

# Final Paper Spring 2020

Course Title: Database Systems

Instructor: Rimsha Khan

Total Marks: 50

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**NOTE: Understanding the paper is part of solving the paper so no questions will be entertained.**

**INSTRUCTIONS:**

1. Write your names and IDs at top of each paper.
2. Scan / Take clear photo of each paper and save it with a number. E.g. photo of paper 1 of answer sheet be saved with name 1.jpg, then 2.jpg and so on.
3. Put answer photos in a folder or preferably make pdf, name the folder/pdf with subject, ID and student name

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**Q1: Perform Normalization upto 3<sup>rd</sup> Normal Form on the following table. (13marks)**

Student_id	Student Name	Student Address	Course_ID	Course_Name	Grade
01	Fawad	Karachi	SE-01	AI	A
			SE-05	SQE	B
02	Waleed	Lahore	SE-02	DIP	C
03	Saira	Peshawar	SE-03	DB	A
			SE-04	SRE	B
04	Aiman	Karachi	SE-03	DB	C
05	Daniyal	Lahore	SE-01	AI	A
06	Emaan	Peshawar	SE-01	AI	B

**Q2: Write SQL queries for the following DDL Statements**

1. Create a Database by the name Gallery (Marks 2)
2. Write a query to create a table by the name Movies which should have the following columns and restrictions: (Marks 10)

Column Name: ID

Type: integer

Column Name: Movie\_Name

Type: varchar

Column Name: Genre

Type: varchar

Column Name: Year                      Type: integer

Column Name: Rating                    Type: integer

**Restrictions:** ID should be the primary key and NOT NULL. Movie\_Name should also be NOT NULL. Year should have a maximum value of 2020 and rating should have a maximum value of 5.

**Q3: If you have the following table:**

Student Id	Student_name	Age	CGPA

1. Write 2 SQL DML Queries to insert your data and your friend's data in this Table. (4 marks)
2. Write SQL DML Query to delete all students' record whose CGPA is greater 3 (2 marks)

**Q4: Consider you have the following 2 tables.**

**Canteen\_Table**

Product_ID	Product_Name	Category	Mfg_Date	Exp_Date	Unit Price
01	Dairy milk Chocolate	Junk	2, Aug 2019	2, Aug 2020	80 Rs
02	Lipton Tea bags	Not Junk	2 Jan 2019	2 Jan 2020	160 Rs
03	Kurkure	Junk	2 April 2019	2 April 2021	30 Rs
04	Shezan Juice	Junk	3 Aug 2019	3 Aug 2020	30 Rs
05	Chilli Milli Jelly	Junk	3 Jan 2018	3 Jan 2021	5 Rs
06	Olpers Milk	Not Junk	3 April 2018	3 April 2020	350 Rs

**Order\_Details**

Order_Id	Product_ID	Unit Price	Quantity
01	02	160 Rs	1
01	06	350 Rs	1
02	01	80 Rs	2
02	03	30 Rs	2
02	05	5 Rs	2

1. Write SQL Query for finding/displaying product names and ids of products whose unit price is less than 50 Rs. (4 Marks)

**2. Write SQL Query for displaying sorted names of product names with Alias name as Product\_List\_Sorted. (5 Marks)**

**3. Write output of the following query (5 Marks)**

```
SELECT Category, COUNT(Category)
FROM Canteen_Table
GROUP BY Category
HAVING COUNT(Category) > 1;
```

**4. Write SQL INNER JOIN query and its output on the given two tables. (5 marks)**

\*\*\*\*\*Good Luck😊\*\*\*\*\*