

**Submitted To**

**Mr. Suvendu Kumar Nayak**

Course Title: DATABASE CREATION AND MAINTENANCE

Course Code: CUTM1028(2-1-1)

**CENTURION UNIVERSITY OF TECHNOLOGY AND MANAGEMENTS**

**A Project Report**

**Submitted by**

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Semester: 2nd Sem

Section: C

Campus: Bhubaneswar

**In partial fulfilment for the award of the degree of B-Tech in Computer Science and Engineering’s**

**STUDENTS ADMISSION SYSTEM**

**Abstract**

An organized and systematic office solution is essential for all universities and organizations. There are many departments of administration for the maintenance of college information and student databases in any institution. All these departments provide various records regarding students. Most of these track records need to maintain information about the students. This information could be the general details like student name, address, performance, attendance etc or specific information related to departments like collection of data.

All the modules in college administration are interdependent. They are maintained manually. So, they need to be automated and centralized as, Information from one module will be needed by other modules. For example, when a student needs his course completion certificate it needs to check many details about the student like his name, reg number, year of study, exams he attended and many other details. So, it needs to contact all the modules that are office, department and examination and result of students.

With that in mind, we overhauled the existing Student Database Management System and made necessary improvement to streamline the processes. Administrators using the system will find that the process of recording and retrieving student’s information and managing their classes, including marking of attendance, is now a breeze. In general, this project aims to enhance efficiency and at the same time maintain information accurateness. Later in this report, features and improvement that allow achievement to this goal will be demonstrated and highlighted.

Our work is useful for easy user interface. We are planning to utilize the powerful database management, data retrieval and data manipulation. We will provide more ease for managing the data than manually maintaining in the documents. Our work is useful for saving valuable time and reduces the huge paper work.

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**Requirements Specifications**

**A Computer with:**

* Operating system: Windows, MacOS or Linux
* Processor: Pentium3, 32-bit
* RAM: 1.00 GB
* System type: 32-bit operating system, x32-based processor
* MySQL 8.0 Command Line Client
* Microsoft Office Word

Schema diagram of Student Admission Database

**USER:-**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Name | Form\_no. | Category\_id | Course\_id | Draft\_no. | Contact\_no. | Father’s\_name | Sex | Address | Email |

**CATEGORY:-**

|  |  |  |  |
| --- | --- | --- | --- |
| Category\_id | Category\_name | Application\_form\_no. | Draft\_no. |

**COURSE:-**

|  |  |  |  |
| --- | --- | --- | --- |
| Course\_id | Course\_name | Application\_form\_no. | Draft\_no. |

**ELIGIBILITY CRITERIA:-**

|  |  |  |
| --- | --- | --- |
| Course\_id | Category\_id | Application\_form\_no. |

**ACADEMIC DETAILS:-**

|  |  |  |  |
| --- | --- | --- | --- |
| Application\_form\_no. | Name | Percentage | Exam\_passed |

**PAYMENT DETAILS:-**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Application\_form\_no. | Draft\_no | Course\_id | Category\_id | Payment\_failed |

**ER Diagram of Student Admission database**

Course\_id

Category\_id

Course\_name

Draft\_no.

Application\_form\_no

Draft\_no.

Application\_form\_no

Category\_id

Category\_name

Sex

Father’s\_name

Contact no.

Form\_no

Name

Course\_id

Address

Payment\_failed

Category\_id

Category\_id

Course\_id

Draft\_no.

Application\_form\_no

Course\_id

Application\_form\_no

Exam\_passed

Percentage

Name

Application\_form\_no

ACADEMIC DETAILS

Email

USER

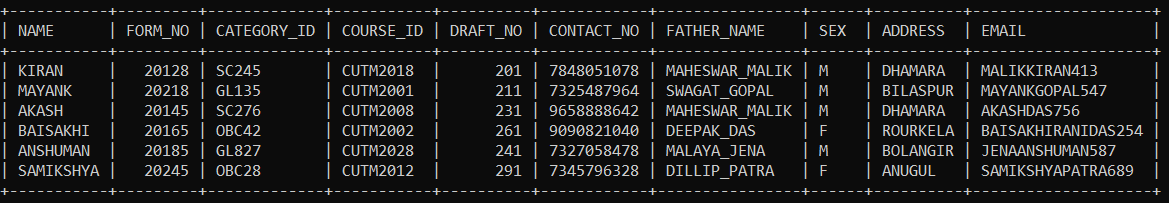
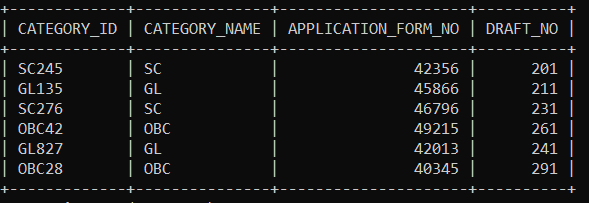
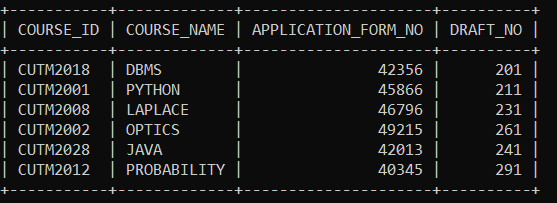
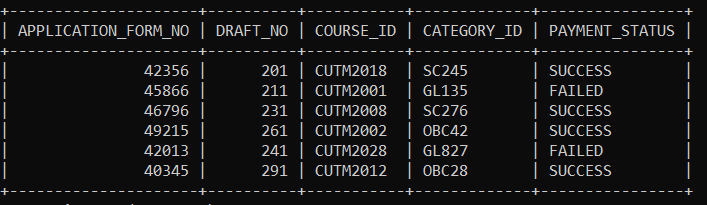
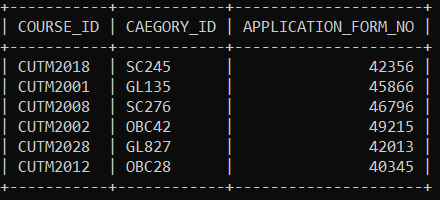
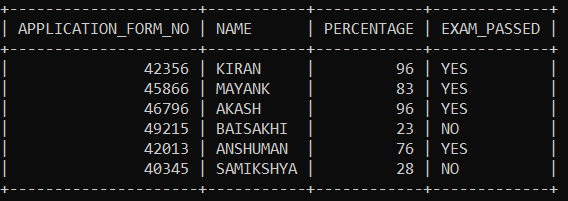
APPLICATION FORM

CATEGORY

ELIGIBILITY CRITERIA

PAYMENT DETAILS

COURSE



**ACADEMIC DETAILS Table**

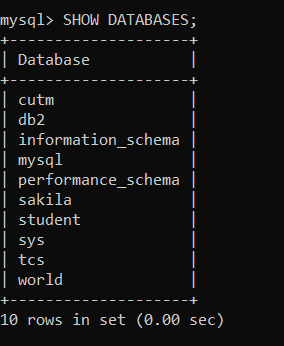
**PAYMENT DETAILS Table**

**ELIGIBILITY CRITERIA Table**

**COURSE Table**

**CATEGORY Table**

**USER Table**

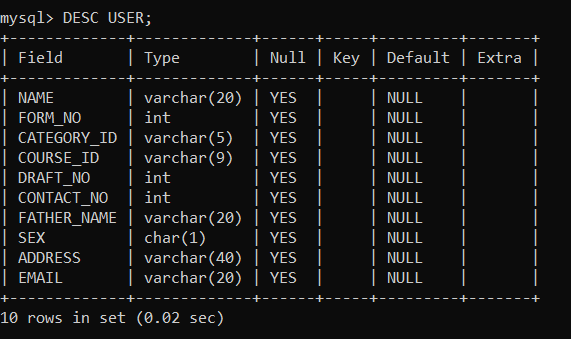
SHOW DATABASES;

USE STUDENT;



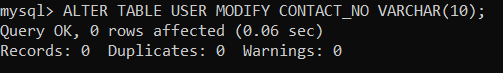
**CREATING USER TABLE**

CREATE TABLE USER(NAME VARCHAR(20),FORM\_NO INT,CATEGORY\_ID VARCHAR(5),COURSE\_ID VARCHAR(9),DRAFT\_NO INT,CONTACT\_NO INT,FATHER\_NAME VARCHAR(20),SEX CHAR,ADDRESS VARCHAR(40),EMAIL VARCHAR(20));

