

## 1. SQL Query Exercises:

Create two tables as

```
EMPLOYEE(Ssn, Fname, Lname, Bdate, Address, Sex, Salary, Super_ssn, Dno)
```

```
DEPARTMENT(Dname, Dnumber, Mgr_ssn, Mgr_start_date)
```

Step-2: Insert following values in two tables

```
EMPLOYEE(Ssn, Fname, Lname, Address, Sex, Salary, Super_ssn, Dno)
```

```
(1, Aashis, Limbu, Baneshwor, M, 45000, 5, 1)
```

```
(2, Barsana, Nakarmi, Lalitpur, F, 50000, 5,1)
```

```
(3, Avinash, Thakur, Janakpur, M, 55000, 4, 1)
```

```
(4, Tasu, Ghalan, Dharan, M, 55000, 4, 2)
```

```
(5, Bishnu, Nepali, Pokhara, M, 50000, 4, 3)
```

```
(6, