Roll No.: 2043

GROUP B-ASSIGNMENT: 05

TITLE: Implement DML commands with following operations:

a. Implement queries with relational operators, boolean operators and pattern matching,

arithmetic operations and built in functions.

b. Execute the aggregate functions like count, sum, avg etc.

c. Retrieve the data from the database based on time and date functions like now (), date (),

day (), time () etc.

d. Implement nested sub queries.

e. Implement queries with set operators.

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*Insert data in tables\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

mysql> INSERT INTO course(id , name , duration) VALUES (101 , "CS" , 2), (102 , "IT" , 3),(103 , "E&TC" , 3),(104 , "ELECTRICAL", 4),(105 ,"MECHANICAL" , 3);

Query OK, 1 row affected (0.02 sec)

mysql> INSERT INTO student (roll\_no , s\_name , s\_city , id )VALUES(1 , "AAMIR" , "SOLAPUR", 102 ),(2 , "PRAJWAL" , "PUNE" , 105 ), (3 , "NIKHIL" , "PUNE" , 103),(4 , "RUSHIKESH" , "PUNE" , 101),(5 , "MUSTAFFA" , "PHURSUNGI" , 104),(6 , "MAYUR" , "NASHIK" , 102),(7 , "HARSHAD" , "DAUND" , 104),(8, "SAHIL" , "BHEKRAI NAGAR", 101),(9, "OM" , "DAUND" , 102),(10, "TANISHQ" , "LONI KALBHOR", 105);

Query OK, 1 row affected (0.02 sec)

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*Display data\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

mysql> SELECT \* FROM student;

+---------+-----------+---------------+------+

| roll\_no | s\_name | s\_city | id |

+---------+-----------+---------------+------+

| 1 | AAMIR | SOLAPUR | 102 |

| 2 | PRAJWAL | PUNE CITY | 105 |

| 3 | NIKHIL | PUNE CITY | 103 |

| 4 | RUSHIKESH | PUNE CITY | 101 |

| 5 | MUSTAFFA | PHURSUNGI | 104 |

| 6 | MAYUR | NASHIK | 102 |

| 7 | HARSHAD | DAUND | 104 |

| 8 | SAHIL | BHEKRAI NAGAR | 101 |

| 9 | OM | DAUND | 102 |

| 10 | TANISHQ | LONI KALBHOR | 105 |

+---------+-----------+---------------+------+

10 rows in set (0.00 sec)

mysql> SELECT \* FROM course;

+-----+------------+----------+

| id | name | duration |

+-----+------------+----------+

| 101 | CS | 2 |

| 102 | IT | 3 |

| 103 | E&TC | 3 |

| 104 | ELECTRICAL | 4 |

| 105 | MECHANICAL | 3 |

+-----+------------+----------+

5 rows in set (0.00 sec)

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*Update data\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

--before updating

mysql> SELECT \* FROM student;

+---------+-----------+---------------+------+---------+

| roll\_no | s\_name | s\_city | id | stu\_age |

+---------+-----------+---------------+------+---------+

| 1 | AAMIR | SOLAPUR | 102 | 20 |

| 2 | PRAJWAL | PUNE | 105 | 20 |

| 3 | NIKHIL | PUNE | 103 | 20 |

| 4 | RUSHIKESH | PUNE | 101 | 20 |

| 5 | MUSTAFFA | PHURSUNGI | 104 | 20 |

| 6 | MAYUR | NASHIK | 102 | 20 |

| 7 | HARSHAD | DAUND | 104 | 20 |

| 8 | SAHIL | BHEKRAI NAGAR | 101 | 20 |

| 9 | OM | DAUND | 102 | 20 |

| 10 | TANISHQ | LONI KALBHOR | 105 | 20 |

+---------+-----------+---------------+------+---------+

1. rows in set (0.00 sec)

--after updating

mysql> UPDATE student SET s\_city = "PUNE CITY" WHERE s\_city = "PUNE";

Query OK, 3 rows affected (0.01 sec)

Rows matched: 3 Changed: 3 Warnings: 0

mysql> SELECT \* FROM student;

