



# National University

of Computer & Emerging Sciences Peshawar Campus

Name: \_\_\_\_\_

Roll No: \_\_\_\_\_

Program: CS

Semester: Spring – 2020

Time Allowed: 3.00 hrs.

Course: Data Base System lab (CL219)

Examination: Lab Exam

Total Marks: 100 Total weightage: 40

Date: 19<sup>th</sup> June, 2020

Lab Instructor: Safia Fatima

**Note:** .Don't rush, carefully understand the problem and then go for solution. Create a separate log file for each question, mark each query. Create a folder named as roll number followed by your name, copy all the log files, html and php files in that folder and submit the folder.

## Question 1:

(48 Marks)

Consider the following Tables:

<u>propertyno</u>	<u>street</u>	<u>country</u>	<u>type</u>	<u>rooms</u>	<u>rent</u>	<u>yearincome</u>	<u>ownerno</u>
PA14	16 Holhead	Barbados	Villa	6	500	12000	CO46
PG16	5 Novar Dr	Antigua	Apartment	2	400	8000	CO87
PG21	18 Dale Rd	St Kitts	Apartment	3	450	9500	CO40
PG36	2 Manor Rd	Barbados	Studio	1	475	11075	CO93
PG4	6 Lawrence St	Barbados	Villa	4	525	14050	CO87
PL94	6 Argyll St	Barbados	Villa	4	550	15000	CO93

**property table**

<u>ownerno</u>	<u>fname</u>	<u>lname</u>	<u>address</u>	<u>telno</u>
CO46	Joe	Keogh	2 Fergus Dr, Aberdeen, AB2 7SX	01224-961212
CO87	Carol	Farrel	6 Achray St, Glasgow, G32 9DX	0141-357-7419
CO40	Tina	Murphy	63 Well St, Glasgow, G42	0141-943-1728
CO93	Tony	Shaw	12 Park Pl, Glasgow, G4 0QR	0141-225-7025

**owner table**

<u>clientno</u>	<u>fname</u>	<u>lname</u>	<u>telno</u>	<u>preftype</u>	<u>maxrent</u>
CR76	John	Kay	0207-774-5632	Villa	500
CR56	Aline	Stewart	0141-848-1825	Apartment	475
CR74	Mike	Ritchie	01475-392178	Studio	525
CR62	Mary	Tregear	01224-196720	Villa	550

**client table**

<u>clientno</u>	<u>propertyno</u>	<u>bookingdate</u>	<u>comment</u>
CR56	PA14	16/07/2007	Non smoking Required
CR76	PG4	09/07/2007	Special Diet
CR56	PG4	17/12/2007	
CR62	PA14	03/09/2007	Allergies
CR56	PG36	10/09/2007	

**booking table**

- Create** these **tables** and make appropriate attribute(s) primary/foreign keys. Also add any other constraint if required. **(2 Marks)**
- Create a stored procedure** for each table to insert data (**at least 10 data entry for each table [you can use the entries above and add few by yourself] ).** These stored procedures must take values as parameters. **(4 Marks)**
- Do the following:** **(21Marks) 3 per query**
  - Show property, type, country and its owner's information (ownerno, owner's name and address) for all properties.
  - Show propertyno, street, country and type for those properties who matches the client's preferences (i.e. preftype).
  - Show the minimum rent for each type of property in each country.
  - Display the client number, client last name, their booking date, the property number of the booked property, the country that the booked property is in and the client's preference type.
  - Display property information (propertyno,street,country,type and ownerno) for all owners.
  - Show the information (clientno,fname,lname, telno) of the clients who owns a villa that has 6 rooms in it.
  - Display the owner information (full name, address and telno), property number and type of property whose property types are Villa and Apartments.
- Create another table** named **booking\_summary** with attributes named **booked\_properties**, **remaining\_properties** and **idate**, **create trigger(s)** so that every time a **record is inserted or updated** in the booking table a new row is inserted in the booking\_summary to show the total booked properties in the **booked\_properties** column, non-booked properties in the **remaining\_properties** column and the date the record was insert in the **idate** column. **(8 Marks)**
- DCL & Views** **(8 Marks)**
  - Create a user of your name and set any password of your liking.
  - Create a view named "yourname\_villa", the view should only show properties whose type is villa. As you already know you can run DML commands by using a view in order to manipulate the data inside the actual table. This view should be made in such a way that the user is not able to insert any other type of property (apart from villa) using this view as well as he/she is not able to change an existing property whose type is "villa" to any other type.

- c. Grant your name(user you have created) the permission to run SELECT, INSERT, UPDATE AND DELETE commands against this view, also give him the privilege to grant the same permissions to any other user.
- d. Using the view, try to INSERT a property whose type is "Apartment" in the property table. What happens? and Why?

