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| **National University of Computer and Emerging Sciences** |
| In Lab Exercise  “Data Retrieval & Set Operations” |
|  |
| Database Systems |
| Spring 2023 |

Department of Computer Science

FAST-NU, Lahore, Pakistan

**Database**

For this in-lab exercise use the following **customer-salesman** schema.

1) Table Name: **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

5007 Paul Adam San Jose 0.13

5003 Lauson Hen San Jose 0.12

2) Table Name: **orders**

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

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70001 150.5 2012-10-05 3005 5006

70009 270.65 2011-09-10 3001 5005

70002 65.26 2014-10-05 3002 5001

70004 110.5 2011-08-17 3009 5003

70007 948.5 2012-09-10 3005 5006

70005 2400.6 2010-07-27 3007 5001

70008 5760 2013-09-10 3002 5001

70010 1983.43 2010-10-10 3004 5005

70003 2480.4 2013-10-10 3009 5003

70012 250.45 2010-06-27 3008 5002

70011 75.29 2014-08-17 3003 NULL

70013 3045.6 2010-04-25 3002 NULL

3) Table Name: **customers**

**customer\_id cust\_name city grade salesman\_id**

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3002 Nick Rimando New York 100 5001

3007 John Brad Davis New York 200 5001

3005 Graham Zusi California 200 5002

3008 Julian Green London 300 5002

3004 Fabian Johnson Paris 300 5006

3009 Geoff Cameron Berlin 100 5003

3003 Jozy Altidor Moscow 200 5007

3001 John Brad Guzan London Null 5005

**Exercise**

1. Create database, tables and insert values in tables.

2. Identify all primary and foreign keys in the tables and add primary keys and foreign keys using Alter

command.

3. Display salesman\_id and city only from salesman table.

4. List all those customers that live in New York, in ascending order of their name. (Use where clause).

5. Change the column name ‘name’ from salesman table to ‘full\_name’.

6. List all those customers who have 'John' in their name and are either from London, Paris or NewYork. (use ‘like’ and ‘%’ operator)

7. Display the name of customer name who have ‘a’ in their name. (use ‘like’ and ‘%’ operator)

8. List all orders in descending order of their order date. (use order by).

9. List all the orders that were made in January (use built-in function).

10. List the year, week, dayofyear, month, day, weekday of all orders in the month of October. (use built in function)

11. List customers who have made order in 2012 as well as 2014.

12. Show those customers who have made order in 2012 but not in 2014.

13. Triple the purchase amount of all orders in the month of October. (use arithmetic operator).

14. Add 0.5 to the commission of all salesmen who belong to San Jose.

15. Find salesman name, orderdate, commission that have places the order.