Assignment

Aug24/ DBT/ 007

Database Technologies

Diploma in Advance Computing

August 2024

**DML commands: Select data with WHERE, GROUP BY, HAVING, ORDER BY and LIMIT clause.**

USE ***student\_phone, student\_address, faculty\_phone, faculty\_address, batch\_students, course\_batches, student\_qualifications, faculty\_qualifications, course\_modules, modules, faculty, student, course, student\_cards, and student\_order*** relation to solve the following queries.

|  |
| --- |
| 1. List all student. |
| **mysql> select \* from student;**  **+----+-----------+----------+------------+--------------------------+**  **| ID | namefirst | namelast | DOB | emailID |**  **+----+-----------+----------+------------+--------------------------+**  **| 1 | saleel | bagde | 1984-06-12 | saleel.bagde@gmail.com |**  **| 2 | omkar | rokde | 1969-10-25 | omkar.rakde@gmail.com |**  **| 3 | ulka | joshi | 1970-10-25 | ulka.joshi@gmail.com |**  **| 4 | rahul | patil | 1982-10-31 | rahul.patil@gmail.com |**  **| 5 | ruhan | bagde | 1984-01-12 | ruhan.bagde@gmail.com |**  **| 6 | lala | prasad | 1980-12-01 | lala.prasad@gmail.com |**  **| 7 | sharmin | bagde | 1986-12-14 | sharmin.bagde@gmail.com |**  **| 8 | vrushali | bagde | 1984-12-29 | vrushali.bagde@gmail.com |**  **| 9 | vasant | khande | 1992-10-26 | vasant.khande@gmail.com |**  **| 10 | nitish | patil | 1990-10-26 | nitish.patil@gmail.com |**  **| 11 | neel | save | 1975-10-30 | neel.save@gmail.com |**  **| 12 | deep | save | 1986-11-30 | deep.save@gmail.com |**  **| 13 | nrupali | save | 1981-12-01 | nrupali.save@gmail.com |**  **| 14 | supriya | karnik | 1983-12-15 | supriya.karnik@gmail.com |**  **| 15 | bandish | karnik | 1987-12-30 | bandish.karnik@gmail.com |**  **| 16 | sangita | karnik | 1990-12-01 | sangita.karnik@gmail.com |**  **| 17 | sangita | menon | 1989-10-26 | sangita.menon@gmail.com |**  **| 18 | rahul | shah | 1982-06-12 | rahul.shah@gmail.com |**  **| 19 | bhavin | patel | 1983-11-13 | bhavin.patel@gmail.com |**  **| 20 | kaushal | patil | 1982-07-30 | kaushal.patil@gmail.com |**  **| 21 | pankaj | gandhi | 1982-07-30 | pankaj.gandhi@gmail.com |**  **| 22 | rajan | patel | 1982-07-30 | rajan.patel@gmail.com |**  **| 23 | bhavin | patel | 1982-07-30 | bhavin.patel@gmail.com |**  **| 24 | mukesh | bhavsar | 1982-07-30 | mukesh.bhavsar@gmail.com |**  **| 25 | dilu | khande | 1982-07-30 | dilu.khande@gmail.com |**  **| 26 | sonam | khan | 1972-05-13 | sonam.khan@gmail.com |**  **| 27 | rohit | patil | 1976-12-31 | rohit.patil@gmail.com |**  **| 28 | raj | bubber | 1982-02-28 | raj.bubber@gmail.com |**  **+----+-----------+----------+------------+--------------------------+** |
|  |
| 1. List namefirst,namelast of all student. |
| **mysql> select namefirst, namelast from student;**  **+-----------+----------+**  **| namefirst | namelast |**  **+-----------+----------+**  **| saleel | bagde |**  **| omkar | rokde |**  **| ulka | joshi |**  **| rahul | patil |**  **| ruhan | bagde |**  **| lala | prasad |**  **| sharmin | bagde |**  **| vrushali | bagde |**  **| vasant | khande |**  **| nitish | patil |**  **| neel | save |**  **| deep | save |**  **| nrupali | save |**  **| supriya | karnik |**  **| bandish | karnik |**  **| sangita | karnik |**  **| sangita | menon |**  **| rahul | shah |**  **| bhavin | patel |**  **| kaushal | patil |**  **| pankaj | gandhi |**  **| rajan | patel |**  **| bhavin | patel |**  **| mukesh | bhavsar |**  **| dilu | khande |**  **| sonam | khan |**  **| rohit | patil |**  **| raj | bubber |**  **+-----------+----------+** |
