NAME: SYED MAQTHYAR

1. CREATE DATABASE STUDENT

```
makki24@makki24: ~

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mysql> create database student;
Query OK, 1 row affected (0.00 sec)

mysql> create table StudentBasicInformation(StudentName varchar(20), StudentSurname varchar(20), StudentRollNo varchar(10), StudentAddress varchar(10), StudentDOB varchar(15), StudentEmail varchar(15)
    -> , StudentMajor varchar(15) );
Query OK, 0 rows affected (0.01 sec)

mysql> create table AdmissionPaymentDetails(StudentRollNo varchar(10), AmountPaid int(6), AmountBalance int(6), LastPayDate varchar(15), PaymentLastDate varchar(15), Interest varchar(5), LastPayReciept va
rchar(10) );
Query OK, 0 rows affected (0.00 sec)

mysql> create table StudentSubjectInformation(SubjectOpted varchar(10), StudentRollNo varchar(10), SubjectTotalMarks int(5), SubjectObtainedMarks int(5), StudentMarksPercentage varchar(6), SubjectTeacherC
ode varchar(10) );
Query OK, 0 rows affected (0.03 sec)

mysql> create table SubjectScholarshipInformation(StudentRollNo varchar(10), ScholarshipName varchar(20), ScholarshipDescription varchar(30), ScholarshipAmount int(6), ScholarshipCategory varchar(15), Sch
olarShipRewardDate varchar(15), ScholarshipPeriod varchar(15));
Query OK, 0 rows affected (0.00 sec)

mysql> _
```

2,3,4

```
mysql>
mysql> select * from StudentBasicInformation;
+------------+----------------+--------------+----------------+------------+--------------------------+----------------+------------------+
| StudentName | StudentSurname | StudentRollNo | StudentAddress | StudentDOB | StudentEmail            | StudentMajor   | isScholarshipOpted |
+------------+----------------+--------------+----------------+------------+--------------------------+----------------+------------------+
| zachray    | erich          | 60001        | bangalore      | 27-07-1999 | zac@university.edu       | biology        |                1 |
| ashutosh   | verma          | 60002        | bangalore      | 27-03-1999 | ashutosh@university.edu  | science        |                1 |
| john       | langer         | 60003        | shimoga        | 27-03-1999 | john@university.edu      | science        |                0 |
| delp       | langer         | 60004        | New York       | 20-06-1998 | delp@university.edu      | physics        |                1 |
| aaron      | finch          | 60005        | california     | 10-03-2000 | aaron1@university.edu    | geography      |                1 |
| warner     | david          | 60006        | california     | 10-03-1999 | david@university.edu     | geography      |                1 |
| joe        | chris          | 60007        | delhi          | 15-04-1999 | joe@university.edu       | maths          |                1 |
| aaron      | green          | 60008        | delhi          | 15-04-1999 | aaron@university.edu     | botany         |                1 |
| virat      | sharma         | 60009        | delhi          | 15-04-1999 | virat@university.edu     | zoology        |                1 |
| maria      | rambau         | 60010        | chennai        | 13-01-1999 | rambau@university.edu    | computer       |                1 |
| allan      | donald         | 60011        | mumbai         | 13-05-1999 | donald@university.edu    | social science |                0 |
+------------+----------------+--------------+----------------+------------+--------------------------+----------------+------------------+
11 rows in set (0.00 sec)

mysql> select * from AdmissionPaymentDetails;
+--------------+------------+---------------+-------------+----------------+----------+----------------+
| StudentRollNo | AmountPaid | AmountBalance | LastPayDate | PaymentLastDate | Interest | LastPayReciept |
+--------------+------------+---------------+-------------+----------------+----------+----------------+
| 60001        |      10000 |          5000 | 13-01-2020  | 25-04-2021      | 1.15     | cf-4340        |
| 60002        |       5000 |          5000 | 13-03-2020  | 25-04-2021      | 1.15     | cf-4349        |
| 60003        |       5000 |         15000 | 03-03-2020  | 25-04-2021      | 1.15     | cf-4341        |
| 60004        |      19000 |          1000 | 09-03-2020  | 25-04-2021      | 1.15     | cf-4241        |
