determine hidden relationship between data which is used for segmentation, classification, etc.,
b. Visualize data : Data visualization refers to make the data clearly visible for domain experts and casual observers through pie and bar charts
c. Correct data : Correct the incomplete data **- 1 Mark**

(OR)

8 b)	**Write the results of the following OLAP operations for AllElectronics database which contains sales value for 3 products for the quarters Q1, Q2, Q3 and Q4.** **[AP,CO1]** **i) Roll up** **ii) Drill down** **iii) Slice and dice** **iv) Pivot**



- **Roll up (drill-up)** - 4 marks
- **Drill down (roll down)** - 4 marks
- **Slice and dice** - 4 marks
- **Pivot (rotate)** - 2 marks

23/3/21

Prepared By
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Course Instructor

23/3/21

Approved By
HoD-CSE

GOOGLE CLASSROOM – QUESTION BANK

GOOGLE CLASSROOM – QUESTION BANK SAMPLE

	AAA COLLEGE OF ENGINEERNG AND TECHNOLOGY **Kamarajar Educational Road,** **Amathur, Sivakasi – 626 005.** **DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING** **QUESTION BANK - UNIT - III**	**Regulation : 2017** **Revision: 1** **Date : 18.2.2021**

Name of the Course Instructor : **Dr.J.Sutha** Class / Semester : **III Year / VI Semester**

Course Code & Name : **CS8075 DATA WAREHOUSING AND DATA MINING** Academic Year **: 2020 – 2021 EVEN**

UNIT – III (First Half)

PART – A

1	What do you mean by frequent itemset.	[UN, CO3]
2	What is frequent pattern mining?	[UN, CO3]
3	What is association rule mining?	[UN, CO3]
4	Define strong association rule.	[UN, CO3]
5	Write the closed frequent itemset & maximal frequent items from the following database. DB = {<I1, …, I10>, < I1, …, I25>, <I1,….I5>} with min_sup = 1.	[AP, CO3]
6	List out the various methods for mining frequent itemsets.	UN, CO3
7	Define Apriori property.	[UN, CO3]
8	List out the challenges in frequent pattern mining using Apriori algorithm.	[UN, CO3]
9	List out the variations to improve the efficiency of Apriori algorithm.	[UN, CO3]
10	What is the advantage of FP-Growth algorithm over Apriori algorithm.	[UN, CO3]

PART – B

1	i) Describe frequent pattern mining with an example. (7 marks) ii) Explain how to generate association rules from frequent itemset with examples. (6 marks)	[UN, CO3]
2	i) Write the Apriori algorithm to generate frequent itemset from transactional databases. (7 marks) ii) Explain in detail the various strategies to improve the efficiency of Apriori algorithm. (6 marks)	[UN, CO3]
3	Describe the method of generating frequent item sets with candidate generation with an example.	[UN, CO3]
4	Write the FP-Growth algorithm to generate frequent itemset from transactional databases with an example.	[UN, CO3]
5	i) Describe the method of generating frequent item sets using vertical data format with an example. (9 marks) ii) Explain the pruning strategies used for mining closed and max patterns. (4 marks)	[UN, CO3]

PART – C

1	Find out the frequent itemset and generate association rules from the following transactional database using Apriori algorithm with minimum support is 30% and minimum confidence threshold is 70%. **Trans. Id** / **Items Purchased** 101 Mullberry,Rasberry,Cherry 102 Mullberry,Papaya 103 Papaya,Mango 104 Mullberry, Rasberry,Cherry 105 Passion Fruit,Cherry 106 Passion Fruit 107 Papaya, Passion Fruit 108 Mullberry, Rasberry,Cherry,Guava 109 Mango, Guava 110 Mullberry, Rasberry	[AP, CO3]
2	Find out the frequent itemset and generate strong association rules from the following transactional database using FP_Growth algorithm with minimum support is 30% and minimum confidence threshold is 70% . **TID** / **List of item IDs** T100 I1, I2, I5 T200 I2, I4 T300 I2, I3 T400 I1, I2, I4 T500 I1, I3 T600 I2, I3 T700 I1, I3 T800 I1, I2, I3, I5 T900 I1, I2, I3	[AP, CO3]

UNIT – III (Second Half)

PART – A

1	What is the use of lift measure?	[UN, CO3]
2	What is rare and negative pattern?	[UN, CO3]
3	What do mean by constraint-based mining?	[UN, CO3]
4	List out the various constraints in constraint-based mining.	[UN, CO3]
5	What do you mean by metarule-guided mining?	[UN, CO3]
6	List out the various categories of pattern mining constraints.	[UN, CO3]
7	Where uniform support and reduced support measures are applicable?	[UN, CO3]
8	Write the steps in associative classification.	[UN, CO3]
9	List out the various methods in associative classification.	[UN, CO3]
10	What is the general framework for discriminative frequent pattern–based classification?	[UN, CO3]

PART – B

1	Discuss in detail pattern evaluation methods.	[UN, CO3]
2	i) Discuss in detail various kinds of association rules with examples. (6 marks) ii) Explain in detail mining quantitative associations with examples. (7 marks)	[UN, CO3]
3	i) Explain in detail mining multilevel associations with examples. (7 marks) ii) Explain in detail mining multi-dimensional associations with examples. (6 marks)	[UN, CO3]
4	Describe in detail Constraint-Based Frequent Pattern Mining with examples.	[UN, CO3]
5	Explain in detail classification using Frequent Patterns with examples.	[UN, CO3]

PART – C

1	Find out the frequent itemset and generate association rules from the following transactional database using vertical data format with minimum support is 30% and minimum confidence threshold is 70%.	[AP, CO3]

Tid	Items
10	A, C, D
20	B, C, E
30	A, B, C, E
40	B, E
50	A, B, D, E
60	A, E
70	C, E
80	A, B, E
90	C, D,E

2	i) 2 _ 2 Contingency Table summarizing the Transactions with Respect to Game and Video Purchases is given below. Find whether the two purchases are correlated with each other using χ^2 measure. (7 marks)	[AP, CO3]

	game	$\overline{game}$	Σ_{row}
video	4000	3500	7500
$\overline{video}$	2000	500	2500
Σ_{col}	6000	4000	10,000

	ii) Compare and contrast various pattern evaluation measures. (7 marks)	[UN, CO3]

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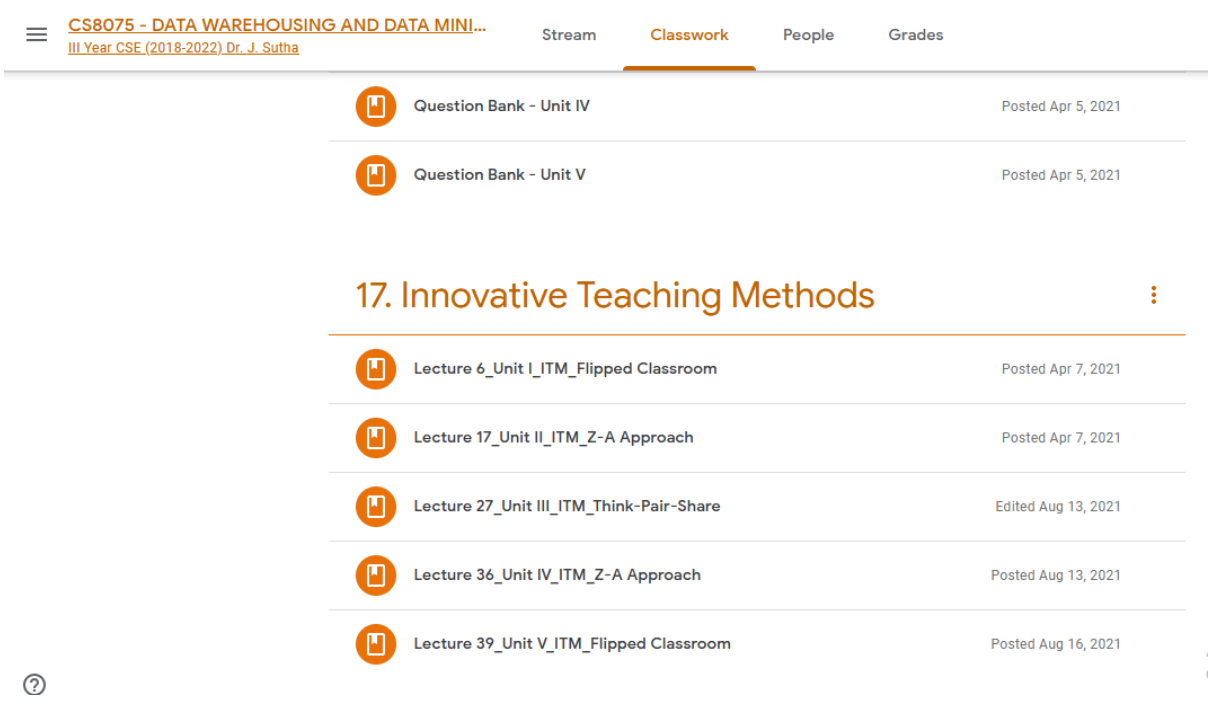
HoD-CSE

GOOGLE CLASSROOM – INNOVATIVE TEACHING METHOD



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Kamarajar Educational Road, Amathur, Sivakasi – 626 005.

