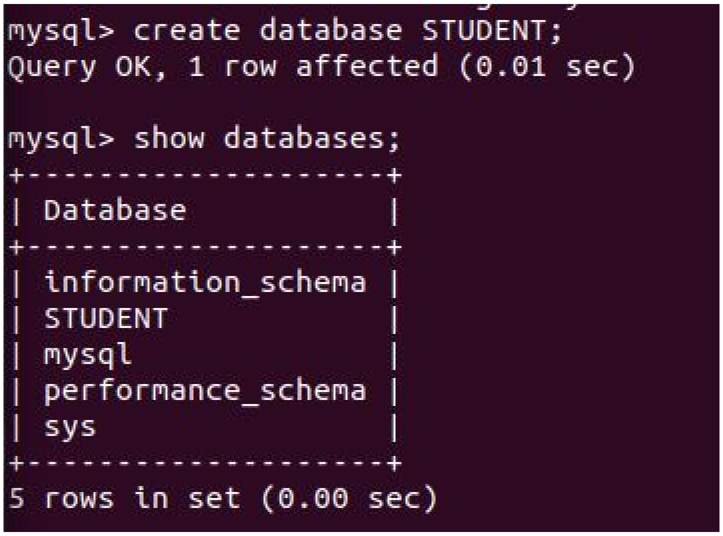
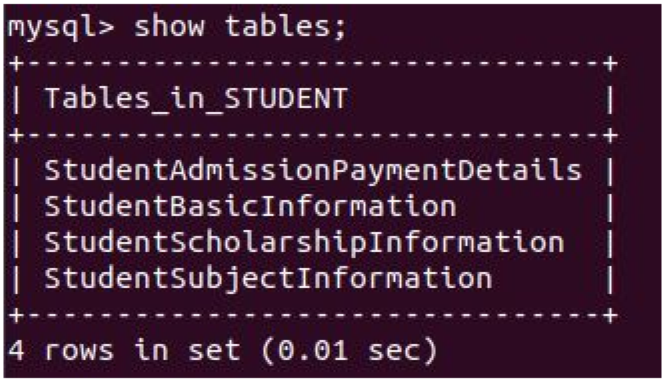
Sumanto Pal
Spring AU batch1
sumanto.pal@accolitedigital.com

1.



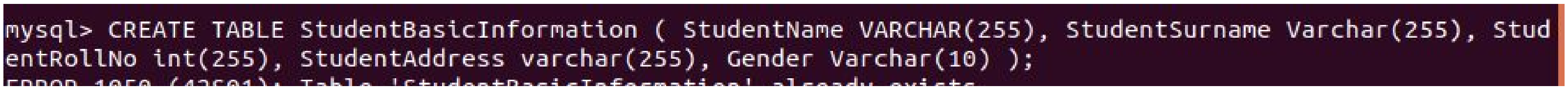
```
mysql> create database STUDENT;
Query OK, 1 row affected (0.01 sec)

mysql> show databases;
+--------------------+
| Database           |
+--------------------+
| information_schema |
| STUDENT            |
| mysql              |
| performance_schema |
| sys                |
+--------------------+
5 rows in set (0.00 sec)
```

2.



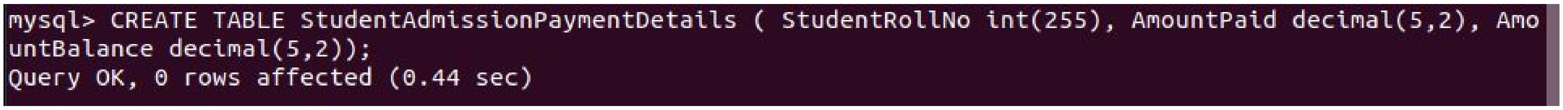
```
mysql> show tables;
+-------------------------------+
| Tables_in_STUDENT             |
+-------------------------------+
| StudentAdmissionPaymentDetails |
| StudentBasicInformation       |
| StudentScholarshipInformation |
| StudentSubjectInformation     |
+-------------------------------+
4 rows in set (0.01 sec)
```

a.



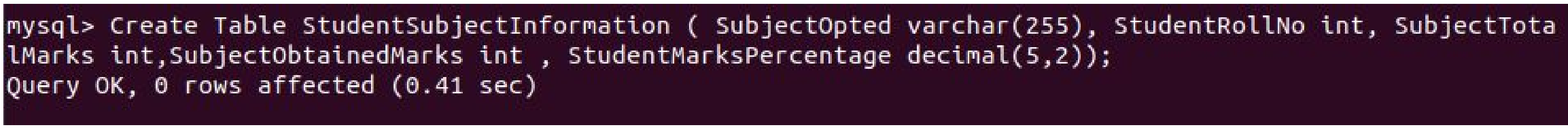
```
mysql> CREATE TABLE StudentBasicInformation ( StudentName VARCHAR(255), StudentSurname Varchar(255), Stud
entRollNo int(255), StudentAddress varchar(255), Gender Varchar(10) );
ERROR 1050 (42S01): Table 'StudentBasicInformation' already exists
```

B.



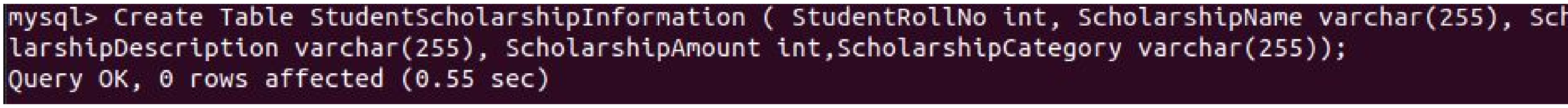
```
mysql> CREATE TABLE StudentAdmissionPaymentDetails ( StudentRollNo int(255), AmountPaid decimal(5,2), Amo
untBalance decimal(5,2));
Query OK, 0 rows affected (0.44 sec)
```

C.



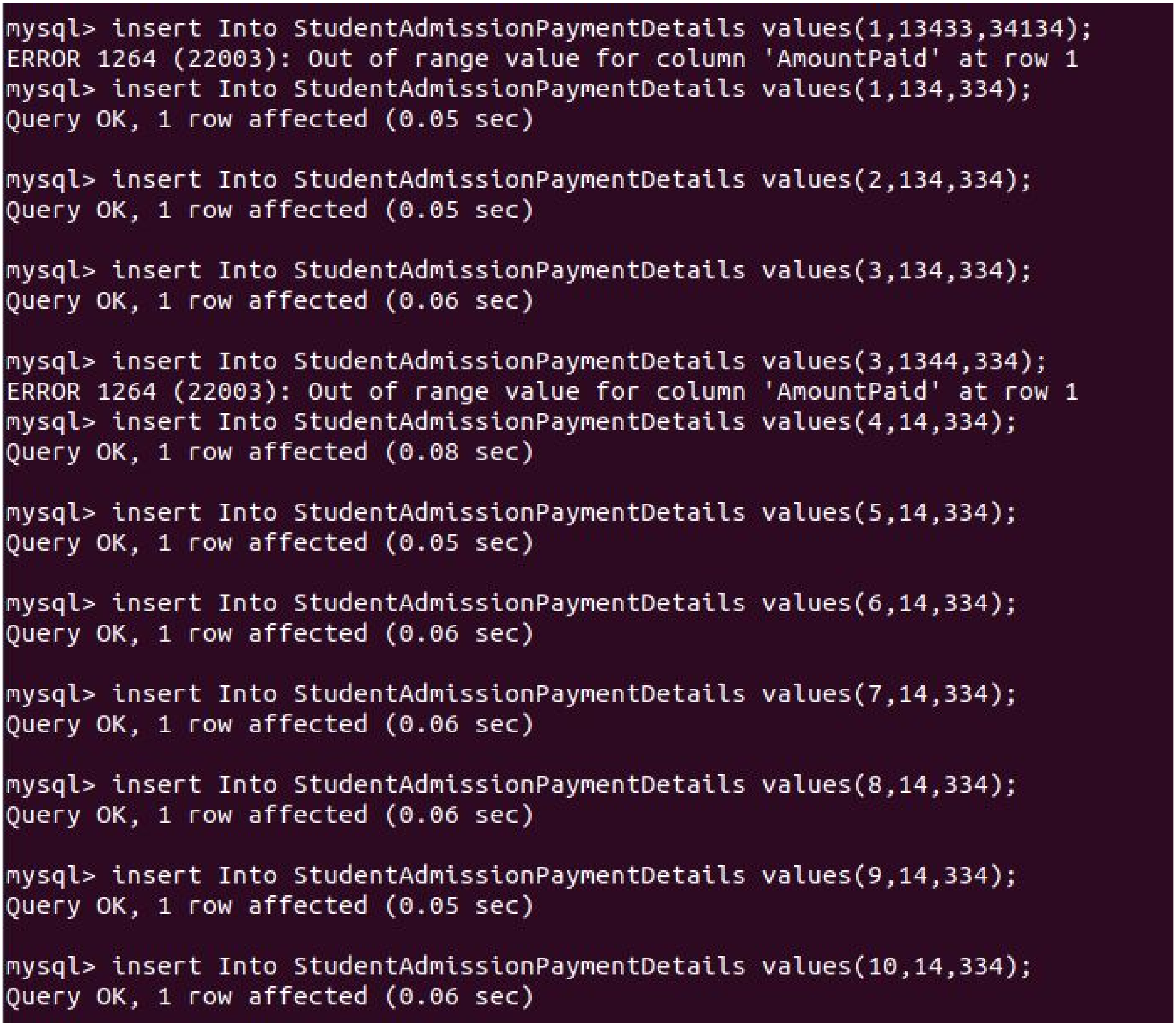
```
mysql> Create Table StudentSubjectInformation ( SubjectOpted varchar(255), StudentRollNo int, SubjectTota
lMarks int,SubjectObtainedMarks int , StudentMarksPercentage decimal(5,2));
Query OK, 0 rows affected (0.41 sec)
```

D.