**6. Read all the bullet points before attempting this question.**

**(5 Marks)**

Set autocommit = 0 before doing any of the below and do not commit after any of the following commands:

- a. INSERT a new row in the owner table with the following information:  
( 'CO54', 'your\_name[e.g Rida]', your last name[e.g fatima], 'your address', your cell phone number')
- b. UPDATE the last name (lname) of owner: CO54 and set it to any other name.
- c. DELETE the owner: CO54
- d. Since the changes above are all temporary (because autocommit is off). How would you jump to the first insertion? Cancelling the temporary changes made by the UPDATE and DELETE commands. Write the statement(s) and also show where to put the statement(s) in the above sequence of queries.

**Question 2:**

**(20 Marks)**

Run the script 'football.sql' (provided), you will get the following tables and data:

Id	Mdate	Stadium	Team1	Team2
1001	8-Jun-12	National Stadium, Warsaw	POL	GRE
1002	8-Jun-12	Stadion Miejski (Wroclaw)	RUS	CZE
1003	12-Jun-12	Stadion Miejski (Wroclaw)	GRE	CZE
1004	12-Jun-12	National Stadium, Warsaw	POL	RUS

Matchid	Teamid	Player	Gtime
1001	POL	Rober Lewandowski	17
1001	GRE	Dimitris Salpingidis	51
1002	RUS	Alan Dzagoev	15
1001	RUS	Roman	82

Id	Teamname	Coach
POL	Poland	Franciszek Smuda
RUS	Russia	Guus Hiddink
CZE	Czech Republic	Michal Bilek
GRE	Greece	Fernando Santos

**Table-3:** eteam  
[Id (p.k.)]

Do the following:

(2 marks per query)

Can you write the following queries in more than one way, if yes write it and explain which and why that way of writing a query is more efficient?

1. Show the player, teamid and mdate and for every Russian goal. (teamid='RUS').
2. Show the team1, team2 and player for every goal scored by a player called Alan Dzagev.
3. Show player, teamid, coach, gtime for all goals scored in the first 10 minutes.
4. List the the dates of the matches and the name of the team in which 'Fernando Santos' was the team1 coach.
5. List the player for every goal scored in a game where the staium was 'National Stadium, Warsaw'
6. Show names of all players who scored a goal against Greece.
7. Show teamname and the total number of goals scored by that team.
8. Show the stadium and the number of goals scored in each stadium.
9. For every match involving 'POL', show the matchid, date and the number of goals scored.
10. For every match where 'GRE' scored, show matchid, match date and the number of goals scored by 'GRE'

### Question 3:

(12 Marks)

Run the script 'emp.sql' (provided), you will a table named employee:

```
MariaDB [hr]> desc employees;
```

Field	Type	Null	Key	Default	Extra
employee_id	int(11) unsigned	NO	PRI	NULL	
first_name	varchar(20)	YES		NULL	
last_name	varchar(25)	NO		NULL	
email	varchar(25)	NO		NULL	
phone_number	varchar(20)	YES		NULL	
hire_date	date	NO		NULL	
job_id	varchar(10)	NO	MUL	NULL	
salary	decimal(8,2)	NO		NULL	
commission_pct	decimal(2,2)	YES		NULL	
manager_id	int(11) unsigned	YES	MUL	NULL	
department_id	int(11) unsigned	YES	MUL	NULL	

Do the following:

Insert a data into the table above, whose first data entry is your information (your first\_name, your last name, your email, your phone number and for the rest of the attributes you can add dummy value). For rest of entries, insert the data from the script(emp.sql).

(2 marks per query)

1. how the number of employees working under each manager in each department.

Using Sub Queries only:

2. Show the last name, salary and department id of those employees who has minimum salary in his/her department.
3. Show the employee id, last name and job id of those employees whose salary is less than any clerk (PU\_CLERK, ST\_CLERK, SH\_CLERK).
4. Show the employee id, last name and job id of those employees whose salary is greater than the average salary of all the departments.
5. Write a query to display the employee first name and hiredate for all employees in the same department as Bruce. Exclude Bruce from the result.

6. Display the Job groups having average salary greater than the maximum salary for managers.

**Question 4:**

**(20 Marks)**

**Create a web page using php and html.**

FAST Admissions for FALL 2020 has been announced and applicants want to register themselves for BS,MS and PHD programs in Computer Science and Electrical Department.

Your task is to create a web page that ask the user to sign up. [store the data in login\_information table]

If the applicant has already register himself, ask the user to enter the username and password, after validating the credentials, your page proceed towards the registration page that ask the user for his personal and academic information[Ask basic information like name, cnic, phone number, martric marks and fsc marks]. Store all the data the applicant enters in form in the table named applicant\_info.

For better understanding see this link : <http://admissions.nu.edu.pk/OLAR/>

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