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

INNOVATIVE TEACHING METHOD

Course Code and Name : **CS8075 - DATA WAREHOUSING AND DATA MINING**		
Name of the Course Instructor : **Dr.J. Sutha**		
Date of conduct of class : **4.3.2021**		Branch/Year/Semester : **CSE/III/VI**
Unit : **I**	Lecture No. : **L6**	Topic : **Data Warehouse Schemas for Decision Support**
Innovative Teaching Method Used		**FLIPPED CLASSROOM**

IMPLEMENTATION OF FLIPPED CLASSROOM

1. PRECLASS CONTENT DELIVERY/ CREATING PRECLASS CONTENT

(i) Choose the form of pre-class content

✓ ✓

Video Lectures / Textbook / Journal readings / **Power Point Presentation** / Websites

(ii) Date of providing pre-class content : 2.3.2021

(iii) Were clear learning objectives provided? Specify the learning objectives.

Yes.

- Understand the concept of Multidimensional schema.
- Understand how dimensions are represented in Star Schema.
- Understand about Snowflake Schema.
- Understand the concept of Galaxy Schema.

(iv) What was the duration of video lecture?

[Shorter lectures (10–15 minutes) are more effective than longer lectures].

- https://www.youtube.com/watch?v=6hpl-u0F_7E : 14 minutes
- https://www.youtube.com/watch?v=VOJ54hu2e2Q : 9 minutes
- https://www.youtube.com/watch?v=Qq4yhhAk9fc : 23 minutes
- https://www.youtube.com/watch?v=uigKK02XGxE : 20.46 minutes
- https://www.youtube.com/watch?v=d0gTFkytlW0 : 6.43 minutes

1

2. STUDENT CENTERED IN-CLASS LEARNING ACTIVITIES

(Include photographs/video recordings/audio recordings wherever possible)

(a) Student Ms. Thanga Sudha shared her views about Data Warehouse Schemas for Decision Support

(b)

A schema is defined as a logical description of database where fact and dimension tables are joined in a logical manner. Data Warehouse is maintained in the form of Star, Snow flakes, and Fact Constellation schema. Multidimensional Schema is especially designed to model data warehouse systems. The schemas are designed to address the unique needs of very large databases designed for the analytical purpose (OLAP).

Types of Data Warehouse Schema :

Following are 3 chief types of multidimensional schemas each having its unique advantages.

1. **Star Schema**
2. **Snowflake Schema**
3. **Galaxy Schema**

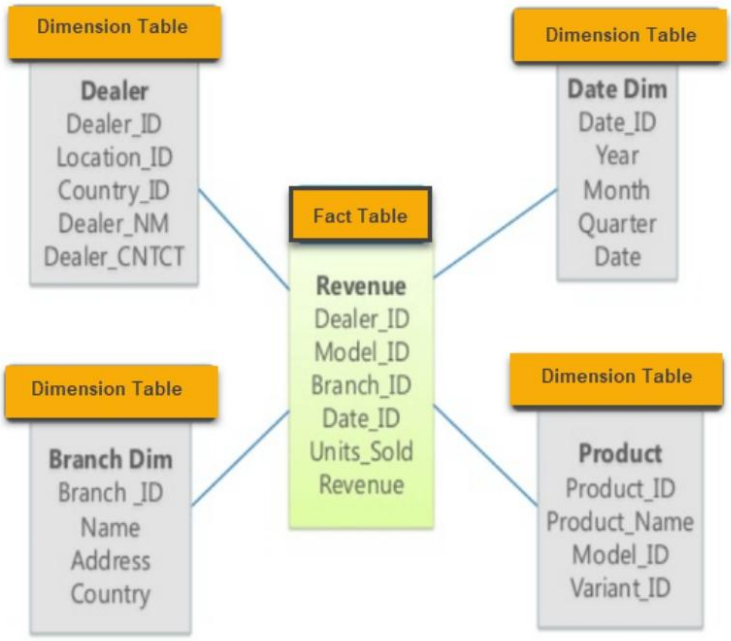
What is a Star Schema?

In the STAR Schema, the center of the star can have one fact table and a number of associated dimension tables. It is known as star schema as its structure resembles a star. The star schema is the

simplest type of Data Warehouse schema. It is also known as Star Join Schema and is optimized for querying large data sets.

Characteristics :

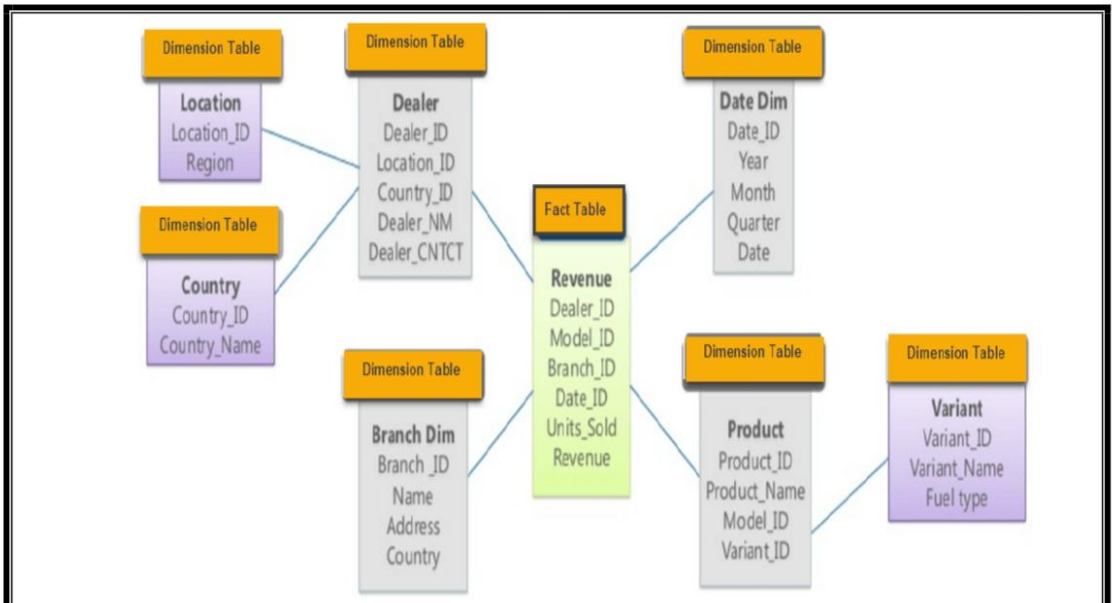
- In a Star schema, there is only one fact table and multiple dimension tables.
- In a Star schema, each dimension is represented by one-dimension table.
- Dimension tables are not normalized in a Star schema.
- Each Dimension table is joined to a key in a fact table.



What is a Snowflake Schema?

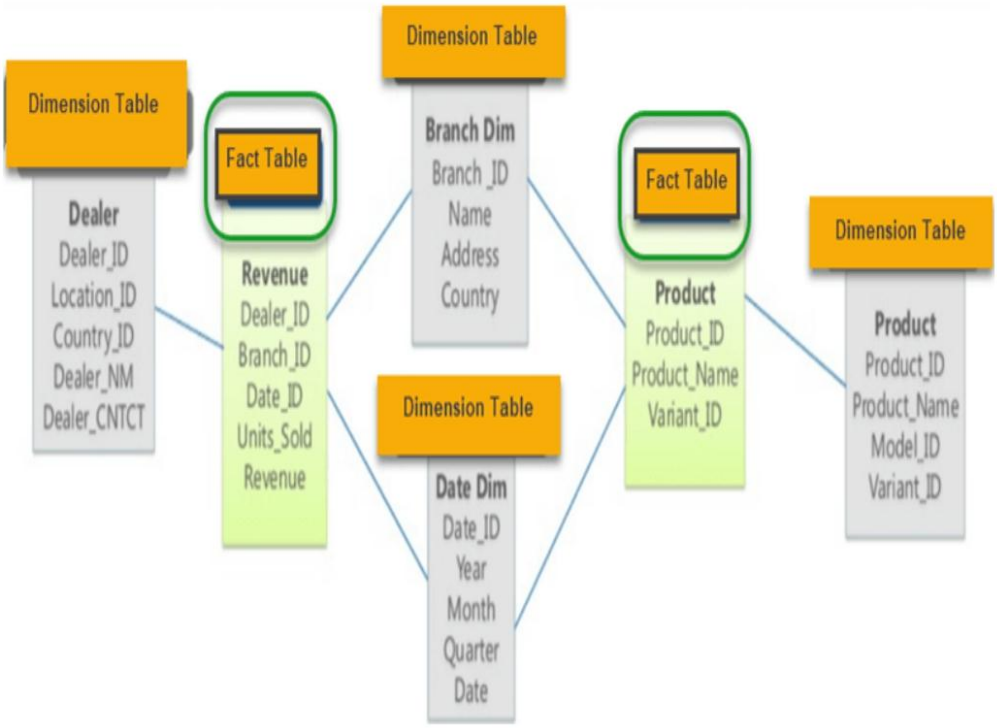
SNOWFLAKE SCHEMA is a logical arrangement of tables in a multidimensional database such that the ER diagram resembles a snowflake shape. A Snowflake Schema is an extension of a Star Schema, and it adds additional dimensions. The dimension tables are **normalized** which splits data into additional tables.