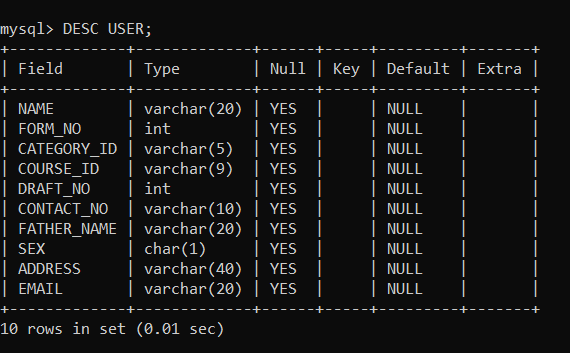
DESC USER;

**Modify datatype**

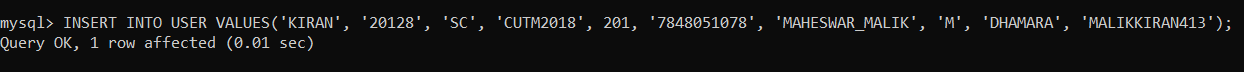
ALTER TABLE USER MODIFY CONTACT\_NO VARCHAR(10);

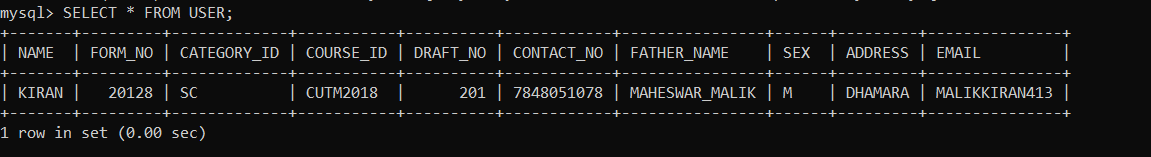


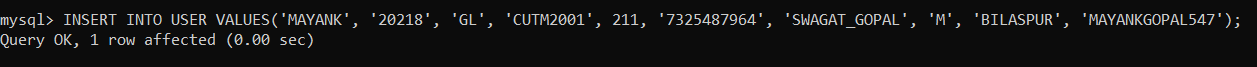
DESC USER;

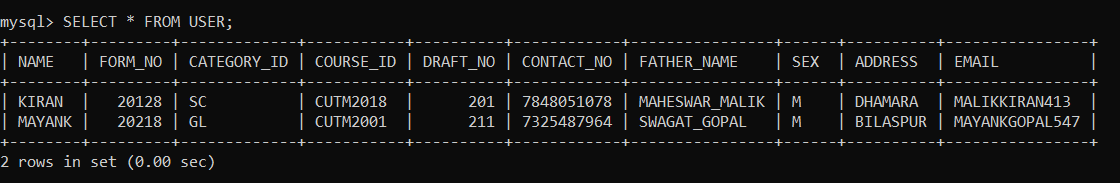


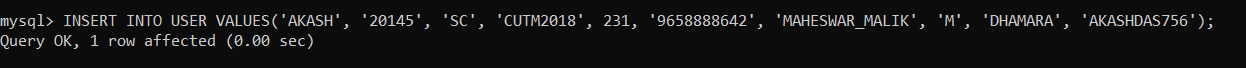
**INSERTING DATA INTO THE TABLE (INSERT INTO Statement)**

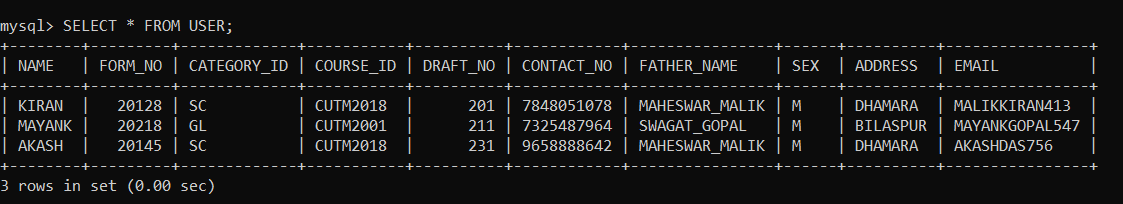
INSERT INTO USER VALUES('KIRAN', '20128', 'SC', 'CUTM2018', 201, '7848051078', 'MAHESWAR\_MALIK', 'M', 'DHAMARA', 'MALIKKIRAN413');

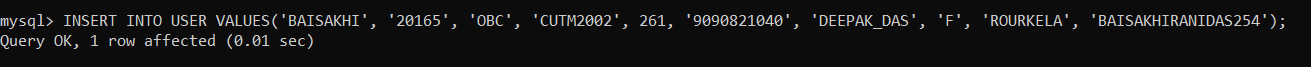
SELECT \* FROM USER;

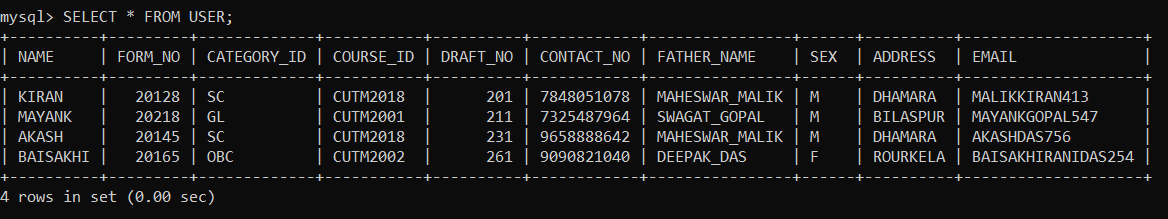
INSERT INTO USER VALUES('MAYANK', '20218', 'GL', 'CUTM2001', 211, '7325487964', 'SWAGAT\_GOPAL', 'M', 'BILASPUR', 'MAYANKGOPAL547');

SELECT \* FROM USER;

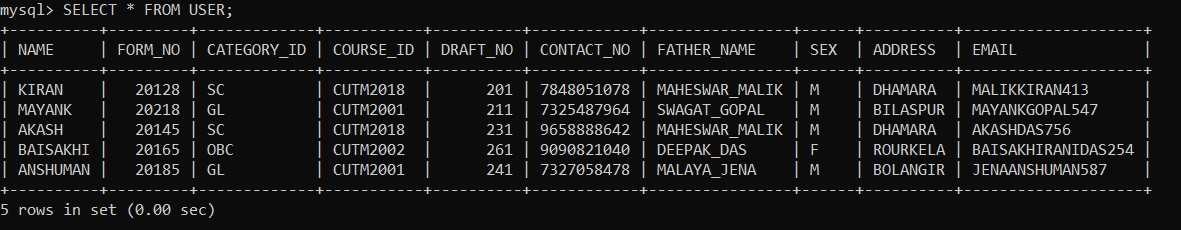
INSERT INTO USER VALUES('AKASH', '20145', 'SC', 'CUTM2018', 231, '9658888642', 'MAHESWAR\_MALIK', 'M', 'DHAMARA', 'AKASHDAS756');

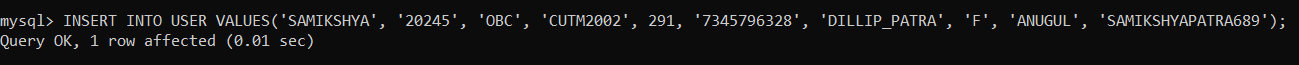
SELECT \* FROM USER;

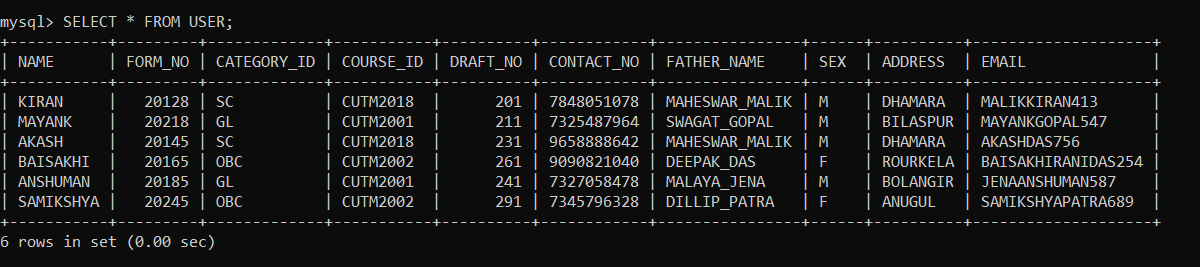
INSERT INTO USER VALUES('BAISAKHI', '20165', 'OBC', 'CUTM2002', 261, '9090821040', 'DEEPAK\_DAS', 'F', 'ROURKELA', 'BAISAKHIRANIDAS254');

SELECT \* FROM USER;

INSERT INTO USER VALUES('ANSHUMAN', '20185', 'GL', 'CUTM2001', 241, '7327058478', 'MALAYA\_JENA', 'M', 'BOLANGIR', 'JENAANSHUMAN587');