| 60005        |      20000 |             0 | 19-03-2020  | 25-04-2021      | 1.15     | cf-5241        |
| 60006        |          0 |         20000 | NULL        | 25-04-2021      | 1.15     | NULL           |
| 60007        |      10000 |          2000 | 20-02-2019  | 25-04-2021      | 1.15     | cf-5250        |
| 60008        |      10000 |          5000 | 18-02-2020  | 25-04-2021      | 1.15     | cf-5205        |
| 60009        |       5000 |         15000 | 19-02-2020  | 25-04-2021      | 1.15     | cf-6205        |
| 60010        |      10000 |          5000 | 18-02-2020  | 25-04-2021      | 1.15     | cf-5305        |
| 60011        |      10000 |          3000 | 19-02-2020  | 25-04-2021      | 1.15     | cf-5355        |
+--------------+------------+---------------+-------------+----------------+----------+----------------+
11 rows in set (0.00 sec)

mysql> select * from SubjectScholarshipInformation;
+--------------+----------------+------------------------+------------------+------------------+------------------+------------------+
| StudentRollNo | ScholarshipName | ScholarshipDescription | ScholarshipAmount | ScholarshipCategory | ScholarShipRewardDate | ScholarshipPeriod |
+--------------+----------------+------------------------+------------------+------------------+------------------+------------------+
| 60001        | Zindal         | For Real Talent        |            10000 | NULL             | NULL             | NULL             |
| 60005        | NSF            | For Needy One          |             4000 | NULL             | NULL             | NULL             |
| 60007        | NSP            | For Minority           |             6000 | NULL             | NULL             | NULL             |
| 60008        | Vidyasirir     | For non-local students |             2000 | NULL             | NULL             | NULL             |
| 60009        | Vision UVCE    | for handicapped        |             7000 | NULL             | NULL             | NULL             |
| 60010        | Lalit Academy  | for handicapped        |             8000 | NULL             | NULL             | NULL             |
+--------------+----------------+------------------------+------------------+------------------+------------------+------------------+
6 rows in set (0.00 sec)
```

```
mysql> select * from StudentSubjectInformation;
+--------------------+--------------+------------------+--------------------+----------------------+------------------+
| SubjectOpted       | StudentRollNo | SubjectTotalMarks | SubjectObtainedMarks | StudentMarksPercentage | SubjectTeacherCode |
+--------------------+--------------+------------------+--------------------+----------------------+------------------+
| Mathematics-I      | 60001        |              100 |                 83 | NULL                 | xy-501           |
| Chemistry          | 60002        |              100 |                 75 | NULL                 | xy-502           |
| Physics            | 60003        |              125 |                 90 | NULL                 | xy-503           |
| Zeology            | 60004        |              100 |                 88 | NULL                 | xy-504           |
| Physics            | 60004        |              125 |                 90 | NULL                 | xy-505           |
| Zeology            | 60006        |              100 |                 88 | NULL                 | xy-506           |
| Internet Programming | 60008      |              125 |                100 | NULL                 | xy-507           |
| Networks           | 60007        |              100 |                 93 | NULL                 | xy-508           |
| Internet Programming | 60009      |              125 |                100 | NULL                 | xy-509           |
| Networks           | 60010        |              100 |                 76 | NULL                 | xy-518           |
| Java               | 60011        |              100 |                 95 | NULL                 | xy-511           |
+--------------------+--------------+------------------+--------------------+----------------------+------------------+
11 rows in set (0.00 sec)

mysql> _
```