+---------+-----------+---------------+------+---------+

| roll\_no | s\_name | s\_city | id | stu\_age |

+---------+-----------+---------------+------+---------+

| 1 | AAMIR | SOLAPUR | 102 | 20 |

| 2 | PRAJWAL | PUNE CITY | 105 | 20 |

| 3 | NIKHIL | PUNE CITY | 103 | 20 |

| 4 | RUSHIKESH | PUNE CITY | 101 | 20 |

| 5 | MUSTAFFA | PHURSUNGI | 104 | 20 |

| 6 | MAYUR | NASHIK | 102 | 20 |

| 7 | HARSHAD | DAUND | 104 | 20 |

| 8 | SAHIL | BHEKRAI NAGAR | 101 | 20 |

| 9 | OM | DAUND | 102 | 20 |

| 10 | TANISHQ | LONI KALBHOR | 105 | 20 |

+---------+-----------+---------------+------+---------+

10 rows in set (0.00 sec)

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*Delete record\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

mysql> INSERT INTO student(roll\_no , s\_name, s\_city, id) VALUES(11 , "ABCDE" , "XYZ", 102);

Query OK, 1 row affected (0.01 sec)

mysql> SELECT \* FROM student;

+---------+-----------+---------------+------+

| roll\_no | s\_name | s\_city | id |

+---------+-----------+---------------+------+

| 1 | AAMIR | SOLAPUR | 102 |

| 2 | PRAJWAL | PUNE CITY | 105 |

| 3 | NIKHIL | PUNE CITY | 103 |

| 4 | RUSHIKESH | PUNE CITY | 101 |

| 5 | MUSTAFFA | PHURSUNGI | 104 |

| 6 | MAYUR | NASHIK | 102 |

| 7 | HARSHAD | DAUND | 104 |

| 8 | SAHIL | BHEKRAI NAGAR | 101 |

| 9 | OM | DAUND | 102 |

| 10 | TANISHQ | LONI KALBHOR | 105 |

| 11 | ABCDE | XYZ | 102 |

+---------+-----------+---------------+------+

11 rows in set (0.00 sec)

mysql> DELETE FROM student WHERE roll\_no = 11;

Query OK, 1 row affected (0.01 sec)

mysql> SELECT \* FROM student;

+---------+-----------+---------------+------+

| roll\_no | s\_name | s\_city | id |

+---------+-----------+---------------+------+

| 1 | AAMIR | SOLAPUR | 102 |

| 2 | PRAJWAL | PUNE CITY | 105 |

| 3 | NIKHIL | PUNE CITY | 103 |

| 4 | RUSHIKESH | PUNE CITY | 101 |

| 5 | MUSTAFFA | PHURSUNGI | 104 |

| 6 | MAYUR | NASHIK | 102 |

| 7 | HARSHAD | DAUND | 104 |

| 8 | SAHIL | BHEKRAI NAGAR | 101 |

| 9 | OM | DAUND | 102 |

| 10 | TANISHQ | LONI KALBHOR | 105 |

+---------+-----------+---------------+------+

10 rows in set (0.00 sec)

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*Where clause\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

mysql> SELECT s\_name FROM student WHERE marks>80;

+--------+

| s\_name |

+--------+

| AAMIR |

| NIKHIL |

| MAYUR |

+--------+

3 rows in set (0.00 sec)

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*Sort records\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

mysql> SELECT \* FROM student ORDER BY s\_city ASC;

+---------+-----------+---------------+------+

| roll\_no | s\_name | s\_city | id |

+---------+-----------+---------------+------+

| 8 | SAHIL | BHEKRAI NAGAR | 101 |

| 7 | HARSHAD | DAUND | 104 |

| 9 | OM | DAUND | 102 |

| 10 | TANISHQ | LONI KALBHOR | 105 |

| 6 | MAYUR | NASHIK | 102 |

| 5 | MUSTAFFA | PHURSUNGI | 104 |

| 2 | PRAJWAL | PUNE CITY | 105 |

| 3 | NIKHIL | PUNE CITY | 103 |

| 4 | RUSHIKESH | PUNE CITY | 101 |

| 1 | AAMIR | SOLAPUR | 102 |

+---------+-----------+---------------+------+

10 rows in set (0.00 sec)

mysql> SELECT \* FROM student ORDER BY s\_city DESC;

