Source Code

/\* To create a new database: \*/

**CREATE** DATABASE database\_name;

/\* Ex : \*/

**CREATE** DATABASE joes;

/\* To drop(Remove) a database:\*/

**DROP** DATABASE database\_name;

/\* Ex:\*/

**DROP** DATABASE joes;

/\* To view all databases:\*/

**SHOW** **DATABASES**;

/\* To select a database:\*/

**USE** database\_name;

/\* Ex:\*/

**USE** joes;

/\* To create a new table:\*/

**CREATE** **TABLE** users(id INT NOT NULL AUTO\_INCREMENT, name VARCHAR(50) NOT NULL, age INT NOT NULL,**PRIMARY** **KEY**(id));

/\* To view all tables in a database:\*/

**SHOW** **TABLES**;

/\* To view structure of a table:\*/

**DESCRIBE** table\_name;

**DESCRIBE** users;

/\* To add a new column inside a table:\*/

**ALTER** **TABLE** users **ADD** gender VARCHAR(10) NOT NULL **AFTER** AGE;

/\* To add multiple columns to a table:\*/

**ALTER** **TABLE** users **ADD** city VARCHAR(50) NOT NULL, **ADD** contact VARCHAR(50) NOT NULL;

/\*To modify a column in a table:\*/

**ALTER** **TABLE** users **MODIFY** contact VARCHAR(25) NOT NULL;

/\*To rename a table:\*/

**ALTER** **TABLE** users **RENAME** **TO** students;

/\*To view recoords in a table:\*/

**SELECT** \* **FROM** students;

/\* To insert a record into a table:\*/

**INSERT** **INTO** students **VALUES**(NULL,'Ram',25,'Male','Salem','9874563210');

/\* To insert mutiple records into a table:\*/

**INSERT** **INTO** students(name,age,gender,city,contact) **VALUES** ('Ravi',23,'Male','Namakkal','9876543210'),('Sara',23,'Female','Erode','9874521360');

/\* To delete a row from table:\*/

**DELETE** **FROM** students **WHERE** id=4;

/\* To Modify/Update a row in table:\*/

**UPDATE** students **SET** city='Hosur',contact='9988776655' **WHERE** id=3;

/\* To clear all data from a table:\*/

**TRUNCATE** **TABLE** students;

/\* Select particular fields in a table:\*/

**SELECT** name,age **FROM** students;

/\* elect records with criteria:\*/

**SELECT** name,age,city **FROM** students **WHERE** city='Hosur';

/\* Select recoords with multiple criteria:\*/

**SELECT** name,age,city **FROM** students **WHERE** city='Hosur' AND age >= 23;

**SELECT** name,age,city **FROM** students **WHERE** city='Namakkal' OR city='Hosur';

**SELECT** name,age,city **FROM** students **WHERE** (city='Namakkal' OR city='Hosur') AND age >= 23;

/\* To select unique values in a field:\*/

**SELECT** **DISTINCT** city **FROM** students;

/\* To count unique values in a field:\*/

**SELECT** COUNT(**DISTINCT** city) **FROM** students;

/\* To count unique values in a field with allies name:\*/

**SELECT** COUNT(**DISTINCT** city) **AS** total **FROM** students;

/\* To Select N number of recoords:\*/

**SELECT** \* **FROM** students **LIMIT** 5;

/\* To Select a range of recoords:\*/

**SELECT** \* **FROM** students **LIMIT** 5,15;

/\* To select the very first record from a table:\*/

**SELECT** \* **FROM** students **LIMIT** 0,1;

/\* To select the very last record from a table:\*/

**SELECT** \* **FROM** students **ORDER** **BY** id **DESC** **LIMIT** 0,1;

/\* To select maximum value in a table:\*/

**SELECT** MAX(age) **FROM** students;

/\* To select minimum value in a table:\*/

**SELECT** MIN(age) **FROM** students;

/\* To select average of a field:\*/

**SELECT** AVG(age) **FROM** students;

/\* To round a float value:\*/

**SELECT** ROUND(AVG(age),0) **FROM** students;

/\* To select sum of a field:\*/

**SELECT** SUM(age) **FROM** students;

/\* To select group wise records:\*/

**SELECT** gender,COUNT(id) **FROM** students **GROUP** **BY** gender;

/\* WILD CARD QUERIES:

To select values starts with some letters:\*/

**SELECT** NAME **FROM** students **WHERE** name LIKE 'Ra%';

/\* To select values ends with some letters:\*/

**SELECT** NAME **FROM** students **WHERE** name LIKE '%am';

/\* To select values contains some letters:\*/

**SELECT** NAME **FROM** students **WHERE** name LIKE '%la%';

/\* To select values having given keywords:\*/

**SELECT** \* **FROM** STUDENTS **WHERE** city **IN**('Salem','Namakkal');

/\* To select values not having given keywords:\*/

**SELECT** \* **FROM** STUDENTS **WHERE** city NOT **IN**('Salem','Namakkal');

/\* To select values not starts with some letters:\*/

**SELECT** NAME **FROM** students **WHERE** name NOT LIKE 'Ra%';

/\* To select values using between keyword:\*/

**SELECT** name,age **FROM** students **WHERE** age **BETWEEN** 24 AND 30;

/\* JOIN QUERIES:

1.Inner Join(To select common values only)\*/

**SELECT** emp.name,emp.design,salary.sdate,salray.amt **FROM** emp **INNER** **JOIN** salary **ON** emp.id = salary.id;

/\* 2.Left Join(To select common values and all values from the first table)\*/

**SELECT** emp.name,emp.design,salary.sdate,salray.amt **FROM** emp LEFT **JOIN** salary **ON** emp.id = salary.id;

/\* 3.Right Join(To select common values and all values from the second table)\*/

**SELECT** emp.name,emp.design,salary.sdate,salray.amt **FROM** emp LEFT **JOIN** salary **ON** emp.id = salary.id;

/\* To select with cases:\*/

**SELECT** name,city,(**CASE** **WHEN** city='Salem' **THEN** 100 **WHEN** city='Namakkal' **THEN** 200 **WHEN** city='Chennai' **THEN** 300 **WHEN** city='Hosur' **THEN** 400 **ELSE** 0 **END**) **AS** amt **FROM** students;

/\*Multiple Inner Join:\*/

**SELECT** students.name,students.rollno,course.cname,marks.M1,marks.M2,marks.M3 **FROM** students

**INNER** **JOIN** course **ON** students.cid=course.cid **INNER** **JOIN** marks **ON** students.id=marks.id;

/\*Simple Dynamic Marklist using Queries:\*/

**SELECT** students.name,students.rollno,

course.cname **as** Course,

marks.M1,marks.M2,marks.M3,

(marks.M1,marks.M2,marks.M3) **AS** Total,

ROUND(((marks.M1,marks.M2,marks.M3)/3),2) **AS** Average

**CASE**

**WHEN** marks.M1 >= 35 AND marks.M2 >= 35 AND marks.M3 >= 35 **THEN** 'PASS'

**ELSE** 'FAIL'

**END** **AS** Result,

**CASE**

**WHEN** marks.M1 >= 35 AND marks.M2 >= 35 AND marks.M3 >= 35 **THEN**

**CASE**

**WHEN** ROUND(((marks.M1,marks.M2,marks.M3)/3),2) >= 90 AND ROUND(((marks.M1,marks.M2,marks.M3)/3),2)

< = 100 **THEN** 'A'

**WHEN** ROUND(((marks.M1,marks.M2,marks.M3)/3),2) >= 80 AND ROUND(((marks.M1,marks.M2,marks.M3)/3),2)

< = 89 **THEN** 'B'

**ELSE**

'C'