5. update StudentBasicInformation set StudentAddress = 'Sydney' where Studentname = 'aaron'
update AdmissionPaymentDetails set AmountPaid = 12000 where StudentRollNo = '60001'

6. Updated tables

```
mysql> select * from StudentBasicInformation;
+-----------+--------------+--------------+---------------+-------------+------------------------+----------------+------------------+
| StudentName | StudentSurname | StudentRollNo | StudentAddress | StudentDOB | StudentEmail           | StudentMajor   | isScholarshipOpted |
+-----------+--------------+--------------+---------------+-------------+------------------------+----------------+------------------+
| zachray   | erich        | 60001        | bangalore     | 27-07-1999  | zac@university.edu     | biology        |                1 |
| ashutosh  | verma        | 60002        | bangalore     | 27-03-1999  | ashutosh@university.edu | science       |                1 |
| john      | langer       | 60003        | shimoga       | 27-03-1999  | john@university.edu    | science        |                0 |
| delp      | langer       | 60004        | New York      | 20-06-1998  | delp@university.edu    | physics        |                1 |
| aaron     | finch        | 60005        | Sydney        | 10-03-2000  | aaron1@university.edu  | geography      |                1 |
| warner    | david        | 60006        | california    | 10-03-1999  | david@university.edu   | geography      |                1 |
| joe       | chris        | 60007        | delhi         | 15-04-1999  | joe@university.edu     | maths          |                1 |
| aaron     | green        | 60008        | Sydney        | 15-04-1999  | aaron@university.edu   | botany         |                1 |
| virat     | sharma       | 60009        | delhi         | 15-04-1999  | virat@university.edu   | zoology        |                1 |
| maria     | rambau       | 60010        | chennai       | 13-01-1999  | rambau@university.edu  | computer       |                1 |
| allan     | donald       | 60011        | mumbai        | 13-05-1999  | donald@university.edu  | social science |                0 |
+-----------+--------------+--------------+---------------+-------------+------------------------+----------------+------------------+
11 rows in set (0.01 sec)

mysql> select * from AdmissionPaymentDetails;
+--------------+------------+---------------+-------------+---------------+----------+--------------+
| StudentRollNo | AmountPaid | AmountBalance | LastPayDate | PaymentLastDate | Interest | LastPayReciept |
+--------------+------------+---------------+-------------+---------------+----------+--------------+
| 60001        |     12000  |          3000 | 13-01-2020  | 25-04-2021    | 1.15     | cf-4340      |
| 60002        |      5000  |          5000 | 13-03-2020  | 25-04-2021    | 1.15     | cf-4349      |
| 60003        |      5000  |         15000 | 03-03-2020  | 25-04-2021    | 1.15     | cf-4341      |
| 60004        |     19000  |          1000 | 09-03-2020  | 25-04-2021    | 1.15     | cf-4241      |
| 60005        |     20000  |             0 | 19-03-2020  | 25-04-2021    | 1.15     | cf-5241      |
| 60006        |         0  |         20000 | NULL        | 25-04-2021    | 1.15     | NULL         |
| 60007        |     10000  |          2000 | 20-02-2019  | 25-04-2021    | 1.15     | cf-5250      |
| 60008        |     10000  |          5000 | 18-02-2020  | 25-04-2021    | 1.15     | cf-5205      |
| 60009        |      5000  |         15000 | 19-02-2020  | 25-04-2021    | 1.15     | cf-6205      |
| 60010        |     10000  |          5000 | 18-02-2020  | 25-04-2021    | 1.15     | cf-5305      |
| 60011        |     10000  |          3000 | 19-02-2020  | 25-04-2021    | 1.15     | cf-5355      |
+--------------+------------+---------------+-------------+---------------+----------+--------------+
11 rows in set (0.00 sec)

mysql> select * from StudentSubjectInformation;
+---------------------+--------------+----------------+------------------+-----------------------+------------------+
| SubjectOpted        | StudentRollNo | SubjectTotalMarks | SubjectObtainedMarks | StudentMarksPercentage | SubjectTeacherCode |
+---------------------+--------------+----------------+------------------+-----------------------+------------------+
| Mathematics-I       | 60001        |            100 |               83 | NULL                  | xy-501           |
| Chemistry           | 60002        |            100 |               75 | NULL                  | xy-502           |
| Physics             | 60003        |            125 |               90 | NULL                  | xy-503           |
| Zeology             | 60004        |            100 |               88 | NULL                  | xy-504           |
| Physics             | 60004        |            125 |               90 | NULL                  | xy-505           |
| Zeology             | 60006        |            100 |               88 | NULL                  | xy-506           |
| Internet Programming | 60008       |            125 |              100 | NULL                  | xy-507           |
| Networks            | 60007        |            100 |               93 | NULL                  | xy-508           |
| Internet Programming | 60009       |            125 |              100 | NULL                  | xy-509           |
| Networks            | 60010        |            100 |               76 | NULL                  | xy-518           |
| Python              | 60011        |            100 |               95 | NULL                  | xy-511           |
+---------------------+--------------+----------------+------------------+-----------------------+------------------+
11 rows in set (0.00 sec)

mysql> select * from SubjectScholarshipInformation;
+--------------+----------------+----------------------+------------------+-------------------+---------------------+------------------+
| StudentRollNo | ScholarshipName | ScholarshipDescription | ScholarshipAmount | ScholarshipCategory | ScholarShipRewardDate | ScholarshipPeriod |
+--------------+----------------+----------------------+------------------+-------------------+---------------------+------------------+
| 60001        | Zindal         | For Real Talent       |            10000 | NULL              | NULL                | NULL             |
| 60005        | NSF            | For Needy One         |             4000 | NULL              | NULL                | NULL             |
| 60007        | NSP            | For Minority          |             6000 | NULL              | NULL                | NULL             |
| 60008        | Vidyasirir     | For non-local students |            2000 | NULL              | NULL                | NULL             |
| 60009        | Vision UVCE    | for handicapped       |             7000 | NULL              | NULL                | NULL             |
| 60010        | Lalit Academy  | for handicapped       |             8000 | NULL              | NULL                | NULL             |
+--------------+----------------+----------------------+------------------+-------------------+---------------------+------------------+
6 rows in set (0.00 sec)
```