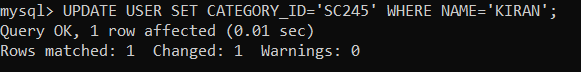
SELECT \* FROM USER;

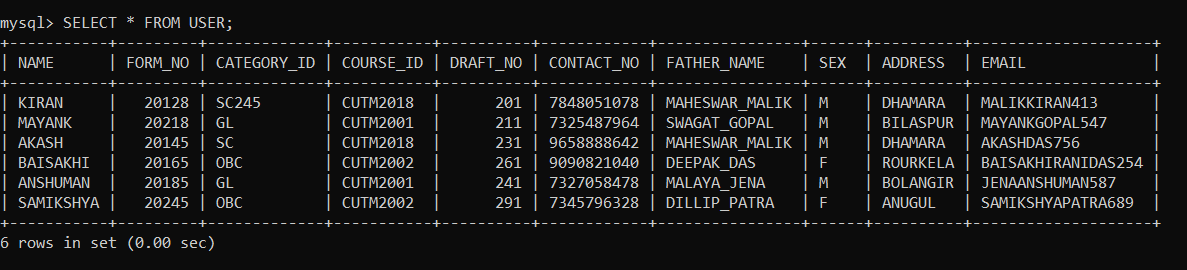
INSERT INTO USER VALUES('SAMIKSHYA', '20245', 'OBC', 'CUTM2002', 291, '7345796328', 'DILLIP\_PATRA', 'F', 'ANUGUL', 'SAMIKSHYAPATRA689');

SELECT \* FROM USER;

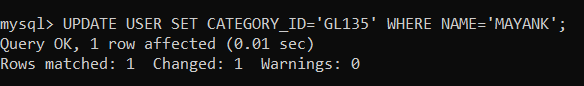
**UPDATING THE DATA BY SPECIFYING A COLUMN OF PARTICULAR TUPLE USING WHERE CLAUSE (UPDATE Statement)**

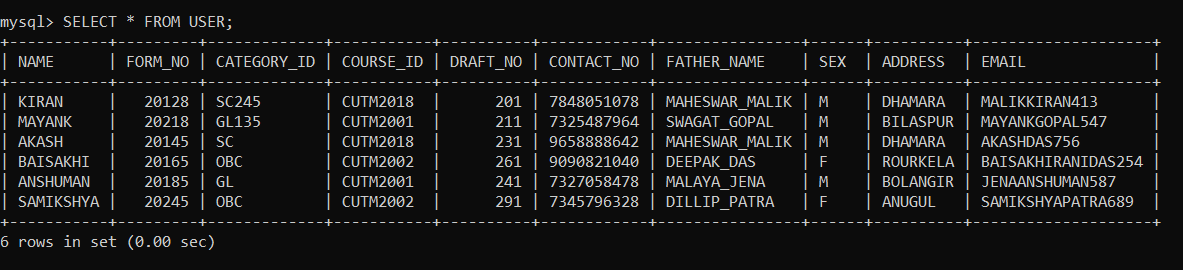
UPDATE USER SET CATEGORY\_ID='SC245' WHERE NAME='KIRAN';



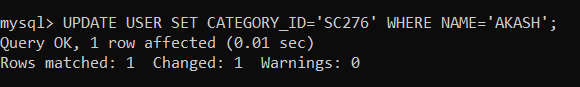
SELECT \* FROM USER;

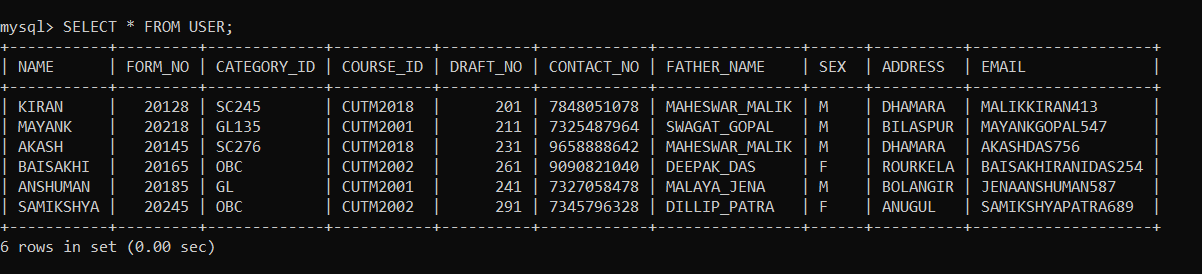
UPDATE USER SET CATEGORY\_ID='GL135' WHERE NAME='MAYANK';



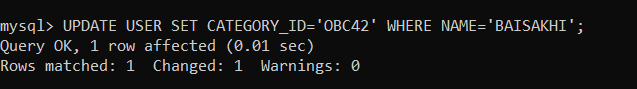
SELECT \* FROM USER;

UPDATE USER SET CATEGORY\_ID='SC276' WHERE NAME='AKASH';

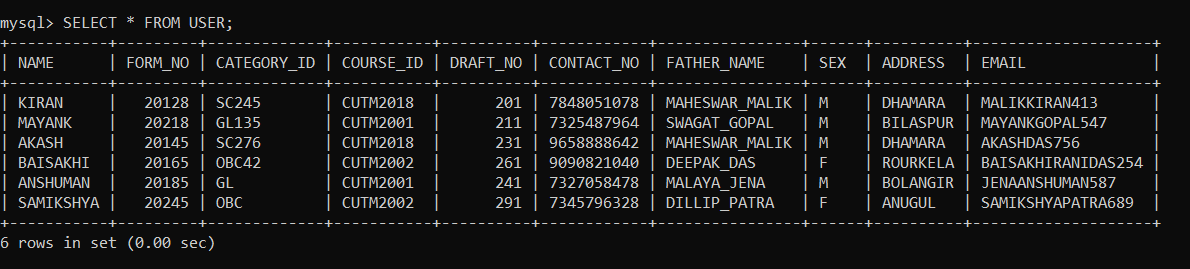


SELECT \* FROM USER;

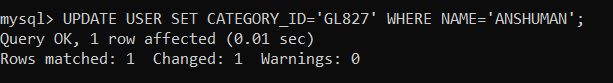
UPDATE USER SET CATEGORY\_ID='OBC42' WHERE NAME='BAISAKHI';



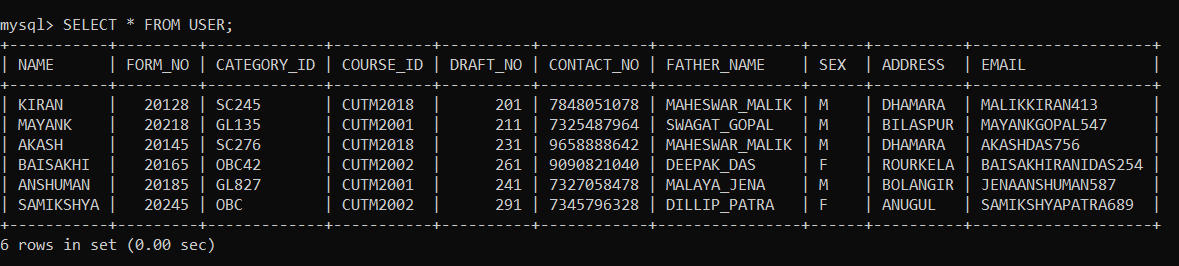
SELECT \* FROM USER;



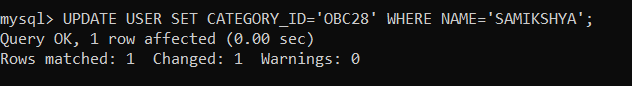
UPDATE USER SET CATEGORY\_ID='GL827' WHERE NAME='ANSHUMAN';

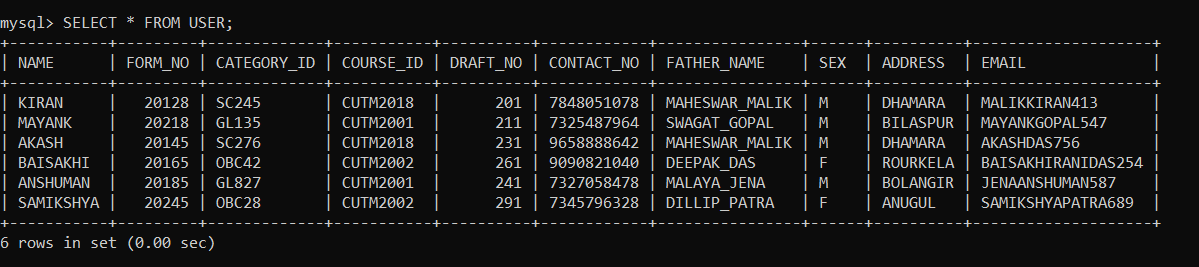


SELECT \* FROM USER;



