



UTTARANCHAL UNIVERSITY

(Established vide Uttaranchal University Act, 2012, Uttarakhand Act No. 11 of 2013)
Premnagar-248007, Dehradun, Uttarakhand, INDIA



Uttaranchal Institute of Technology, Dehradun, Uttarakhand

Department of Computer Science & Engineering

Assignment-I

Database Management System (TCS-304), B. Tech. IIIrd Semester

Instructions:

-
- NAME : Aditya Negi
 - CLASS : 2nd year(Sec A)
 - ROLL_NO : 30
 - UNIVERSITY ROLLNO : 22210101304
-

Q1 Attempt any three questions and use relevant output:

Question (A)

Develop a SQL query to list details of Departments that offer more than 3 branches.

Question (B)

Develop a SQL query to list the details of Departments that offer more than 6 courses.

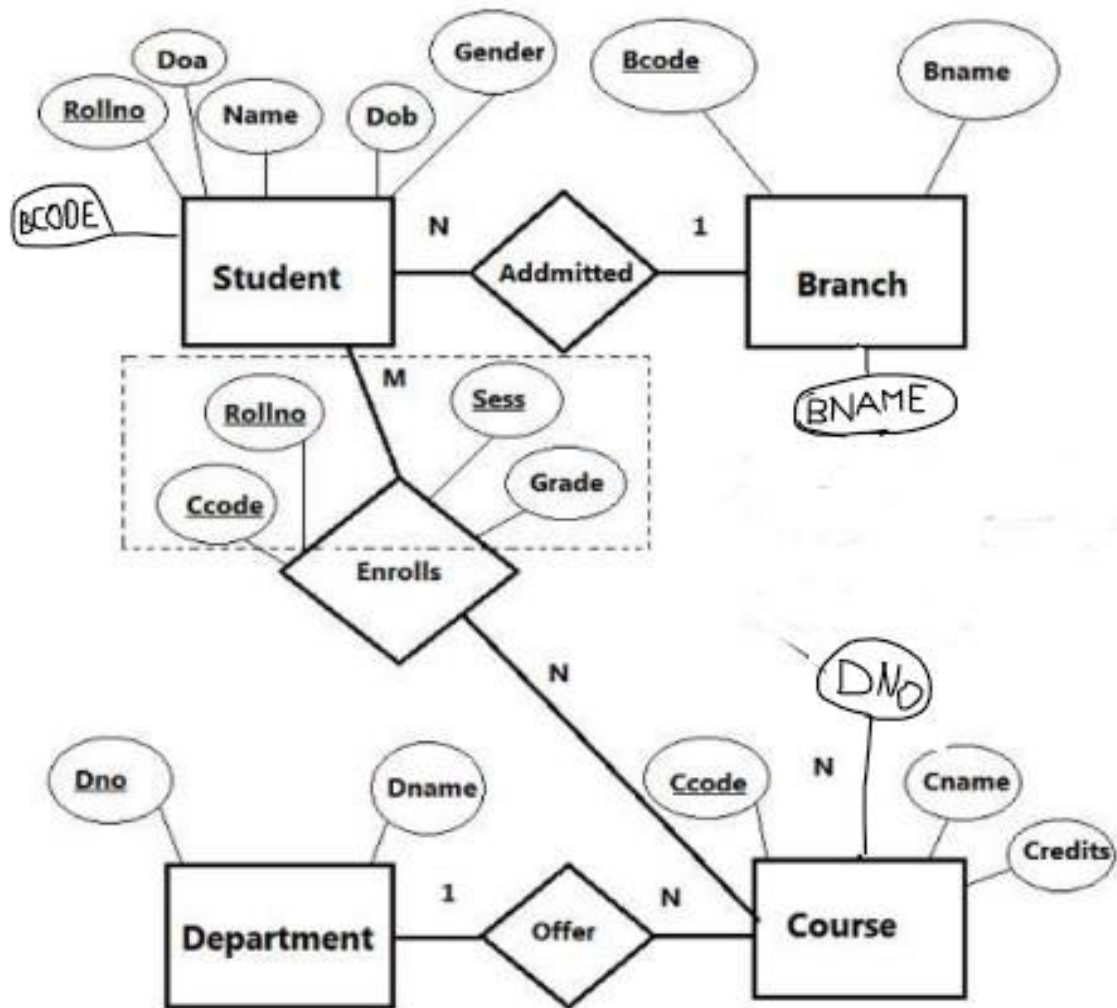
Question (C)

Develop a SQL query to list the details of courses that are common for more than 3 branches.

Question (D)

Develop a SQL query to list students who got 'S' in more than 2 courses during single enrollment.