7 select s.* from StudentBasicInformation s inner join SubjectScholarshipInformation ss on s.StudentRollNo = ss.StudentRollNo where ss.ScholarshipAmount > 5000

```
File Edit View Search Terminal Help
mysql> select s.* from StudentBasicInformation s inner join SubjectScholarshipInformation ss on s.StudentRollNo = ss.StudentRollNo where ss.ScholarshipAmount > 500
+------------+--------------+--------------+----------------+------------+--------------------------+--------------+-------------------+
| StudentName | StudentSurname | StudentRollNo | StudentAddress | StudentDOB | StudentEmail          | StudentMajor | isScholarshipOpted |
+------------+--------------+--------------+----------------+------------+--------------------------+--------------+-------------------+
| zachray    | erich        | 60001        | bangalore      | 27-07-1999 | zac@university.edu    | biology      |                 1 |
| joe        | chris        | 60007        | delhi          | 15-04-1999 | joe@university.edu    | maths        |                 1 |
| virat      | sharma       | 60009        | delhi          | 15-04-1999 | virat@university.edu  | zoology      |                 1 |
| maria      | rambau       | 60010        | chennai        | 13-01-1999 | rambau@university.edu | computer     |                 1 |
+------------+--------------+--------------+----------------+------------+--------------------------+--------------+-------------------+
4 rows in set (0.00 sec)
```

8 select * from StudentBasicInformation where StudentRollNo NOT IN (select StudentRollNo from SubjectScholarshipInformation) and isScholarshipOpted = 1;

```
mysql> Select * from StudentBasicInformation where StudentRollNo NOT IN (select StudentRollNo from SubjectScholarshipInformation) and isScholarshipOpted = 1;
+------------+--------------+--------------+----------------+------------+--------------------------+--------------+-------------------+
| StudentName | StudentSurname | StudentRollNo | StudentAddress | StudentDOB | StudentEmail          | StudentMajor | isScholarshipOpted |
+------------+--------------+--------------+----------------+------------+--------------------------+--------------+-------------------+
| ashutosh   | verma        | 60002        | bangalore      | 27-03-1999 | ashutosh@university.edu | science      |                 1 |
| delp       | langer       | 60004        | New York       | 20-06-1998 | delp@university.edu   | physics      |                 1 |
| warner     | david        | 60006        | california     | 10-03-1999 | david@university.edu  | geography    |                 1 |
+------------+--------------+--------------+----------------+------------+--------------------------+--------------+-------------------+
3 rows in set (0.00 sec)

mysql> _
```

9.

delimiter ^

create procedure calc_percentage() begin update StudentSubjectInformation set StudentMarksPercentage = (SubjectObtainedMarks/SubjectTotalMarks)*100.0; end;^

call calc_percentage()^

select * from StudentSubjectInformation

```
mysql> delimiter ^
mysql> create procedure calc_percentage() begin update StudentSubjectInformation set StudentMarksPercentage = (SubjectObtainedMarks/SubjectTotalMarks)*100.0; end;^
Query OK, 0 rows affected (0.01 sec)

mysql> call calc_percentage()^
Query OK, 11 rows affected (0.01 sec)

mysql> select * from StudentSubjectInformation
    -> ^
+----------------------+--------------+------------------+-------------------+----------------------+------------------+
| SubjectOpted         | StudentRollNo | SubjectTotalMarks | SubjectObtainedMarks | StudentMarksPercentage | SubjectTeacherCode |
+----------------------+--------------+------------------+-------------------+----------------------+------------------+
| Mathematics-I        | 60001        |              100 |                83 | 83.0000000000        | xy-501           |
| Chemistry            | 60002        |              100 |                75 | 75.0000000000        | xy-502           |
| Physics              | 60003        |              125 |                90 | 72.0000000000        | xy-503           |
| Zeology              | 60004        |              100 |                88 | 88.0000000000        | xy-504           |
| Physics              | 60004        |              125 |                90 | 72.0000000000        | xy-505           |
| Zeology              | 60006        |              100 |                88 | 88.0000000000        | xy-506           |
| Internet Programming | 60008        |              125 |               100 | 80.0000000000        | xy-507           |
| Networks             | 60007        |              100 |                93 | 93.0000000000        | xy-508           |
| Internet Programming | 60009        |              125 |               100 | 80.0000000000        | xy-509           |
| Networks             | 60010        |              100 |                76 | 76.0000000000        | xy-518           |
| Python               | 60011        |              100 |                95 | 95.0000000000        | xy-511           |
+----------------------+--------------+------------------+-------------------+----------------------+------------------+
11 rows in set (0.00 sec)

mysql> delimiter ;
mysql> _
```

10.

