

ASSIGNMENT – 1

- All tables

1. Department Table

```
mysql> select * from Department;
```

Dno	Dname
1	Information Technology
2	Pharmacy
3	Management Studies
4	Applied Mathematics & Computational Science
5	Industrial & Production Engineering
6	Computer Technology & Applications

6 rows in set (0.00 sec)

2. Branch Table

```
mysql> select * from Branch;
```

Bcode	Bname	Dno
101	Btech	1
102	Mtech	1
103	PhD in IT	1
104	B. Pharma	2
105	Master of Pharmacy(Industrial Pharmacy)	2
106	Master of Pharmacy(Pharmaceutical Chemistry)	2
107	Pharmacology	2
108	MBA(Full Time)	3
109	MBA(Hospital Administration)	3
110	MSc	4
111	B.E.	5
112	M.E.	5
113	MCA	6

13 rows in set (0.01 sec)

3. Course Table

```
mysql> select * from Course;
```

Ccode	cname	credits	Dno
1011	Computer Network	3	1
1012	Theory of Computations	4	1
1013	Operating System	4	1
1014	Artificial Intelligence	5	1
1015	Machine Learning	6	1
1016	Internet of Things	3	1
1017	Big Data Analysis	4	1
1018	Medicinal Chemistry	3	2
1019	Industrial Pharmacy	4	2
1020	Pharmacology	5	2
1021	Pharmaceutical Engineering	5	2
1022	Intellectual Property Rights	4	2
1024	Fundamentals of Management	3	3
1025	Organization Behaviour	4	3
1026	Accounting of Managers	4	3
1027	Operations Management	5	3
1028	IT for Managers	3	3
1029	Business Communication	3	3
1030	Mathematics & Statistics for Managers	4	3
1031	Computer Architecture	4	4
1032	Operations Research	4	4
1033	Advance Discrete Mathematics and Algebra	2	4
1034	Object Oriented Programming Systems	5	4
1035	Real and Complex Analysis	3	4
1036	Mathematical Modelling and Applications	3	4
1037	Regression Analysis For Data Science	5	4
1038	Principles and Practices of Management	3	5
1039	Financial Management	3	5
1040	Marketing Management	4	5
1041	Supply Chain and Logistic Management	4	5
1042	Industrial Design and Processes	3	5
1043	Statistical Quality Control and TQM	5	5
1044	Design of Machine Elements	4	5
1045	Computer Organization and Architecture	5	6
1046	Statistical Computing Techniques	5	6
1047	Analysis and Design of Algorithms	3	6
1048	Software Engineering	4	6
1049	Big Data	4	6
1050	Computer Network	5	6

39 rows in set (0.00 sec)

4. Student Table

```
mysql> select * from Student;
```

Rollno	name	dob	gender	doa	Bcode
61	Isha Khare	2002-11-10	F	2023-08-31	113
62	Gautam Parmar	2000-08-01	M	2023-07-10	112
63	Sonam Mishra	1999-02-24	F	2020-05-14	111
64	Umesh Bangar	2001-06-02	M	2020-05-14	101
65	Nikhil Gupta	2003-06-02	M	2021-07-01	104
66	Aniket Mehta	2000-12-15	M	2022-10-08	102
67	Hema Thakur	2000-10-19	F	2023-02-02	105
68	Lakhan Jain	2002-07-01	M	2023-12-02	110
69	Kratika Nandwal	2002-07-01	F	2021-06-17	108
70	Yash Thakur	2002-12-06	M	2023-12-02	107

10 rows in set (0.00 sec)

5. Branch_Course Table

```
mysql> select * from Branch_Course;
```

Bcode	Ccode	Semester
101	1011	2
101	1012	3
101	1013	2
101	1014	5
101	1015	5
101	1016	6
101	1017	6
102	1012	1
102	1013	3
102	1014	1
102	1015	1
102	1016	4
102	1017	2
104	1018	1
104	1019	2
104	1020	3
104	1022	4
105	1018	2
105	1019	3
105	1021	4
105	1022	1
106	1018	1
106	1019	1
106	1022	3
107	1018	1
107	1019	2
107	1020	3
107	1021	3
107	1022	4
108	1024	2
108	1025	1
108	1027	3
108	1028	2
108	1029	4
108	1030	1
109	1025	3
109	1027	4
109	1029	2
110	1031	1
110	1032	1
110	1033	2
110	1034	4
110	1035	3
110	1036	4
110	1037	2
111	1038	2
111	1039	3
111	1042	1
111	1043	5
111	1044	6
112	1039	1
112	1040	2
112	1041	2
112	1043	2
112	1044	3
113	1045	1
113	1046	1
113	1047	3
113	1048	2
113	1049	3
113	1050	2