In the following example, Country is further normalized into an individual table.



What is a Galaxy schema?

A GALAXY SCHEMA contains two fact table that share dimension tables between them. It is also called Fact Constellation Schema. The schema is viewed as a collection of stars hence the name Galaxy Schema.



3. ASSESSMENT OF STUDENT LEARNING

(i) Individual Activities

(c) Individual Exercises :

Choose the type of activity

✓

Labeling / Rank ordering / **Answering Questions (may consist of Multiple choice type or True/False type)** / Problem solving

1. The star schema is composed of _____ fact table.

A. one.
B. two.
C. three.
D. four.

ANSWER: A

2. …… is a good alternative to the star schema.

A. Star schema
B. Snowflake schema
C. Fact constellation
D. Star-snowflake schema

ANSWER: C

3. The type of relationship in star schema is ……

A. many to many
B. one to one
C. one to many
D. many to one

ANSWER: C

4. Data warehouse contains_____data that is never found in the operational environment.

A. normalized.
B. informational.

C. summary.
D. denormalized.

ANSWER: C

5. **Business Intelligence and data warehousing is used for _____.**
   A. Forecasting.
   B. Data Mining.
   C. Analysis of large volumes of product sales data.
   D. All of the above.

ANSWER: D

6. **_____ is an important functional component of the metadata.**
   A. Digital directory.
   B. Repository.
   C. Information directory.
   D. Data dictionary.

ANSWER: C

7. **Data that can be modeled as dimension attributes and measure attributes are called _____ data.**
   A. Multidimensional
   B. Single dimensional
   C. Measured
   D. Dimensional

Answer: A

8. **Fact constellation is also known as _____.**
   A. Star Schema
   B. Snowflake Schema
   C. Micro Schema
   D. Galaxy Schema

Answer : D

9. **The dimension tables describe the _____.**
   A. entities.
   B. facts.
   C. keys & attributes
   D. units of measures.

Answer : C

10. **_____describes the data contained in the data warehouse.**

    A. Relational data.
    B. Operational data.
    C. Metadata.
    D. Informational data.

ANSWER: C

- Include the questionnaire for the chosen activity – **Attached Sample Response sheet**
- Attach the response of the students – **Attached Evaluation of Student Responses sheet**

Prepared By
(Dr. J. Sutha)
Course Instructor

Approved By
HoD-CSE

FEEDBACK

Alumni Feedback – Curriculum

AAA COLLEGE OF ENGINEERING AND TECHNOLOGY

Alumni Feedback on Curriculum - Feedback Analysis Report

Academic Year : 2021-2022 Report Date : 11-01-2022 From : 11/12/2021 To : 12/10/2021

S.No	Question's	Excellent	Very Good	Good	Fair	Poor	Total Weightage	Percentage	3-Scale Weightage
1	How do you rate relevance of the courses in relation to the program?	127	70	34	0	0	1017	88.05%	2.64
2	How do you rate the sequence of the courses included into the programs?	101	83	46	1	0	977	84.59%	2.54
3	How do you rate the competencies in relation to the course content?	115	53	60	2	1	972	84.16%	2.52
4	How do rate the sequence of the topics in the units?	108	73	46	4	0	978	84.68%	2.54
5	Rate the offering of the in relation to the specialization streams?	110	72	44	5	0	980	84.85%	2.55
6	How do you rate the offering of the electives in relation to the Technological advancements?	113	70	46	2	0	987	85.45%	2.56

S.No	Question's	Excellent	Very Good	Good	Fair	Poor	Total Weightage	Percentage	3-Scale Weightage
7	How do you rate the courses which are skills related suiting to the Industry included into the programs?	108	66	57	0	0	975	84.42%	2.53
8	How do you rate the domain used for designing the experiments in terms of the suitability of the Tools to the domain?	106	76	43	4	2	973	84.24%	2.53
9	How do you rate the experiments in terms of their relevance to the real life application?	114	62	49	5	1	976	84.50%	2.54
10	How do you rate the courses that you have learnt in relation to your current Job	111	71	45	4	0	982	85.02%	2.55
AVERAGE SCORE							981.70	85.00%	2.55

Authorized Signature

Authorized Person

Dr. M. Sekar, M.E.,Ph.D.
Principal
AAA College of Engineering and Technology
Amathur, Sivakasi - 626 005.

AAA College of Engg. & Tech. Sivakasi

AAA COLLEGE OF ENGINEERING & TECHNOLOGY
(An ISO 9001: 2015 Certified Institution)
(Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai)
Amathur, Sivakasi - 626 005.

Date: 21.10.2021

Action Taken Report for the Alumni Feedback on curriculum

Academic Year 2020-2021

S.No	Particulars	Action Taken	Implementation
1.	How do you rate the competencies in relation to the course content?	It is decided to conduct more training program to students through various center of excellences.	The training program were conducted to the students to increase their competency level.
2.	How do you rate the domain used for designing the experiments in terms of the suitability of the Tools to the domain?	It is informed to provide some simulation experiments in all lab subjects as the content beyond syllabus.	Few simulation experiments are done as content beyond syllabus.
3.	How do you rate the experiments in terms of their relevance to the real life application?	It is decided to give hardware based mini projects to students.	Few projects were applied for funding in various funding agencies.
4.	How do you rate the courses which are skills related suiting to the Industry included into the programs?	Principles of Management and Professional Ethics in Engineering are offered to the students which is essential for their career.	During the course case studies are discussed in the class for learning from the past.

Prepared by

Principal

Dr. M. Sekar, M.E.,Ph.D.
Principal
AAA College of Engineering and Technology
Amathur, Sivakasi - 626 005.

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3. Governing Council File
4. IQAC File

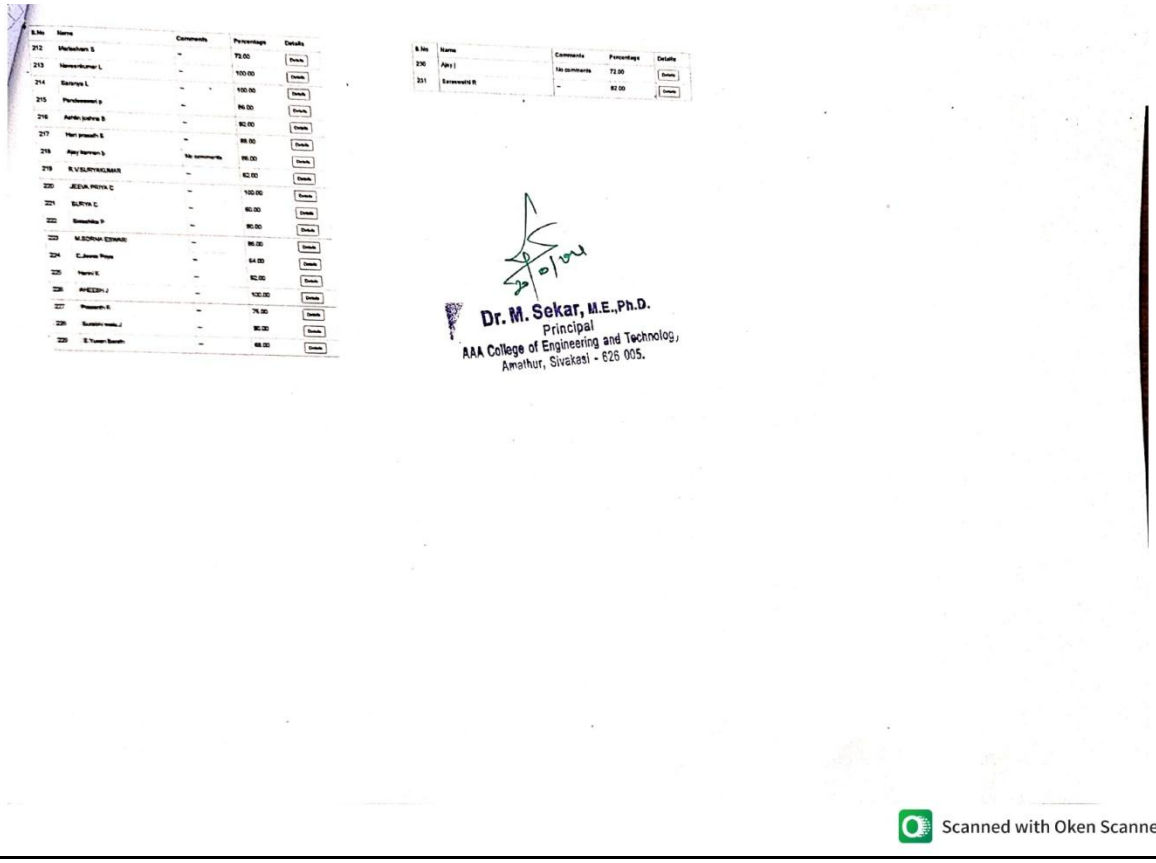
AAA COLLEGE OF ENGINEERING AND TECHNOLOGY