delimiter /

create procedure cal_category() begin update
SubjectScholarshipInformation set ScholarshipCategory = 'Special'
where ScholarshipAmount >= 8000; update
SubjectScholarshipInformation set ScholarshipCategory = 'Normal'
where ScholarshipAmount >=4000 and ScholarshipAmount < 8000;
update SubjectScholarshipInformation set ScholarshipCategory = 'Small'
where ScholarshipAmount < 4000; end;/

call cal_category()/

select * from SubjectScholarshipInformation/

```
mysql> delimiter /
mysql> create procedure cal_category() begin update SubjectScholarshipInformation set ScholarshipCategory = 'Special' where ScholarshipAmount >= 8000; update SubjectScholarshipInformation set ScholarshipC
ategory = 'Normal' where ScholarshipAmount >=4000 and ScholarshipAmount < 8000; update SubjectScholarshipInformation set ScholarshipCategory = 'Small' where ScholarshipAmount < 4000; end;/
Query OK, 0 rows affected (0.00 sec)

mysql> call cal_category()/
Query OK, 1 row affected (0.00 sec)

mysql> select * from SubjectScholarshipInformation/
+------------+----------------+------------------------+------------------+--------------------+---------------------+------------------+
| StudentRollNo | ScholarshipName | ScholarshipDescription | ScholarshipAmount | ScholarshipCategory | ScholarShipRewardDate | ScholarshipPeriod |
+------------+----------------+------------------------+------------------+--------------------+---------------------+------------------+
| 60001      | Zindal         | For Real Talent        |            10000 | Special            | NULL                | NULL             |
| 60005      | NSF            | For Needy One          |             4000 | Normal             | NULL                | NULL             |
| 60007      | NSP            | For Minority           |             6000 | Normal             | NULL                | NULL             |
| 60008      | Vidyasirir     | For non-local students |             2000 | Small              | NULL                | NULL             |
| 60009      | Vision UVCE    | for handicapped        |             7000 | Normal             | NULL                | NULL             |
| 60010      | Lalit Academy  | for handicapped        |             8000 | Special            | NULL                | NULL             |
+------------+----------------+------------------------+------------------+--------------------+---------------------+------------------+
6 rows in set (0.00 sec)

mysql> _
```

11. Create view studentBalance as select s.* , AmountBalance from StudentBasicInformation s inner join AdmissionPaymentDetails A on S.StudentRollNo = A.StudentRollNo;

select * from studentBalance

```
mysql> create view studentBalance as
    -> select S.*,AmountBalance from StudentBasicInformation S inner join AdmissionPaymentDetails A on S.StudentRollNo = A.StudentRollNo;
Query OK, 0 rows affected (0.00 sec)

mysql> select * from studentBalance;
+-------------+----------------+---------------+----------------+------------+---------------------------+----------------+------------------+---------------+
| StudentName | StudentSurname | StudentRollNo | StudentAddress | StudentDOB | StudentEmail              | StudentMajor   | isScholarshipOpted | AmountBalance |
+-------------+----------------+---------------+----------------+------------+---------------------------+----------------+------------------+---------------+
| zachray     | erich          | 60001         | bangalore      | 27-07-1999 | zac@university.edu         | biology        |                1 |          3000 |
| ashutosh    | verma          | 60002         | bangalore      | 27-03-1999 | ashutosh@university.edu    | science        |                1 |          5000 |
| john        | langer         | 60003         | shimoga        | 27-03-1999 | john@university.edu        | science        |                0 |         15000 |
| delp        | langer         | 60004         | New York       | 20-06-1998 | delp@university.edu        | physics        |                1 |          1000 |
| aaron       | finch          | 60005         | Sydney         | 10-03-2000 | aaron1@university.edu      | geography      |                1 |             0 |
| warner      | david          | 60006         | california     | 10-03-1999 | david@university.edu       | geography      |                1 |         20000 |
| joe         | chris          | 60007         | delhi          | 15-04-1999 | joe@university.edu         | maths          |                1 |          2000 |
| aaron       | green          | 60008         | Sydney         | 15-04-1999 | aaron@university.edu       | botany         |                1 |          5000 |
| virat       | sharma         | 60009         | delhi          | 15-04-1999 | virat@university.edu       | zoology        |                1 |         15000 |
| maria       | rambau         | 60010         | chennai        | 13-01-1999 | rambau@university.edu      | computer       |                1 |          5000 |
| allan       | donald         | 60011         | mumbai         | 13-05-1999 | donald@university.edu      | social science |                0 |          3000 |
+-------------+----------------+---------------+----------------+------------+---------------------------+----------------+------------------+---------------+
11 rows in set (0.01 sec)
```

