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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

**Total Time: 90 Minutes**

**Database**

For this in-lab exercise use the following **customer-salesman** schema. Create database, tables and insert values in tables. (30 Minutes)

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 5002

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 5002

70005 2400.6 2010-07-27 3007 5001

70008 5760 2013-09-10 3002 5001

70010 1983.43 2010-10-10 3004 5006

70003 2480.4 2013-10-10 3009 5003

70012 250.45 2010-06-27 3008 5002

70011 75.29 2014-08-17 3003 5007

70013 3045.6 2010-04-25 3002 5001

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**

Write queries for the following exercise. (60 Minutes)

1. List all those customers that live in New York, in ascending order of their name. (2 Minutes)
2. List all those customers who have 'John' in their name and are either from London, Paris or NewYork. (5 Minutes)
3. List all those customers who are either from London or New York. (2 Minutes)
4. List those orders whose purchase amount is greater than 500. (2 Minutes)
5. List all salesmen whose second character in their name contain ‘a’. (5 Minutes)
6. Add 0.5 to the commission of all salesmen who belong to San Jose. (2 Minutes)
7. List all orders in descending order of their order date. (2 Minutes)
8. Get the first name of all salesmen and change the column name from name to firstname. (5 Minutes)
9. List all the orders that were made in January (Hint: use some built-in function). (5 Minutes)
10. List the year, week, dayofyear, month, day, weekday of all orders in the month of October. (Hint: use some built-in function). (10 Minutes)
11. Triple the purchase amount of all orders in the month of October. (5 Minutes)
12. Show those customers who have made order in 2012 as well as 2014. (Hint: use some set operation) (5 Minutes)
13. Show those customers who have made order in 2011 or in 2013. (5 Minutes)
14. Show those customers who have made order in 2012 but not in 2014. (5 Minutes)

Note: Approximate time required to perform each task has been mentioned based on task difficulty.