Feedback :Alumni Feedback on Curriculum Info

Academic Year : 2020-2021 **Report Date : 01-11-2022** **From : 11/12/2021** **To : 12/10/2021**

S.No	Name	Comments	Percentage	Details
1	Paulmani R	--	92.00	Details
2	AJEETH KUMAR S	--	82.00	Details
3	Balan M	--	98.00	Details
4	ARJUN B	--	100.00	Details
5	M.RUBAN SAKTHI	--	100.00	Details
6	Lakshmanaprabhu	--	88.00	Details
7	Dharmaraj G	--	100.00	Details
8	Sudha T	--	88.00	Details
9	953716114022	--	68.00	Details
10	GAYATHRI R	--	80.00	Details
11	SELVAPRAKASH K	--	60.00	Details
12	Manikandan T	--	90.00	Details
13	ABISHEK	--	92.00	Details

S.No	Name	Comments	Percentage	Details
14	D.SAMUEL RAJAN	--	100.00	Details
15	L. RAMASUBRAMAINAN	--	100.00	Details
16	SANKARESWARI S	--	74.00	Details
17	Prabhu M	--	68.00	Details
18	Arunkumar t	No comments	68.00	Details
19	DRAVID PRASAD L	--	100.00	Details
20	ARUNRAJ G	--	70.00	Details
21	K.pandiyaraj	--	72.00	Details
22	P.MANIKANDAN	--	100.00	Details
23	Ajith kumar M N J	--	86.00	Details
24	M.karthik andiappan	--	100.00	Details
25	Gowthamraj R	--	82.00	Details
26	KISHORE KUMAR.S	--	90.00	Details
27	Arulkumaran T	--	100.00	Details
28	DHUSHIMA M	--	78.00	Details
29	ASHLIN JOSHNA B	--	80.00	Details
30	Sowmiya M	--	90.00	Details
31	POOJA S	--	78.00	Details



S.No	Name	Comments	Percentage	Details
212	Mahesh S	-	72.00	Details
213	Naveenkumar L	-	100.00	Details
214	Saranya L	-	100.00	Details
215	Pandeeswari p	-	86.00	Details
216	Ashik Jasha S	-	92.00	Details
217	Hari prasath S	-	88.00	Details
218	Ajay kannan S	No comments	86.00	Details
219	R.V.SURYAKUMAR	-	82.00	Details
220	JEEVA PRIYA C	-	100.00	Details
221	SURIYA C	-	90.00	Details
222	Sreeshka P	-	90.00	Details
223	M.SORNA ESWARI	-	86.00	Details
224	C.Aswini Priya	-	64.00	Details
225	Hariss K	-	92.00	Details
226	AHEESH J	-	100.00	Details
227	Prasanth K	-	76.00	Details
228	Sundara mala J	-	90.00	Details
229	S.Yuvan Sanath	-	88.00	Details

S.No	Name	Comments	Percentage	Details
230	Ajay j	No comments	72.00	Details
231	Saraswathi R	-	82.00	Details

Dr. M. Sekar, M.E.,Ph.D.
Principal
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Amathur, Sivakasi - 626 005.

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Parents Feedback – Curriculum

AAA COLLEGE OF ENGINEERING AND TECHNOLOGY

Parents Feedback on Curriculum - Feedback Analysis Report

Academic Year : 2020-2021 **Report Date : 11-01-2022** **From : 11/12/2021** **To : 12/10/2021**

S.No	Question's	Excellent	Very Good	Good	Fair	Poor	Total Weightage	Percentage	3-Scale Weightage
1	How do you rate the program that your ward is undergoing in terms of the load of the courses in different semesters?	223	132	96	3	1	1938	**85.00%**	2.55
2	How do you rate the availability of the Text and reference books in the Market?	166	211	75	3	0	1905	**83.55%**	2.51
3	How do you rate the quality and relevance of the courses included into the semester?	204	155	93	3	0	1925	**84.43%**	2.53

S.No	Question's	Excellent	Very Good	Good	Fair	Poor	Total Weightage	Percentage	3-Scale Weightage
4	How do you rate the treatment of the students by the faculty irrespective of the background of the student that includes Gender, cast, community creed etc. in teaching and evaluation?	191	179	81	4	0	1922	**84.30%**	2.53
5	How do you rate ambience of the AAACET for effective delivery of the academic programs?	199	156	96	2	2	1913	**83.90%**	2.52
6	How do you rate the courses in terms of their relevance to the latest technologies or future technologies?	163	186	99	7	0	1870	**82.02%**	2.46

S.No	Question's	Excellent	Very Good	Good	Fair	Poor	Total Weightage	Percentage	3-Scale Weightage
7	How do you rate the programs based on the comfort of your ward in coping with the workload?	184	161	105	4	1	1888	**82.81%**	2.48
8	How do you rate the quality of teaching in the AAACET?	152	191	107	5	0	1855	**81.36%**	2.44
9	How do you rate the outcomes that your ward has achieved from the courses	191	157	104	1	2	1899	**83.29%**	2.50
10	How do you rate the transparency of the evaluation system in the AAACET?	168	181	99	4	3	1872	**82.11%**	2.46
11	Rate the ability of your ward on Communication	183	171	97	4	0	1898	**83.25%**	2.50
12	Does the AAACET give importance to moral and ethical values	163	206	82	3	1	1892	**82.98%**	2.49

S.No	Question's	Excellent	Very Good	Good	Fair	Poor	Total Weightage	Percentage	3-Scale Weightage
13	Did your ward posses the knowledge on contemporary issues?	161	171	118	5	0	1853	**81.27%**	2.44
14	Did your ward acquire the use of necessary technic skills in modern tool usage?	177	185	91	2	0	1902	**83.42%**	2.50
AVERAGE SCORE							**1,895.14**	**83.12%**	**2.49**

AAA College of Engg. & Tech., Sivakasi

Authorized Signature

Authorized Person

Dr. M. Sekar, M.E.,Ph.D.
Principal
AAA College of Engineering and Technology
Amathur, Sivakasi - 626 005.

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Amathur, Sivakasi - 626 005.

Date: 21.10.2021

Action Taken Report for the Parents Feedback on curriculum

Academic Year 2020-2021

S.No	Particulars	Action Taken	Implementation
1.	Did your ward possess the knowledge on contemporary issues?	Periodic journals and magazines were purchased for central library. Students are instructed to read daily newspaper regularly.	Library hour is allotted in timetable. Students are motivated to read the journals and magazines.
2.	How do you rate the quality of teaching in the AAACET?	1. Google classroom platform created for all subjects. 2. Innovative teaching methodology followed for all units in each subjects.	Faculty created a google classroom for their subjects and updates it regularly.

Prepared by

Principal

Dr. M. Sekar, M.E.,Ph.D.
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AAA College of Engineering and Technology
Amathur, Sivakasi - 626 005.

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AAA COLLEGE OF ENGINEERING AND TECHNOLOGY

Feedback :Parents Feedback on Curriculum Info

Academic Year : 2020-2021 **Report Date : 01-11-2022** **From : 11/12/2021** **To : 12/10/2021**

S.No	Name	Comments	Percentage	Details
1	Vijayalakshmi	--	75.71	Details
2	S.Pandiarajan	--	65.71	Details
3	LOGARAJ H	--	90.00	Details
4	SANTHANALAKSHMI A	--	90.00	Details
5	JOHN MARTIN X	No	94.29	Details
6	B.Swetha	--	78.57	Details
7	Subbulakshmi	Nothing	90.00	Details
8	M.Rathi devi	--	77.14	Details
9	MUTHU KUMAR M	No	95.71	Details
10	SADAIYANDI P	--	95.71	Details
11	KARUPPIAH A	--	87.14	Details
12	Naveenkumar	--	97.14	Details
13	PONMATHI P	No	98.57	Details

S.No	Name	Comments	Percentage	Details
14	S.Sureshkumar	--	77.14	Details
15	SATHISH KUMAR CR	--	90.00	Details
16	Arumugam.S	--	95.71	Details
17	MANIKANDAN A	--	97.14	Details
18	A.SAmpath kumar	--	81.43	Details
19	L Pavithra	--	74.29	Details
20	A.Ramarpandiyan	--	85.71	Details
21	K.MUTHUPANDI	--	92.86	Details
22	M.Rameshkumar	--	60.00	Details
23	Saravana Kumaran	--	82.86	Details
24	S.Muthu	--	90.00	Details
25	G.kaliraj	No	60.00	Details
26	Hari harapandiyan	--	60.00	Details
27	M.subramanian	No	60.00	Details
28	Selvadurai A	--	75.71	Details
29	AMUTHA. B	--	94.29	Details
30	Rajkumar-Sathyamoorthy	--	75.71	Details