12. select * from StudentBasicInformation where StudentRollNo not in (select StudentRollNo from SubjectScholarshipInformation) ;

```
mysql> select * from StudentBasicInformation where StudentRollNo not in (select StudentRollNo from SubjectScholarshipInformation) ;
+-------------+----------------+---------------+----------------+------------+---------------------------+----------------+------------------+
| StudentName | StudentSurname | StudentRollNo | StudentAddress | StudentDOB | StudentEmail              | StudentMajor   | isScholarshipOpted |
+-------------+----------------+---------------+----------------+------------+---------------------------+----------------+------------------+
| ashutosh    | verma          | 60002         | bangalore      | 27-03-1999 | ashutosh@university.edu    | science        |                1 |
| john        | langer         | 60003         | shimoga        | 27-03-1999 | john@university.edu        | science        |                0 |
| delp        | langer         | 60004         | New York       | 20-06-1998 | delp@university.edu        | physics        |                1 |
| warner      | david          | 60006         | california     | 10-03-1999 | david@university.edu       | geography      |                1 |
| allan       | donald         | 60011         | mumbai         | 13-05-1999 | donald@university.edu      | social science |                0 |
+-------------+----------------+---------------+----------------+------------+---------------------------+----------------+------------------+
5 rows in set (0.01 sec)

mysql>
```
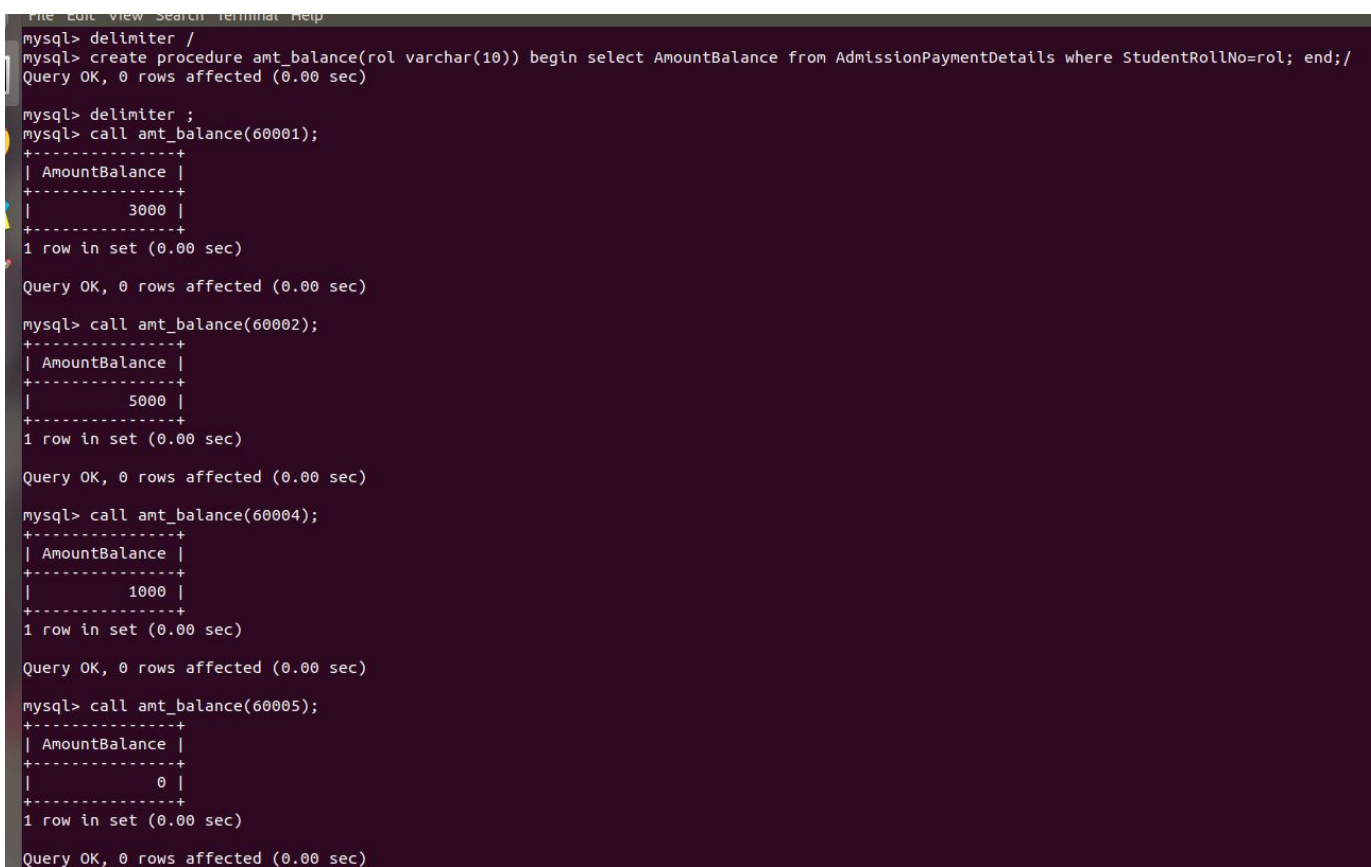
13.