+---------+-----------+---------------+------+

| roll\_no | s\_name | s\_city | id |

+---------+-----------+---------------+------+

| 1 | AAMIR | SOLAPUR | 102 |

| 2 | PRAJWAL | PUNE CITY | 105 |

| 3 | NIKHIL | PUNE CITY | 103 |

| 4 | RUSHIKESH | PUNE CITY | 101 |

| 5 | MUSTAFFA | PHURSUNGI | 104 |

| 6 | MAYUR | NASHIK | 102 |

| 10 | TANISHQ | LONI KALBHOR | 105 |

| 7 | HARSHAD | DAUND | 104 |

| 9 | OM | DAUND | 102 |

| 8 | SAHIL | BHEKRAI NAGAR | 101 |

+---------+-----------+---------------+------+

10 rows in set (0.00 sec)

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*Aggregate functions\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

mysql> SELECT COUNT(s\_city) FROM student;

+---------------+

| COUNT(s\_city) |

+---------------+

| 10 |

+---------------+

1 row in set (0.01 sec)

mysql> SELECT MAX(marks) FROM student;

+------------+

| MAX(marks) |

+------------+

| 85 |

+------------+

1 row in set (0.00 sec)

mysql> SELECT MIN(marks) FROM student;

+------------+

| MIN(marks) |

+------------+

| 48 |

+------------+

1 row in set (0.00 sec)

mysql> SELECT AVG(marks) FROM student;

+------------+

| AVG(marks) |

+------------+

| 68.3000 |

+------------+

1 row in set (0.00 sec)

mysql> SELECT SUM(marks) FROM student;

+------------+

| SUM(marks) |

+------------+

| 683 |

+------------+

1 row in set (0.00 sec)

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*Group by clause\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

mysql> SELECT s\_city FROM student GROUP BY s\_city;

+---------------+

| s\_city |

+---------------+

| SOLAPUR |

| PUNE CITY |

| PHURSUNGI |

| NASHIK |

| DAUND |

| BHEKRAI NAGAR |

| LONI KALBHOR |

+---------------+

7 rows in set (0.00 sec)

mysql> SELECT MAX(marks) , s\_city FROM student GROUP BY s\_city;

+------------+---------------+

| MAX(marks) | s\_city |

+------------+---------------+

| 85 | SOLAPUR |

| 82 | PUNE CITY |

| 55 | PHURSUNGI |

| 82 | NASHIK |

| 80 | DAUND |

| 63 | BHEKRAI NAGAR |

| 54 | LONI KALBHOR |

+------------+---------------+

7 rows in set (0.00 sec)

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*Like Operator\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

mysql> SELECT \* FROM student WHERE s\_name like "a%";

+---------+--------+---------+------+-------+

| roll\_no | s\_name | s\_city | id | marks |

+---------+--------+---------+------+-------+

| 1 | AAMIR | SOLAPUR | 102 | 85 |

+---------+--------+---------+------+-------+

1 row in set (0.00 sec)

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*Lower case & Upper case\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

mysql> SELECT LOWER(s\_city) AS lowercase\_city FROM student;

+----------------+

| lowercase\_city |

+----------------+

| solapur |

| pune city |

| pune city |

| pune city |

| phursungi |

| nashik |

| daund |

| bhekrai nagar |

| daund |

| loni kalbhor |

+----------------+

10 rows in set (0.00 sec)

mysql> SELECT UPPER(s\_city) AS uppercase\_city FROM student;

+----------------+

| uppercase\_city |

+----------------+

| SOLAPUR |

| PUNE CITY |

| PUNE CITY |

| PUNE CITY |

| PHURSUNGI |

| NASHIK |

| DAUND |

| BHEKRAI NAGAR |

| DAUND |

| LONI KALBHOR |

+----------------+

10 rows in set (0.00 sec)

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*Between clause\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

mysql> SELECT s\_city FROM student WHERE marks BETWEEN 60 AND 90;

+---------------+

| s\_city |

+---------------+

| SOLAPUR |

| PUNE CITY |

| PUNE CITY |

| PUNE CITY |

| NASHIK |

| BHEKRAI NAGAR |

| DAUND |

+---------------+

7 rows in set (0.00 sec)

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*Use of “AND, OR, NOT”\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

mysql> SELECT \* FROM student WHERE marks>40 AND s\_city = "PUNE CITY";