|  |
| 1. Display student information of the student whosestudent *ID* is 10. |
| **mysql> select \* from student where ID=10;**  **+----+-----------+----------+------------+------------------------+**  **| ID | namefirst | namelast | DOB | emailID |**  **+----+-----------+----------+------------+------------------------+**  **| 10 | nitish | patil | 1990-10-26 | nitish.patil@gmail.com |**  **+----+-----------+----------+------------+------------------------+** |
|  |
| 1. List of various faculties available from faculty table. |
| mysql> select \* from faculty;  +----+-----------+----------+------------+------------------------+  | ID | namefirst | namelast | DOB | emailID |  +----+-----------+----------+------------+------------------------+  | 1 | prachi | gupta | 1974-06-12 | prachi.gupta@gmail.com |  | 2 | ketan | shukla | 1972-10-25 | ketan.shukla@gmail.com |  | 3 | kiran | dev | 1971-10-25 | kiran.dev@gmail.com |  | 4 | parag | patil | 1972-10-31 | parag.patil@gmail.com |  | 5 | raju | patil | 1972-02-12 | raju.patil@gmail.com |  +----+-----------+----------+------------+------------------------+ |
|  |
| 1. List all student having ‘A’ as second letter in their namefirst. |
| **mysql> select \* from student where substr(namefirst,2,1)='A';**  **+----+-----------+----------+------------+--------------------------+**  **| ID | namefirst | namelast | DOB | emailID |**  **+----+-----------+----------+------------+--------------------------+**  **| 1 | saleel | bagde | 1984-06-12 | saleel.bagde@gmail.com |**  **| 4 | rahul | patil | 1982-10-31 | rahul.patil@gmail.com |**  **| 6 | lala | prasad | 1980-12-01 | lala.prasad@gmail.com |**  **| 9 | vasant | khande | 1992-10-26 | vasant.khande@gmail.com |**  **| 15 | bandish | karnik | 1987-12-30 | bandish.karnik@gmail.com |**  **| 16 | sangita | karnik | 1990-12-01 | sangita.karnik@gmail.com |**  **| 17 | sangita | menon | 1989-10-26 | sangita.menon@gmail.com |**  **| 18 | rahul | shah | 1982-06-12 | rahul.shah@gmail.com |**  **| 20 | kaushal | patil | 1982-07-30 | kaushal.patil@gmail.com |**  **| 21 | pankaj | gandhi | 1982-07-30 | pankaj.gandhi@gmail.com |**  **| 22 | rajan | patel | 1982-07-30 | rajan.patel@gmail.com |**  **| 28 | raj | bubber | 1982-02-28 | raj.bubber@gmail.com |**  **+----+-----------+----------+------------+--------------------------+** |
|  |
| 1. List all student having letter ‘A’ in their namefirst. |
| **select \* from student where substr(namefirst,1,1)='a';**  **Empty set (0.00 sec)** |
|  |
| 1. Display the details of the student whoseDOBis '1986-12-14'. |
| mysql> select \* from student where dob='1986-12-14';  +----+-----------+----------+------------+-------------------------+  | ID | namefirst | namelast | DOB | emailID |  +----+-----------+----------+------------+-------------------------+  | 7 | sharmin | bagde | 1986-12-14 | sharmin.bagde@gmail.com |  +----+-----------+----------+------------+-------------------------+ |
|  |
| 1. List all student having ‘R’ as first letter in their namefirst. |