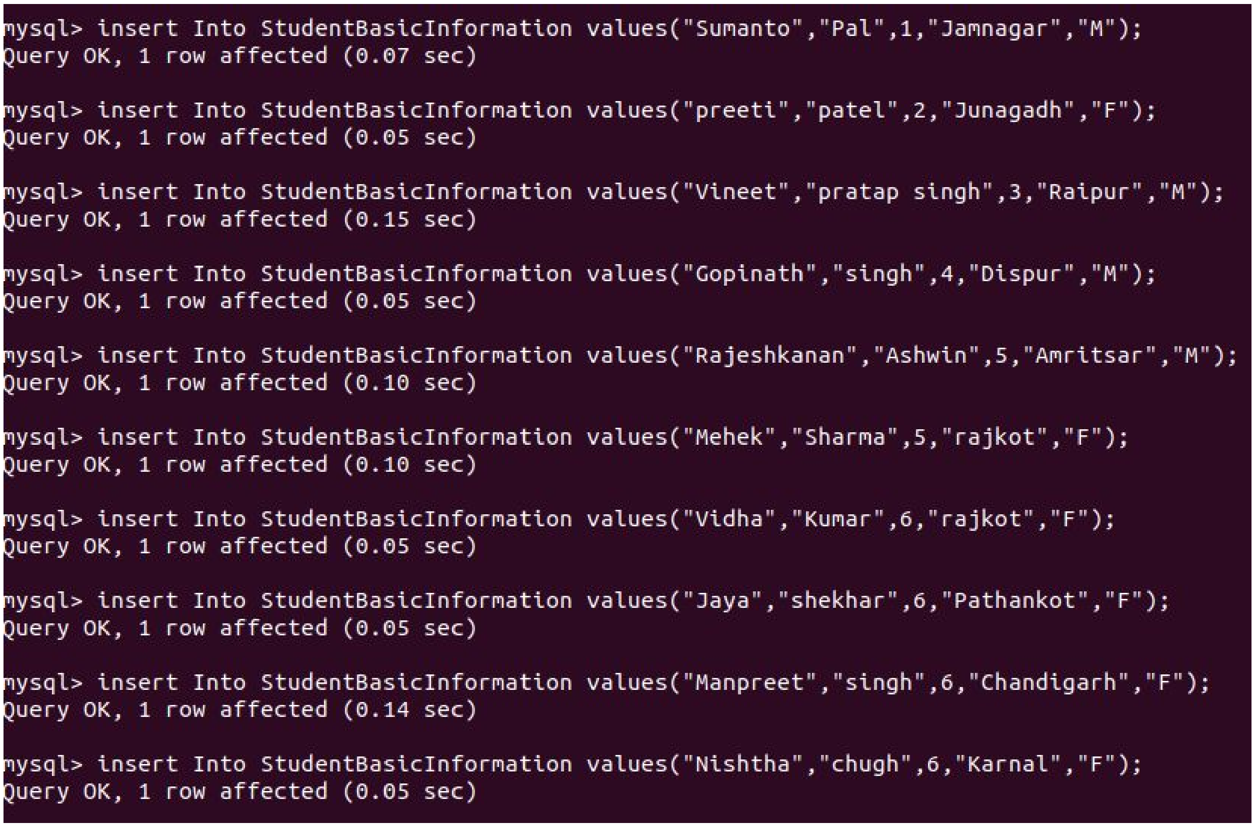


```
mysql> Create Table StudentScholarshipInformation ( StudentRollNo int, ScholarshipName varchar(255), Sch
larshipDescription varchar(255), ScholarshipAmount int,ScholarshipCategory varchar(255));
Query OK, 0 rows affected (0.55 sec)
```

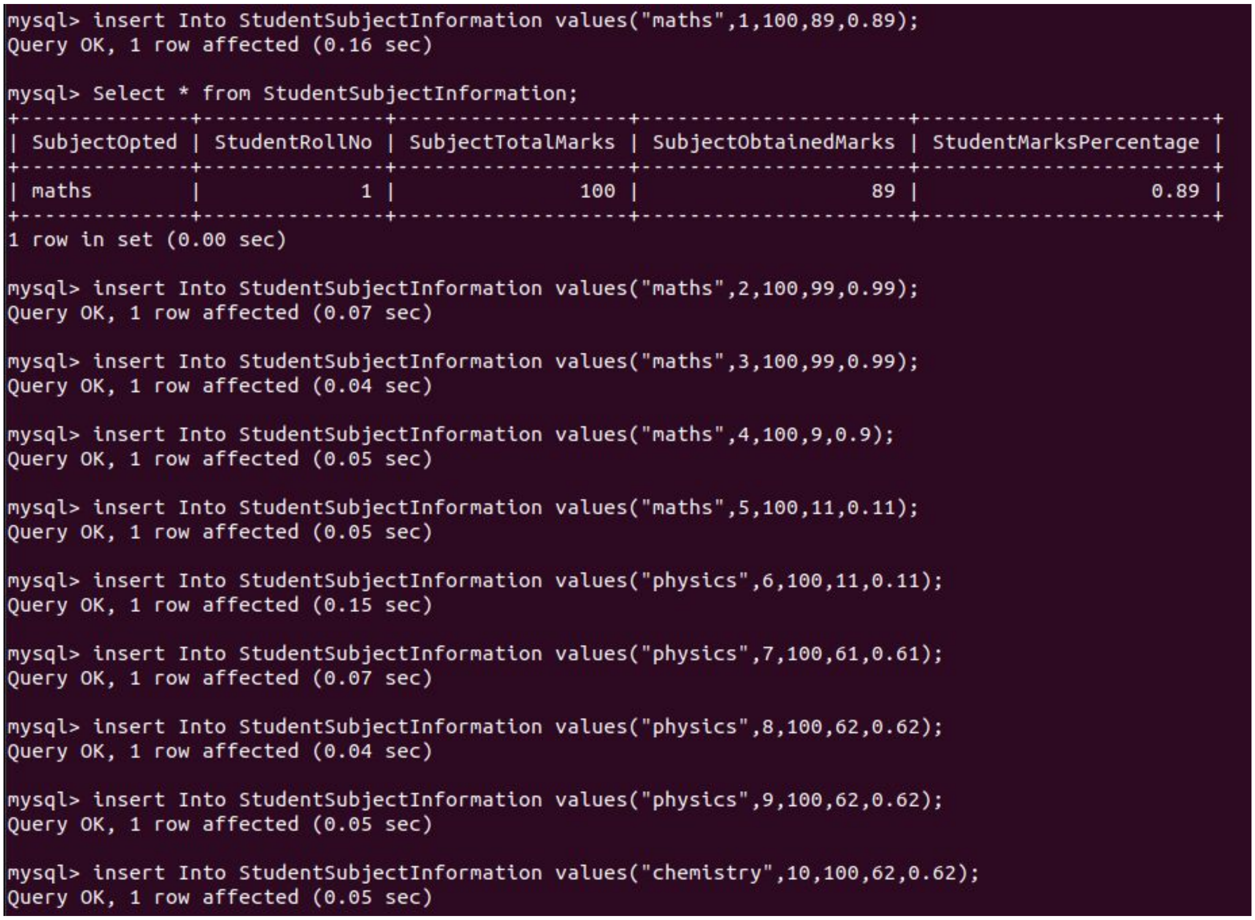
3.



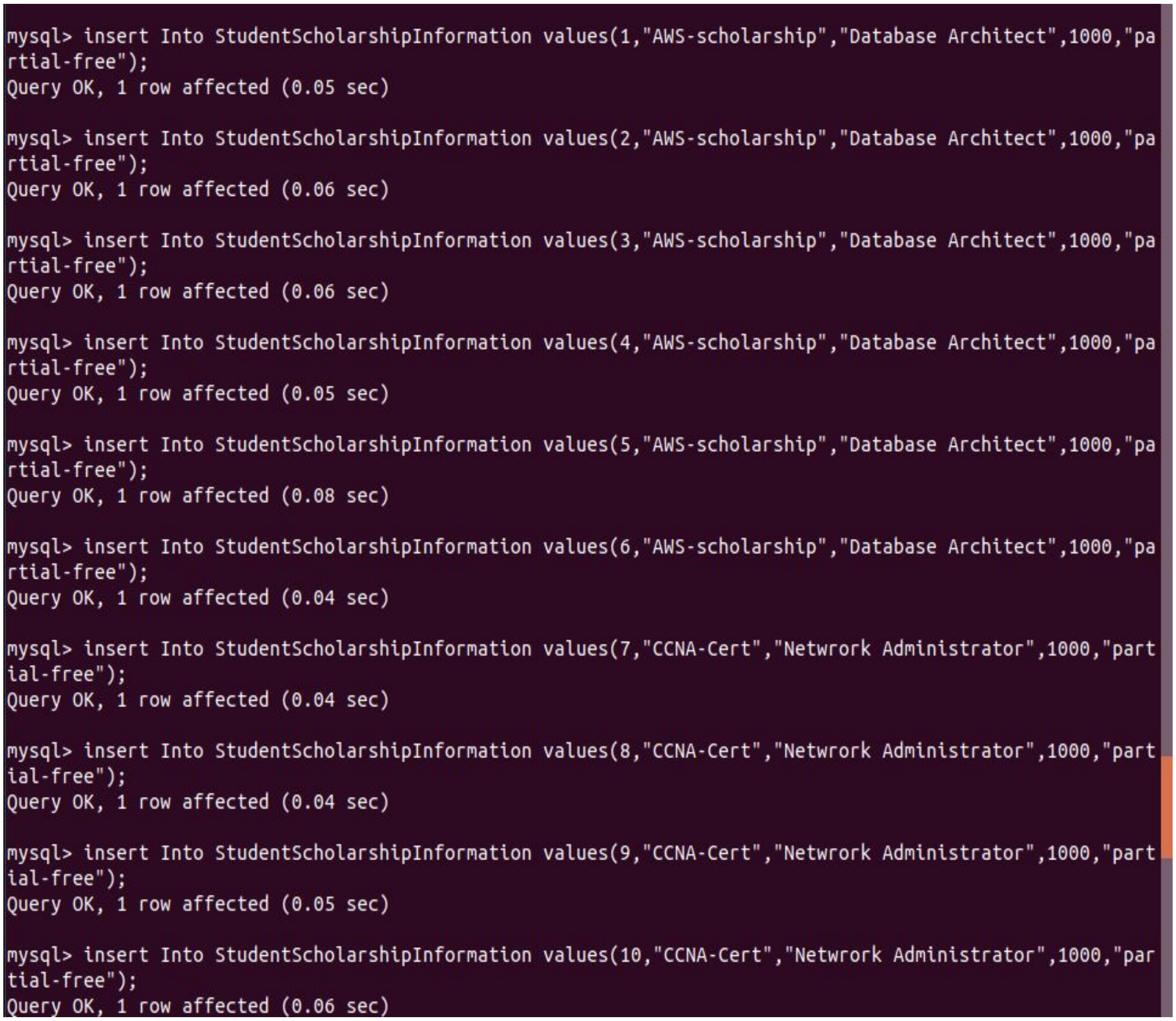
```
mysql> insert Into StudentAdmissionPaymentDetails values(1,13433,34134);
ERROR 1264 (22003): Out of range value for column 'AmountPaid' at row 1
mysql> insert Into StudentAdmissionPaymentDetails values(1,134,334);
Query OK, 1 row affected (0.05 sec)

mysql> insert Into StudentAdmissionPaymentDetails values(2,134,334);
Query OK, 1 row affected (0.05 sec)

mysql> insert Into StudentAdmissionPaymentDetails values(3,134,334);
Query OK, 1 row affected (0.06 sec)

mysql> insert Into StudentAdmissionPaymentDetails values(3,1344,334);
ERROR 1264 (22003): Out of range value for column 'AmountPaid' at row 1
mysql> insert Into StudentAdmissionPaymentDetails values(4,14,334);
Query OK, 1 row affected (0.08 sec)

mysql> insert Into StudentAdmissionPaymentDetails values(5,14,334);
Query OK, 1 row affected (0.05 sec)

mysql> insert Into StudentAdmissionPaymentDetails values(6,14,334);
Query OK, 1 row affected (0.06 sec)

mysql> insert Into StudentAdmissionPaymentDetails values(7,14,334);
Query OK, 1 row affected (0.06 sec)

mysql> insert Into StudentAdmissionPaymentDetails values(8,14,334);
Query OK, 1 row affected (0.06 sec)

mysql> insert Into StudentAdmissionPaymentDetails values(9,14,334);
Query OK, 1 row affected (0.05 sec)

mysql> insert Into StudentAdmissionPaymentDetails values(10,14,334);
Query OK, 1 row affected (0.06 sec)
```



```
mysql> insert Into StudentBasicInformation values("Sumanto","Pal",1,"Jamnagar","M");
Query OK, 1 row affected (0.07 sec)

mysql> insert Into StudentBasicInformation values("preeti","patel",2,"Junagadh","F");
Query OK, 1 row affected (0.05 sec)

mysql> insert Into StudentBasicInformation values("Vineet","pratap singh",3,"Raipur","M");
Query OK, 1 row affected (0.15 sec)

mysql> insert Into StudentBasicInformation values("Gopinath","singh",4,"Dispur","M");
Query OK, 1 row affected (0.05 sec)

mysql> insert Into StudentBasicInformation values("Rajeshkanan","Ashwin",5,"Amritsar","M");
Query OK, 1 row affected (0.10 sec)

mysql> insert Into StudentBasicInformation values("Mehek","Sharma",5,"rajkot","F");
Query OK, 1 row affected (0.10 sec)

mysql> insert Into StudentBasicInformation values("Vidha","Kumar",6,"rajkot","F");
Query OK, 1 row affected (0.05 sec)

mysql> insert Into StudentBasicInformation values("Jaya","shekhar",6,"Pathankot","F");
Query OK, 1 row affected (0.05 sec)

mysql> insert Into StudentBasicInformation values("Manpreet","singh",6,"Chandigarh","F");
Query OK, 1 row affected (0.14 sec)

mysql> insert Into StudentBasicInformation values("Nishtha","chugh",6,"Karnal","F");
Query OK, 1 row affected (0.05 sec)
```

