DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

REVIEW II

Course name: Mini Project **Course Code: CSE56**
Academic Session: Aug – Nov 2018

Student details:

USN	Name of the student	Semester	Section	Date of Submission
1NH17CS407	IQRA ANJUM	5th	B	09-10-2018

HOTEL DATABASE

Students to demonstrate queries as following (Reviewers to ask them)

Queries on DDL Commands (5 Marks)

Tables creation

- **Department table**

Create table department(dept_id varchar(4) primary key,d_name varchar(20) not null ,d_loc varchar(20),d_ph_no bigint(11) unsigned zerofill default 08022146133);

- **Employee table**

create table employee(emp_id varchar(4) primary key,fname varchar(20) not null,lname varchar(20),designation varchar(30),e_ph_no bigint(10),address varchar(30) not null,salary decimal(10,2),dept_id varchar(4),foreign key(dept_id) references department(dept_id) on delete cascade on update cascade);

- **room table**

create table room(r_no varchar(4) primary key,r_type varchar(30) default 'general',no_of_bed int(1) default 1);

- **customer table**

create table costumer(c_id varchar(5) primary key,c_fname varchar(20) not null,c_lname varchar(20),c_address varchar(30),c_ph_no bigint(10) not null);

- **payment table**

create table payment(tr_no varchar(20) primary key,p_mode varchar(30) not null,p_date date not null,total_amount decimal(10,2),c_id varchar(5),foreign key(c_id) references customer(c_id)on delete cascade on update cascade);

- **booking table**

create table booking(c_id varchar(5),r_no varchar(4),check_in date,check_out date, foreign key(c_id) references customer(c_id)on delete cascade on update cascade, foreign key(r_no) references room(r_no)on delete cascade on update cascade);

Q)set not null constrain to d_name of department table

alter table department modify d_name varchar(20) not null;

output

```
mysql> desc department;
+---------+-------------------------------+------+-----+-------------+-------+
| Field   | Type                          | Null | Key | Default     | Extra |
+---------+-------------------------------+------+-----+-------------+-------+
| dept_id | varchar(4)                    | NO   | PRI | NULL        |       |
| d_name  | varchar(20)                   | NO   |     | NULL        |       |
| d_loc   | varchar(20)                   | YES  |     | NULL        |       |
| d_ph_no | bigint(11) unsigned zerofill  | YES  |     | 08022146133 |       |
+---------+-------------------------------+------+-----+-------------+-------+
4 rows in set (0.01 sec)
```

Q) Change the column name designation to job from employee table

alter table emp change designation job varchar(20);

output

```
mysql> desc emp;
+---------+---------------+------+-----+---------+-------+
| Field   | Type          | Null | Key | Default | Extra |
+---------+---------------+------+-----+---------+-------+
| emp_id  | varchar(4)    | NO   | PRI | NULL    |       |
| fname   | varchar(20)   | NO   |     | NULL    |       |
| lname   | varchar(20)   | YES  |     | NULL    |       |
| job     | varchar(20)   | YES  |     | NULL    |       |
| e_ph_no | bigint(10)    | YES  |     | NULL    |       |
| address | varchar(30)   | NO   |     | NULL    |       |
| salary  | decimal(10,2) | YES  |     | NULL    |       |
| dept_id | varchar(4)    | YES  | MUL | NULL    |       |
+---------+---------------+------+-----+---------+-------+
8 rows in set (0.00 sec)
```

Q)Change the table name of employee to emp

rename table project.employee to project.emp;

output

```
mysql> show tables;
+--------------------+
| Tables_in_project  |
+--------------------+
| booking            |
| customer           |
| department         |
| emp                |
| payment            |
| room               |
+--------------------+
6 rows in set (0.02 sec)
```

Single table Queries (10 Marks)

- **Aggregate function**

  Q) Display total salary, no of employees, average of salary, highest salary, and lowest salary using aggregate functions

select sum(salary) as 'total Salary',count(*) as 'no_of_emplyees',max(salary) ,min(salary) as 'lowest salary' ,avg(salary) as 'average of salary' from employee;

output

```
+--------------+---------------+-------------+---------------+-------------------+
| total Salary | no_of_emplyees | max(salary) | lowest salary | average of salary |
+--------------+---------------+-------------+---------------+-------------------+
|    225000.00 |             11 |    45000.00 |      15000.00 |      20454.545455 |
+--------------+---------------+-------------+---------------+-------------------+
1 row in set (0.06 sec)
```

- **Set operator**

  Q) demonstrate set operator to display distinct values in c_address column of customer

  select c_address from customer union select c_address from customer;

  OUTPUT

```
mysql> select c_address from customer union select c_address from customer;
+-----------+
| c_address |
+-----------+
| bangalore |
| mumbai    |
| chennai   |
| delhi     |
+-----------+
4 rows in set (0.00 sec)
```

- **Group by having**

  Q) display the no of employees containing same amount of salary and salary should be greater then15000

  select concat(fname,lname),salary from employee group by salary having salary>15000;

  output

```
mysql> select concat(fname,lname),salary from employee group by salary having salary>15000;
+---------------------+----------+
| concat(fname,lname) | salary   |
+---------------------+----------+
| karinakaif          | 20000.00 |
| suhailkhan          | 25000.00 |
| salmankhan          | 45000.00 |
+---------------------+----------+
3 rows in set (0.02 sec)
```

Multi-table Queries (10 Marks)

- **Joins**

Q) display the customer name from customer table and check in date from booking table who have checked in, in July month using joins

select concat(c_fname,c_lname) as 'customer name',check_in from customer c,booking b where c.c_id=b.c_id and check_in like '____-07-__';

output

```
+---------------+------------+
| customer name | check_in   |
+---------------+------------+
| vijaisharma   | 2018-07-25 |
| rahulsharma   | 2018-07-28 |
| ajaysharma    | 2018-07-20 |
+---------------+------------+
3 rows in set, 1 warning (0.08 sec)
```

- **Nested queries**

Q) display the details of available rooms in hotel using nested queries

select * from room where r_no not in(select r_no from booking);

output

```
+------+---------------+-----------+
| r_no | r_type        | no_of_bed |
+------+---------------+-----------+
| R012 | dulex         |         2 |
| R016 | general       |         1 |
| R017 | air condition |         2 |
+------+---------------+-----------+
3 rows in set (0.00 sec)
```

- Correlated queries

Q) display the customer name and paid amount which is greater then average of paid amount using correlated queries

select concat(c_fname,' ',c_lname) as 'customer name',total_amount from customer c, payment p where c.c_id=p.c_id and p.total_amount>(select avg(total_amount) from payment);

output

```
+---------------+--------------+
| customer name | total_amount |
+---------------+--------------+
| kapil singh   |     25000.00 |
| kapil sharma  |     20000.00 |
| ajay sharma   |     18000.00 |
| vijay k       |     21000.00 |
| anna singh    |     22000.00 |
| ajay sharma   |     17000.00 |
| varun sharma  |     18000.00 |
+---------------+--------------+
7 rows in set (0.00 sec)
```

Signature of Reviewer with Date