delimiter /

mysql> create procedure amt_balance(rol varchar(10)) begin select AmountBalance from AdmissionPaymentDetails where StudentRollNo=rol; end;/

delimiter ;

call amt_balance(60001);

```
File  Edit  View  Search  Terminal  Help
mysql> delimiter /
mysql> create procedure amt_balance(rol varchar(10)) begin select AmountBalance from AdmissionPaymentDetails where StudentRollNo=rol; end;/
Query OK, 0 rows affected (0.00 sec)

mysql> delimiter ;
mysql> call amt_balance(60001);
+---------------+
| AmountBalance |
+---------------+
|          3000 |
+---------------+
1 row in set (0.00 sec)

Query OK, 0 rows affected (0.00 sec)

mysql> call amt_balance(60002);
+---------------+
| AmountBalance |
+---------------+
|          5000 |
+---------------+
1 row in set (0.00 sec)

Query OK, 0 rows affected (0.00 sec)

mysql> call amt_balance(60004);
+---------------+
| AmountBalance |
+---------------+
|          1000 |
+---------------+
1 row in set (0.00 sec)

Query OK, 0 rows affected (0.00 sec)

mysql> call amt_balance(60005);
+---------------+
| AmountBalance |
+---------------+
|             0 |
+---------------+
1 row in set (0.00 sec)

Query OK, 0 rows affected (0.00 sec)
```

14.

select * from StudentSubjectInformation order by
StudentMarksPercentage desc limit 5;

```
mysql> select * from StudentSubjectInformation order by StudentMarksPercentage desc limit 5;
+--------------+--------------+-----------------+-------------------+---------------------+------------------+
| SubjectOpted | StudentRollNo | SubjectTotalMarks | SubjectObtainedMarks | StudentMarksPercentage | SubjectTeacherCode |
+--------------+--------------+-----------------+-------------------+---------------------+------------------+
| Python       | 60011        |             100 |                95 | 95.0000000000       | xy-511           |
| Networks     | 60007        |             100 |                93 | 93.0000000000       | xy-508           |
| Zeology      | 60004        |             100 |                88 | 88.0000000000       | xy-504           |
| Zeology      | 60006        |             100 |                88 | 88.0000000000       | xy-506           |
| Mathematics-I | 60001       |             100 |                83 | 83.0000000000       | xy-501           |
+--------------+--------------+-----------------+-------------------+---------------------+------------------+
5 rows in set (0.00 sec)

mysql> _
```

15.

LEFT/RIGHT JOIN

select s.StudentRollNo,s.StudentName, s.isScholarshipOpted,
ss.ScholarshipName,ScholarshipAmount from
SubjectScholarshipInformation ss right join StudentBasicInformation s on
s.StudentRollNo = ss.StudentRollNo;

```
mysql> select s.StudentRollNo,s.StudentName,s.isScholarshipOpted,ss.ScholarshipName,ScholarshipAmount  from SubjectScholarshipInformation ss right join StudentBasicInformation s on s.StudentRollNo = ss.St
udentRollNo;
+--------------+-------------+------------------+----------------+-------------------+
| StudentRollNo | StudentName | isScholarshipOpted | ScholarshipName | ScholarshipAmount |
+--------------+-------------+------------------+----------------+-------------------+
| 60001        | zachray     |                1 | Zindal         |             10000 |
| 60005        | aaron       |                1 | NSF            |              4000 |
| 60007        | joe         |                1 | NSP            |              6000 |
| 60008        | aaron       |                1 | Vidyasirir     |              2000 |
| 60009        | virat       |                1 | Vision UVCE    |              7000 |
| 60010        | maria       |                1 | Lalit Academy  |              8000 |
| 60002        | ashutosh    |                1 | NULL           |              NULL |
| 60003        | john        |                0 | NULL           |              NULL |
| 60004        | delp        |                1 | NULL           |              NULL |
| 60006        | warner      |                1 | NULL           |              NULL |
| 60011        | allan       |                0 | NULL           |              NULL |
+--------------+-------------+------------------+----------------+-------------------+
11 rows in set (0.00 sec)

mysql> _
```

right join is used to here get the information about the students who are not getting
any scholarship. this is the students who are having null values in the resultant table
of the above query. A left join is similar to right except for it considers first table
instead of second.