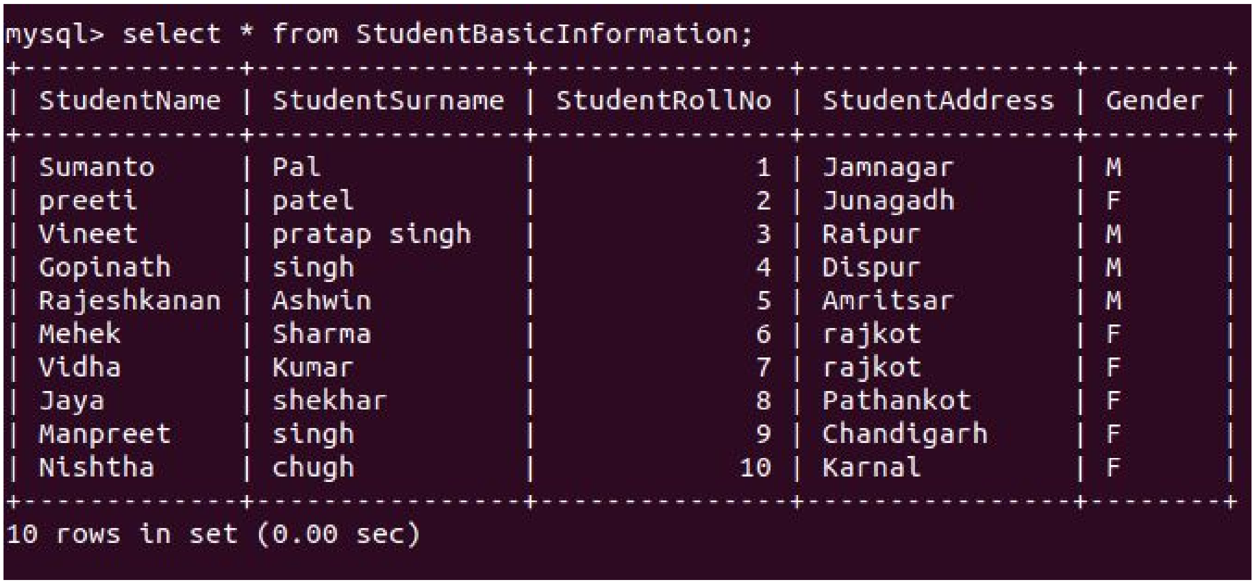


```
mysql> insert Into StudentSubjectInformation values("maths",1,100,89,0.89);
Query OK, 1 row affected (0.16 sec)

mysql> Select * from StudentSubjectInformation;
+--------------+---------------+-------------------+----------------------+------------------------+
| SubjectOpted | StudentRollNo | SubjectTotalMarks | SubjectObtainedMarks | StudentMarksPercentage |
+--------------+---------------+-------------------+----------------------+------------------------+
| maths        |             1 |               100 |                   89 |                   0.89 |
+--------------+---------------+-------------------+----------------------+------------------------+
1 row in set (0.00 sec)

mysql> insert Into StudentSubjectInformation values("maths",2,100,99,0.99);
Query OK, 1 row affected (0.07 sec)

mysql> insert Into StudentSubjectInformation values("maths",3,100,99,0.99);
Query OK, 1 row affected (0.04 sec)

mysql> insert Into StudentSubjectInformation values("maths",4,100,9,0.9);
Query OK, 1 row affected (0.05 sec)

mysql> insert Into StudentSubjectInformation values("maths",5,100,11,0.11);
Query OK, 1 row affected (0.05 sec)

mysql> insert Into StudentSubjectInformation values("physics",6,100,11,0.11);
Query OK, 1 row affected (0.15 sec)

mysql> insert Into StudentSubjectInformation values("physics",7,100,61,0.61);
Query OK, 1 row affected (0.07 sec)

mysql> insert Into StudentSubjectInformation values("physics",8,100,62,0.62);
Query OK, 1 row affected (0.04 sec)

mysql> insert Into StudentSubjectInformation values("physics",9,100,62,0.62);
Query OK, 1 row affected (0.05 sec)

mysql> insert Into StudentSubjectInformation values("chemistry",10,100,62,0.62);
Query OK, 1 row affected (0.05 sec)
```

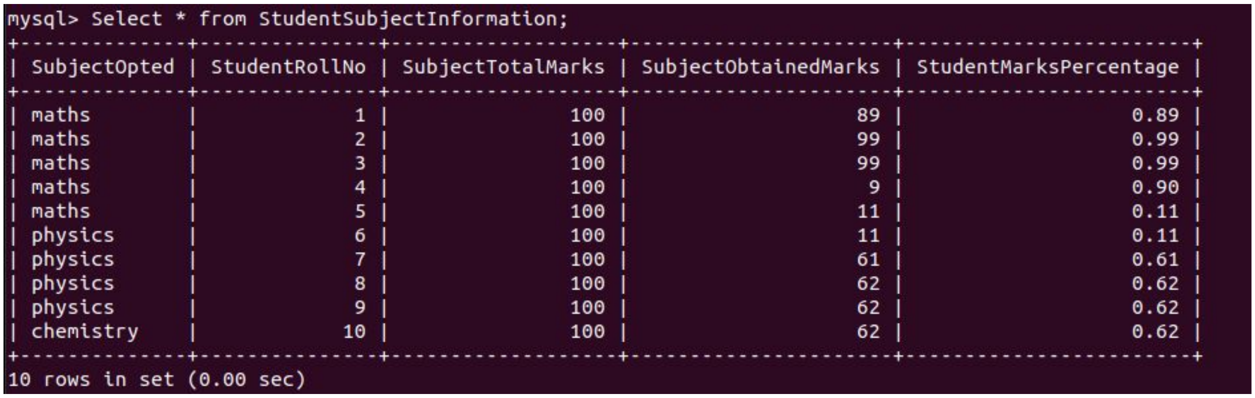


```
mysql> insert Into StudentScholarshipInformation values(1,"AWS-scholarship","Database Architect",1000,"pa
rtial-free");
Query OK, 1 row affected (0.05 sec)

mysql> insert Into StudentScholarshipInformation values(2,"AWS-scholarship","Database Architect",1000,"pa
rtial-free");
Query OK, 1 row affected (0.06 sec)

mysql> insert Into StudentScholarshipInformation values(3,"AWS-scholarship","Database Architect",1000,"pa
rtial-free");
Query OK, 1 row affected (0.06 sec)

mysql> insert Into StudentScholarshipInformation values(4,"AWS-scholarship","Database Architect",1000,"pa
rtial-free");
Query OK, 1 row affected (0.05 sec)

mysql> insert Into StudentScholarshipInformation values(5,"AWS-scholarship","Database Architect",1000,"pa
rtial-free");
Query OK, 1 row affected (0.08 sec)

mysql> insert Into StudentScholarshipInformation values(6,"AWS-scholarship","Database Architect",1000,"pa
rtial-free");
Query OK, 1 row affected (0.04 sec)

mysql> insert Into StudentScholarshipInformation values(7,"CCNA-Cert","Netwrork Administrator",1000,"part
ial-free");
Query OK, 1 row affected (0.04 sec)

mysql> insert Into StudentScholarshipInformation values(8,"CCNA-Cert","Netwrork Administrator",1000,"part
ial-free");
Query OK, 1 row affected (0.04 sec)

mysql> insert Into StudentScholarshipInformation values(9,"CCNA-Cert","Netwrork Administrator",1000,"part
ial-free");
Query OK, 1 row affected (0.05 sec)

mysql> insert Into StudentScholarshipInformation values(10,"CCNA-Cert","Netwrork Administrator",1000,"par
tial-free");
Query OK, 1 row affected (0.06 sec)
```

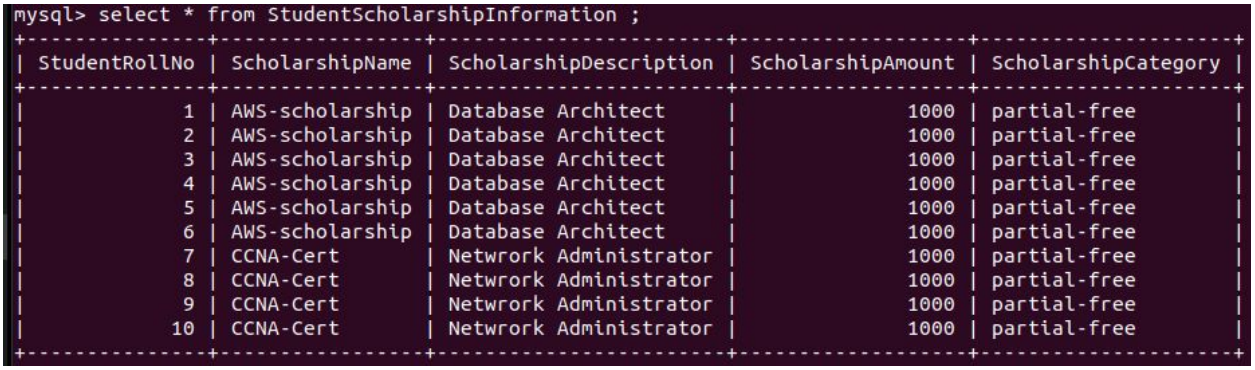
4.