| **mysql> select \* from student where substr(namefirst,1,1)='R';**  **+----+-----------+----------+------------+-----------------------+**  **| ID | namefirst | namelast | DOB | emailID |**  **+----+-----------+----------+------------+-----------------------+**  **| 4 | rahul | patil | 1982-10-31 | rahul.patil@gmail.com |**  **| 5 | ruhan | bagde | 1984-01-12 | ruhan.bagde@gmail.com |**  **| 18 | rahul | shah | 1982-06-12 | rahul.shah@gmail.com |**  **| 22 | rajan | patel | 1982-07-30 | rajan.patel@gmail.com |**  **| 27 | rohit | patil | 1976-12-31 | rohit.patil@gmail.com |**  **| 28 | raj | bubber | 1982-02-28 | raj.bubber@gmail.com |**  **+----+-----------+----------+------------+-----------------------+** |
|  |
| 1. Display the *namefirst, lastname* from student relation with Customized column headings. |
| mysql> select namefirst Firstname, namelast LastName from student;  +-----------+----------+  | Firstname | LastName |  +-----------+----------+  | saleel | bagde |  | omkar | rokde |  | ulka | joshi |  | rahul | patil |  | ruhan | bagde |  | lala | prasad |  | sharmin | bagde |  | vrushali | bagde |  | vasant | khande |  | nitish | patil |  | neel | save |  | deep | save |  | nrupali | save |  | supriya | karnik |  | bandish | karnik |  | sangita | karnik |  | sangita | menon |  | rahul | shah |  | bhavin | patel |  | kaushal | patil |  | pankaj | gandhi |  | rajan | patel |  | bhavin | patel |  | mukesh | bhavsar |  | dilu | khande |  | sonam | khan |  | rohit | patil |  | raj | bubber |  +-----------+----------+ |
|  |
| 1. Display all students in ascending order of their DOB. |
| mysql> select \* from student order by dob;  +----+-----------+----------+------------+--------------------------+  | ID | namefirst | namelast | DOB | emailID |  +----+-----------+----------+------------+--------------------------+  | 2 | omkar | rokde | 1969-10-25 | omkar.rakde@gmail.com |  | 3 | ulka | joshi | 1970-10-25 | ulka.joshi@gmail.com |  | 26 | sonam | khan | 1972-05-13 | sonam.khan@gmail.com |  | 11 | neel | save | 1975-10-30 | neel.save@gmail.com |  | 27 | rohit | patil | 1976-12-31 | rohit.patil@gmail.com |  | 6 | lala | prasad | 1980-12-01 | lala.prasad@gmail.com |  | 13 | nrupali | save | 1981-12-01 | nrupali.save@gmail.com |  | 28 | raj | bubber | 1982-02-28 | raj.bubber@gmail.com |  | 18 | rahul | shah | 1982-06-12 | rahul.shah@gmail.com |  | 20 | kaushal | patil | 1982-07-30 | kaushal.patil@gmail.com |  | 21 | pankaj | gandhi | 1982-07-30 | pankaj.gandhi@gmail.com |  | 22 | rajan | patel | 1982-07-30 | rajan.patel@gmail.com |  | 23 | bhavin | patel | 1982-07-30 | bhavin.patel@gmail.com |  | 24 | mukesh | bhavsar | 1982-07-30 | mukesh.bhavsar@gmail.com |  | 25 | dilu | khande | 1982-07-30 | dilu.khande@gmail.com |  | 4 | rahul | patil | 1982-10-31 | rahul.patil@gmail.com |  | 19 | bhavin | patel | 1983-11-13 | bhavin.patel@gmail.com |  | 14 | supriya | karnik | 1983-12-15 | supriya.karnik@gmail.com |  | 5 | ruhan | bagde | 1984-01-12 | ruhan.bagde@gmail.com |  | 1 | saleel | bagde | 1984-06-12 | saleel.bagde@gmail.com |  | 8 | vrushali | bagde | 1984-12-29 | vrushali.bagde@gmail.com |  | 12 | deep | save | 1986-11-30 | deep.save@gmail.com |  | 7 | sharmin | bagde | 1986-12-14 | sharmin.bagde@gmail.com |  | 15 | bandish | karnik | 1987-12-30 | bandish.karnik@gmail.com |  | 17 | sangita | menon | 1989-10-26 | sangita.menon@gmail.com |  | 10 | nitish | patil | 1990-10-26 | nitish.patil@gmail.com |  | 16 | sangita | karnik | 1990-12-01 | sangita.karnik@gmail.com |  | 9 | vasant | khande | 1992-10-26 | vasant.khande@gmail.com |  +----+-----------+----------+------------+--------------------------+ |
|  |
| 1. Display two records of student whose name starts with the letter ‘S’. |
