Lab No: 01

1. Create a DB named “BUBT_DB1”.

Query:

```
create database BUBT_DB1;
```

2. Create three tables in this DB named “Student”, “Faculty”, “Course”.

Query:

```
CREATE table student(Name varchar(30),ST_ID int(2),NID int(3),Intake int(2),Section int(2),CGPA float(3.2));
INSERT INTO student VALUES('Ashraful','1','102','44','1','3.30');
INSERT INTO student VALUES('Tonny', '2', '101', '44', '1', '3.50');
INSERT INTO student VALUES('Zakir', '33', '103', '35', '2', '3.98');
INSERT INTO student VALUES('Urmi', '6', '104', '35', '1', '3.96');
INSERT INTO student VALUES('Tonny', '23', '105', '44', '1', '3.50');
```

Output:

Extra options

Name	ST_ID	NID	Intake	Section	CGPA
Ashraful	1	102	44	1	3.3
Tonny	2	101	44	1	3.5
Zakir	33	103	35	2	3.98
Urmi	6	104	35	1	3.96
Tonny	23	105	44	1	3.5

```
CREATE TABLE Faculty(Name varchar(30),Short_Code varchar(7),Course_Code varchar(8),Conduct_Semester varchar(15));
INSERT INTO faculty VALUES('Farha Akhter Munmun','FAM','CSE 319','Summer 2019');
INSERT INTO faculty VALUES('Sweety Lima', 'SWL', 'CSE 209', 'Fall 2019-20');
INSERT INTO faculty VALUES('Shumi Khatun', 'SKN', 'NULL', 'Summer 2019');
INSERT INTO faculty VALUES('Nadia Afrin Ritu','NULL', 'CSE 351', 'NULL');
```

Output:

Extra options

Name	Short_Code	Course_Code	Conduct_Semester
Farha Akhter Munmun	FAM	CSE 319	Summer 2019
Sweety Lima	SWL	CSE 209	Fall 2019-20
Shumi Khatun	SKN	NULL	Summer 2019
Nadia Afrin Ritu	NULL	CSE 351	NULL

```
CREATE TABLE Course(Course_Title varchar(30),Course_Code varchar(8));
INSERT INTO course VALUES ('Database Systems', 'CSE 207');
INSERT INTO course VALUES('Computer Networks', 'CSE 319');
INSERT INTO course VALUES('Data Communication', 'CSE 209');
INSERT INTO course VALUES('System Analysis Design', NULL);
```

Extra options

Course_Title	Course_Code
Database Systems	CSE 207
Computer Networks	CSE 319
Data Communication	CSE 209
System Analysis Design	*NULL*

3.

a) Update the short code whose short code is NULL.

Query:

UPDATE faculty SET Short_Code='NAR' WHERE Name='Nadia Afrin Ritu';

Name	Short_Code	Course_Code	Conduct_Semester
Farha Akhter Munmun	FAM	CSE 319	Summer 2019
Sweety Lima	SWL	CSE 209	Fall 2019-20
Shumi Khatun	SKN	CSE 207	Summer 2019
Nadia Afrin Ritu	NAR	CSE 351	Summer 2020

b) Update the course code that is NULL.

Query:

UPDATE faculty SET Course_Code='CSE 207' WHERE Name='Shumi Khatun';

Name	Short_Code	Course_Code	Conduct_Semester
Farha Akhter Munmun	FAM	CSE 319	Summer 2019
Sweety Lima	SWL	CSE 209	Fall 2019-20
Shumi Khatun	SKN	CSE 207	Summer 2019
Nadia Afrin Ritu	NAR	CSE 351	Summer 2020

UPDATE course SET Course_Code='CSE 323' WHERE Course_Title='System Analysis Design';

Course_Title	Course_Code
Database Systems	CSE 207
Computer Networks	CSE 319
Data Communication	CSE 209
System Analysis Design	CSE 323

c)Update the conduct semester that is NULL.

Query:

UPDATE faculty SET Conduct_Semester='Summer 2020' WHERE Name='Nadia Afrin Ritu';

d) Add a new column named “Age” in student relation.