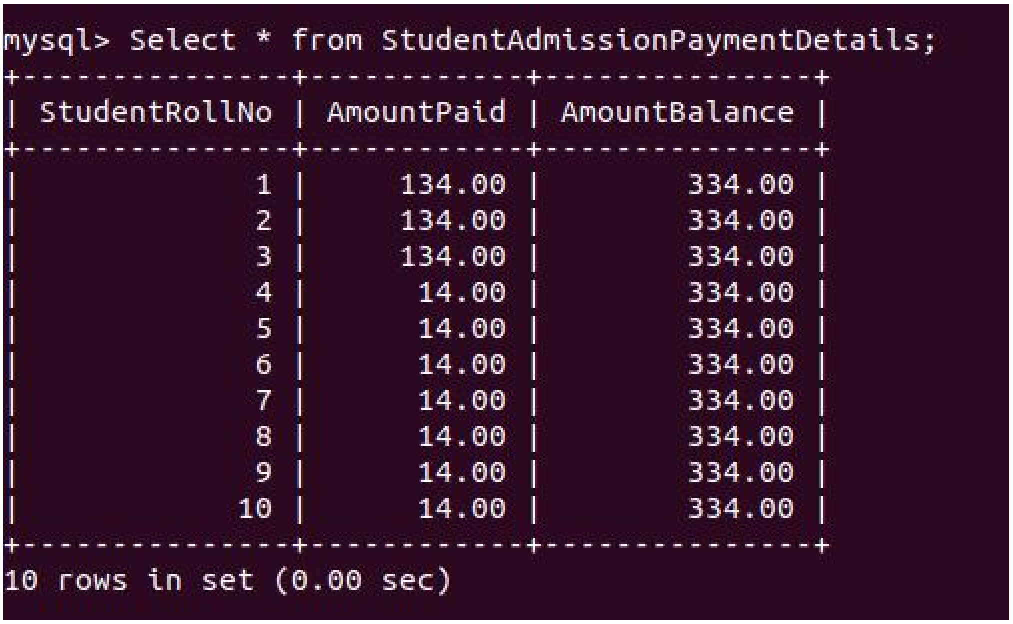
```
mysql> select * from StudentBasicInformation;
+-------------+----------------+---------------+----------------+--------+
| StudentName | StudentSurname | StudentRollNo | StudentAddress | Gender |
+-------------+----------------+---------------+----------------+--------+
| Sumanto     | Pal            |             1 | Jamnagar       | M      |
| preeti      | patel          |             2 | Junagadh       | F      |
| Vineet      | pratap singh   |             3 | Raipur         | M      |
| Gopinath    | singh          |             4 | Dispur         | M      |
| Rajeshkanan | Ashwin         |             5 | Amritsar       | M      |
| Mehek       | Sharma         |             6 | rajkot         | F      |
| Vidha       | Kumar          |             7 | rajkot         | F      |
| Jaya        | shekhar        |             8 | Pathankot      | F      |
| Manpreet    | singh          |             9 | Chandigarh     | F      |
| Nishtha     | chugh          |            10 | Karnal         | F      |
+-------------+----------------+---------------+----------------+--------+
10 rows in set (0.00 sec)
```



```
mysql> Select * from StudentSubjectInformation;
+--------------+---------------+-------------------+----------------------+------------------------+
| SubjectOpted | StudentRollNo | SubjectTotalMarks | SubjectObtainedMarks | StudentMarksPercentage |
+--------------+---------------+-------------------+----------------------+------------------------+
| maths        |             1 |               100 |                   89 |                   0.89 |
| maths        |             2 |               100 |                   99 |                   0.99 |
| maths        |             3 |               100 |                   99 |                   0.99 |
| maths        |             4 |               100 |                    9 |                   0.90 |
| maths        |             5 |               100 |                   11 |                   0.11 |
| physics      |             6 |               100 |                   11 |                   0.11 |
| physics      |             7 |               100 |                   61 |                   0.61 |
| physics      |             8 |               100 |                   62 |                   0.62 |
| physics      |             9 |               100 |                   62 |                   0.62 |
| chemistry    |            10 |               100 |                   62 |                   0.62 |
+--------------+---------------+-------------------+----------------------+------------------------+
10 rows in set (0.00 sec)
```

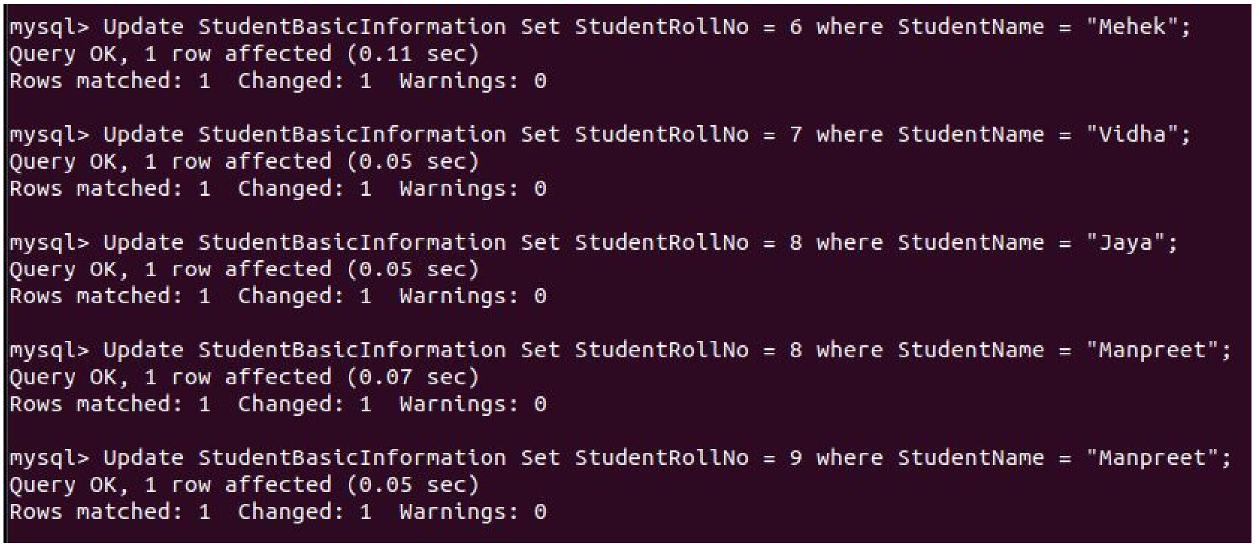


```
mysql> select * from StudentScholarshipInformation ;
+---------------+-----------------+------------------------+-------------------+---------------------+
| StudentRollNo | ScholarshipName | ScholarshipDescription | ScholarshipAmount | ScholarshipCategory |
+---------------+-----------------+------------------------+-------------------+---------------------+
|             1 | AWS-scholarship | Database Architect     |              1000 | partial-free        |
|             2 | AWS-scholarship | Database Architect     |              1000 | partial-free        |
|             3 | AWS-scholarship | Database Architect     |              1000 | partial-free        |
|             4 | AWS-scholarship | Database Architect     |              1000 | partial-free        |
|             5 | AWS-scholarship | Database Architect     |              1000 | partial-free        |
|             6 | AWS-scholarship | Database Architect     |              1000 | partial-free        |
|             7 | CCNA-Cert       | Netwrork Administrator |              1000 | partial-free        |
|             8 | CCNA-Cert       | Netwrork Administrator |              1000 | partial-free        |
|             9 | CCNA-Cert       | Netwrork Administrator |              1000 | partial-free        |
|            10 | CCNA-Cert       | Netwrork Administrator |              1000 | partial-free        |
+---------------+-----------------+------------------------+-------------------+---------------------+
```



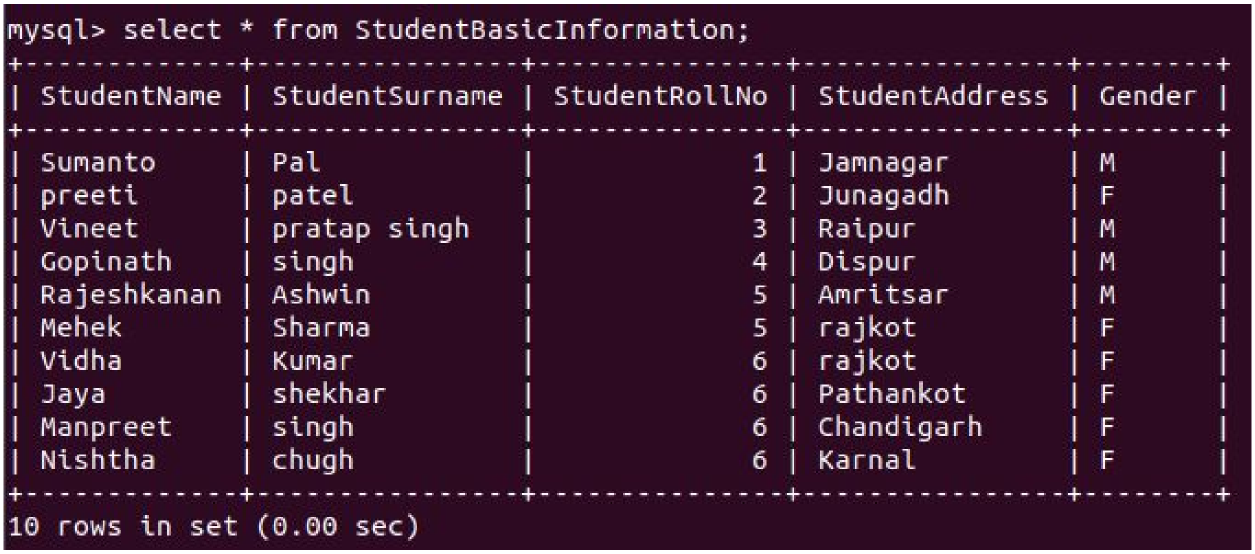
```
mysql> Select * from StudentAdmissionPaymentDetails;
+---------------+------------+---------------+
| StudentRollNo | AmountPaid | AmountBalance |
+---------------+------------+---------------+
|             1 |     134.00 |        334.00 |
|             2 |     134.00 |        334.00 |
|             3 |     134.00 |        334.00 |
|             4 |      14.00 |        334.00 |
|             5 |      14.00 |        334.00 |
|             6 |      14.00 |        334.00 |
|             7 |      14.00 |        334.00 |
|             8 |      14.00 |        334.00 |
|             9 |      14.00 |        334.00 |
|            10 |      14.00 |        334.00 |
+---------------+------------+---------------+
10 rows in set (0.00 sec)
```

5.



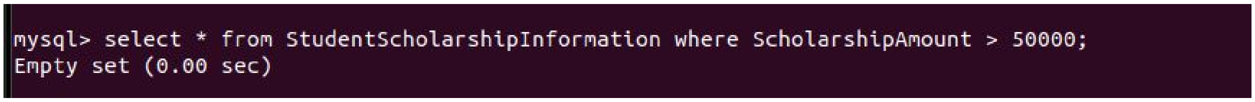
```
mysql> Update StudentBasicInformation Set StudentRollNo = 6 where StudentName = "Mehek";
Query OK, 1 row affected (0.11 sec)
Rows matched: 1  Changed: 1  Warnings: 0

mysql> Update StudentBasicInformation Set StudentRollNo = 7 where StudentName = "Vidha";
Query OK, 1 row affected (0.05 sec)
Rows matched: 1  Changed: 1  Warnings: 0

mysql> Update StudentBasicInformation Set StudentRollNo = 8 where StudentName = "Jaya";
Query OK, 1 row affected (0.05 sec)
Rows matched: 1  Changed: 1  Warnings: 0

mysql> Update StudentBasicInformation Set StudentRollNo = 8 where StudentName = "Manpreet";
Query OK, 1 row affected (0.07 sec)
Rows matched: 1  Changed: 1  Warnings: 0

mysql> Update StudentBasicInformation Set StudentRollNo = 9 where StudentName = "Manpreet";
Query OK, 1 row affected (0.05 sec)
Rows matched: 1  Changed: 1  Warnings: 0
```

6.