| mysql> select namefirst, namelast from student where substr(namefirst,1,1)='S';  +-----------+----------+  | namefirst | namelast |  +-----------+----------+  | saleel | bagde |  | sharmin | bagde |  | supriya | karnik |  | sangita | karnik |  | sangita | menon |  | sonam | khan |  +-----------+----------+ |
|  |
| 1. Display the student detail whose DOB is ‘1986-12-14’. |
| mysql> select \* from student where dob='1986-12-14';  +----+-----------+----------+------------+-------------------------+  | ID | namefirst | namelast | DOB | emailID |  +----+-----------+----------+------------+-------------------------+  | 7 | sharmin | bagde | 1986-12-14 | sharmin.bagde@gmail.com |  +----+-----------+----------+------------+-------------------------+ |
|  |
| 1. Display all modules whose module duration is 1 (use modules table). |
| mysql> select \* from modules where duration=1 ;  +----+----------+----------+  | ID | name | duration |  +----+----------+----------+  | 1 | Oracle | 1 |  | 2 | PHP | 1 |  | 3 | MySQL | 1 |  | 4 | Node | 1 |  | 5 | C++ | 1 |  | 6 | C | 1 |  | 9 | MongoDB | 1 |  | 11 | Hive | 1 |  | 12 | Python | 1 |  | 13 | Aptitude | 1 |  +----+----------+----------+ |
|  |
| 1. Display all batches whose sitting capacity is 80 students (use course\_batches table). |
| mysql> select \* from course\_batches where capacity=80;  +----+---------+----------+------------+------------+----------+  | ID | name | courseID | starton | endson | capacity |  +----+---------+----------+------------+------------+----------+  | 1 | Batch1 | 1 | 2016-02-01 | 2016-08-31 | 80 |  | 6 | Batch6 | 1 | 2015-02-01 | 2015-08-31 | 80 |  | 11 | Batch11 | 1 | 2017-08-01 | 2018-02-28 | 80 |  | 16 | Batch16 | 1 | 2014-08-01 | 2015-02-28 | 80 |  | 21 | Batch21 | 1 | 2015-08-01 | 2016-02-28 | 80 |  +----+---------+----------+------------+------------+----------+ |
|  |
| 1. Display all student qualification who have done’ BE’ and secured marks more than 70. (use student\_qualifications table). |
| mysql> select \* from student\_qualifications where name='BE' and marks>=70;  +----+-----------+------+-------------+------------------------+-------+------+  | ID | studentID | name | college | university | marks | year |  +----+-----------+------+-------------+------------------------+-------+------+  | 18 | 6 | BE | Indiana | University of Chicago | 87 | 2015 |  | 21 | 7 | BE | Kentucky | Harvard University | 97 | 2017 |  | 27 | 9 | BE | Kansas | Columbia University | 87 | 2018 |  | 48 | 16 | BE | Mississippi | University of Michigan | 76 | 2018 |  | 54 | 18 | BE | Maryland | Harvard University | 75 | 2017 |  | 60 | 20 | BE | Maryland | Columbia University | 72 | 2019 |  | 72 | 24 | BE | Kentucky | Harvard University | 97 | 2017 |  | 75 | 25 | BE | Kentucky | Harvard University | 97 | 2017 |  +----+-----------+------+-------------+------------------------+-------+------+ |
|  |
| 1. Display all student qualification who have done’ BE’ and graduated in the year 2017. (use student\_qualifications table). |
| mysql> select \* from student\_qualifications where name='BE'and year=2017;  +----+-----------+------+----------+-------------------------+-------+------+  | ID | studentID | name | college | university | marks | year |  +----+-----------+------+----------+-------------------------+-------+------+  | 9 | 3 | BE | Florida | University of Florida | 67 | 2017 |  | 21 | 7 | BE | Kentucky | Harvard University | 97 | 2017 |  | 45 | 15 | BE | Alabama | Pennsylvania University | 65 | 2017 |  | 54 | 18 | BE | Maryland | Harvard University | 75 | 2017 |  | 72 | 24 | BE | Kentucky | Harvard University | 97 | 2017 |  | 75 | 25 | BE | Kentucky | Harvard University | 97 | 2017 |  +----+-----------+------+----------+-------------------------+-------+------+ |