61 rows in set (0.00 sec)

6. Enrolls Table

```
mysql> select * from Enrolls;
```

Rollno	Ccode	Sess	grade
61	1045	OCT 2023	B
61	1046	OCT 2023	A
62	1039	JUL 2023	S
62	1041	JAN 2024	S
62	1044	JUL 2024	S
63	1042	JUN 2020	C
64	1011	JUN 2020	S
64	1012	JAN 2021	S
64	1013	JUN 2020	S
64	1014	JAN 2022	A
65	1018	AUG 2021	B
65	1019	JAN 2022	D
66	1012	NOV 2022	C
66	1014	NOV 2022	A
66	1017	JAN 2023	B
67	1018	JAN 2024	D
67	1022	APR 2023	U
67	1022	JAN 2024	C
68	1031	JAN 2024	A
68	1033	JUN 2024	A
69	1024	JAN 2022	A
69	1025	JUL 2021	B
69	1027	JUN 2022	C
69	1029	JAN 2023	B
70	1018	JAN 2024	A
70	1019	JUN 2024	A

26 rows in set (0.00 sec)

Question (A)

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

```
mysql> SELECT * FROM DEPARTMENT D WHERE D.DNO IN (SELECT B.DNO FROM BRANCH B GROUP BY B.DNO HAVING COUNT(B.DNO)>3);
```

Dno	Dname
2	Pharmacy

1 row in set (0.00 sec)

Question (B)

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

```
mysql> SELECT * FROM DEPARTMENT D WHERE D.DNO IN (SELECT C.DNO FROM COURSE C GROUP BY C.DNO HAVING COUNT(C.CCODE)>6);
```

Dno	Dname
1	Information Technology
3	Management Studies
4	Applied Mathematics & Computational Science
5	Industrial & Production Engineering

4 rows in set (0.00 sec)

Question (C)

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

```
mysql> SELECT * FROM COURSE C WHERE C.CCODE IN (SELECT B.CCODE FROM BRANCH_COURSE B GROUP BY B.CCODE HAVING COUNT(B.BCODE)>3);
```

Ccode	cname	credits	Dno
1018	Medicinal Chemistry	3	2
1019	Industrial Pharmacy	4	2
1022	Intellectual Property Rights	4	2

3 rows in set (0.00 sec)

Question (D)

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

```
mysql> SELECT * FROM STUDENT S WHERE S.ROLLNO IN (SELECT E.ROLLNO FROM ENROLLS E WHERE E.GRADE='S' GROUP BY E.ROLLNO HAVING COUNT(E.GRADE)>2);
```

Rollno	name	dob	gender	doa	Bcode
62	Gautam Parmar	2000-08-01	M	2023-07-10	112
64	Umesh Bangar	2001-06-02	M	2020-05-14	101

2 rows in set (0.00 sec)

Question (E)

Create a view that will keep track of the roll number, name and number of courses, a student has completed successfully.

```
mysql> CREATE VIEW STUDATA AS SELECT E.ROLLNO, S.NAME, COUNT(E.CCODE) AS COURSE_COMPLETED
-> FROM STUDENT S, ENROLLS E
-> WHERE E.ROLLNO = S.ROLLNO AND E.GRADE != 'U'
-> GROUP BY E.ROLLNO, S.NAME;
Query OK, 0 rows affected (0.01 sec)
```

```
mysql> SELECT * FROM STUDATA;
```

ROLLNO	NAME	COURSE_COMPLETED
61	Isha Khare	2
62	Gautam Parmar	3
63	Sonam Mishra	1
64	Umesh Bangar	4
65	Nikhil Gupta	2
66	Aniket Mehta	3
67	Hema Thakur	2
68	Lakhan Jain	2
69	Kratika Nandwal	4
70	Yash Thakur	2

```
10 rows in set (0.01 sec)
```