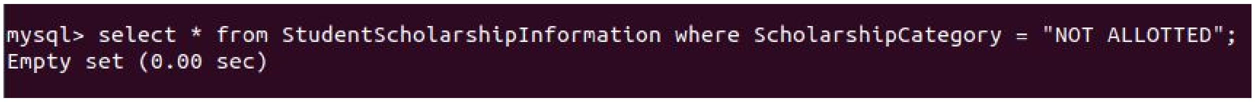
```
mysql> select * from StudentBasicInformation;
+-------------+----------------+---------------+----------------+--------+
| StudentName | StudentSurname | StudentRollNo | StudentAddress | Gender |
+-------------+----------------+---------------+----------------+--------+
| Sumanto     | Pal            |             1 | Jamnagar       | M      |
| preeti      | patel          |             2 | Junagadh       | F      |
| Vineet      | pratap singh   |             3 | Raipur         | M      |
| Gopinath    | singh          |             4 | Dispur         | M      |
| Rajeshkanan | Ashwin         |             5 | Amritsar       | M      |
| Mehek       | Sharma         |             5 | rajkot         | F      |
| Vidha       | Kumar          |             6 | rajkot         | F      |
| Jaya        | shekhar        |             6 | Pathankot      | F      |
| Manpreet    | singh          |             6 | Chandigarh     | F      |
| Nishtha     | chugh          |             6 | Karnal         | F      |
+-------------+----------------+---------------+----------------+--------+
10 rows in set (0.00 sec)
```

7.



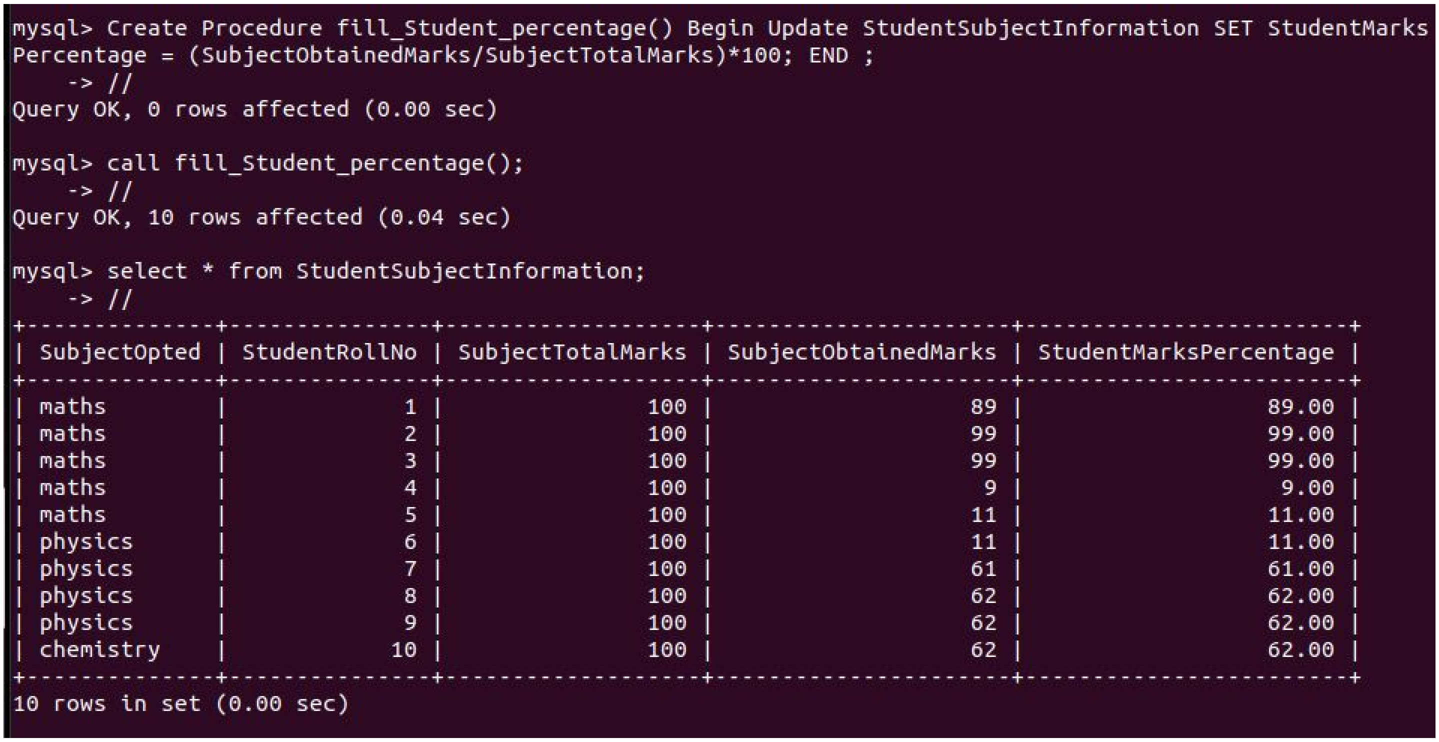
```
mysql> select * from StudentScholarshipInformation where ScholarshipAmount > 50000;
Empty set (0.00 sec)
```

8.



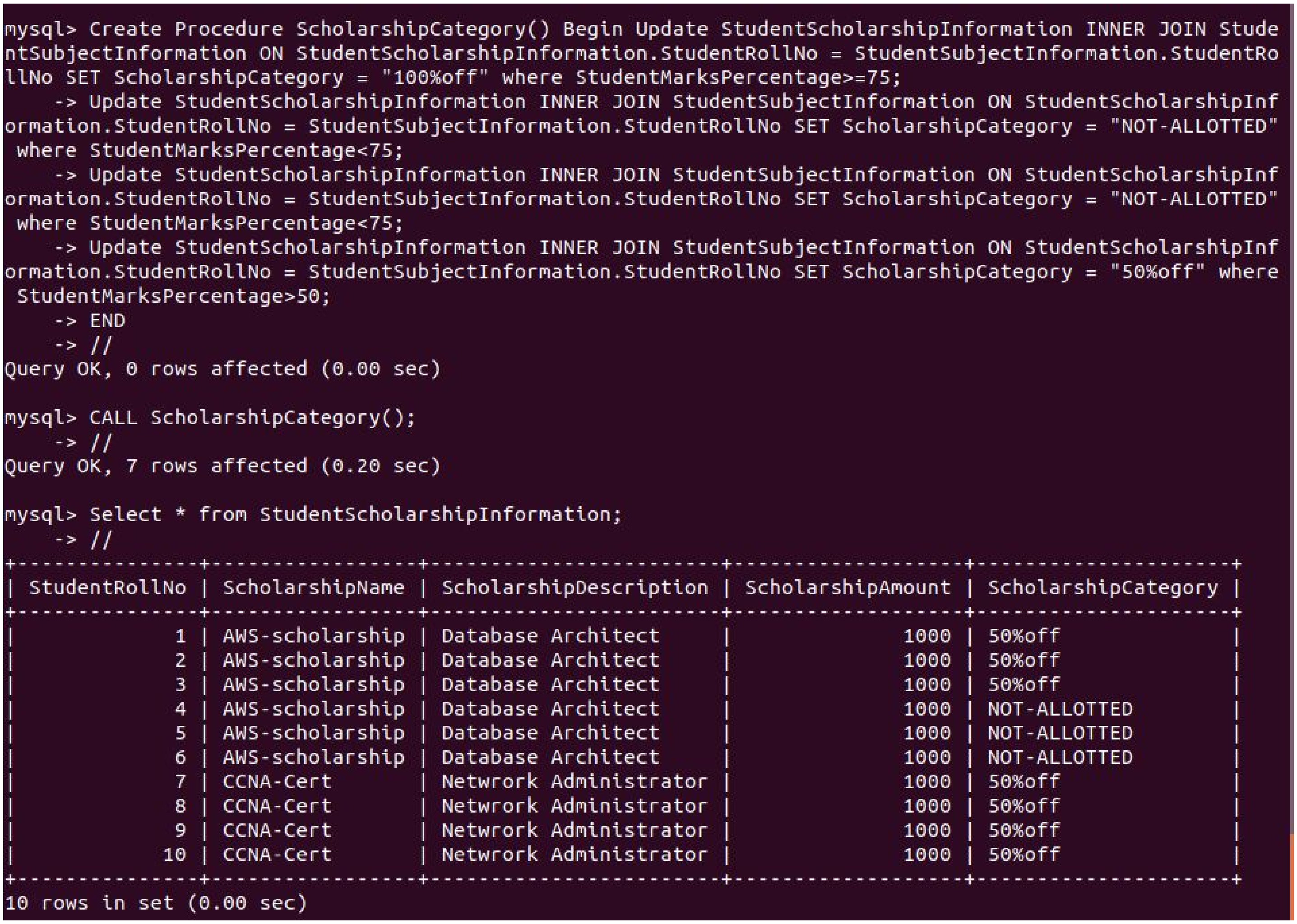
```
mysql> select * from StudentScholarshipInformation where ScholarshipCategory = "NOT ALLOTTED";
Empty set (0.00 sec)
```

9.



