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Department: BS(cs) 4th

Paper: DATABASE SYSTEMS (THEORY)

Q.1

First Normal Form:-

St-Id	St-Name	St-address	Course-Id	Course-N	Grade
01	Fawad	Katbachi	SF-01	AI	A
01	Fawad	Katbachi	SF-05	SQE	B
02	Waleed	Lahore	SF-02	DIP	C
03	Saiba	Peshawar	SF-03	DB	A
03	Saiba	Peshawar	SF-04	SRE	B
04	Aiman	Katbachi	SF-03	DB	C
05	Danigal	Lahore	SF-01	AI	A
06	Emaan	Peshawar	SF-01	AI	B

2nd Form of Normalization:-

Student Id	Student Name	Student Address	Course Id	Course Name	Course Grade
01	Fawad	Katbachi	SF-01	AI	A
01	Fawad	Katbachi	SF-05	SQE	B
02	Waleed	Lahore	SF-02	DIP	C
03	Saiba	Peshawar	SF-03	DB	A
04	Aiman	Katbachi	SF-04	SRE	B
05	Danigal	Lahore	SF-03	DB	C
06	Emaan	Peshawar	SF-01	AI	A
03	Saiba	Peshawar	SF-01	AI	B

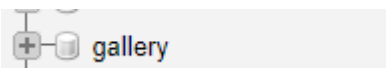
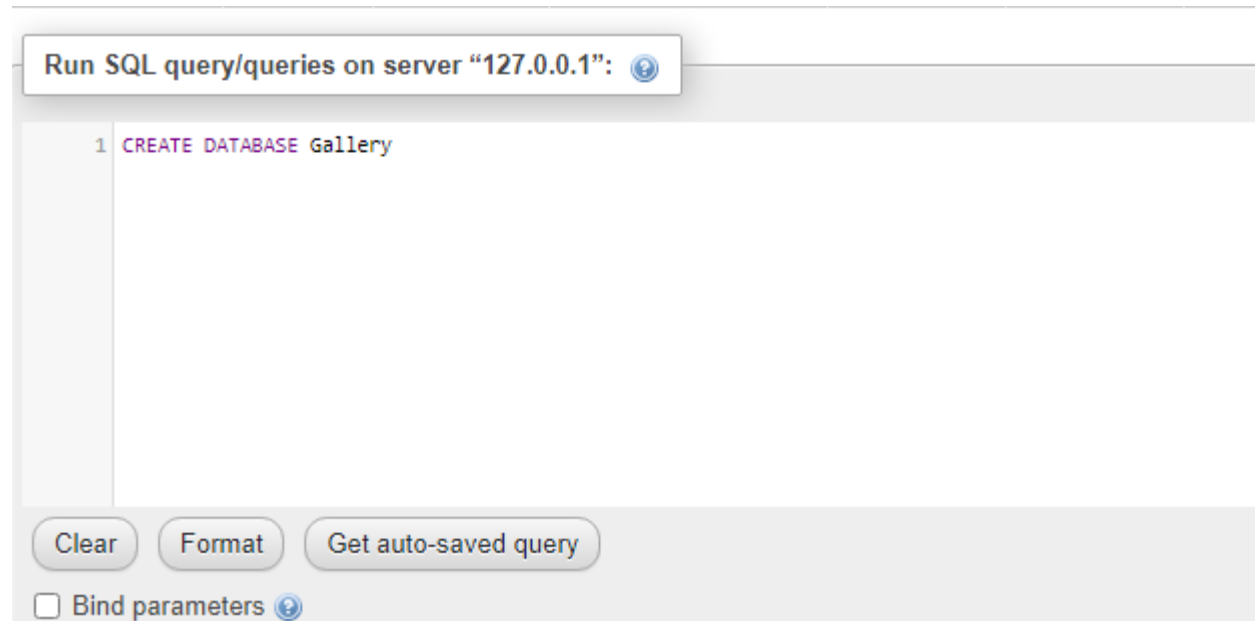
GRADE

Student - Id	Course - Id	Grade
01	SE - 01	A
01	SE - 05	B
02	SE - 02	C
03	SE - 03	A
03	SE - 04	B
04	SE - 03	C
05	SE - 01	A
06	SE - 01	B

Q2 Write SQL queries for the following DDL Statements

1. Create a Database by the name Gallery

Answer: CREATE DATABASE Gallery;