+---------+-----------+-----------+------+-------+

| roll\_no | s\_name | s\_city | id | marks |

+---------+-----------+-----------+------+-------+

| 2 | PRAJWAL | PUNE CITY | 105 | 66 |

| 3 | NIKHIL | PUNE CITY | 103 | 82 |

| 4 | RUSHIKESH | PUNE CITY | 101 | 68 |

+---------+-----------+-----------+------+-------+

3 rows in set (0.00 sec)

mysql> SELECT \* FROM student WHERE marks>40 OR s\_city = "PUNE CITY";

+---------+-----------+---------------+------+-------+

| roll\_no | s\_name | s\_city | id | marks |

+---------+-----------+---------------+------+-------+

| 1 | AAMIR | SOLAPUR | 102 | 85 |

| 2 | PRAJWAL | PUNE CITY | 105 | 66 |

| 3 | NIKHIL | PUNE CITY | 103 | 82 |

| 4 | RUSHIKESH | PUNE CITY | 101 | 68 |

| 5 | MUSTAFFA | PHURSUNGI | 104 | 55 |

| 6 | MAYUR | NASHIK | 102 | 82 |

| 7 | HARSHAD | DAUND | 104 | 48 |

| 8 | SAHIL | BHEKRAI NAGAR | 101 | 63 |

| 9 | OM | DAUND | 102 | 80 |

| 10 | TANISHQ | LONI KALBHOR | 105 | 54 |

+---------+-----------+---------------+------+-------+

10 rows in set (0.00 sec)

mysql> SELECT \* FROM student WHERE NOT s\_city = "PUNE CITY";

+---------+----------+---------------+------+-------+

| roll\_no | s\_name | s\_city | id | marks |

+---------+----------+---------------+------+-------+

| 1 | AAMIR | SOLAPUR | 102 | 85 |

| 5 | MUSTAFFA | PHURSUNGI | 104 | 55 |

| 6 | MAYUR | NASHIK | 102 | 82 |

| 7 | HARSHAD | DAUND | 104 | 48 |

| 8 | SAHIL | BHEKRAI NAGAR | 101 | 63 |

| 9 | OM | DAUND | 102 | 80 |

| 10 | TANISHQ | LONI KALBHOR | 105 | 54 |

+---------+----------+---------------+------+-------+

7 rows in set (0.00 sec)

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*Nested Query\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

mysql> SELECT s\_name,s\_city FROM student WHERE marks>(SELECT AVG(marks) FROM student);

+--------+-----------+

| s\_name | s\_city |

+--------+-----------+

| AAMIR | SOLAPUR |

| NIKHIL | PUNE CITY |

| MAYUR | NASHIK |

| OM | DAUND |

+--------+-----------+

4 rows in set (0.00 sec)

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*Other queries\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

mysql> SELECT \* FROM student;

+---------+-----------+---------------+------+-------+------------+

| roll\_no | s\_name | s\_city | id | marks | d\_o\_b |

+---------+-----------+---------------+------+-------+------------+

| 1 | AAMIR | SOLAPUR | 102 | 85 | 2004-07-07 |

| 2 | PRAJWAL | PUNE CITY | 105 | 66 | 2003-11-18 |

| 3 | NIKHIL | PUNE CITY | 103 | 82 | 2004-02-29 |

| 4 | RUSHIKESH | PUNE CITY | 101 | 68 | 2005-08-25 |

| 5 | MUSTAFFA | PHURSUNGI | 104 | 55 | 2004-03-07 |

| 6 | MAYUR | NASHIK | 102 | 82 | 2004-04-22 |

| 7 | HARSHAD | DAUND | 104 | 48 | 2004-05-01 |

| 8 | SAHIL | BHEKRAI NAGAR | 101 | 63 | 2004-09-13 |

| 9 | OM | DAUND | 102 | 80 | 2004-03-12 |

| 10 | TANISHQ | LONI KALBHOR | 105 | 54 | 2003-06-09 |

+---------+-----------+---------------+------+-------+------------+

10 rows in set (0.00 sec)

mysql> SELECT s\_name, roll\_no FROM student WHERE d\_o\_b > "2004-05-08";

+-----------+---------+

| s\_name | roll\_no |

+-----------+---------+

| AAMIR | 1 |

| RUSHIKESH | 4 |

| SAHIL | 8 |

+-----------+---------+

3 rows in set (0.00 sec)