S.No	Name	Comments	Percentage	Details
31	BALA SUNDARA MOORTHY M	--	98.57	Details
32	Kathirvelan s	--	82.86	Details
33	Dhilip kumar	--	88.57	Details
34	GANESAN M	--	80.00	Details
35	Sivakumar	--	81.43	Details
36	Muthusamy	--	61.43	Details
37	Ponmathi	--	84.29	Details
38	MUTHUKRISHNAN R	--	75.71	Details
39	Sudha A	--	90.00	Details
40	Vairamani	--	82.86	Details
41	MADHUMITHA D S	No	95.71	Details
42	R.RAMAKRISHNAN	VERY GOOD	88.57	Details
43	ARJUN. B	--	88.57	Details
44	G.Baciyaraj	--	94.29	Details
45	Murugan	--	67.14	Details
46	SORNA LAXMI	--	90.00	Details
47	Chairman rajan.L	--	94.29	Details
48	Rathina raja S	--	90.00	Details

S.No	Name	Comments	Percentage	Details
49	Nagarajan R	--	100.00	Details
50	K.BALAMURUGAN	--	95.71	Details
51	JAWAHAR A	--	80.00	Details
52	Dharmalingam.P	--	98.57	Details
53	M.Durgadevi	--	74.29	Details
54	GOKUL D	No	95.71	Details
55	Yogarajan.P	--	87.14	Details
56	DRAVIDPRASAD. L	--	92.86	Details
57	Siva sankari J	--	90.00	Details
58	A. Prince shalem	Very usefull	100.00	Details
59	Laksham.A.S	--	95.71	Details
60	K.G.Saravana kumar	--	81.43	Details
61	M.Sai Janani	--	100.00	Details
62	M.Kanniyarai	--	75.71	Details
63	MANI SANKAR V	--	100.00	Details
64	Selva Ganesh S	Good	100.00	Details
65	Shrisumugi	--	95.71	Details
66	VENKATESAN K	--	90.00	Details

S.No	Name	Comments	Percentage	Details
424	R.DineshKumar	–	71.43	Details
425	G.Maheswaran	–	91.43	Details
426	ARUN R	No	91.43	Details
427	Manikandan,T	–	95.71	Details
428	A.chandramohan	–	82.86	Details
429	Sakthimanikandan.M	Usefull	67.14	Details
430	GOWTHAM R	No	95.71	Details
431	Chinna karuppasamy	–	80.00	Details
432	Gnanaguru.D	–	94.29	Details
433	P.Murugavel	–	82.86	Details
434	K. Murali	–	78.57	Details
435	GIRIDHARAN. B	–	81.43	Details
436	Karuppasamy.M	–	82.86	Details
437	I. SEBASTIAN	–	81.43	Details
438	BALAMURUGAN. K	–	85.71	Details
439	Sudha A	–	91.43	Details
440	Revathi S	–	90.00	Details
441	PARAMASIVAM P	–	71.43	Details

S.No	Name	Comments	Percentage	Details
442	P.Thangaraj	–	100.00	Details
443	SAM P ANBUMANI S	–	77.14	Details
444	PERUMAL SAMY	–	97.14	Details
445	D Paul Stanley	–	85.71	Details
446	T.V.Thomas	–	90.00	Details
447	Subbaraj P	No	90.00	Details
448	T.Vasuki	–	94.29	Details
449	RAJAGOPAL S	–	92.86	Details
450	G.Saravanakumar	–	81.43	Details
451	A.S Thilip kumar	–	81.43	Details
452	P.Palmurugan	–	81.43	Details
453	Sabari Shri	–	84.29	Details

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Students Feedback – Curriculum

AAA COLLEGE OF ENGINEERING AND TECHNOLOGY

Students Feedback on Curriculum - Feedback Analysis Report

Academic Year : 2020-2021 **Report Date : 11-01-2022** **From : 11/12/2021** **To : 12/01/2021**

S.No	Question's	Excellent	Very Good	Good	Fair	Poor	Total Weightage	Percentage	3-Scale Weightage
1	How do you rate the sequence of the Courses that you have studied are in sequence to what you have studied in the previous semester?	417	189	133	2	1	3245	**87.47%**	2.62
2	How do you rate the syllabus of the courses that you have studied in relation to the competencies expected out of the course?	233	357	145	5	2	3040	**81.94%**	2.46

S.No	Question's	Excellent	Very Good	Good	Fair	Poor	Total Weightage	Percentage	3-Scale Weightage
3	How do you rate the relevance of the units in Syllabus relevant to the course?	368	222	141	8	3	3170	**85.44%**	2.56
4	How do you rate the sequence of the units in the course?	245	346	143	5	3	3051	**82.24%**	2.47
5	How do you rate the allocation of the credits to the courses?	344	252	138	6	2	3156	**85.07%**	2.55
6	How do you rate the distribution of the contact hours among the course components (L-T-P)?	240	341	150	8	3	3033	**81.75%**	2.45
7	How do you rate the offering of the electives in terms of their relevance to the specialization streams?	343	248	142	8	1	3150	**84.91%**	2.55

S.No	Question's	Excellent	Very Good	Good	Fair	Poor	Total Weightage	Percentage	3-Scale Weightage
8	How do you rate the electives offered in relation to the Technological advancements?	239	346	146	8	3	3036	**81.83%**	2.45
9	How do you rate the relevance of the Text Books and reference books by their International recognition to the Courses?	345	245	136	14	2	3143	**84.72%**	2.54
10	Rate the Size of syllabus in terms of the load on the student	244	335	145	14	4	3027	**81.59%**	2.45
11	Rate the courses in terms of extra learning or self learning considering the design of the courses	331	262	127	16	6	3122	**84.15%**	2.52

S.No	Question's	Excellent	Very Good	Good	Fair	Poor	Total Weightage	Percentage	3-Scale Weightage
12	Rate the courses in terms of sequence of offering considering whether the preceding courses have been covered.	259	326	139	10	8	3044	**82.05%**	2.46
13	How do you Rate the loading of the courses in a semester?	328	260	138	10	6	3120	**84.10%**	2.52
14	How do you rate the evaluation scheme designed for each of the course?	267	313	145	13	4	3052	**82.26%**	2.47
15	How do you rate the objectives stated for each of the course?	312	256	160	10	4	3088	**83.23%**	2.50
16	How do you rate competencies expected out of the course?	265	321	143	10	3	3061	**82.51%**	2.48

S.No	Question's	Excellent	Very Good	Good	Fair	Poor	Total Weightage	Percentage	3-Scale Weightage
17	How do you rate the composition of the courses in terms of Basic science, Engineering science, Humanities, Discipline core, discipline elective, open elective, project etc.?	360	246	129	5	2	3183	**85.80%**	2.57
18	How do you rate the percentage of courses having LAB components?	284	299	144	12	3	3075	**82.88%**	2.49
19	How do you rate the domain used for designing the experiments for the LAB components?	333	246	144	16	3	3116	**83.99%**	2.52
20	How do you rate the experiments in relation to the real life Applications?	270	309	134	20	9	3037	**81.86%**	2.46

S.No	Question's	Excellent	Very Good	Good	Fair	Poor	Total Weightage	Percentage	3-Scale Weightage
AVERAGE SCORE							3,097.45	83.49%	2.50

Authorized Signature

Authorized Person

AAA College of Engg Sivakasi

Dr. M. Sekar, M.E.,Ph.D.
Principal
AAA College of Engineering and Technology
Amathur, Sivakasi - 626 005.

AAA COLLEGE OF ENGINEERING & TECHNOLOGY

(An ISO 9001: 2015 Certified Institution)
(Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai)
Amathur, Sivakasi - 626 005.

Date: 21.10.2021

Action Taken Report for the Student Feedback on curriculum

Academic Year 2020-2021

S.No	Particulars	Action Taken	Implementation
1.	How do you rate the syllabus of the courses that you have studied in relation to the competencies expected out of the course?	1. Mini projects were given to the students. 2. In theory courses content beyond syllabus were included to enhance the competencies of the students. 3. In Laboratory courses the content beyond syllabus experiments are included.	1. Content Beyond Syllabus experiments are conducted and students write in their record notebook. 2. Students were motivated to do mini projects.
2.	How do you rate the distribution of the contact hours among the course components (L-T-P)?	The periods are uniformly distributed for lecture, tutorial and practical based on the credits allotted for the course by the university.	Faculty follows class regular time table.
3.	Rate the Size of syllabus in terms of the load on the student	Due to Covid pandemic the students were unable to concentrate their full syllabus. It was planned to conduct revision classes.	The revision classes were conducted by the faculty.
4.	How do you rate the experiments in relation to the real life applications?	Students acquires basic knowledge by doing experiments. To get exposure on real life applications students are given opportunities to go for industrial visits and internships.	Due to Covid pandemic and restrictions few students gone for industrial visit and internship.