Query:

ALTER TABLE student ADD COLUMN Age int(3);

e) Update the age of each student.

Query:

UPDATE student SET Age='21' WHERE NID='102';

UPDATE student SET Age='19' WHERE NID='101';

UPDATE student SET Age='22' WHERE NID='103';

UPDATE student SET Age='24' WHERE NID='104';

UPDATE student SET Age='20' WHERE NID='105';

Name	ST_ID	NID	Intake	Section	CGPA	Age
Ashraful	1	102	44	1	3.3	21
Tonny	2	101	44	1	3.5	19
Zakir	33	103	35	2	3.98	22
Urmi	6	104	35	1	3.96	24
Tonny	23	105	44	1	3.5	20

F) Find the names of all Courses in the Course relation.

Query:

select Course_Title from course;

Extra options

Course_Title
Database Systems
Computer Networks
Data Communication
System Analysis Design

G) Find the names of all teachers who has conducted in summer 2019.

Query:

select Name from faculty where Conduct_semester="Summer 2019";

Name
Farha Akhter Munmun
Shumi Khatun

H) Find the names of all students whose CGPA is greater than 3.50

Query:

SELECT Name from student where CGPA>3.50;

Extra options

Name
Zakir
Urmi

I) Add a new column “Offered Semester” after the column “Course Title”.

Query:

ALTER table course ADD column Offered_Semester varchar(30) AFTER Course_Title;

I) Add a new column “Offered Semester” after the column “Course Title”.

Query:

ALTER table course ADD column Offered_Semester varchar(30) AFTER Course_Title;

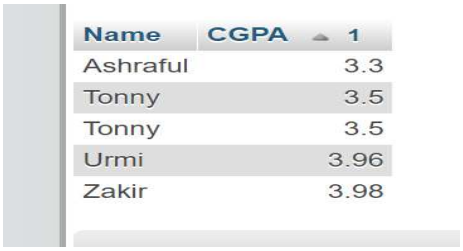
Extra options

Course_Title	Offered_Semester	Course_Code
Database Systems	*NULL*	CSE 207
Computer Networks	*NULL*	CSE 319
Data Communication	*NULL*	CSE 209
System Analysis Design	*NULL*	CSE 323

J) Find the name and CGPA of each student order by their CGPA (ascending order).

Query:

SELECT Name, CGPA from student ORDER by CGPA ASC;

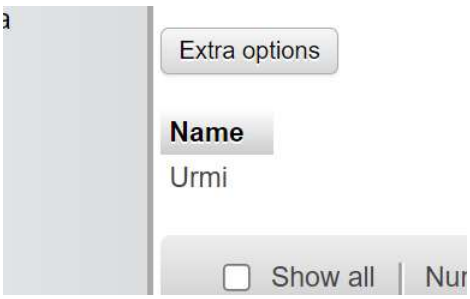


Name	CGPA 1
Ashraful	3.3
Tonny	3.5
Tonny	3.5
Urmi	3.96
Zakir	3.98

K) Find the name of all students whose age is greater than 22 and CGPA is greater than 3.50

Query:

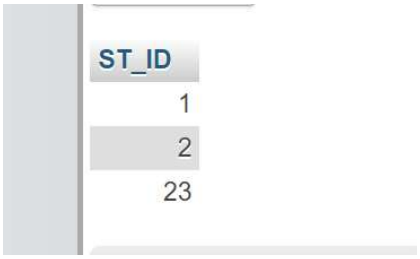
SELECT Name from student where Age>22 AND CGPA>3.50;



L) Find the ID of all those students who are from 44 intake or CGPA is less than 3.40

Query:

```
select ST_ID from student WHERE Intake=44 OR CGPA<3.40;
```



ST_ID
1
2
23

M) Find the ID of all those students whose CGPA is 3.30 or 3.50 or 3.96

Query:

select Student_ID from student where CGPA=3.30 OR CGPA=3.50 OR CGPA=3.96;

```
select ST_ID from student WHERE CGPA=3.30 OR CGPA=3.50 OR CGPA=3.96;
```