|  |
| 1. Display all student qualification who have done’ BE’ and graduated in the year 2017 and scored marks more than 80. (use student\_qualifications table). |
| mysql> select \* from student\_qualifications where name='BE'; and year=2017 and marks>80;  +----+-----------+------+-------------+-------------------------+-------+------+  | ID | studentID | name | college | university | marks | year |  +----+-----------+------+-------------+-------------------------+-------+------+  | 3 | 1 | BE | Arizona | Harvard University | 68 | 2018 |  | 9 | 3 | BE | Florida | University of Florida | 67 | 2017 |  | 18 | 6 | BE | Indiana | University of Chicago | 87 | 2015 |  | 21 | 7 | BE | Kentucky | Harvard University | 97 | 2017 |  | 27 | 9 | BE | Kansas | Columbia University | 87 | 2018 |  | 39 | 13 | BE | Texas | University of Florida | 68 | 2018 |  | 42 | 14 | BE | Idaho | Yale University | 57 | 2019 |  | 45 | 15 | BE | Alabama | Pennsylvania University | 65 | 2017 |  | 48 | 16 | BE | Mississippi | University of Michigan | 76 | 2018 |  | 51 | 17 | BE | Ohio | University of Ohio | 68 | 2019 |  | 54 | 18 | BE | Maryland | Harvard University | 75 | 2017 |  | 57 | 19 | BE | Maine | University of Florida | 61 | 2019 |  | 60 | 20 | BE | Maryland | Columbia University | 72 | 2019 |  | 63 | 21 | BE | Arizona | Harvard University | 68 | 2018 |  | 66 | 22 | BE | Arizona | Harvard University | 68 | 2018 |  | 69 | 23 | BE | Arizona | Harvard University | 68 | 2018 |  | 72 | 24 | BE | Kentucky | Harvard University | 97 | 2017 |  | 75 | 25 | BE | Kentucky | Harvard University | 97 | 2017 |  | 78 | 26 | BE | Maryland | Harvard University | 68 | 2000 |  | 82 | 27 | BE | Vermont | Pennsylvania University | 62 | 2006 |  +----+-----------+------+-------------+-------------------------+-------+------+ |
|  |
| 1. Display faculty qualification who have done ‘BE’ from ‘Harvard University’(use faculty\_qualifications table) |
| mysql> select \* from student\_qualifications where name='BE'and university='Harvard University';  +----+-----------+------+----------+--------------------+-------+------+  | ID | studentID | name | college | university | marks | year |  +----+-----------+------+----------+--------------------+-------+------+  | 3 | 1 | BE | Arizona | Harvard University | 68 | 2018 |  | 21 | 7 | BE | Kentucky | Harvard University | 97 | 2017 |  | 54 | 18 | BE | Maryland | Harvard University | 75 | 2017 |  | 63 | 21 | BE | Arizona | Harvard University | 68 | 2018 |  | 66 | 22 | BE | Arizona | Harvard University | 68 | 2018 |  | 69 | 23 | BE | Arizona | Harvard University | 68 | 2018 |  | 72 | 24 | BE | Kentucky | Harvard University | 97 | 2017 |  | 75 | 25 | BE | Kentucky | Harvard University | 97 | 2017 |  | 78 | 26 | BE | Maryland | Harvard University | 68 | 2000 |  +----+-----------+------+----------+--------------------+-------+------+ |
|  |
| 1. Display all courses whose course duration is 6 months.(use course table) |
| mysql> select \* from course where duration=6;  +----+--------+----------+---------------------------------+  | ID | name | duration | summery |  +----+--------+----------+---------------------------------+  | 1 | PG-DAC | 6 | This course is designed by CDAC |  | 2 | DBDA | 6 | This course is designed by CDAC |  | 6 | DMC | 6 | This course is designed by CDAC |  | 7 | DSSD | 6 | This course is designed by CDAC |  +----+--------+----------+---------------------------------+ |