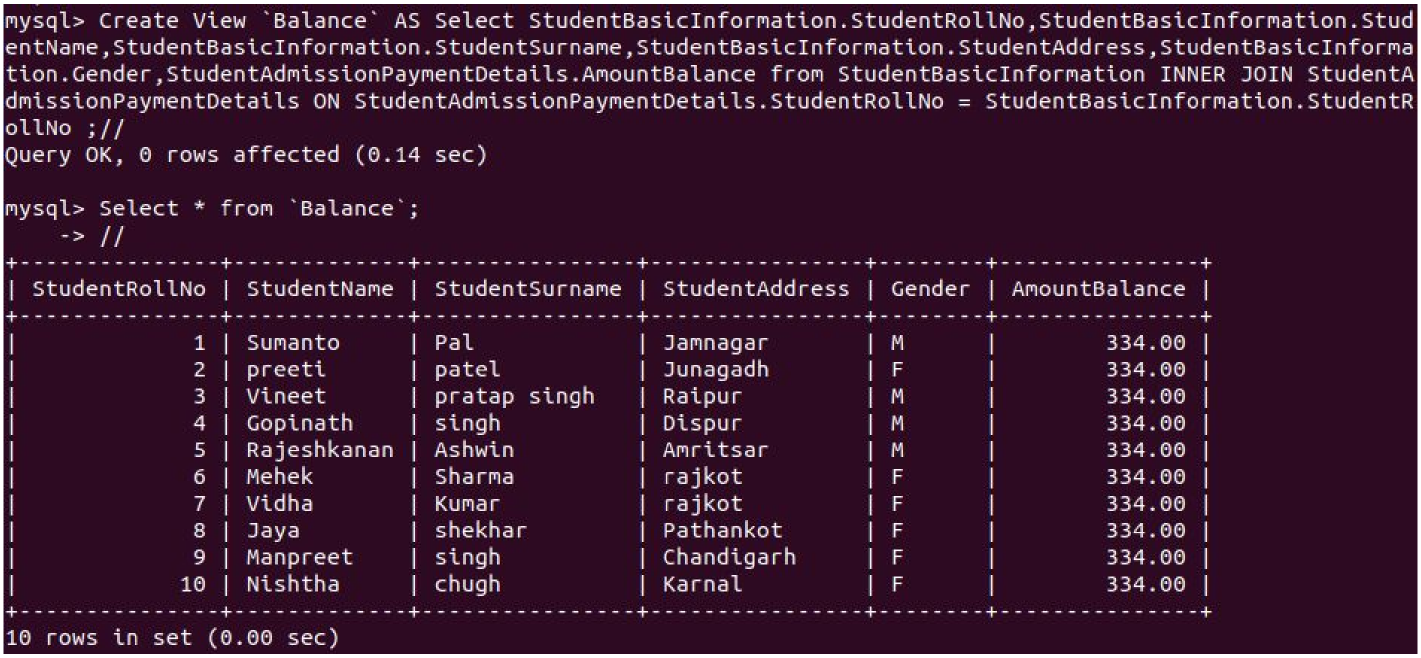
```
mysql> Create Procedure fill_Student_percentage() Begin Update StudentSubjectInformation SET StudentMarks
Percentage = (SubjectObtainedMarks/SubjectTotalMarks)*100; END ;
    -> //
Query OK, 0 rows affected (0.00 sec)

mysql> call fill_Student_percentage();
    -> //
Query OK, 10 rows affected (0.04 sec)

mysql> select * from StudentSubjectInformation;
    -> //
+--------------+--------------+-------------------+----------------------+-----------------------+
| SubjectOpted | StudentRollNo | SubjectTotalMarks | SubjectObtainedMarks | StudentMarksPercentage |
+--------------+--------------+-------------------+----------------------+-----------------------+
| maths        |             1 |               100 |                   89 |                  89.00 |
| maths        |             2 |               100 |                   99 |                  99.00 |
| maths        |             3 |               100 |                   99 |                  99.00 |
| maths        |             4 |               100 |                    9 |                   9.00 |
| maths        |             5 |               100 |                   11 |                  11.00 |
| physics      |             6 |               100 |                   11 |                  11.00 |
| physics      |             7 |               100 |                   61 |                  61.00 |
| physics      |             8 |               100 |                   62 |                  62.00 |
| physics      |             9 |               100 |                   62 |                  62.00 |
| chemistry    |            10 |               100 |                   62 |                  62.00 |
+--------------+--------------+-------------------+----------------------+-----------------------+
10 rows in set (0.00 sec)
```

10.



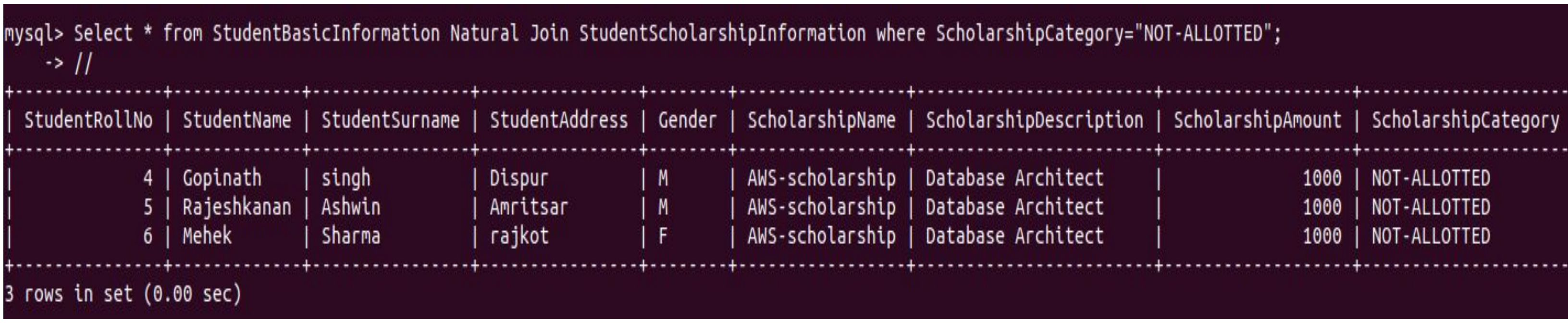
```
mysql> Create Procedure ScholarshipCategory() Begin Update StudentScholarshipInformation INNER JOIN Stude
ntSubjectInformation ON StudentScholarshipInformation.StudentRollNo = StudentSubjectInformation.StudentRo
llNo SET ScholarshipCategory = "100%off" where StudentMarksPercentage>=75;
    -> Update StudentScholarshipInformation INNER JOIN StudentSubjectInformation ON StudentScholarshipInf
ormation.StudentRollNo = StudentSubjectInformation.StudentRollNo SET ScholarshipCategory = "NOT-ALLOTTED"
 where StudentMarksPercentage<75;
    -> Update StudentScholarshipInformation INNER JOIN StudentSubjectInformation ON StudentScholarshipInf
ormation.StudentRollNo = StudentSubjectInformation.StudentRollNo SET ScholarshipCategory = "NOT-ALLOTTED"
 where StudentMarksPercentage<75;
    -> Update StudentScholarshipInformation INNER JOIN StudentSubjectInformation ON StudentScholarshipInf
ormation.StudentRollNo = StudentSubjectInformation.StudentRollNo SET ScholarshipCategory = "50%off" where
 StudentMarksPercentage>50;
    -> END
    -> //
Query OK, 0 rows affected (0.00 sec)

mysql> CALL ScholarshipCategory();
    -> //
Query OK, 7 rows affected (0.20 sec)

mysql> Select * from StudentScholarshipInformation;
    -> //
+---------------+-----------------+------------------------+-------------------+---------------------+
| StudentRollNo | ScholarshipName | ScholarshipDescription | ScholarshipAmount | ScholarshipCategory |
+---------------+-----------------+------------------------+-------------------+---------------------+
|             1 | AWS-scholarship | Database Architect     |              1000 | 50%off              |
|             2 | AWS-scholarship | Database Architect     |              1000 | 50%off              |
|             3 | AWS-scholarship | Database Architect     |              1000 | 50%off              |
|             4 | AWS-scholarship | Database Architect     |              1000 | NOT-ALLOTTED        |
|             5 | AWS-scholarship | Database Architect     |              1000 | NOT-ALLOTTED        |
|             6 | AWS-scholarship | Database Architect     |              1000 | NOT-ALLOTTED        |
|             7 | CCNA-Cert       | Netwrork Administrator |              1000 | 50%off              |
|             8 | CCNA-Cert       | Netwrork Administrator |              1000 | 50%off              |
|             9 | CCNA-Cert       | Netwrork Administrator |              1000 | 50%off              |
|            10 | CCNA-Cert       | Netwrork Administrator |              1000 | 50%off              |
+---------------+-----------------+------------------------+-------------------+---------------------+
10 rows in set (0.00 sec)
```

11.



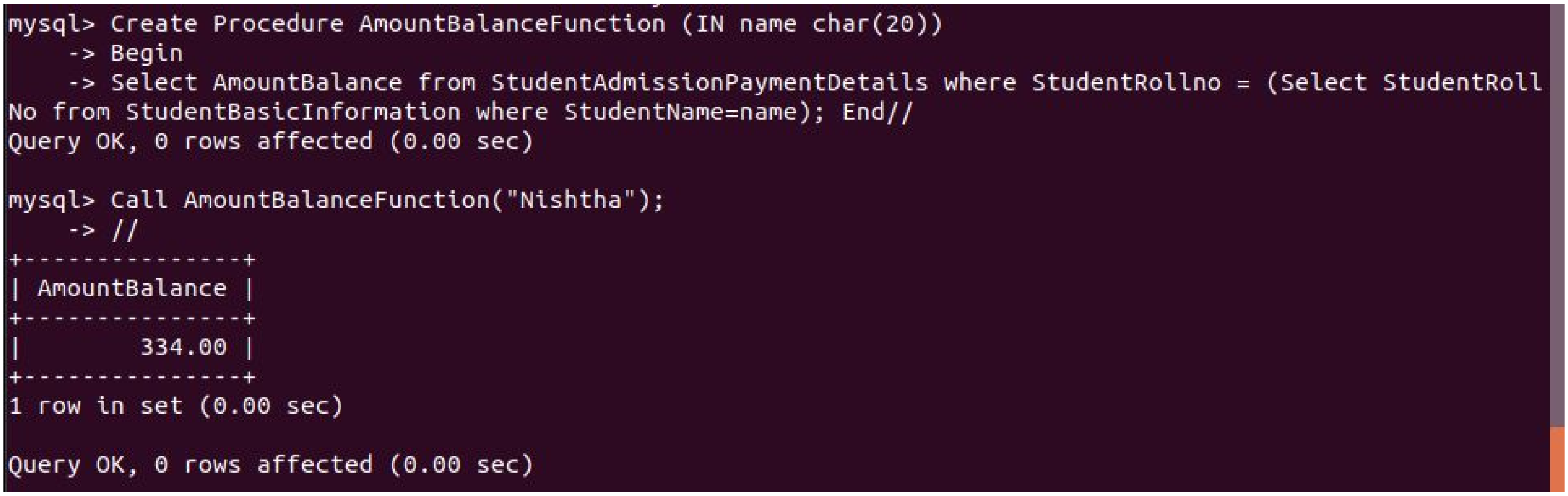
```
mysql> Create View `Balance` AS Select StudentBasicInformation.StudentRollNo,StudentBasicInformation.StudentName,StudentBasicInformation.StudentSurname,StudentBasicInformation.StudentAddress,StudentBasicInformation.Gender,StudentAdmissionPaymentDetails.AmountBalance from StudentBasicInformation INNER JOIN StudentAdmissionPaymentDetails ON StudentAdmissionPaymentDetails.StudentRollNo = StudentBasicInformation.StudentRollNo ;//
Query OK, 0 rows affected (0.14 sec)

mysql> Select * from `Balance`;
    -> //
+---------------+-------------+----------------+----------------+--------+---------------+
| StudentRollNo | StudentName | StudentSurname | StudentAddress | Gender | AmountBalance |
+---------------+-------------+----------------+----------------+--------+---------------+
|             1 | Sumanto     | Pal            | Jamnagar       | M      |        334.00 |
|             2 | preeti      | patel          | Junagadh       | F      |        334.00 |
|             3 | Vineet      | pratap singh   | Raipur         | M      |        334.00 |
|             4 | Gopinath    | singh          | Dispur         | M      |        334.00 |
|             5 | Rajeshkanan | Ashwin         | Amritsar       | M      |        334.00 |
|             6 | Mehek       | Sharma         | rajkot         | F      |        334.00 |
|             7 | Vidha       | Kumar          | rajkot         | F      |        334.00 |
|             8 | Jaya        | shekhar        | Pathankot      | F      |        334.00 |
|             9 | Manpreet    | singh          | Chandigarh     | F      |        334.00 |
|            10 | Nishtha     | chugh          | Karnal         | F      |        334.00 |
+---------------+-------------+----------------+----------------+--------+---------------+
10 rows in set (0.00 sec)
```

12.



