

IQRA NATIONAL UNIVERSITY

30th June, 2020

NAME

Mian Daud Jan.

CLASS

BS-SE(A), 4th SEM.

ID

14468

SUBJ

Database (theory)

TEACHER

RIMSHA KHAN

Final Examinations

Date: 30th June, 2020

QUESTION #01

Perform Normalization upto 3rd Normal Form --

Answer: 1st NF :

The following rules should be taken care of.

- 1) Each column should contain Atomic values
- 2) Values of same type in a column
- 3) Each column with a Unique name
- 4) Using SQL query

Student id	Student name	Student Address	Course ID	Course Name	Grade
01	Fawad	Karachi	SE-01	AI	A
01	Fawad	Karachi	SE-05	SSE	B
02	Waleed	Lahore	SE-02	DIP	C
03	Saira	Peshawar	SE-03	DB	A
03	Saira	Peshawar	SE-04	SRE	B
04	Alman	Karachi	SE-03	DB	C
05	Damiyal	Lahore	SE-01	AI	A
06	Emaan	Peshawar	SE-01	AI	B

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2nd NF:

The Rules For 2nd NF are.

- (1) Table should be in 1st NF
- (2) Should not have any partial Dependencies

For this we need to make total of 3 tables.

- i- Student table
- ii- COURSE table
- iii- GRADE table

Student Table

Student ID	Student Name	Student Address
01	Fawad	Karachi
02	Waheed	Lahore
03	Saira	Peshawar
04	Aiman	Karachi
05	Daniyal	Lahore
06	Emaan	Peshawar

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COURSE table

Course ID	Course Name
SE-01	AI
SE-02	DIP
SE-03	DB
SE-04	SRE
SE-05	SRE

GRADE Table

Grade-ID	Student-ID	Subject-ID	Grade
01	01	SE-01	A
2	01	SE-05	B
3	02	SE-02	C
4	03	SE-03	A
5	03	SE-04	B
6	04	SE-03	C
7	05	SE-01	A
8	06	SE-01	B

Since the given Tables are already have no transitive dependency, This means it is already in 3rd NF.

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QUESTION #02

① Create a Database by the name Gallery.

Answer:

```
mysql > CREATE DATABASE Gallery;
```

② Write a query to create --- Restrictions.

Answer:

```
CREATE TABLE Movies (  
    ID integer (2) NOT NULL,  
    Movie_Name Varchar (15) NOT NULL,  
    Genre Varchar (10),  
    Year integer (2020),  
    Rating integer (5),  
    PRIMARY KEY (ID));
```


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QUESTION #03:

Student ID	Student_name	Age	CGPA

Answer (i) Let the table name is,
IQRA_Student_Record

For inserting my data:

```
INSERT INTO IQRA_Student_Record (student_ID,  
student_name, Age, CGPA)
```

```
VALUES (14468, 'Mian-Daud-Jan', 21, 3.5);
```

For inserting my friend's data:

```
INSERT INTO IQRA_Student_Record (student_ID,  
student_name, Age, CGPA)
```

```
VALUES (12345, 'Muhammad-Yaseen', 21, 3.86);
```


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② Write SQL DML - - - greater than 3.

Answer

```
DELETE from JARA_Student_Record where  
CGPA > 3;
```

QUESTION#04:

Canteen-Table and Order-Details.

① Answer:

```
SELECT Product-ID, Product-Name  
WITH FROM Canteen-Table  
WHERE Unit-Price < 50  
ORDER BY Unit-Price DESC, Product-ID,  
Product-Name;
```

② SELECT Product-Name AS Product-List-
Sorted FROM Canteen-Table GROUP BY
Unit-Price ~~WHERE~~ ORDER BY Unit-Price DESC;

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3) Write Output of the following Query

Category	My Count
Junk	4
Not Junk	2

4) INNER JOIN SQL QUERY:

```
SELECT Canteen-Table.Product-ID, Product-Name,
Unit-Price FROM Canteen-Table INNER JOIN
Order-Details ON Canteen-Table.Product-ID
= Order-Details.Product-ID
```

Output:

Product-ID	Product-Name	Order-ID	Unit-Price	Quantity
02	Lipton tea bags	02	160	1
06	Olper's MILK	01	350	1
01	Dairy milk choc	02	80	2
03	KUR KUNE	02	30	2
05	Chilli Milli	02	5	2