UPDATE USER SET CATEGORY\_ID='OBC28' WHERE NAME='SAMIKSHYA';

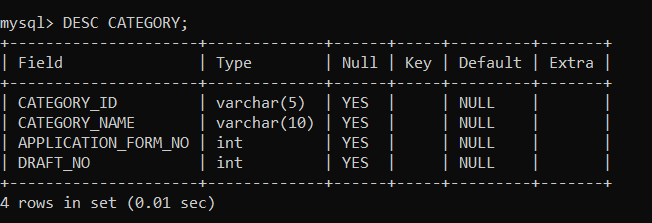


SELECT \* FROM USER;

**CREATING CATEGORY TABLE:**

CREATE TABLE CATEGORY(CATEGORY\_ID VARCHAR(5),CATEGORY\_NAME VARCHAR(10),APPLICATION\_FORM\_NO INT,DRAFT\_NO INT);

DESC CATEGORY;

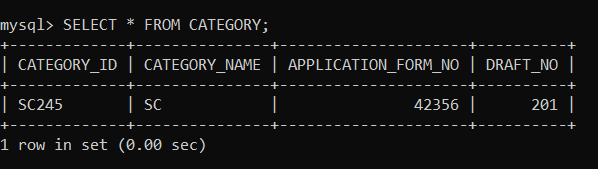


**INSERTING DATA INTO THE TABLE (INSERT INTO Statement)**

INSERT INTO CATEGORY VALUES('SC245', 'SC','42356', '201');



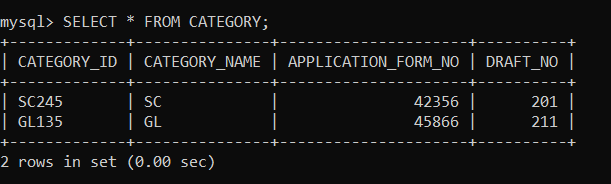
SELECT \* FROM CATEGORY;



INSERT INTO CATEGORY VALUES('GL135', 'GL','45866', '211');

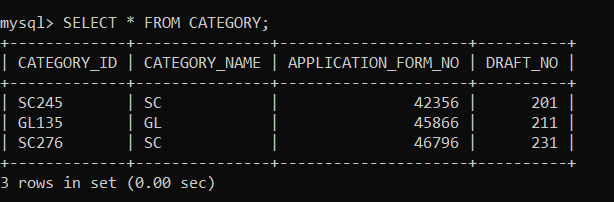


SELECT \* FROM CATEGORY;



INSERT INTO CATEGORY VALUES('SC276', 'SC','46796', '231');

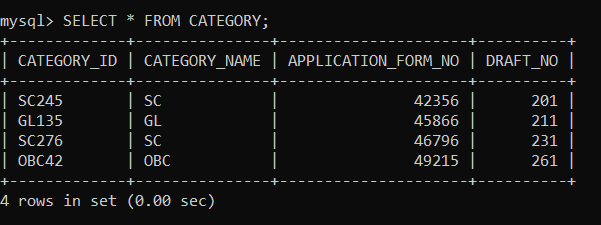


SELECT \* FROM CATEGORY;

INSERT INTO CATEGORY VALUES('OBC42', 'OBC','49215', '261');



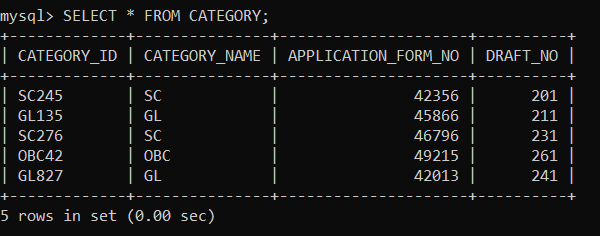
SELECT \* FROM CATEGORY;



INSERT INTO CATEGORY VALUES('GL827', 'GL','42013', '241');



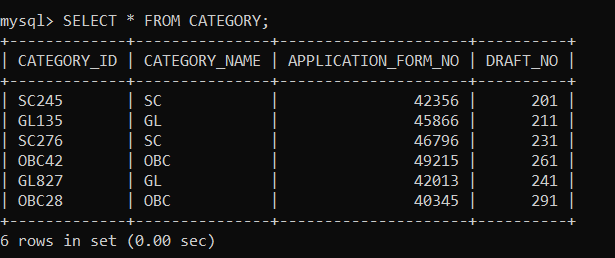
SELECT \* FROM CATEGORY;



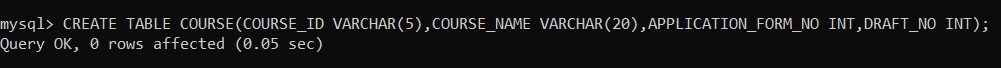
INSERT INTO CATEGORY VALUES('OBC28', 'OBC','40345', '291');



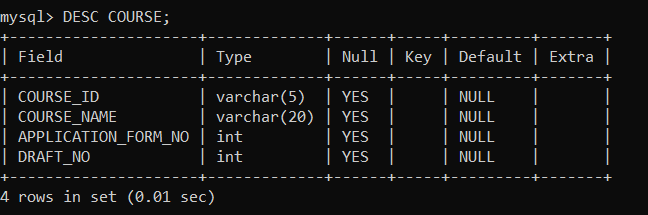
SELECT \* FROM CATEGORY;



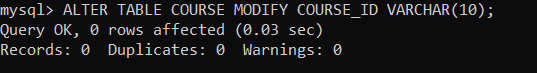
**CREATING COURSE TABLE**

CREATE TABLE COURSE(COURSE\_ID VARCHAR(5),COURSE\_NAME VARCHAR(20),APPLICATION\_FORM\_NO INT,DRAFT\_NO INT);

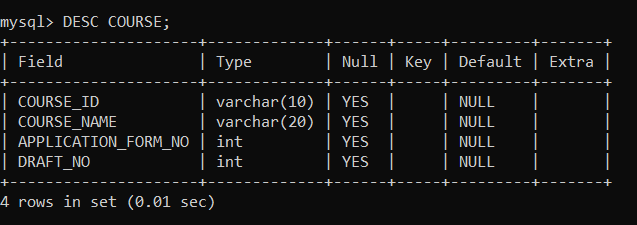
DESC COURSE;



ALTER TABLE COURSE MODIFY COURSE\_ID VARCHAR(10);

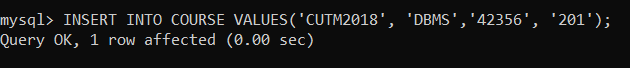


DESC COURSE;

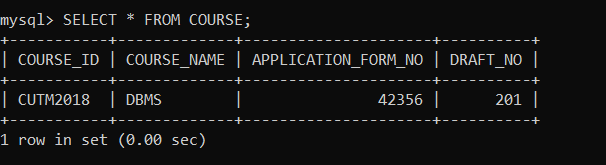


**INSERTING DATA INTO THE TABLE (INSERT INTO Statement)**

INSERT INTO COURSE VALUES('CUTM2018', 'DBMS','42356', '201');



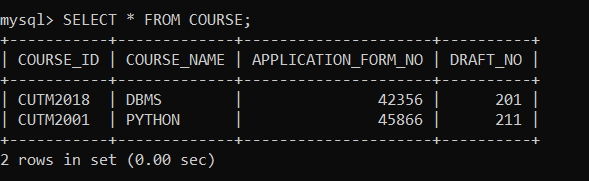
SELECT \* FROM COURSE;



INSERT INTO COURSE VALUES('CUTM2001', 'PYTHON','45866', '211');



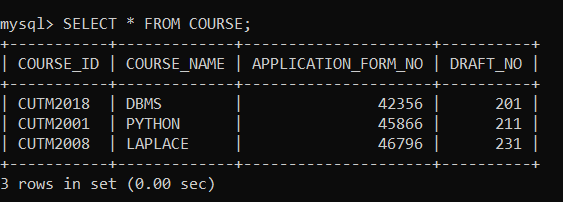
SELECT \* FROM COURSE;



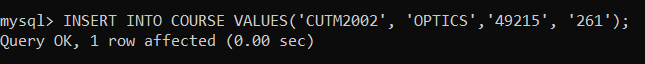
INSERT INTO COURSE VALUES('CUTM2008', 'LAPLACE','46796', '231');



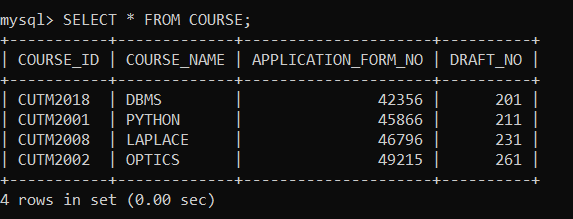
SELECT \* FROM COURSE;