OUTER JOIN

select s.StudentRollNo,s.StudentName,ss.ScholarshipName, ScholarshipAmount from SubjectScholarshipInformation FULL OUTER JOIN StudentBasicInformation s on s.StudentRollNo = ss.StudentRollNo;

Outer join includes all the rows from both table and if there are unmatched rows null values are included

INNER JOIN

select s.StudentRollNo,s.StudentName,ss.ScholarshipName, ScholarshipAmount from SubjectScholarshipInformation ss inner join StudentBasicInformation s on s.StudentRollNo = ss.StudentRollNo;

```
mysql> select s.StudentRollNo,s.StudentName,ss.ScholarshipName,ScholarshipAmount  from SubjectScholarshipInformation ss inner join StudentBasicInformation s on s.StudentRollNo = ss.StudentRollNo;
+--------------+-------------+-----------------+-------------------+
| StudentRollNo | StudentName | ScholarshipName | ScholarshipAmount |
+--------------+-------------+-----------------+-------------------+
| 60001        | zachray     | Zindal          |             10000 |
| 60005        | aaron       | NSF             |              4000 |
| 60007        | joe         | NSP             |              6000 |
| 60008        | aaron       | Vidyasirir      |              2000 |
| 60009        | virat       | Vision UVCE     |              7000 |
| 60010        | maria       | Lalit Academy   |              8000 |
+--------------+-------------+-----------------+-------------------+
6 rows in set (0.00 sec)

mysql> _
```

Inner join select only matching rows from both tables. Here it selects student detail and scholarship details

16

Delete command delete specific row depending upon the condition

Drop command Drop enter table along with its structure. This is the definition of the table which includes all its attributes

The truncate command deletes all the rows of the table but it maintains table definition and attributes.

17.

select ScholarshipCategory,count(*) from SubjectScholarshipInformation
group by ScholarshipCategory;

```
mysql> select ScholarshipCategory,count(*) from SubjectScholarshipInformation group by ScholarshipCategory;
+--------------------+----------+
| ScholarshipCategory | count(*) |
+--------------------+----------+
| Normal             |        3 |
| Small              |        1 |
| Special            |        2 |
+--------------------+----------+
3 rows in set (0.00 sec)

mysql> _
```

18.

select ScholarshipCategory,count(*) from SubjectScholarshipInformation
group by ScholarshipCategory order by count(*) desc limit 1;

```
mysql> select ScholarshipCategory,count(*) from SubjectScholarshipInformation group by ScholarshipCategory order by count(*) desc limit 1;
+--------------------+----------+
| ScholarshipCategory | count(*) |
+--------------------+----------+
| Normal             |        3 |
+--------------------+----------+
1 row in set (0.00 sec)

mysql> _
```

19.

select scho.ScholarshipAmount, tmp.* from
SubjectScholarshipInformation scho inner join (select
s.StudentRollNo,s.StudentName,ss.StudentMarksPercentage from
StudentBasicInformation s inner join StudentSubjectInformation ss on
s.StudentRollNo = ss.StudentRollNo order by StudentMarksPercentage
desc) as tmp on scho.StudentRollNo = tmp.StudentRollNo order by
StudentMarksPercentage desc;

```
mysql> select scho.ScholarshipAmount, tmp.* from SubjectScholarshipInformation scho inner join (select s.StudentRollNo,s.StudentName,ss.StudentMarksPercentage from StudentBasicInformation s inner join Stu
dentSubjectInformation ss on s.StudentRollNo = ss.StudentRollNo order by StudentMarksPercentage desc) as tmp on scho.StudentRollNo = tmp.StudentRollNo order by StudentMarksPercentage desc;
+------------------+--------------+-------------+----------------------+
| ScholarshipAmount | StudentRollNo | StudentName | StudentMarksPercentage |
+------------------+--------------+-------------+----------------------+
|             6000 | 60007        | joe         | 93.0000000000        |
|            10000 | 60001        | zachray     | 83.0000000000        |
|             2000 | 60008        | aaron       | 80.0000000000        |
|             7000 | 60009        | virat       | 80.0000000000        |
|             8000 | 60010        | maria       | 76.0000000000        |
+------------------+--------------+-------------+----------------------+
5 rows in set (0.00 sec)
```

20.

stored procedures are one which takes input and does some specific
operations on data.

Triggers are a set of operations which are gonna executed automatically
upon completion of some events like insert, delete and update

function in the database is a set of operations that accept input
arguments and return a single value.

views are virtual table which can create by using columns from multiple
tables of class or same class and use it later for some operation