DBMS-Assignment-2

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I am attaching an SQL file which I made on Mysql workbench along with this PDF. Please Find it.
Query 1

The popular courses (based on Number of students who had taken that course) in the year 2004 including both Even and Odd semester of that year.

```sql
use academic_insti;
select courseId, count(courseId) as 'No of students registered'
from enrollment
where year = '2004'
group by courseId
order by count(courseId) desc
;
```

Query 2

The sum of total credits of courses taught by professors who joined in between the years 1990 and 2000.

```sql
use academic_insti;
select p.name, p.startYear, sum(c.credits) as 'Total credits taught'
from professor p
join teaching t
        on p.empId = t.empId
join course c
        on t.courseId = c.courseId
where p.startYear >= 1990 and p.startYear <= 2000
group by p.empId
;
```

Query 3

The Number of 'U' grades given by each professor in all the courses he/she taught over all the years in descending order of count of grades.

```
1   use academic_insti;
2   select p.name, count(e.grade) as 'No of U grades given'
3   from professor p
4   join teaching t
5          on p.empId = t.empId
6   join enrollment e
7          on t.courseId = e.courseId and t.sem = e.sem and t.year = e.year and e.grade = 'U'
8   group by p.empId
9   order by count(e.grade) desc
10  ;
```

Query 4

Number of courses taken by a student under his/her faculty advisor. Only those students are listed out who has taken atleast one course under their faculty advisor in descending order of number of courses taken.

```
1   use academic_insti;
2   select s.rollNo, count(e.courseId) as 'No of courses taken under Advisor'
3   from student s
4   join teaching t
5          on t.empId = s.advisor
6   join enrollment e
7          on t.courseId = e.courseId and e.rollNo = s.rollNo
8   group by s.rollNo
9   order by count(e.courseId) desc
10  ;
```

Query 5

List of department HODs and phone numbers.

```
1   use academic_insti;
2   select deptId , phone
3   from department
4   order by deptId
5   ;
```

Query 6

List of all the courses along with Number of prerequisite courses of that particular course (only those courses are considered which has more than 1 prerequisite).

```
1   use academic_insti;
2   select c.courseId, c.cname, count(*) as 'No of PreReqCourses'
3   from prerequisite p
4   join course c on c.courseId = p.courseId
5   where c.courseId is not null and p.preReqCourse is not null
6   group by c.courseId
7   having count(*) > 1
8   order by count(*) desc
9   ;
```

Query 7

List of number of courses offered by each department.

```
1   use academic_insti;
2   select d.name, count(*) as 'No of courses offered'
3   from course c
4   join department d
5          on c.deptNo = d.deptId
6   group by c.deptNo
7   order by d.name
8   ;
```

Query 8

List of name of the professor and number of students he/she advised over all
the years.

```
1    use academic_insti;
2    select p.name, d.name, count(*) as 'No of Students'
3    from student s
4    join professor p
5           on s.advisor = p.empId
6    join department d
7           on p.deptNo = d.deptId
8    group by s.advisor
9    order by d.name, count(*)
10   ;
```