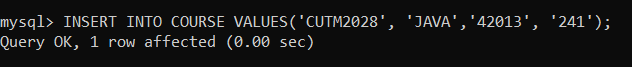
INSERT INTO COURSE VALUES('CUTM2002', 'OPTICS','49215', '261');



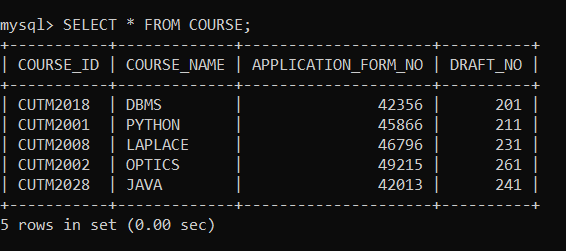
SELECT \* FROM COURSE;



INSERT INTO COURSE VALUES('CUTM2028', 'JAVA','42013', '241');

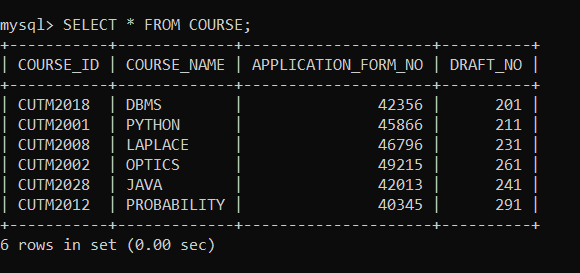


SELECT \* FROM COURSE;

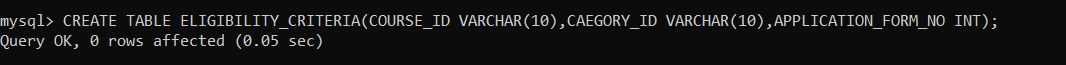


INSERT INTO COURSE VALUES('CUTM2012', 'PROBABILITY','40345', '291');

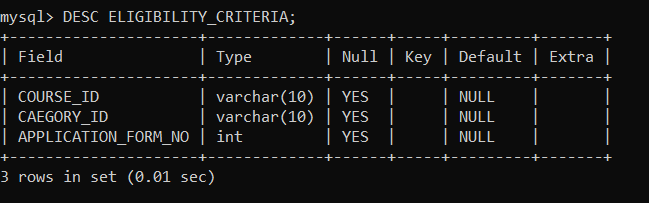


SELECT \* FROM COURSE;

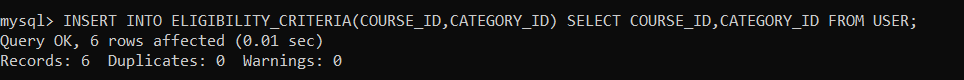
**CREATING ELIGIBILITY CRITERIA TABLE**

CREATE TABLE ELIGIBILITY\_CRITERIA(COURSE\_ID VARCHAR(10),CAEGORY\_ID VARCHAR(10),APPLICATION\_FORM\_NO INT);

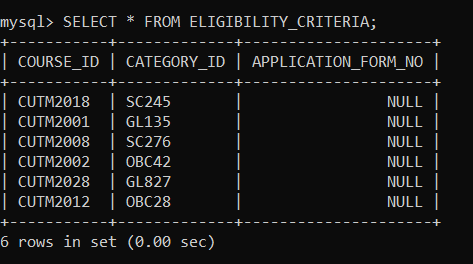
DESC ELIGIBILITY\_CRITERIA;



**INSERTING DATA INTO TABLE BY EXTRACTING THE DATA FROM OTHER TABLE (INSERT INTO Statement)**

INSERT INTO ELIGIBILITY\_CRITERIA(COURSE\_ID,CATEGORY\_ID) SELECT COURSE\_ID,CATEGORY\_ID FROM USER;

SELECT \* FROM ELIGIBILITY\_CRITERIA;



**INSERTING DATA INTO A COLUMN OF PARTICULAR TUPLE USING WHERE CLAUSE**

UPDATE ELIGIBILITY\_CRITERIA SET APPLICATION\_FORM\_NO='42356' WHERE COURSE\_ID='CUTM2018';

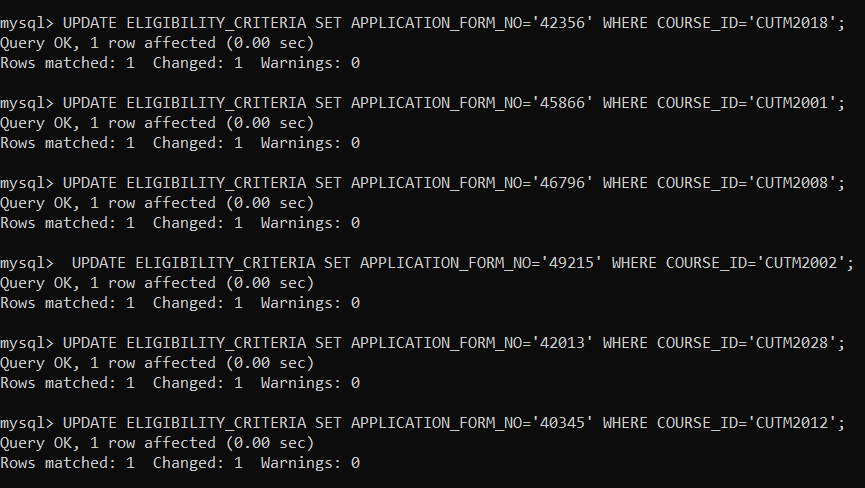
UPDATE ELIGIBILITY\_CRITERIA SET APPLICATION\_FORM\_NO='45866' WHERE COURSE\_ID='CUTM2001';

UPDATE ELIGIBILITY\_CRITERIA SET APPLICATION\_FORM\_NO='46796' WHERE COURSE\_ID='CUTM2008';

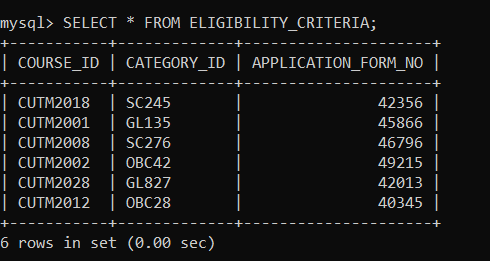
UPDATE ELIGIBILITY\_CRITERIA SET APPLICATION\_FORM\_NO='49215' WHERE COURSE\_ID='CUTM2002';

UPDATE ELIGIBILITY\_CRITERIA SET APPLICATION\_FORM\_NO='42013' WHERE COURSE\_ID='CUTM2028';

UPDATE ELIGIBILITY\_CRITERIA SET APPLICATION\_FORM\_NO='40345' WHERE COURSE\_ID='CUTM2012';

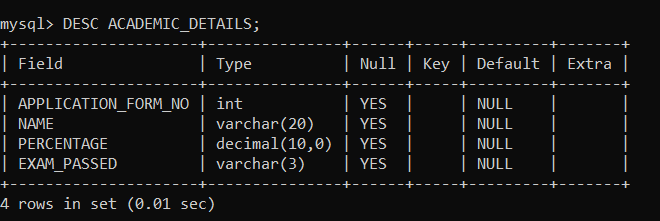


SELECT \* FROM ELIGIBILITY\_CRITERIA;



**CREATING ACADEMIC DETAILS TABLE**

CREATE TABLE ACADEMIC\_DETAILS(APPLICATION\_FORM\_NO INT,NAME VARCHAR(20),PERCENTAGE DECIMAL,EXAM\_PASSED VARCHAR(3));

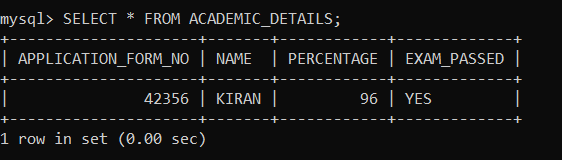
DESC ACADEMIC\_DETAILS;

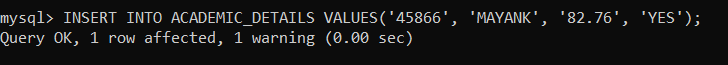
**INSERTING DATA INTO ACADEMIC DETAILS TABLE**

**(INSERT INTO Statement)**

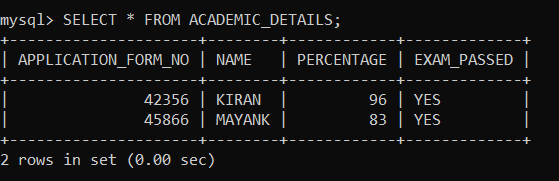
INSERT INTO ACADEMIC\_DETAILS VALUES('42356', 'KIRAN', '96.45', 'YES');

SELECT \* FROM ACADEMIC\_DETAILS;