2. Write a query to create a table by the name Movies which should have the following columns and restrictions?

Answer:

create table Movies

(id INT NOT NULL PRIMARY KEY AUTO_INCREMENT,

Movie_Name varchar(50) NOT NULL,

Genre VARCHAR(15) NOT NULL,

years INT(20) NOT NULL,

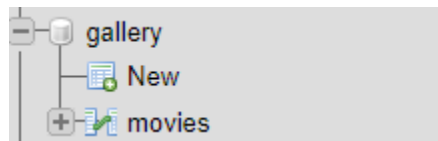
rating INT(5) NOT NULL);

Run SQL query/queries on database gallery: ⓘ

```
1 create table Movies
2 (id INT NOT NULL PRIMARY KEY AUTO_INCREMENT,
3  Movie_Name varchar(50) NOT NULL,
4  Genre VARCHAR(15) NOT NULL,
5  years INT(20) NOT NULL,
6  rating INT(5) NOT NULL);|
```

Clear Format Get auto-saved query

Bind parameters ⓘ



Q3: If you have the following table

Answer: First of all Create Database name Student

CREATE DATABASE STUDENT;

Run SQL query/queries on server "127.0.0.1": ?

```
1 CREATE DATABASE STUDENT;
```

Clear

Format

Get auto-saved query

Bind parameters ?

+ student

Create Table:

create table Students

(id INT NOT NULL PRIMARY KEY AUTO_INCREMENT,

Student_Id INT(20) NOT NULL,

Student_name varchar(50) NOT NULL,

Age INT(20) NOT NULL,

CGPA INT(5) NOT NULL);

Filters

Containing the word:

Table	Action	Rows	Type	Collation	Size	Overhead
<input type="checkbox"/> students	★ Browse Structure Search Insert Empty Drop	0	InnoDB	utf8mb4_general_ci	16.0 KiB	-
1 table	Sum	0	InnoDB	utf8mb4_general_ci	16.0 KiB	0 B

Check all

With selected:

id	Student_Id	Student_name	Age	CGPA
----	------------	--------------	-----	------

Query results operations

1. Write 2 SQL DML Queries to insert your data and your friend's data in this Table.

Answer:

```
INSERT INTO `students`  
(`id`, `Student_Id`, `Student_name`, `Age`, `CGPA`)  
VALUES (NULL, '14756', 'Sajawal Khan', '19', '3.9');
```

Run SQL query/queries on table student.students: ⓘ

```
1 INSERT INTO `students` (`id`, `Student_Id`, `Student_name`, `Age`, `CGPA`) VALUES (NULL, '14756', 'Sajawal Khan', '19', '3.9');
```

SELECT * SELECT INSERT UPDATE DELETE Clear Format Get auto-saved query

Bind parameters ⓘ

+ Options

	id	Student_Id	Student_name	Age	CGPA
<input type="checkbox"/> Edit Copy Delete	2	14756	Sajawal Khan	19	4

↑ Check all With selected: Edit Copy Delete Export

2. Write SQL DML Query to delete all students' record whose CGPA is greater 3

+ Options

	id	Student_Id	Student_name	Age	CGPA
<input type="checkbox"/> Edit <input type="checkbox"/> Copy <input type="checkbox"/> Delete	5	149	khan	18	3

↑ Check all With selected: Edit Copy Delete Export

Q4) Consider you have the following 2 table

1) Write SQL Query for finding/displaying product names and ids of products whose unit price is less than 50 Rs

Ans)

```
SELECT `ct`.`Product_Name`,
       `od`.`Product_ID`,
       `od`.`Unit_Price`,
FROM `Canteen_Table` AS `ct`,
     `Order_Details` AS `od`,
WHERE
  `od`.`Unit_Price` < 50
ORDER BY `od`.`Product_ID` DESC;
```

2) Write SQL Query for displaying sorted names of product names with Alias name as Product List Sorted ?

Ans)

```
select Product_Name From table as Porduct_list_Sorted
Order by Product_Name;
```

3) Write output of the following query

Ans)

Category	Count(Category)
Junk	4
Not junk	2

4) Write SQL INNER JOIN query and its output on the given two tables.

Ans)

Select Order_Details.Order_id, Canteen_Table.Product_Name, Order_Details.Unit_Price,
Order_Details.Quantity,

From Order_Details

INNER JOIN

Canteen_Table on Order_Details.Product_ID=Canteen_Table.Product_ID

Order_id	Product_Name	Unit_price	Quantity
01	Lipton tea bags	160 RS	1
01	Olpers mailk	350 RS	1
02	Diey milk chocolate	80 RS	2
02	Kukure	30 RS	2
02	Chilli mli jelly	5 RS	2