

## Schema

LECTURER	<u>L-Code</u>	FirstName	Last-Name
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TOPIC	<u>T-Code</u>	Description
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LECTURE	<u>T-Code</u>	<u>Date</u>	<u>L-Code</u>	Stud-Count
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T-Code refers TOPIC and L-Code refers LECTURER

ASSESSMENT	<u>T-code</u>	<u>Date</u>	<u>S-code</u>	Mark
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T-Code and Date refers LECTURE; S-Code refers Student

STUDENT	<u>S-Code</u>	FirstName	Last-Name
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Instances

## LECTURER

<u>L-Code</u>	FirstName	Last-Name
201	Arun	Kumar
202	Balaji	Ganesh
203	Chitra	Vasudevan
204	Devi	Priya
205	Eliza	Edwards

## LECTURE

<u>T-Code</u>	Date	L-Code	Stud-Count
301	13.12.2018	201	10
302	18.12.2018	203	15
303	02.01.2019	202	12
304	21.01.2019	205	10
305	01.02.2019	201	14
306	28.01.2019	201	12

## TOPIC

<u>T-Code</u>	Description
301	ER Modelling
302	Merge Sort
303	Scheduling Algorithms
304	Queuing techniques
305	Normalization

## ASSESSMENT

T-code	Date	S-code	Mark
301	13.12.2018	101	8
301	13.12.2018	105	10
301	13.12.2018	110	4
302	18.12.2018	102	6
302	18.12.2018	108	7
302	18.12.2018	105	5
303	02.01.2019	106	8
303	02.01.2019	103	9
303	02.01.2019	101	3
304	21.01.2019	107	5
304	21.01.2019	110	7
304	21.01.2019	109	8
305	01.02.2019	106	4
305	01.02.2019	103	9
305	01.02.2019	105	7
305	01.02.2019	108	6

## STUDENT

<u>S-Code</u>	FirstName	Last-Name
101	Abhimanyu	ElamPirai
102	Upasana	Nataraj
103	Darsh	Vasudevan
104	Saatvik	Sadashiv
105	Nainika	Paavendan
106	Jagan	Hamsavahini
107	Harshada	Krishnan
108	Niranjana	Ganesh
109	Raakesh	Raghupati
110	Nakul	Raghavendra

Answer all the queries.

1. Create the relations with suitable domain and referential constraints.
2. Populate the instances to the created tables.
3. [String function] List the students who have the letter "n" in their name, and it ends with a.
4. [Update] The Lecturer Devi have taken a lecture on "Queuing theory" on 08.02.2019.
5. [Aggregate function & join] Find the count of assessments each lecturer has given. Indicate blank if there are no assessments.
6. [Aggregate function & join] Which lecturer have covered highest count of lectures?
7. [Aggregate function & join] Find the maximum marks obtained by the student in each course. Display the Student's first name, description of the topic and the mark.
8. [Join] Find the name of the students who have attended more than two tests.
9. [Join] Select the code number, the first name and the last name of the students who were never assessed on a topic with a description "Normalization".
10. [Aggregate function] Find the topic which is attempted by highest number of students.
11. [Subquery] Find the second highest mark in the topic "Scheduling Algorithms".
12. [Set Membership] Find the teachers who have given at least one assessment.
13. [Set Operator] Find the lecturer and Student who share the same last name.
14. [Date Functions] Find the assessments conducted in the first week of January.
15. [Joins] Which lecture have completed without any assessments?
16. [View] Display a grade sheet with First name of the lecturer, Description of the topic and marks for all the assessments taken by students whose name starts either at N or S.
17. [Updatable View] Find the assessments given by the lecturer Balaji.
18. [View] List the topic name and the corresponding marks obtained in the assessment by Abhimanyu.
19. [Update] The teacher Eliza have decided to postpone the assessment date to next Thursday. Update the table appropriately. 25 students attended the class. Update the topic and lecture tables accordingly.
20. [Aggregate function] Find the top three topics which has high student strength.

-- All the Best --