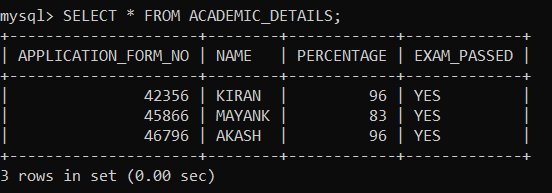


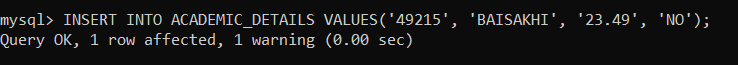
INSERT INTO ACADEMIC\_DETAILS VALUES('45866', 'MAYANK', '82.76', 'YES');

SELECT \* FROM ACADEMIC\_DETAILS;

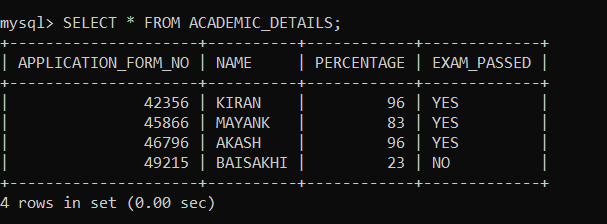


INSERT INTO ACADEMIC\_DETAILS VALUES('46796', 'AKASH', '96.45', 'YES');

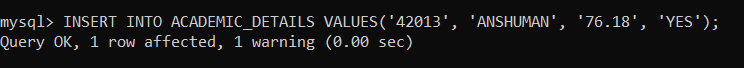
SELECT \* FROM ACADEMIC\_DETAILS;

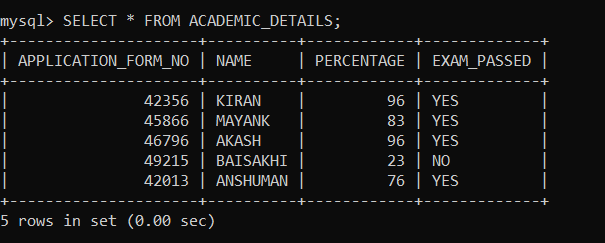
INSERT INTO ACADEMIC\_DETAILS VALUES('49215', 'BAISAKHI', '23.49', 'NO');

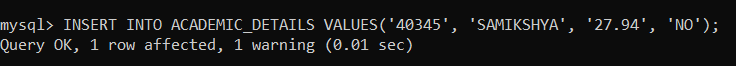
SELECT \* FROM ACADEMIC\_DETAILS;

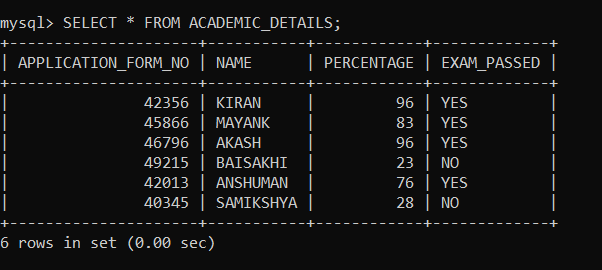


INSERT INTO ACADEMIC\_DETAILS VALUES('42013', 'ANSHUMAN', '76.18', 'YES');



SELECT \* FROM ACADEMIC\_DETAILS;

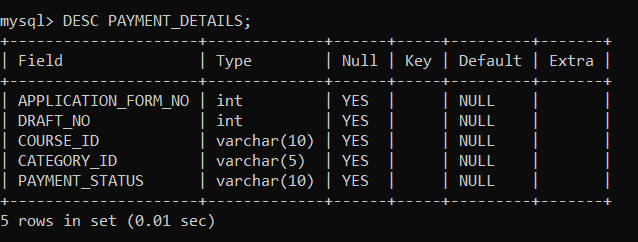
INSERT INTO ACADEMIC\_DETAILS VALUES('40345', 'SAMIKSHYA', '27.94', 'NO');

SELECT \* FROM ACADEMIC\_DETAILS;

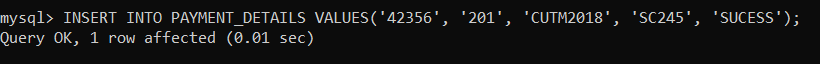
**CREATING PAYMENT DETAILS TABLE**

CREATE TABLE PAYMENT\_DETAILS(APPLICATION\_FORM\_NO INT,DRAFT\_NO INT,COURSE\_ID VARCHAR(10),CATEGORY\_ID VARCHAR(5),PAYMENT\_STATUS VARCHAR(10));

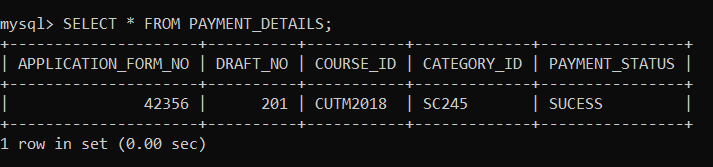
DESC PAYMENT\_DETAILS;



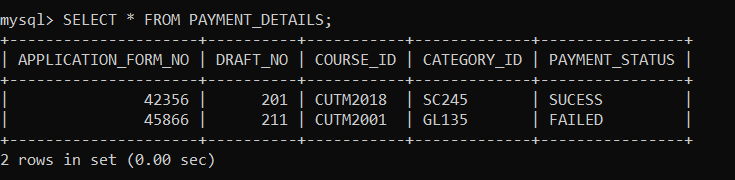
**INSERTING DATA INTO PAYMENT DETAILS TABLE (INSERT INTO Statement)**

INSERT INTO PAYMENT\_DETAILS VALUES('42356', '201', 'CUTM2018', 'SC245', 'SUCESS');

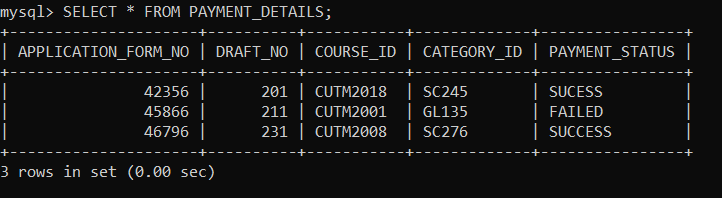
SELECT \* FROM PAYMENT\_DETAILS;



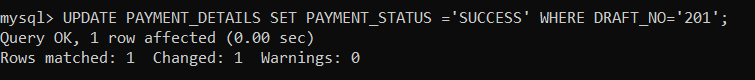
INSERT INTO PAYMENT\_DETAILS VALUES('45866', '211', 'CUTM2001', 'GL135', 'FAILED');

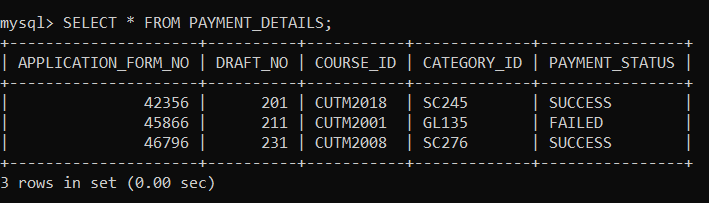
SELECT \* FROM PAYMENT\_DETAILS;

INSERT INTO PAYMENT\_DETAILS VALUES('46796', '231', 'CUTM2008', 'SC276', 'SUCCESS');

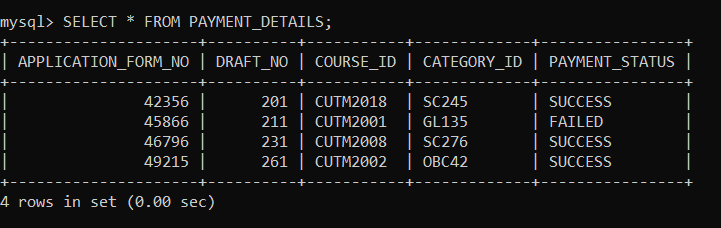
SELECT \* FROM PAYMENT\_DETAILS;

**UPDATING DATA IN PATICULAR COLUMN OF A TUPLE (UPDATE Statement)**

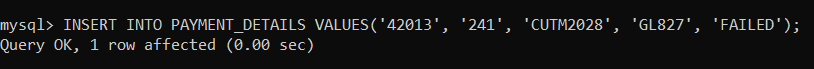
UPDATE PAYMENT\_DETAILS SET PAYMENT\_STATUS ='SUCCESS' WHERE DRAFT\_NO='201';

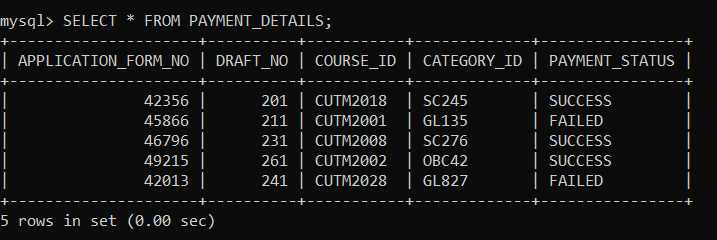
SELECT \* FROM PAYMENT\_DETAILS;

