**CS 457L – Data modeling and Implementation techniques (Lab) Venue: Home**

**Time Duration: 1 pm to 3 pm**

**Date: Dec. 17, 2022**

**Final exam: [Max: 60 points]**

1. **Consider Table 1 and Table 2:**

**Table 1: Salesman**

salesman\_id name city commission

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5001 James Hoog New York 0.15

5002 Nail Knite Paris 0.13

5005 Pit Alex London 0.11

5006 Mc Lyon Paris 0.14

5003 Lauson Hen Paris 0.12

5007 Paul Adam Rome 0.13

**Table 2: Customer**

customer\_id cust\_name city grade salesman\_id

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3002 Nick Rimando New York 100 5001

3005 Graham Zusi California 200 5002

3001 Brad Guzan London 200 5005

3004 Fabian Johns Paris 300 5006

3007 Brad Davis New York 200 5001

3009 Geoff Camero Berlin 100 5003

3008 Julian Green London 300 5002

3003 Jozy Altidor Moscow 200 5007

Write a SQL statement to prepare a list with salesman name, customer name and their cities for the salesmen and customer who belongs to the same city.

After you execute this SQL statement, what will be the output of the query?

1. **Consider Table 3:**

**Table 3: Orders**

ord\_no purch\_amt ord\_date customer\_id salesman\_id

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70001 150.5 2012-10-05 3005 5002

70009 270.65 2012-09-10 3001 5005

70002 65.26 2012-10-05 3002 5001

70004 110.5 2012-08-17 3009 5003

70007 948.5 2012-09-10 3005 5002

70005 2400.6 2012-07-27 3007 5001

70008 5760 2012-09-10 3002 5001

70010 1983.43 2012-10-10 3004 5006

70003 2480.4 2012-10-10 3009 5003

70012 250.45 2012-06-27 3008 5002

70011 75.29 2012-08-17 3003 5007

70013 3045.6 2012-04-25 3002 5001

Write a SQL statement to make a list with order no, purchase amount, customer name and their cities for those orders which order amount between 500 and 2000.

After you execute this SQL statement, what will be the output of the query?

1. Write a SQL statement to know which salesman are working for which customer. After you execute this SQL statement, what will be the output of the query?
2. Write a SQL statement to find the list of customers who appointed a salesman for their jobs who does not live in the same city where their customer lives, and gets a commission is above 13%. After you execute this SQL statement, what will be the output of the query?
3. Write a SQL statement to make a join on the tables salesman, customer and orders in such a form that the same column of each table will appear once and only the relational rows will come. After you execute this SQL statement, what will be the output of the query?
4. Write a SQL statement to make a list in ascending order for the customer who holds a grade less than 300 and works either through a salesman or by own. After you execute this SQL statement, what will be the output of the query?
5. Write SQL statements to make a list in (a) ascending order, (b) descending order for the customer who works either through a salesman or by own. After you execute this SQL statement, what will be the output of the query?
6. Write a SQL statement to make a report with customer name, city, order number, order date, and order amount in ascending order according to the order date to find that either any of the existing customers have placed no order or placed one or more orders. After you execute this SQL statement, what will be the output of the query?
7. Write a SQL statement to make a list for the salesmen who works either for one or more customer or not yet join under any of the customers who placed either one or more orders or no order to their supplier. After you execute this SQL statement, what will be the output of the query?
8. Write a SQL statement to make a list for the salesmen who either work for one or more customers or yet to join any of the customer. The customer may have placed, either one or more orders on or above order amount 2000 and must have a grade, or he may not have placed any order to the associated supplier. After you execute this SQL statement, what will be the output of the query?
9. Write a SQL statement to make a report with customer name, city, order no. order date, purchase amount for only those customers on the list who must have a grade and placed one or more orders or which order(s) have been placed by the customer who is neither in the list not have a grade. After you execute this SQL statement, what will be the output of the query?
10. Write a SQL statement to make a cartesian product between salesman and customer i.e. each salesman will appear for all customer and vice versa. After you execute this SQL statement, what will be the output of the query?
11. Consider Table 4 and Table 5:

**Table 4: Company**

COM\_ID COM\_NAME

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11 Samsung

12 iBall

13 Epsion

14 Zebronics

15 Asus

16 Frontech

**Table 5: Item**

PRO\_ID PRO\_NAME PRO\_PRICE COM\_ID

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101 Mother Board 3200 15

102 Key Board 450 16

103 ZIP drive 250 14

104 Speaker 550 16

105 Monitor 5000 11

106 DVD drive 900 12

107 CD drive 800 12

108 Printer 2600 13

109 Refill cartridge 350 13

110 Mouse 250 12

Write a SQL query to display the name of each company along with the ID and price for their most expensive product. After you execute this SQL statement, what will be the output of the query?

1. Write a SQL query to display the names of the company whose products have an average price larger than or equal to Rs. 350. After you execute this SQL statement, what will be the output of the query?
2. Write a SQL query to display the average price of items of each company, showing the name of the company. After you execute this SQL statement, what will be the output of the query?