|  |
| 1. Display module details whose module duration is between 1 and 2, arrange the data in ascending order of module duration. (use module table) |
| mysql> select \* from modules where duration between 1 and 2 order by duration desc;  +----+----------+----------+  | ID | name | duration |  +----+----------+----------+  | 7 | JAVA1 | 2 |  | 8 | JAVA2 | 2 |  | 10 | NET | 2 |  | 1 | Oracle | 1 |  | 2 | PHP | 1 |  | 3 | MySQL | 1 |  | 4 | Node | 1 |  | 5 | C++ | 1 |  | 6 | C | 1 |  | 9 | MongoDB | 1 |  | 11 | Hive | 1 |  | 12 | Python | 1 |  | 13 | Aptitude | 1 |  +----+----------+----------+ |
|  |
| 1. Display all student with their voting rights, if the student is below 1980 then print the message “\*The student can vote” else print “The student cannot vote”. |
|  |
|  |
| 1. Display all distinct universities from student\_qualifications table. |
| mysql> select distinct(university) from student\_qualifications;  +-------------------------+  | university |  +-------------------------+  | Stanford University |  | Harvard University |  | University of Chicago |  | Yale University |  | California University |  | University of Florida |  | Pennsylvania University |  | Columbia University |  | University of Michigan |  | University of Ohio |  | University Maryland |  +-------------------------+ |
|  |
| 1. Display the second highest marks scored by any student in ‘BE’. |
| mysql> select \* from student\_qualifications where marks =(select max(marks) from student\_qualifications  -> where marks<(select max(marks) from student\_qualifications where name='BE'));  +----+-----------+------+---------------+-----------------------+-------+------+  | ID | studentID | name | college | university | marks | year |  +----+-----------+------+---------------+-----------------------+-------+------+  | 43 | 15 | 10 | New Hampshire | California University | 96 | 2011 |  +----+-----------+------+---------------+-----------------------+-------+------+ |
|  |
| 1. Display the second lowest marks scored by any student in ‘BE’. |
| mysql> select \* from student\_qualifications where marks = (select min(marks) from student\_qualifications  -> where marks>(select min(marks) from student\_qualifications where name='BE'));  +----+-----------+------+---------+-------------------------+-------+------+  | ID | studentID | name | college | university | marks | year |  +----+-----------+------+---------+-------------------------+-------+------+  | 10 | 4 | 10 | Idaho | Pennsylvania University | 58 | 2010 |  +----+-----------+------+---------+-------------------------+-------+------+ |
|  |
| 1. Display last 7 student. |
| mysql> select \* from student limit 22,7;  +----+-----------+----------+------------+--------------------------+  | ID | namefirst | namelast | DOB | emailID |  +----+-----------+----------+------------+--------------------------+  | 23 | bhavin | patel | 1982-07-30 | bhavin.patel@gmail.com |  | 24 | mukesh | bhavsar | 1982-07-30 | mukesh.bhavsar@gmail.com |  | 25 | dilu | khande | 1982-07-30 | dilu.khande@gmail.com |  | 26 | sonam | khan | 1972-05-13 | sonam.khan@gmail.com |  | 27 | rohit | patil | 1976-12-31 | rohit.patil@gmail.com |  | 28 | raj | bubber | 1982-02-28 | raj.bubber@gmail.com |  +----+-----------+----------+------------+--------------------------+ |
|  |