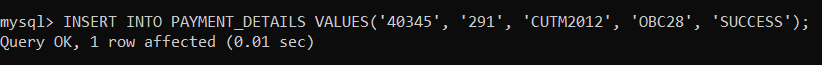
INSERT INTO PAYMENT\_DETAILS VALUES('49215', '261', 'CUTM2002', 'OBC42', 'SUCCESS');

SELECT \* FROM PAYMENT\_DETAILS;

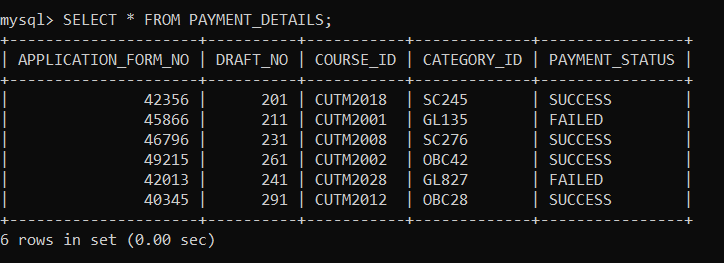
INSERT INTO PAYMENT\_DETAILS VALUES('42013', '241', 'CUTM2028', 'GL827', 'FAILED');



SELECT \* FROM PAYMENT\_DETAILS;

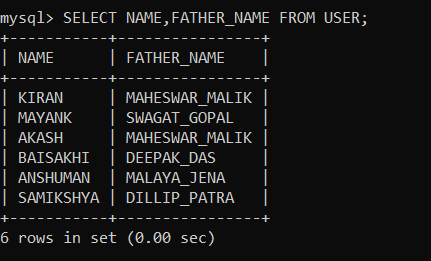
INSERT INTO PAYMENT\_DETAILS VALUES('40345', '291', 'CUTM2012', 'OBC28', 'SUCCESS');

SELECT \* FROM PAYMENT\_DETAILS;



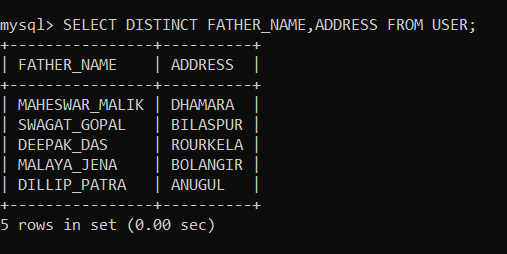
**SELECT STATEMENT WITHOUT DISTINCT**

SELECT NAME,FATHER\_NAME FROM USER;



**SELECT STATEMENT WITH DISTINCT**

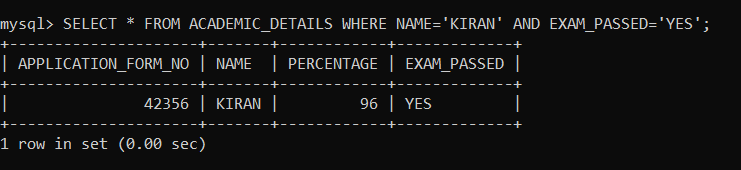
SELECT DISTINCT FATHER\_NAME,ADDRESS FROM USER;



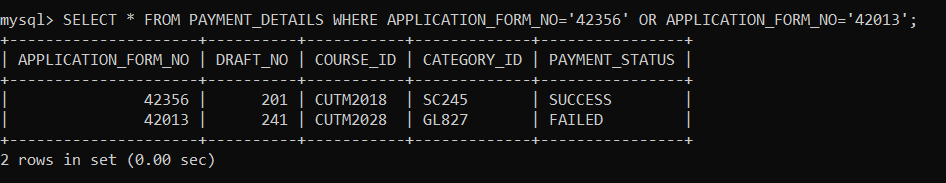
**Using AND, OR and NOT OPERATOR**

**Using AND Operator**

SELECT \* FROM ACADEMIC\_DETAILS WHERE NAME='KIRAN' AND EXAM\_PASSED='YES';

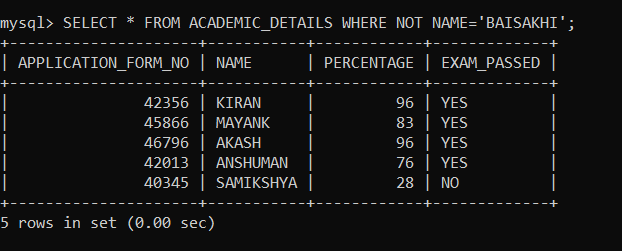


**Using OR Operator**

SELECT \* FROM PAYMENT\_DETAILS WHERE APPLICATION\_FORM\_NO='42356' OR APPLICATION\_FORM\_NO='42013';

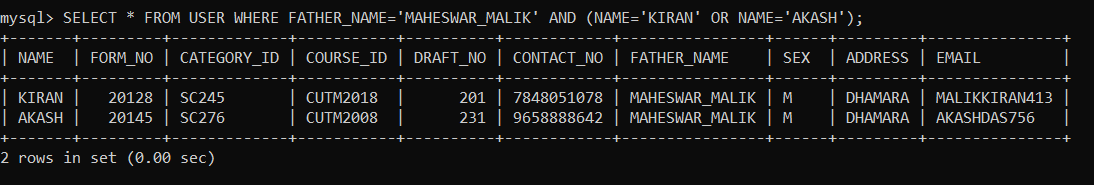
**Using NOT Operator**

SELECT \* FROM ACADEMIC\_DETAILS WHERE NOT NAME='BAISAKHI';

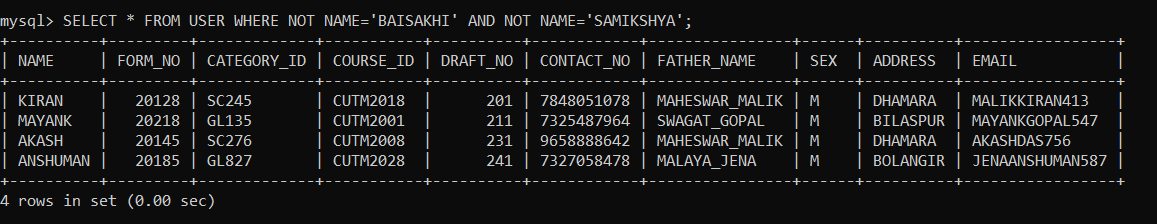


**Combining AND, OR and NOT Operator**

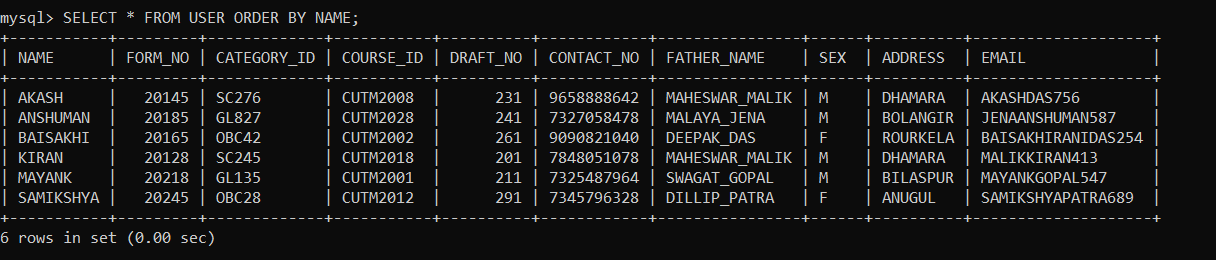
SELECT \* FROM USER WHERE FATHER\_NAME='MAHESWAR\_MALIK' AND (NAME='KIRAN' OR NAME='AKASH');



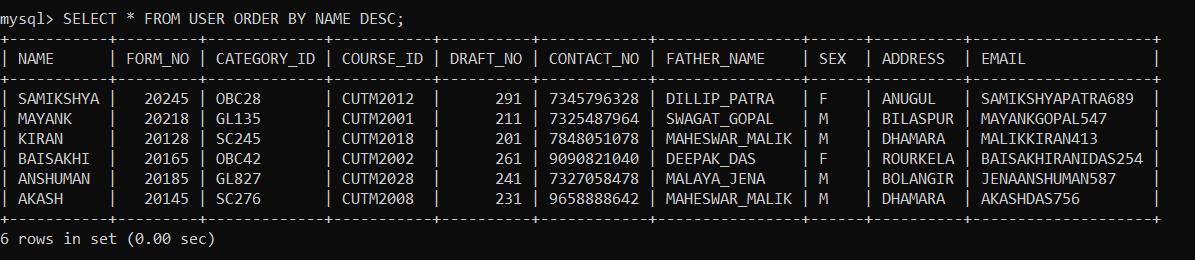
SELECT \* FROM USER WHERE NOT NAME='BAISAKHI' AND NOT NAME='SAMIKSHYA';