21/10

Prepared by

Copy to:

1. All HoDs
2. Academic Council File
3. Governing Council File
4. IQAC File

Principal

Dr. M. Sekar, M.E.,Ph.D.
Principal
AAA College of Engineering and Technology
Amathur, Sivakasi - 626 005.

AAA COLLEGE OF ENGINEERING AND TECHNOLOGY

Feedback :Students Feedback on Curriculum Info

Academic Year : 2020-2021 **Report Date : 01-11-2022** **From : 11/12/2021** **To : 12/01/2021**

S.No	Name	Comments	Percentage	Details
1	Karthickrajah K A	--	78.00	Details
2	Shrisumugi s	--	90.00	Details
3	Surya Prakash K R	--	98.00	Details
4	RAJALAKSHMI S	--	77.00	Details
5	G.Karthika	--	76.00	Details
6	Mahendra Varman S	--	80.00	Details
7	S.PalaniSankar	--	88.00	Details
8	Saravana akash.L	No	89.00	Details
9	M.Muthu Kumar	--	99.00	Details
10	Prakash K	--	87.00	Details
11	A.Sampath kumar	--	75.00	Details
12	S.Parthiban	--	100.00	Details
13	K.Poorna porkamalam	--	100.00	Details

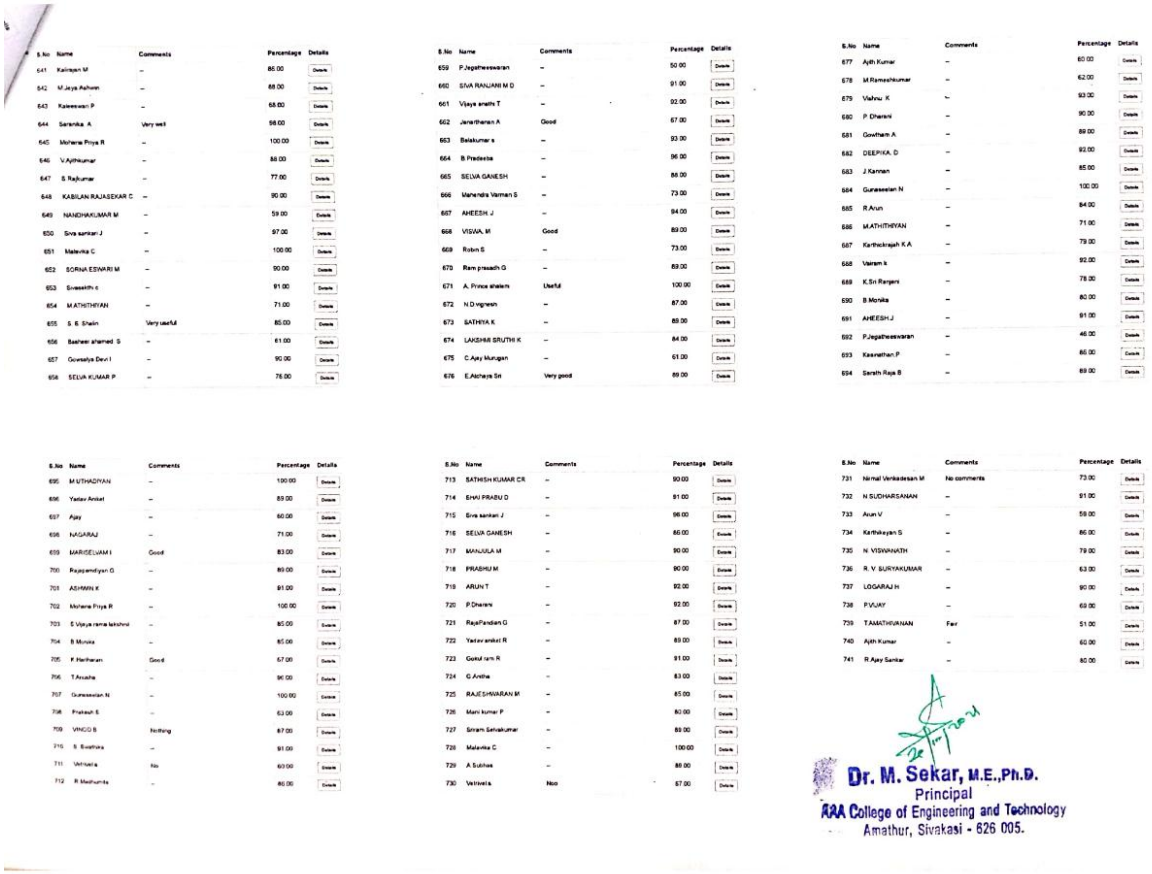
S.No	Name	Comments	Percentage	Details
14	Ravi Kumar N	--	100.00	Details
15	Jailakshman D	--	61.00	Details
16	SANTHANALAKSHMI A	--	90.00	Details
17	KABILAN RAJASEKAR C	--	90.00	Details
18	M.Roopanraj	--	82.00	Details
19	Moniga S	--	85.00	Details
20	N.Dhanas sree	--	79.00	Details
21	Mohana Priya R	--	100.00	Details
22	T. Gayathri	--	82.00	Details
23	Vishnu	Very good	86.00	Details
24	M. Balamurugan	No	65.00	Details
25	VINOD.B	Nothing	85.00	Details
26	Ananthaesver	--	80.00	Details
27	P. Rubak	--	61.00	Details
28	S.Arunpandian	Good	60.00	Details
29	S.Pradeep	All are good	62.00	Details
30	MAGAVIGNESHKUMAR	--	100.00	Details
31	Muthupandi S	--	80.00	Details

S.No	Name	Comments	Percentage	Details
32	SHIVANI D	--	91.00	Details
33	MANJULA M	--	90.00	Details
34	Ponrajkumar. B	Very well	98.00	Details
35	JeethVyaas N	--	100.00	Details
36	A.Preethi	Good	68.00	Details
37	Gunasealan R V	--	84.00	Details
38	Ajith Kumar	--	60.00	Details
39	Selva vijay S	--	88.00	Details
40	Santhosh Paul.P	--	90.00	Details
41	M. Muneeskumar	It's nice	79.00	Details
42	S.subraman	No	60.00	Details
43	Venkat Mariammal	--	87.00	Details
44	Gokulram R	--	84.00	Details
45	LOGARAJ H	--	90.00	Details
46	N.R.KARTHICK	No	62.00	Details
47	Darwin Anto J	--	86.00	Details
48	Gowtham. R	--	91.00	Details
49	Shanmugavel murugan S	--	60.00	Details

S.No	Name	Comments	Percentage	Details
50	Prasanth R	--	80.00	Details
51	P IDHAYAKKANI	Good	86.00	Details
52	R. V. SURYAKUMAR	--	60.00	Details
53	SHIVANI D	--	92.00	Details
54	SANDHIYA R	--	90.00	Details
55	DHANVEER AHAMED B	--	73.00	Details
56	Venkatesh Praveen.R	--	92.00	Details
57	Ajay vishaal T	--	88.00	Details
58	M.ATHITHIYAN	--	71.00	Details
59	P. Karthik	--	81.00	Details
60	S.Aishwarya	--	85.00	Details
61	Kala R	--	72.00	Details
62	AMUTHA. B	--	92.00	Details
63	Nandha kumar G	--	86.00	Details
64	S.Parthiban	--	100.00	Details
65	SEEYANA NACHIAR G	Good	77.00	Details
66	BHUVANESHWARI. M	--	91.00	Details
67	Arun kumar M	--	85.00	Details

S.No	Name	Comments	Percentage	Details
68	L Pavithra	--	80.00	Details
69	E.Atchaya sri	--	91.00	Details
70	George Bejoy J	--	57.00	Details
71	Gowtham.R	--	84.00	Details
72	SURAJ RAM S	--	90.00	Details
73	Gowsalya Devi I	--	90.00	Details
74	SIVASUBRAMANIAN M	--	90.00	Details
75	N.D.vignesh	--	100.00	Details
76	AHEESH. J	--	90.00	Details
77	R.Monisha	--	100.00	Details
78	R.Monisha	--	100.00	Details
79	SHIVANI D	--	91.00	Details
80	S. Jalanthira	--	98.00	Details
81	R.karthikeyan	--	66.00	Details
82	K uma maheswari	--	83.00	Details
83	S. Sathis kanna	--	65.00	Details
84	RAJESHWARAN.M	--	85.00	Details
85	C.Ajay Murugan	--	60.00	Details

S.No	Name	Comments	Percentage	Details
86	Mahendra Varman S	--	80.00	Details
87	Vansantha vignesh	--	90.00	Details
88	D. S. Madhumitha	--	88.00	Details
89	Gowtham Raj V	--	86.00	Details
90	KALICHARAN P	Good	94.00	Details
91	VENKATESH	--	85.00	Details
92	BHUVANASRI.R	--	89.00	Details
93	BALAMURUGAN. K	--	95.00	Details
94	N.Janani	--	86.00	Details
95	Selvakumar. J	--	65.00	Details
96	A.Dineshkumar	--	42.00	Details
97	SIVASUBRAMANIAN M	--	90.00	Details
98	JANANI A	--	62.00	Details
99	Jeeva priya C	--	100.00	Details
100	P.Sivabalarakesh	--	60.00	Details
101	Pradeep P	--	71.00	Details
102	A. Prince shalem	Useful	100.00	Details
103	Karthi	--	63.00	Details