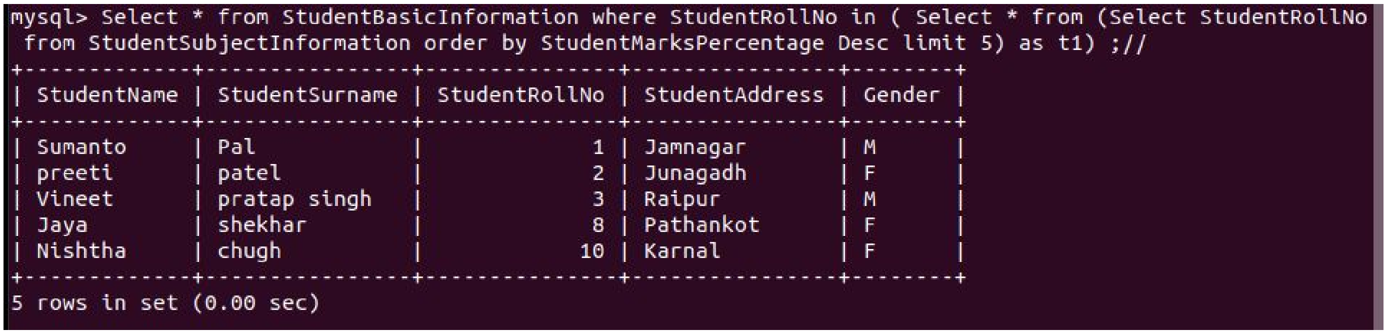
```
mysql> Select * from StudentBasicInformation Natural Join StudentScholarshipInformation where ScholarshipCategory="NOT-ALLOTTED";
    -> //
+---------------+-------------+----------------+----------------+--------+-----------------+------------------------+-------------------+--------------------
| StudentRollNo | StudentName | StudentSurname | StudentAddress | Gender | ScholarshipName | ScholarshipDescription | ScholarshipAmount | ScholarshipCategory
+---------------+-------------+----------------+----------------+--------+-----------------+------------------------+-------------------+--------------------
|             4 | Gopinath    | singh          | Dispur         | M      | AWS-scholarship | Database Architect     |              1000 | NOT-ALLOTTED
|             5 | Rajeshkanan | Ashwin         | Amritsar       | M      | AWS-scholarship | Database Architect     |              1000 | NOT-ALLOTTED
|             6 | Mehek       | Sharma         | rajkot         | F      | AWS-scholarship | Database Architect     |              1000 | NOT-ALLOTTED
+---------------+-------------+----------------+----------------+--------+-----------------+------------------------+-------------------+--------------------
3 rows in set (0.00 sec)
```

13.



```
mysql> Create Procedure AmountBalanceFunction (IN name char(20))
    -> Begin
    -> Select AmountBalance from StudentAdmissionPaymentDetails where StudentRollno = (Select StudentRollNo from StudentBasicInformation where StudentName=name); End//
Query OK, 0 rows affected (0.00 sec)

mysql> Call AmountBalanceFunction("Nishtha");
    -> //
+---------------+
| AmountBalance |
+---------------+
|        334.00 |
+---------------+
1 row in set (0.00 sec)

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

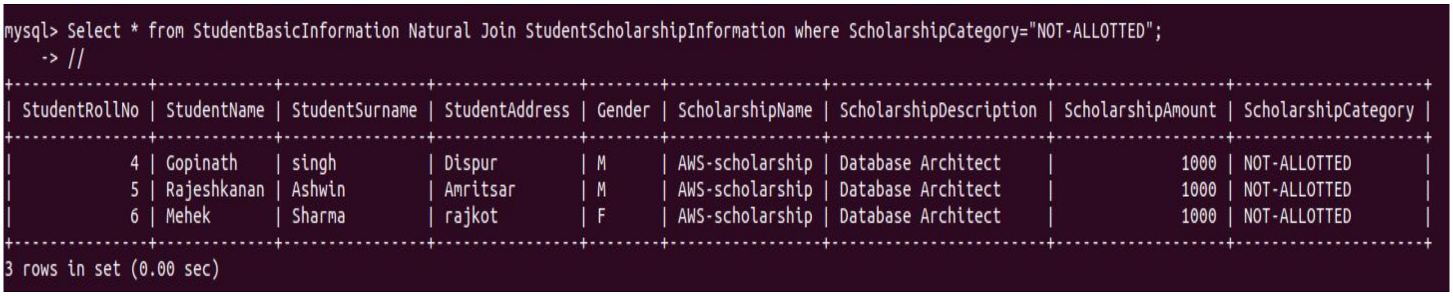
14.



```
mysql> Select * from StudentBasicInformation where StudentRollNo in ( Select * from (Select StudentRollNo
 from StudentSubjectInformation order by StudentMarksPercentage Desc limit 5) as t1) ;//
+-------------+----------------+---------------+----------------+--------+
| StudentName | StudentSurname | StudentRollNo | StudentAddress | Gender |
+-------------+----------------+---------------+----------------+--------+
| Sumanto     | Pal            |             1 | Jamnagar       | M      |
| preeti      | patel          |             2 | Junagadh       | F      |
| Vineet      | pratap singh   |             3 | Raipur         | M      |
| Jaya        | shekhar        |             8 | Pathankot      | F      |
| Nishtha     | chugh          |            10 | Karnal         | F      |
+-------------+----------------+---------------+----------------+--------+
5 rows in set (0.00 sec)
```

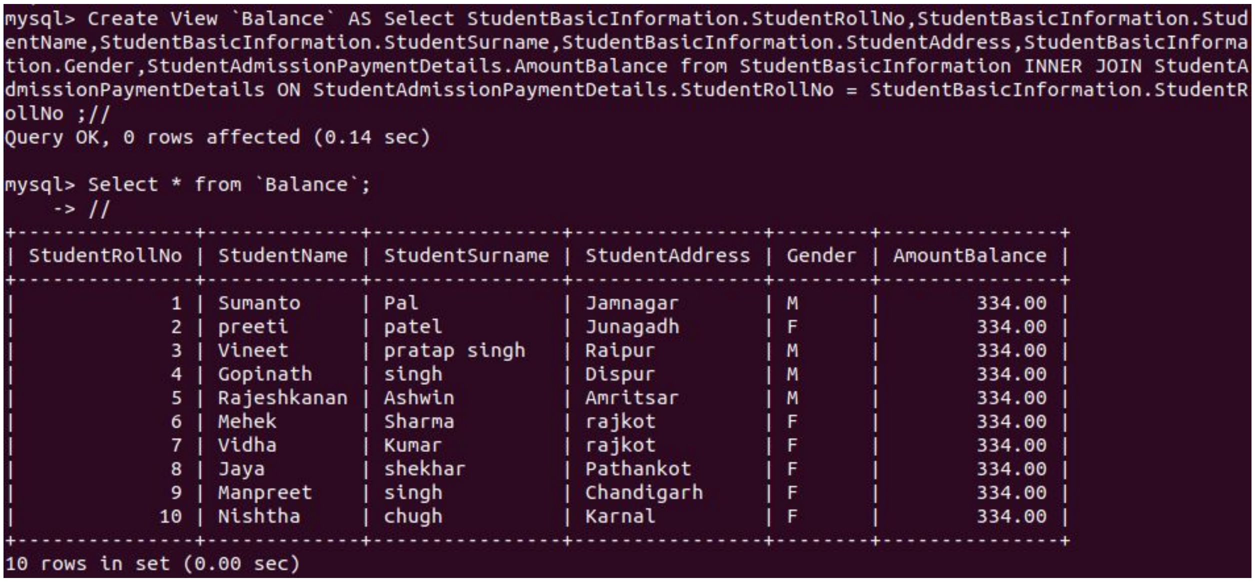
15.

Natural Join : found suitable because column were same



```
mysql> Select * from StudentBasicInformation Natural Join StudentScholarshipInformation where ScholarshipCategory="NOT-ALLOTTED";
    -> //
+---------------+-------------+----------------+----------------+--------+------------------+------------------------+-------------------+---------------------+
| StudentRollNo | StudentName | StudentSurname | StudentAddress | Gender | ScholarshipName  | ScholarshipDescription | ScholarshipAmount | ScholarshipCategory |
+---------------+-------------+----------------+----------------+--------+------------------+------------------------+-------------------+---------------------+
|             4 | Gopinath    | singh          | Dispur         | M      | AWS-scholarship  | Database Architect     |              1000 | NOT-ALLOTTED        |
|             5 | Rajeshkanan | Ashwin         | Amritsar       | M      | AWS-scholarship  | Database Architect     |              1000 | NOT-ALLOTTED        |
|             6 | Mehek       | Sharma         | rajkot         | F      | AWS-scholarship  | Database Architect     |              1000 | NOT-ALLOTTED        |
+---------------+-------------+----------------+----------------+--------+------------------+------------------------+-------------------+---------------------+
3 rows in set (0.00 sec)
```

inner Join : found suitable to add certain conditions



```
mysql> Create View `Balance` AS Select StudentBasicInformation.StudentRollNo,StudentBasicInformation.Stud
entName,StudentBasicInformation.StudentSurname,StudentBasicInformation.StudentAddress,StudentBasicInforma
tion.Gender,StudentAdmissionPaymentDetails.AmountBalance from StudentBasicInformation INNER JOIN StudentA
dmissionPaymentDetails ON StudentAdmissionPaymentDetails.StudentRollNo = StudentBasicInformation.StudentR
ollNo ;//
Query OK, 0 rows affected (0.14 sec)