**Using ORDER BY Keyword**

SELECT \* FROM USER ORDER BY NAME;

**Using ORDER BY DESC Keyword**

SELECT \* FROM USER ORDER BY NAME DESC;

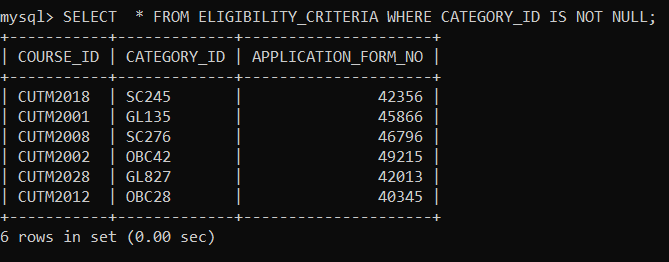
**Using NULL Operator**

SELECT \* FROM ELIGIBILITY\_CRITERIA WHERE CATEGORY\_ID IS NULL;



**Using NOT NULL Operator**

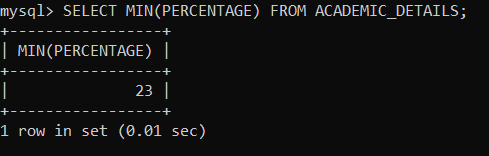
SELECT \* FROM ELIGIBILITY\_CRITERIA WHERE CATEGORY\_ID IS NOT NULL;



**Using MIN() and MAX() Function**

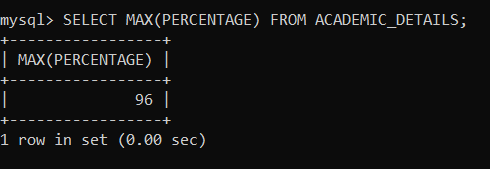
**Using MIN() Function**

SELECT MIN(PERCENTAGE) FROM ACADEMIC\_DETAILS;



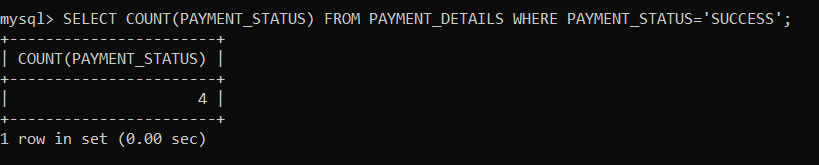
**Using MAX() Function**

SELECT MAX(PERCENTAGE) FROM ACADEMIC\_DETAILS;



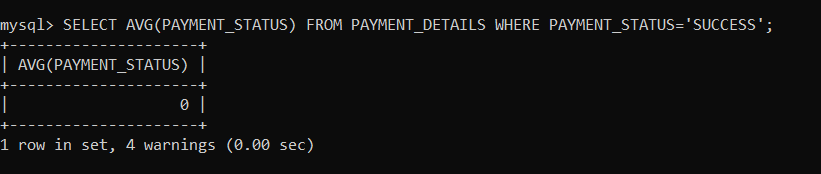
**Using COUNT(), AVG() and SUM() Function**

**Using COUNT() Function**

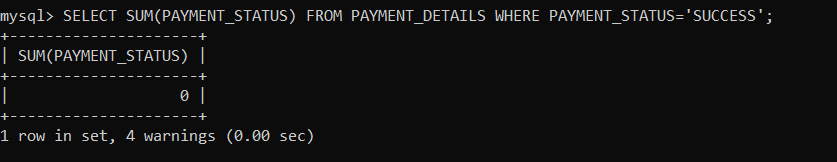
SELECT COUNT(PAYMENT\_STATUS) FROM PAYMENT\_DETAILS WHERE PAYMENT\_STATUS='SUCCESS';

**Using AVG() Function**

SELECT AVG(PAYMENT\_STATUS) FROM PAYMENT\_DETAILS WHERE PAYMENT\_STATUS='SUCCESS';

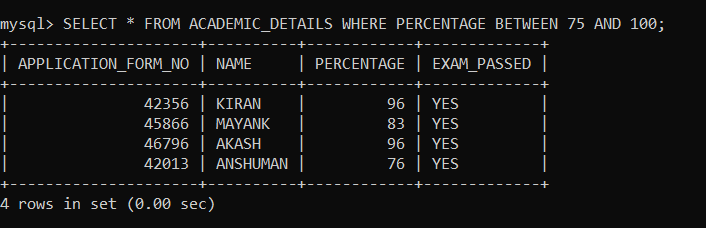


**Using SUM() Function**

SELECT SUM(PAYMENT\_STATUS) FROM PAYMENT\_DETAILS WHERE PAYMENT\_STATUS='SUCCESS';

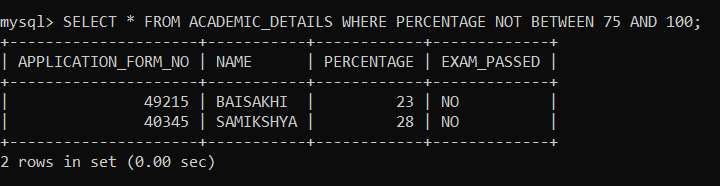
**Using BETWEEN Operator**

SELECT \* FROM ACADEMIC\_DETAILS WHERE PERCENTAGE BETWEEN 75 AND 100;

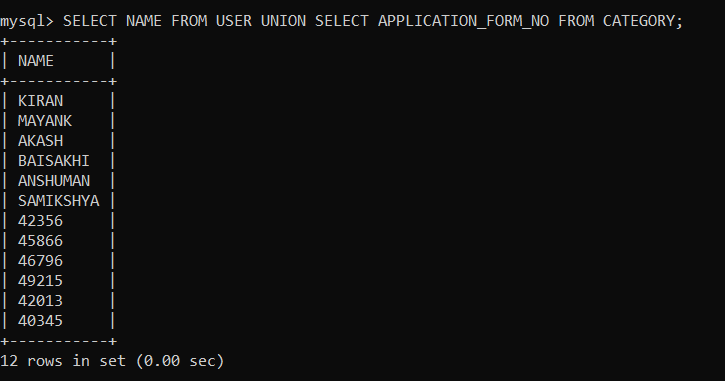


**Using NOT BETWEEN Operator**

SELECT \* FROM ACADEMIC\_DETAILS WHERE PERCENTAGE NOT BETWEEN 75 AND 100;

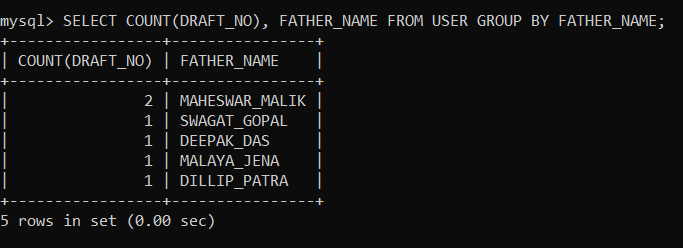


**Using UNION Operator**

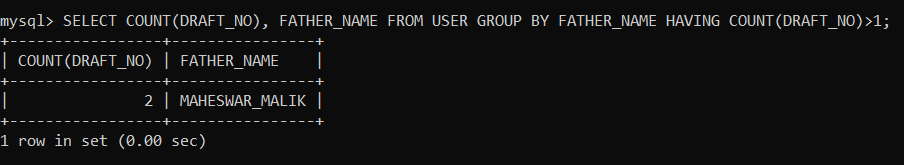
SELECT NAME FROM USER UNION SELECT APPLICATION\_FORM\_NO FROM CATEGORY;

**Using GROUP BY Statement**

SELECT COUNT(DRAFT\_NO), FATHER\_NAME FROM USER GROUP BY FATHER\_NAME;



**Using HAVING Clause**

SELECT COUNT(DRAFT\_NO), FATHER\_NAME FROM USER GROUP BY FATHER\_NAME HAVING COUNT(DRAFT\_NO)>1;

**Conclusion**

Student Admission Management System are being identified as an appropriate method for managing information in university. SMS was built based on real life situation in Centurion University, taking into consideration all possible situations and functionalities of the daily work in these school. This system considered as a good first in implementing performing online based information management in university.

**References**

1. [**https://www.w3schools.com/sql/default.asp**](https://www.w3schools.com/sql/default.asp)
2. **Fundamentals of Database Systems 7th Edition by Elmasri.Navathe**
3. **Principles of Engineering Physics-2 by Md.Khan, S.Panigrahi, Cambridge University Press 2016. [module-V, VI&VII]**