S.No	Name	Comments	Percentage	Details
641	Kalirajan M	–	86.00	Details
642	M.Jaya Ashvin	–	88.00	Details
643	Kaleeswari P	–	68.00	Details
644	Saranika A	Very well	96.00	Details
645	Mohana Priya R	–	100.00	Details
646	V.Ajithkumar	–	88.00	Details
647	S.Rajkumar	–	77.00	Details
648	KABILAN RAJASEKAR C	–	90.00	Details
649	NANDHAKUMAR M	–	59.00	Details
650	Siva sankari J	–	97.00	Details
651	Mateivka C	–	100.00	Details
652	SORNA ESWARI M	–	90.00	Details
653	Sivasakthi c	–	91.00	Details
654	M.ATHITHIYAN	–	71.00	Details
655	S. S. Shalin	Very useful	85.00	Details
656	Basheer ahamed S	–	61.00	Details
657	Gowsalya Devi I	–	90.00	Details
658	SELVA KUMAR P	–	76.00	Details

S.No	Name	Comments	Percentage	Details
659	P.Jegatheeswaran	–	50.00	Details
660	SIVA RANJANI M D	–	91.00	Details
661	Vijaya sneihi T	–	92.00	Details
662	Janatheran A	Good	67.00	Details
663	Balakumar s	–	93.00	Details
664	B.Pradeeba	–	96.00	Details
665	SELVA GANESH	–	86.00	Details
666	Manendra Varman S	–	73.00	Details
667	AHEESH J	–	84.00	Details
668	VISWA. M	Good	89.00	Details
669	Robin S	–	73.00	Details
670	Ram prasath G	–	89.00	Details
671	A. Prince shalom	Useful	100.00	Details
672	N.D.vignesh	–	87.00	Details
673	SATHIYA K	–	89.00	Details
674	LAKSHMI SRUTHI K	–	84.00	Details
675	C.Ajay Murugan	–	61.00	Details
676	E.Atchaya Sri	Very good	89.00	Details

S.No	Name	Comments	Percentage	Details
677	Ajith Kumar	–	60.00	Details
678	M.Rameshkumar	–	62.00	Details
679	Vishnu K	–	93.00	Details
680	P.Dharani	–	90.00	Details
681	Gowtham A	–	89.00	Details
682	DEEPIKA. D	–	92.00	Details
683	J.Kannan	–	85.00	Details
684	Guneseelan N	–	100.00	Details
685	R.Arun	–	84.00	Details
686	M.ATHITHIYAN	–	71.00	Details
687	Karthickrajah K A	–	79.00	Details
688	Vairam k	–	92.00	Details
689	K.Sri Ranjani	–	78.00	Details
690	B.Monika	–	80.00	Details
691	AHEESH J	–	91.00	Details
692	P.Jegatheeswaran	–	46.00	Details
693	Kasinathan.P	–	86.00	Details
694	Sarath Raja B	–	89.00	Details

S.No	Name	Comments	Percentage	Details
695	M.ATHADIYAN	–	100.00	Details
696	Yadav Aniket	–	89.00	Details
697	Ajay	–	60.00	Details
698	NAGARAJ	–	71.00	Details
699	MARISELVAM I	Good	83.00	Details
700	Rajapandiyan G	–	89.00	Details
701	ASHWIN K	–	91.00	Details
702	Mohana Priya R	–	100.00	Details
703	S.Vijaya rama lakshmi	–	85.00	Details
704	B.Monika	–	85.00	Details
705	P.Hariharan	Good	67.00	Details
706	T.Anusha	–	96.00	Details
707	Guneseelan N	–	100.00	Details
708	Prakash S	–	63.00	Details
709	VINCI S	Nothing	87.00	Details
710	S. Sivathira	–	91.00	Details
711	Vetrivel s	No	60.00	Details
712	R.Madhumita	–	86.00	Details

S.No	Name	Comments	Percentage	Details
713	SATHISH KUMAR CR	–	90.00	Details
714	BHAI PRABU D	–	91.00	Details
715	Siva sankari J	–	96.00	Details
716	SELVA GANESH	–	86.00	Details
717	MANJULA M	–	90.00	Details
718	PRABHU M	–	90.00	Details
719	ARUN T	–	92.00	Details
720	P.Dharani	–	92.00	Details
721	RajaPandian G	–	87.00	Details
722	Yadav aniket R	–	89.00	Details
723	Gokul ram R	–	91.00	Details
724	G.Anitha	–	83.00	Details
725	RAJESHWARAN M	–	85.00	Details
726	Mani kumar P	–	80.00	Details
727	Sriram Selvakumar	–	89.00	Details
728	Mateivka C	–	100.00	Details
729	A.Subhas	–	86.00	Details
730	Vetrivel s	Nice	87.00	Details

S.No	Name	Comments	Percentage	Details
731	Nirmal Venkadesan M	No comments	73.00	Details
732	N.SUDHARSANAN	–	91.00	Details
733	Arun V	–	59.00	Details
734	Karthikeyan S	–	86.00	Details
735	N. VISWANATH	–	79.00	Details
736	R. V. SURYAKUMAR	–	63.00	Details
737	LOGARAJ H	–	90.00	Details
738	P.VIJAY	–	69.00	Details
739	T.AMATHIVANAN	Fair	51.00	Details
740	Ajith Kumar	–	60.00	Details
741	R.Ajay Sankar	–	80.00	Details

Dr. M. Sekar, M.E.,Ph.D.
Principal
AAA College of Engineering and Technology
Amathur, Sivakasi - 626 005.

Industrial Visit Feedback

AAA COLLEGE OF ENGINEERNG AND TECHNOLOGY
Approved by AICTE New Delhi, Affiliated by Anna University, Chennai
DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

Industrial visit to Kerala Electrical & Allied Engineering Co. Ltd (Kochi), TRACO CABLE COMPANY LIMITED (Kochi), Keltron (Thiruvananthapuram) for Students from 22nd August to 24th August, 2019.

INDUSTRIAL FEEDBACK FORM

1. **Whether the duration for the industrial visit is sufficient?**
   [✓] Excellent [ ] Very good [ ] Good [ ] Poor
2. **Whether the company chosen for industrial visit is relevant to your branch of study?**
   [ ] Excellent [ ] Very good [ ] Good [ ] Poor
3. **Whether the accompanied faculty helped you in exposing the technical content of the industry?**
   [✓] Excellent [ ] Very good [ ] Good [ ] Poor
4. **Whether the company has arranged any resource person to explain the details of company?**
   [✓] Excellent [ ] Very good [ ] Good [ ] Poor
5. **Are you given enough time to understand the plant operations?**
   [✓] Excellent [ ] Very good [ ] Good [ ] Poor
6. **Specify the technical area related to the industry you visited.**
   [✓] Excellent [ ] Very good [ ] Good [ ] Poor
7. **Mention the time by which you were informed about the visit.**
   [ ] Excellent [✓] Very good [ ] Good [ ] Poor
8. **Are you satisfied with the hospitality provided by the company?**
   [✓] Excellent [ ] Very good [ ] Good [ ] Poor
9. **Mention your overall opinion about this visit.**
   [✓] Excellent [ ] Very good [ ] Good [ ] Poor
10. **Any other remarks :** Overall IV was excellent

Signature of the student

Program Exit Survey Analysis Report of 2016-2020 Batch

AAA COLLEGE OF ENGINEERING AND TECHNOLOGY

Program Exit Survey Mechanical Department - Feedback Analysis Report

Academic Year : 2020-2021 **Program : MECHANICAL ENGINEERING** **Report Date : 05-12-2021**
From : 11/30/2021 **To : 12/05/2021**

S.No	Question's
1	Rate your basicengineering knowledge to become a competent engineer after joining AAACET.
2	How efficient are you in analyzing complex engineering problems usingfirst principles of mathematics, natural and engineering sciences?
3	Rate your ability to designand develop solutions for complex engineering problems.
4	Rate your ability to use research basedknowledge andresearch methods to arrive at valid conclusions.
5	Rate your efficiency in using modernengineering and IT tools.
6	How better are you in assessing societal, health,safety, legal and cultural issues relevantto professionalengineering practice?
7	Rate the awareness which you have about the available resources and their judicious use without affecting the environment forsustainable development.
8	Rate your satisfaction with respect the development ofpersonal code of ethics.
9	How effectivelycan you function as a member or leader in diverse teams?
10	Rate your comfort whilespeaking in alarge group and writing effective reports and design documentation.
11	How better areyou in managing projects and utilizing funds in an effective manner?
12	Rate yourability to engage in independent and life-long learning in recent technologies.
13	Rate your ability to applythe basic knowledge to identify, formulate and solve problemsin the domainsof thermal, machine design, manufacturing and industrial engineering.
14	Rate your ability to provide solutions to complex Mechanical Engineering problems by acquiring technological inputs and managerial skills and utilizing advanced technology withthe help of modern CAD/CAM/CAE tools.
15	Rate your ability to develop mechanical and allied products with socio-economic concern by applying innovative ideas underethical and professional constraints leading to asuccessful career.

