Name :- Shiraz Khan Bangash

ID :- 14539

Course Database system

Section (A)

Instructor Rimsha Khan

(Q1) Perform Normalization upto 3rd Normal Form on the table

Answer:-

1NF (First Normal Form) Rules

- each table cell should contain a single value
- Each record needs to be unique.

Table 1

StudentID	Student Name	Student Address	CourseID	Co-Name	Grade
01	Fawad	Karachi	Se-01	AI	A
01	Fawad	Karachi	Se-05	SQE	B
02	Waleed	Lahore	Se-02	DIP	C
03	Saira	Peshawar	Se-03	DB	A
03	Saira	Peshawar	Se-04	SRE	B
04	Aiman	Karachi	Se-03	DB	C
05	Daniyal	Lahore	Se-01	AI	A
06	Eimaan	Peshawar	Se-01	AI	B

2NF (Second Normal Form) Rules

- Rule 1 Be in 1NF
- Rule 2- Single column Primary Key

Table 1.1

StudentID	Student NAME	Student Address	Grade
01	Fawad	Karachi	A B
02	waleed	Lahore	C
03	Saira	Peshawar	A B
04	Aiman	Karachi	C
05	Daniyal	Lahore	A
06	Emaan	Peshawar	B

Table 1.2

StudentID	Course ID	Course Name
01	Se-01	AI
01	Se-05	SQE
02	Se-02	DIP
03	Se-03	DB
03	Se-04	SRE
04	Se-03	DB
05	Se-01	AI
06	Se-01	AI

we have divided our 1NF table into two tables. Table 1 contains ~~mem~~ Student information. Table 2 contains information about course.

3NF (Third Normal form) Rules

- Rule 1- Be in 2NF
- Rule 2 Has no transitive functional dependencies

first Table will be table 1.1
Second table will be table 1.2
And
Table 3

Studen ID	Grade
01	A
01	B
02	C
03	A
03	B
04	C
05	A
06	B

we have again divided the table and created new table which stores Students grades.

Q2

A Create a Database by the name Gallery?

Create Table:-

ID Int	Not null
Movie Name	Not null
Genre Varchar(15)	Not null
Year	(2020)
Rating	5

(b) write a query to create table:-

```
Create table movies
(Id INT NOT null Primary Key Auto_
Increment, Movie_Name Varchar(50)
Not Null, Genre VARCHAR(15) NOT
Null, Year (2020) INT NOT Null,
rating (5) Int Not null);
```

(Q3)

~~1, Write~~

we will give the name to table Student table.

Insert Keyword is always followed by ~~INTO~~ INTO Keyword are not INSERT Standard.

Starts with Insert-INTO followed by the table name (student) in which you insert the row and then we have our list at columns enclosed in parenthesis thereafter we have our Keywords values followed by values at column which you want to insert enclosed in paranthesis

Inserting

DESC Student

Query 1-- Insert Data into all the Columns at Student table.

INSERT INTO Student (StudentID, Student_name, Age, CGPA)

Values (13456, Saleem, 23, 8.7)

INSERT INTO Student

values (16747, Feraz, 26, 3.4)

Query 2 Insert Data into selected Columns

INSERT INTO student (student-ID, student name, Age, CGPA)
values (18934, Fawad, 21, 2.1)

2) write SQL Query to delete all students records whose CGPA is greater the 3.0

Student Table

Student_ID	Student_Name	Age	CGPA
16747	Faraz	26	3.4
13456	Saleem	23	2.7
18934	Fawad	21	2.1

DELETE Frome table
where conditions

DELETE From student
where CGPA = 3

Student-ID	Student Name	Age	CGPA
13456	Saleem	23	2.7
18934	Fawad	21	2.1

Deleted:- 16747, Faraz, 26, 3.4 CGPA.

Q4
(A)

```
Select product_names, productID
from Canteen_table, order_Details
where Unit_Price < 50
order by product_names DESC,
         product_ID;
```

output at the Query

product_Name	product_ID
Kurkure	03
Shezan juice	04
Chilli Milli Jelly	05
	03
	05

order_Details

(B) write SQL Query for displaying Sorted names:-

Sorting the product names in ascending order

```
Select product_names
from canteen_table
order by product_names ASC;
```

(c) Write query

```
Select category, count(category)
from Canteen_table
Group by Category
Having Count(Category) > 1;
```

Category	Count
Junk	2
Not Junk	3
Junk	2
Junk	2
Junk	2
Not Junk	4

(D) write SQL INNER query and its outputs on the given table.

```
Select order_Details, order_Id, Canteen_table
Product_Name, order.Unit_Price,
Order_Details.Quantity, from order_
Detail INNER Join Canteen_table
on Order_Detail; Product_ID=
Canteen_table.Product_ID
```

Order_Id	Product Name	Unit_Price	Quantity
01	Lipton Tea bags	160 Rs	1
01	Olpers milk	350 Rs	1
02	Dairy milk chocolate	80 Rs	2
02	Kurkure	30 Rs	2
02	Chilli milli Jelly	5 Rs	2