ER model



c

TABLES

```
mysql> use db1;
Database changed
mysql> show tables;
+-----+
| Tables_in_db1 |
+-----+
| branch        |
| course        |
| dept          |
| enrolls       |
| student       |
+-----+
5 rows in set (0.00 sec)
```

Table : 1)

```
mysql> select * from branch;
```

Bcode	Bname	dno
ab1	agriculture	6
ab2	agriculture	5
cs1	computer science	1
cs2	computer science	1
bsc1	chemistry	5
bsc2	chemistry	5
bsit1	it and innovation	1
bsit2	it and innovation	1
bms1	business mngt	1
bms2	business mngt	6
bms3	business mngt	6

11 rows in set (0.00 sec)

2)

```
mysql> select * from dept;
```

DNO	DNAME
1	MATHS
2	PHYSICS
3	CSE
4	LANG
5	CHEMISTRY
6	MANGEMENT
11	ENGG

7 rows in set (0.00 sec)

3)

```
mysql> select * from student;
```

ROLLNO	NAME	DOB	GENDER	DOA	BCODE
1200	RAM	2/3/2017	M	5/15/2020	110
1201	SHYAM	5/4/2019	F	9/16/2020	112
1202	ALI	9/16/2017	M	5/4/2020	114
1203	KOHLI	5/15/2020	F	5/2/2020	109
1204	GHANSHYAM	6/14/2019	M	7/19/2020	106
1205	NEGI	8/12/2033	F	7/13/2020	101

6 rows in set (0.00 sec)

4)

```
mysql> select * from course;
```

CCODE	CNAME	CREDITS	DNO
11	LINEAR ALGEBRA	2	1
12	TRIGONOMETRY	3	1
13	DISCRETE MATH	2	1
14	STATS	2	1
21	REAL ANALYTICS	3	1
22	FIELD THEORY	4	1
23	DIFF EQN	4	1
24	CALCULUS	3	1
51	ENGG MATH	2	1
52	ENGG GRAPHICS	3	1
61	ART OF PROG	2	1
62	MECH OF SOLIDS	3	1
63	ELEC ENGG BASIC	3	1
64	HIGH VOLTAGE ENGG	2	1
65	ENGG ELECTRIC	3	2
66	CLASSIC MECH	4	2
81	THEORY OF RELATIVITY	3	2
82	MATTER AND KINETIC THEORY	4	2
83	COMPLEX ANALYSIS	4	2
84	SEMICONDUCTOR DEVICES	4	2
85	WAVE AND OPTICS	3	3
86	NUCLEAR PHYSICS	4	3
91	ELECTROPHYSICS	5	3
92	MOLECULAR PHYSICS	6	3
93	ATMOSPHERIC PHYSICS	2	3
1	RADIATION PHYSICS	3	3
2	MATH FOR CS	1	3
111	PROGRAMMING	5	4
112	WEB PROGRAMMING	7	5
113	OS	3	2
121	COMPUTER GRAPHICS	2	1
122	COMPUTER NETWORKS	2	2
123	RESEARCH METHODS	2	3
103	ENGLISH-1	1	3
110	ENGLISH-2	4	2
114	C LANGUAGE	9	2
115	JAVA	5	1
116	RDBMS	2	1
117	JAVA	2	2
118	JAVA CORE	2	3
119	COMPUTER ORGANIZATION	2	2
120	SANSKRIT	2	5
124	HINDI	0	6
125	FRENCH	2	2

44 rows in set (0.00 sec)

5)

```
mysql> select * from enrolls;
+-----+-----+-----+-----+
| ROLLNO | CCODE | SESS  | GRADE |
+-----+-----+-----+-----+
| 1200   | 1011  | Apr-14 | S     |
| 1201   | 1012  | Apr-14 | S     |
| 1202   | 1013  | Apr-14 | S     |
| 1203   | 1014  | Apr-08 | S     |
| 1204   | 1015  | Apr-12 | A     |
| 1205   | 1016  | Apr-08 | S     |
| 1206   | 1017  | May-13 | B     |
| 1207   | 1018  | May-13 | S     |
| 1208   | 1019  | Nov-12 | A     |
| 1209   | 1020  | Dec-12 | C     |
| 1210   | 1021  | Jan-13 | D     |
| 1211   | 1022  | Feb-13 | U     |
| 1212   | 1023  | Mar-13 | C     |
| 1213   | 1024  | Apr-13 | E     |
| 1214   | 1025  | May-13 | K     |
| 1215   | 1026  | Jun-13 | L     |
| 1216   | 1027  | Jul-13 | Z     |
| 1217   | 1028  | Aug-13 | A     |
| 1218   | 1029  | Sep-13 | F     |
| 1219   | 1030  | Oct-13 | W     |
| 1220   | 1031  | Nov-13 | A     |
| 1221   | 1032  | Dec-13 | S     |
+-----+-----+-----+-----+
22 rows in set (0.00 sec)
```

Ans a)

```
mysql> select * from dept
-> where dno in(
-> select dno
-> from branch
-> group by dno
-> having count(*)>3);
+-----+-----+
| dno | DNAME |
+-----+-----+
| 1   | MATHS |
+-----+-----+
1 row in set (0.02 sec)
```

Ans b)

```
mysql> select * from dept
-> where dno in(
-> select DNO
-> from course
-> group by dno
-> having count(dno)>6);
+-----+-----+
| dno | DNAME |
+-----+-----+
| 1   | MATHS |
| 2   | PHYSICS |
| 3   | CSE   |
+-----+-----+
3 rows in set (0.00 sec)
```

Ans d)

```
mysql> select name from student
-> where rollno in(
-> select rollno from enrolls
-> where grade='s'
-> group by rollno
-> having count(ccode)>2);
Empty set (0.00 sec)
```