AVERAGE SCORE

P. Seenivasan

Authorized Signature

Dr. P. SEENI KANNAN, M.E., Ph.D.,
Dean & Head of the Department **Authorized Person**
Department of Mechanical Engineering
AAA College of Engineering & Technology
A.MATHUR, Virudhunagar-626 005.

1/5

AAA COLLEGE OF ENGINEERING AND TECHNOLOGY

Program Exit Survey Mechanical Department - Feedback Analysis Report

Academic Year : 2020-2021 **Program : MECHANICAL ENGINEERING** **Report Date : 05-12-2021**
From : 11/30/2021 **To : 12/05/2021**

S.No	Question's	Excellent	Very Good	Good	Fair	Poor	Total Weightage	Percentage	3-Scale Weightage
1	Rate your basic engineering knowledge to become a competent engineer after joining AAACET.	21	13	8	0	0	181	**86.19%**	2.59
2	How efficient are you in analyzing complex engineering problems using first principles of mathematics, natural and engineering sciences?	12	21	9	0	0	171	**81.43%**	2.44
3	Rate your ability to design and develop solutions for complex engineering problems.	12	19	11	0	0	169	**80.48%**	2.41

S.No	Question's	Excellent	Very Good	Good	Fair	Poor	Total Weightage	Percentage	3-Scale Weightage
4	Rate your ability to use research based knowledge and research methods to arrive at valid conclusions.	10	24	8	0	0	170	**80.95%**	2.43
5	Rate your efficiency in using modern engineering and IT tools.	13	22	7	0	0	174	**82.86%**	2.49
6	How better are you in assessing societal, health, safety, legal and cultural issues relevant to professional engineering practice?	13	21	8	0	0	173	**82.38%**	2.47
7	Rate the awareness which you have about the available resources and their judicious use without affecting the environment for sustainable development.	13	21	7	1	0	172	**81.90%**	2.46

S.No	Question's	Excellent	Very Good	Good	Fair	Poor	Total Weightage	Percentage	3-Scale Weightage
8	Rate your satisfaction with respect the development of personal code of ethics.	12	19	11	0	0	169	**80.48%**	2.41
9	How effectively can you function as a member or leader in diverse teams?	10	20	11	1	0	165	**78.57%**	2.36
10	Rate your comfort while speaking in a large group and writing effective reports and design documentation.	11	24	6	1	0	171	**81.43%**	2.44
11	How better are you in managing projects and utilizing funds in an effective manner?	8	22	12	0	0	164	**78.10%**	2.34
12	Rate your ability to engage in independent and life-long learning in recent technologies.	11	24	7	0	0	172	**81.90%**	2.46

S.No	Question's	Excellent	Very Good	Good	Fair	Poor	Total Weightage	Percentage	3-Scale Weightage
13	Rate your ability to apply the basic knowledge to identify, formulate and solve problems in the domains of thermal, machine design, manufacturing and industrial engineering.	18	18	5	1	0	179	**85.24%**	2.56
14	Rate your ability to provide solutions to complex Mechanical Engineering problems by acquiring technological inputs and managerial skills and utilizing advanced technology with the help of modern CAD/CAM/CAE tools.	19	17	6	0	0	181	**86.19%**	2.59

S.No	Question's	Excellent	Very Good	Good	Fair	Poor	Total Weightage	Percentage	3-Scale Weightage
15	Rate your ability to develop mechanical and allied products with socio-economic concern by applying innovative ideas under ethical and professional constraints leading to a successful career.	17	14	9	2	0	172	81.90%	2.46
AVERAGE SCORE							172.20	82.00%	2.46

Authorized Signature

Authorized Person

Dr. P. SEENI KANNAN, M.E., Ph.D.,
Dean & Head of the Department
Department of Mechanical Engineering
AAA College of Engineering & Technology
AMATHUR, Virudhunagar-626 005.

Alumni Survey Report of 2016-2020 Batch

12/21/21, 2:00 PM

AAA COLLEGE OF ENGINEERING AND TECHNOLOGY

Mechanical Alumni Survey - Feedback Analysis Report

Academic Year : 2020-2021 **Program : MECHANICAL ENGINEERING** **Report Date : 21-12-2021**

From : 12/19/2021 **To : 12/21/2021**

S.No	Question's
1	Impact of Mathematics and Science insolving engineering problems.
2	Ability to analyze problems forproviding suitable solutions.
3	Design solutions forcomplex engineeringproblems.
4	Identifying andfinding appropriate solutions by conducting investigations.
5	Usage of modern tools inengineering activities.
6	Training givenin the collegeto satisfy the awareness ofpolitical, Economical issues relatedto industry.
7	Training to understand theglobal scenariowith respect toindustry.
8	Ability to applyethical conceptto solving engineering problems.
9	Leadershipquality and Communication skills yielded inour college.
10	Proficiency inexhibits skillsfor updating technology.
11	Program aids in securing jobsin the field of design, implementationand research.
12	Training helpsto progress through advanced degree or certificate programs.
13	Ability to applythe basic knowledge to identify, formulate and solve problemsin the domains of thermal, machine design, manufacturingand industrial engineering.
14	Ability to provide solutions to complex Mechanical Engineering problems by acquiring technologicalinputs and managerial skills and utilizing advanced technology withthe help of modern CAD/CAM/CAE tools.
15	Ability to develop mechanical and allied products with socio-economicconcern by applying Innovative ideas underethical and professionalconstraints leading to asuccessful career.

Authorized Signature

Dr. P. SEENI KANNAN, M.E., Ph.D.,
Dean & Head of the Department
Department of Mechanical Engineering
AAA College of Engineering & Technology
AMATHUR, Virudhunagar-626 005.

Authorized Person

1/5

AAA COLLEGE OF ENGINEERING AND TECHNOLOGY

Mechanical Alumni Survey - Feedback Analysis Report

Academic Year : 2020-2021 **Program : MECHANICAL ENGINEERING** **Report Date : 21-12-2021**
From : 12/19/2021 **To : 12/21/2021**

S.No	Question's	Excellent	Very Good	Good	Fair	Poor	Total Weightage	Percentage	3-Scale Weightage
1	Impact of Mathematics and Science in solving engineering problems.	35	8	0	0	0	207	**96.28%**	2.89
2	Ability to analyze problems for providing suitable solutions.	34	9	0	0	0	206	**95.81%**	2.87
3	Design solutions for complex engineering problems.	30	12	1	0	0	201	**93.49%**	2.80
4	Identifying and finding appropriate solutions by conducting investigations.	30	12	1	0	0	201	**93.49%**	2.80

S.No	Question's	Excellent	Very Good	Good	Fair	Poor	Total Weightage	Percentage	3-Scale Weightage
5	Usage of modern tools in engineering activities.	30	11	2	0	0	200	**93.02%**	2.79
6	Training given in the college to satisfy the awareness of political, Economical issues related to industry.	27	12	4	0	0	195	**90.70%**	2.72
7	Training to understand the global scenario with respect to industry.	29	10	4	0	0	197	**91.63%**	2.75
8	Ability to apply ethical concept to solving engineering problems.	27	11	5	0	0	194	**90.23%**	2.71
9	Leadership quality and Communication skills yielded in our college.	27	13	2	1	0	195	**90.70%**	2.72
10	Proficiency in exhibits skills for updating technology.	31	10	2	0	0	201	**93.49%**	2.80

S.No	Question's	Excellent	Very Good	Good	Fair	Poor	Total Weightage	Percentage	3-Scale Weightage
11	Program aids in securing jobs in the field of design, implementation and research.	32	10	0	0	1	201	**93.49%**	2.80
12	Training helps to progress through advanced degree or certificate programs.	29	13	1	0	0	200	**93.02%**	2.79
13	Ability to apply the basic knowledge to identify, formulate and solve problems in the domains of thermal, machine design, manufacturing and industrial engineering.	31	11	1	0	0	202	**93.95%**	2.82

S.No	Question's	Excellent	Very Good	Good	Fair	Poor	Total Weightage	Percentage	3-Scale Weightage
14	Ability to provide solutions to complex Mechanical Engineering problems by acquiring technological inputs and managerial skills and utilizing advanced technology with the help of modern CAD/CAM/CAE tools.	31	10	2	0	0	201	**93.49%**	2.80
15	Ability to develop mechanical and allied products with socio-economic concern by applying innovative ideas under ethical and professional constraints leading to a successful career.	24	13	5	1	0	189	**87.91%**	2.64

S.No	Question's	Excellent	Very Good	Good	Fair	Poor	Total Weightage	Percentage	3-Scale Weightage
AVERAGE SCORE							199.33	92.71%	2.78

Authorized Signature

Authorized Person

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