**END**

**ELSE** 'NO GRADE'

**END** **AS** Result,

**FROM** students **INNER** **JOIN** course **ON** students.cid=course.cid **INNER** **JOIN** marks **ON** students.id=marks.id;

/\*To use dynamically Created column names:\*/

**SELECT** students.name,students.rollno,

course.cname **as** Course,

marks.M1,marks.M2,marks.M3,

(marks.M1,marks.M2,marks.M3) **AS** Total,

ROUND(((marks.M1,marks.M2,marks.M3)/3),2) **AS** Average

**CASE**

**WHEN** marks.M1 >= 35 AND marks.M2 >= 35 AND marks.M3 >= 35 **THEN** 'PASS'

**ELSE** 'FAIL'

**END** **AS** Result,

**CASE**

**WHEN** marks.M1 >= 35 AND marks.M2 >= 35 AND marks.M3 >= 35 **THEN**

**CASE**

**WHEN** ROUND(((marks.M1,marks.M2,marks.M3)/3),2) >= 90 AND ROUND(((marks.M1,marks.M2,marks.M3)/3),2)

< = 100 **THEN** 'A'

**WHEN** ROUND(((marks.M1,marks.M2,marks.M3)/3),2) >= 80 AND ROUND(((marks.M1,marks.M2,marks.M3)/3),2)

< = 89 **THEN** 'B'

**ELSE**

'C'

**END**

**ELSE** 'NO GRADE'

**END** **AS** Result,

**FROM** students **INNER** **JOIN** course **ON** students.cid=course.cid **INNER** **JOIN** marks **ON** students.id=marks.id

**WHERE** course.cname='BCA' **having** Result = 'PASS' AND (Average >= 70 AND Average <= 100);

/\*Creating queries as View:\*/

**CREATE** VIEW Reports **AS**

**SELECT** students.name,students.rollno,

course.cname **as** Course,

marks.M1,marks.M2,marks.M3,

(marks.M1,marks.M2,marks.M3) **AS** Total,

ROUND(((marks.M1,marks.M2,marks.M3)/3),2) **AS** Average

**CASE**

**WHEN** marks.M1 >= 35 AND marks.M2 >= 35 AND marks.M3 >= 35 **THEN** 'PASS'

**ELSE** 'FAIL'

**END** **AS** Result,

**CASE**

**WHEN** marks.M1 >= 35 AND marks.M2 >= 35 AND marks.M3 >= 35 **THEN**

**CASE**

**WHEN** ROUND(((marks.M1,marks.M2,marks.M3)/3),2) >= 90 AND ROUND(((marks.M1,marks.M2,marks.M3)/3),2)

< = 100 **THEN** 'A'

**WHEN** ROUND(((marks.M1,marks.M2,marks.M3)/3),2) >= 80 AND ROUND(((marks.M1,marks.M2,marks.M3)/3),2)

< = 89 **THEN** 'B'

**ELSE**

'C'

**END**

**ELSE** 'NO GRADE'

**END** **AS** Result,

**FROM** students **INNER** **JOIN** course **ON** students.cid=course.cid **INNER** **JOIN** marks **ON** students.id=marks.id;

/\*Accessing views like a table:\*/

**SELECT** \* **FROM** Reports;

**SELECT** \* **FROM** Reports **WHERE** Result = 'PASS';

/\*Update table using Inner Join:\*/

**UPDATE** marks **INNER** **JOIN** students **ON** students.id = marks.id **SET** M1 = 100,M2 = 100,M3 = 100 **WHERE**

students.rollno = 'A1001';

/\*Creating Triggers:\*/

**CREATE** TRIGGER before\_products\_update

BEFORE **UPDATE** **ON** product

**FOR** EACH **ROW**

**BEGIN**

**INSERT** **INTO** price\_logs(pid,price,new\_price)

**VALUES**(old.pid,old.rate,new.rate);

**END**$$