mysql> Select * from `Balance`;
    -> //
+---------------+-------------+----------------+----------------+--------+---------------+
| StudentRollNo | StudentName | StudentSurname | StudentAddress | Gender | AmountBalance |
+---------------+-------------+----------------+----------------+--------+---------------+
|             1 | Sumanto     | Pal            | Jamnagar       | M      |        334.00 |
|             2 | preeti      | patel          | Junagadh       | F      |        334.00 |
|             3 | Vineet      | pratap singh   | Raipur         | M      |        334.00 |
|             4 | Gopinath    | singh          | Dispur         | M      |        334.00 |
|             5 | Rajeshkanan | Ashwin         | Amritsar       | M      |        334.00 |
|             6 | Mehek       | Sharma         | rajkot         | F      |        334.00 |
|             7 | Vidha       | Kumar          | rajkot         | F      |        334.00 |
|             8 | Jaya        | shekhar        | Pathankot      | F      |        334.00 |
|             9 | Manpreet    | singh          | Chandigarh     | F      |        334.00 |
|            10 | Nishtha     | chugh          | Karnal         | F      |        334.00 |
+---------------+-------------+----------------+----------------+--------+---------------+
10 rows in set (0.00 sec)
```

Full Outer Join: Suitable when null values are also needed to be  considered of both the tables.
NOT used because there are no null values in tables

16.

→ Delete

→ DML

→ Deletes all rows

→ Schema is not

→ **Delete has where option too, that gives flexibility**

→ **SLOW**

→ **ROLLBACK POSSIBLE**

: Example

→ Delete from Student where age > 21;

→ Drop

→ DDL

→ NO ROLLBACK

→ **Whole structure(schema) is deleted**

: Example

→Drop Table Student;

→ Truncate

→ DDL

→ Deletes all rows

→ Schema is not

→ **All rows are deleted at once by locking it**

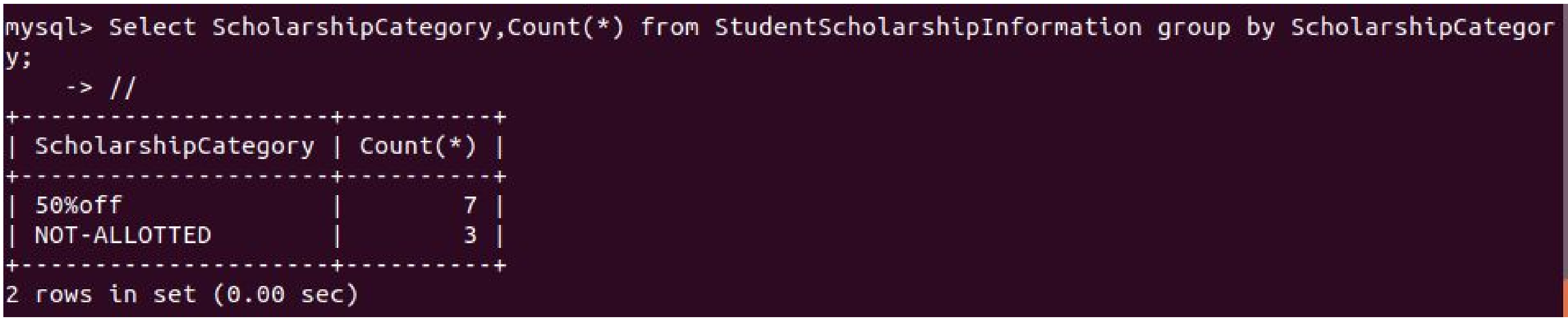
→ **RollBACK is not Possible**

→ **FAST as no log is created**

: Example

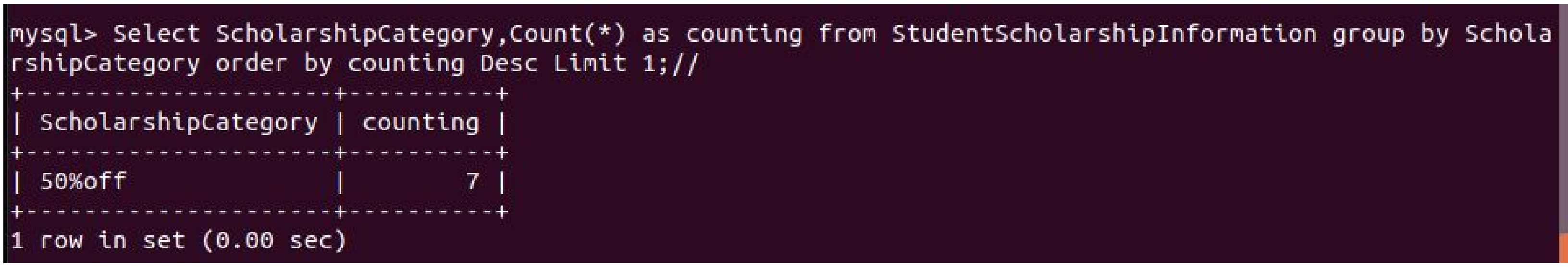
→Truncate Student;

17.



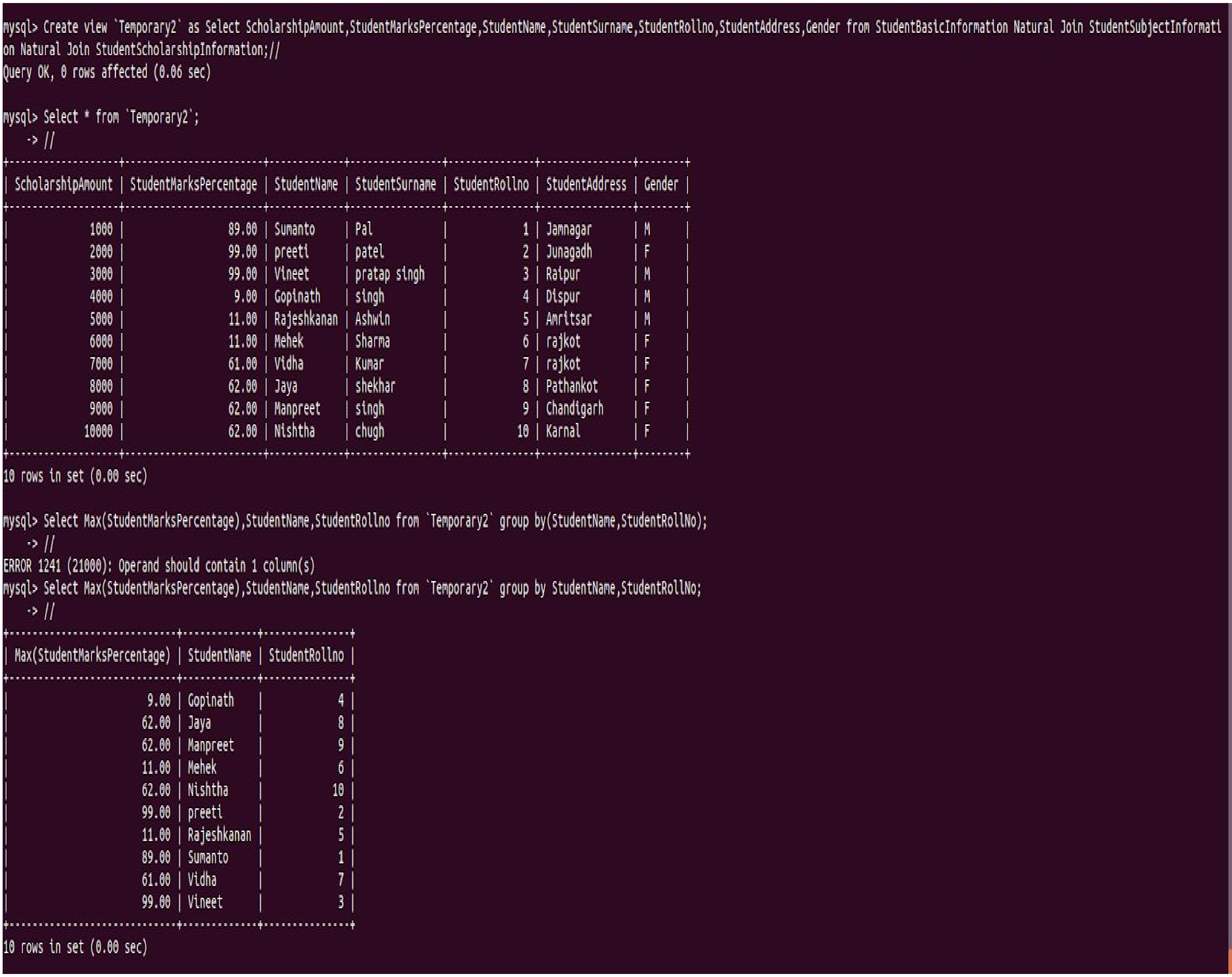
```
mysql> Select ScholarshipCategory,Count(*) from StudentScholarshipInformation group by ScholarshipCategor
y;
    -> //
+---------------------+----------+
| ScholarshipCategory | Count(*) |
+---------------------+----------+
| 50%off              |        7 |
| NOT-ALLOTTED        |        3 |
+---------------------+----------+
2 rows in set (0.00 sec)
```

18.



```
mysql> Select ScholarshipCategory,Count(*) as counting from StudentScholarshipInformation group by Schola
rshipCategory order by counting Desc Limit 1;//
+---------------------+----------+
| ScholarshipCategory | counting |
+---------------------+----------+
| 50%off              |        7 |
+---------------------+----------+
1 row in set (0.00 sec)
```

19.



```
mysql> Create view `Temporary2` as Select ScholarshipAmount,StudentMarksPercentage,StudentName,StudentSurname,StudentRollno,StudentAddress,Gender from StudentBasicInformation Natural Join StudentSubjectInformati
on Natural Join StudentScholarshipInformation;//
Query OK, 0 rows affected (0.06 sec)

mysql> Select * from `Temporary2`;
    -> //
+-------------------+------------------------+-------------+----------------+---------------+----------------+--------+
| ScholarshipAmount | StudentMarksPercentage | StudentName | StudentSurname | StudentRollno | StudentAddress | Gender |
+-------------------+------------------------+-------------+----------------+---------------+----------------+--------+
|              1000 |                  89.00 | Sumanto     | Pal            |             1 | Jamnagar       | M      |
|              2000 |                  99.00 | preeti      | patel          |             2 | Junagadh       | F      |
|              3000 |                  99.00 | Vineet      | pratap singh   |             3 | Raipur         | M      |
|              4000 |                   9.00 | Gopinath    | singh          |             4 | Dispur         | M      |
|              5000 |                  11.00 | Rajeshkanan | Ashwin         |             5 | Amritsar       | M      |
|              6000 |                  11.00 | Mehek       | Sharma         |             6 | rajkot         | F      |
|              7000 |                  61.00 | Vidha       | Kumar          |             7 | rajkot         | F      |
|              8000 |                  62.00 | Jaya        | shekhar        |             8 | Pathankot      | F      |
|              9000 |                  62.00 | Manpreet    | singh          |             9 | Chandigarh     | F      |
|             10000 |                  62.00 | Nishtha     | chugh          |            10 | Karnal         | F      |
+-------------------+------------------------+-------------+----------------+---------------+----------------+--------+
10 rows in set (0.00 sec)

mysql> Select Max(StudentMarksPercentage),StudentName,StudentRollno from `Temporary2` group by(StudentName,StudentRollNo);
    -> //
ERROR 1241 (21000): Operand should contain 1 column(s)
mysql> Select Max(StudentMarksPercentage),StudentName,StudentRollno from `Temporary2` group by StudentName,StudentRollNo;
    -> //
+-----------------------------+-------------+---------------+
| Max(StudentMarksPercentage) | StudentName | StudentRollno |
+-----------------------------+-------------+---------------+
|                        9.00 | Gopinath    |             4 |
|                       62.00 | Jaya        |             8 |
|                       62.00 | Manpreet    |             9 |
|                       11.00 | Mehek       |             6 |
|                       62.00 | Nishtha     |            10 |
|                       99.00 | preeti      |             2 |
|                       11.00 | Rajeshkanan |             5 |
|                       89.00 | Sumanto     |             1 |
|                       61.00 | Vidha       |             7 |
|                       99.00 | Vineet      |             3 |
+-----------------------------+-------------+---------------+
10 rows in set (0.00 sec)
```

20.

STORED PROCEDURES:
Stored procedures are a pieces of the code in written in PL/SQL to do some specific task. Stored procedures can be invoked explicitly by the user. It's like a java program , it can take some input as a parameter then can do some processing and can return values.

TRIGGERS:

Trigger is a stored procedure that runs automatically when various events happen (eg update, insert, delete). Triggers are more like an event handler they run at the specific event. Trigger can not take input and they can't return values.

Difference between stored procedure and triggers in SQL

FUNCTIONS:

- The function must return a value but in **Stored Procedure** it is optional. Even a procedure can return zero or n values.
- Functions can have only input parameters for it whereas Procedures can have input or output parameters.
- Functions can be called from Procedure whereas Procedures cannot be called from a Function.

Stored Procedures vs functions stackoverflow link

VIEWS:

**VIEWS** are virtual tables that do not store any data of their own but display data stored in other tables. In other words, VIEWS are nothing but SQL Queries. A view can contain all or a few rows from a table. A MySQL view can show data from one table or many tables.