Fast**National University of Computer & Emerging Sciences, Karachi  
Fall 2019 CS-Department  
Mid-Term Exam  
23rd-Oct-2019, 08:10 am – 09:20 am**

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| **Course Code: CL-203** | **Course Name: Database Systems Lab** | |
| **Instructor Name: Ammara Yaseen** | | |
| **Student Roll No:** | | **Section: G** |

**Instructions:**

* Return the question paper.
* In case of any ambiguity, you may make assumption. But your assumption should not contradict any statement in the question paper.
* You are required to submit your exam in a single text file (Questions must be in order), name your file with your student id (k17-XXXX).

**Time:** 70 minutes. **Max Marks:** 50

**Q1-**

1. Find the total number of booking in the month of September.

SELECT COUNT(BOOKING\_ID) FROM BOOKING WHERE INITCAP(TO\_CHAR(BOOKING\_DATE,'MONTH')) ='SEPTEMBER';

1. How many times the room *‘101’* booked by the guests.

SELECT COUNT(ROOM\_NO) FROM BOOKING WHERE ROOM\_NO=101;

**Q2-**Find the guest\_id and number of rooms who booked more than one room (at the same or different timings).

SELECT COUNT(ROOM\_NO), GUEST\_ID FROM BOOKING GROUP BY GUEST\_ID HAVING COUNT(ROOM\_NO)>1;

**Q3-** List the arrival time and the first and last names (in single column) for all guests booked on

2016-11-03, order the output by time of arrival.

SELECT ARRIVAL\_TIME, FIRST\_NAME||' '||LAST\_NAME AS NAME FROM GUEST, BOOKING WHERE

ID=GUEST\_ID AND BOOKING\_DATE=TO\_DATE('03-11-2016','DD-MM-YYYY')

ORDER BY ARRIVAL\_TIME;

**Q4-** Show the total amount payable by guest Lisa Nandy for her room bookings.

SELECT SUM(DAYS\*AMOUNT) FROM BOOKING, RATE, GUEST WHERE UPPER(FIRST\_NAME) ='LISA' AND

UPPER(LAST\_NAME) ='NANDY' AND BOOKING.GUEST\_ID=GUEST.ID AND

BOOKING.OCCUPANTS=RATE.OCCUPANCY AND RATE.ROOM\_TYPE=BOOKING.ROOM\_TYPE\_REQUESTED;

**Q5-** Get guest name, room order by first name for all guests if room is not assigned then display "No Room Assigned".

SELECT ID, FIRST\_NAME, NVL2(ROOM\_NO, TO\_CHAR(ROOM\_NO),'NO ROOM ASSIGNED') FROM GUEST LEFT OUTER JOIN BOOKING ON (GUEST\_ID = ID) ORDER BY FIRST\_NAME;

**Q6-** For every guest who has the word “Edinburgh” in their address show the total number of days booked. Be sure to include ‘0’ for those guests who have never had a booking. Show last name, first name, address and number of nights. Order by last name then first name.

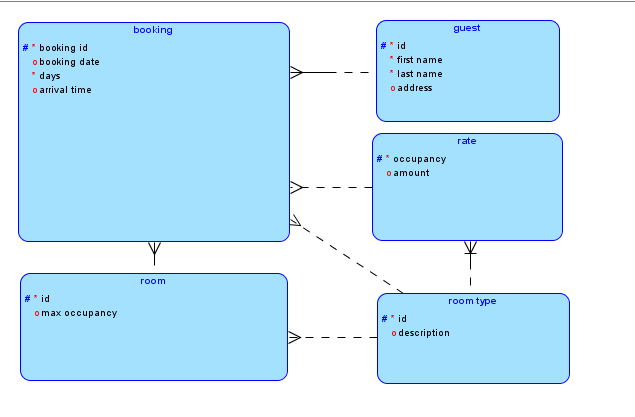
SELECT LAST\_NAME, FIRST\_NAME, ADDRESS, DAYS FROM GUEST LEFT OUTER JOIN BOOKING ON ID=GUEST\_ID WHERE UPPER(ADDRESS) LIKE '%EDINBURGH%' ORDER BY LAST\_NAME, FIRST\_NAME;

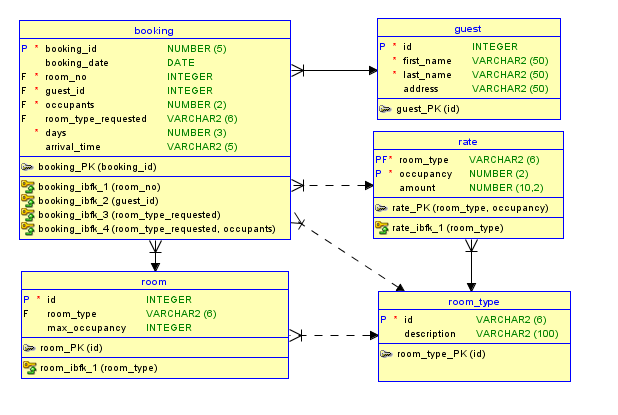
**Q7-** Have two guests with the same surname ever stayed in the hotel? Show the last name and both first names.

SELECT FIRST\_NAME, LAST\_NAME FROM GUEST WHERE LAST\_NAME IN (

SELECT LAST\_NAME FROM BOOKING, GUEST WHERE GUEST\_ID = ID GROUP BY LAST\_NAME HAVING COUNT(LAST\_NAME) > 1 AND COUNT (DISTINCT FIRST\_NAME)! = 1);

**Q8**- Develop a logical and relational model of the same schema provided to you.





**Q9**-

1. Insert one record in each table of the given schema. Take user input while inserting in the guest table.

insert into room\_type values ('3-bed','beatifully decorated');

insert into rate values ('3-bed',3,56.00);

insert into room values (200,'3-bed',3);

insert into guest values (&id,'&f\_name','&l\_name','&address');

insert into booking values (6001,to\_date('2016-11-03','yyyy-mm-dd'),200,1027,3,'3-bed',5,'13:00');

1. As per the new policy rates of the room’s increases 50%.reflect this change in the database.

Update rate set amount=amount + (amount\*0.5);

**Q10-**Write a Pl/Sql program that prints an asterisk (\*) for every hundreds of the amount payable by the guests.

Sample Output:

|  |  |  |
| --- | --- | --- |
| **Guest Name** | **Amount Payable** | **Remarks** |
| Jack | 112 | \* |
| Nick | 504 | \*\*\*\*\* |
| ….. | … | … |
| ….. | … | … |

declare

amount\_payable int;

f\_name guest.first\_name%type;

asteric int;

begin

SELECT SUM(DAYS\*AMOUNT),first\_name into amount\_payable,f\_name FROM BOOKING, RATE, GUEST WHERE UPPER(FIRST\_NAME) ='&name' AND BOOKING.GUEST\_ID=GUEST.ID AND

BOOKING.OCCUPANTS=RATE.OCCUPANCY AND RATE.ROOM\_TYPE=BOOKING.ROOM\_TYPE\_REQUESTED GROUP BY FIRST\_NAME;

asteric :=amount\_payable/100;

dbms\_output.put\_line(f\_name||' '||amount\_payable);

for i in 1..asteric

loop

DBMS\_OUTPUT.PUT\_LINE(' '|| '\*');

end loop;

end;

/

***BEST OF LUCK!***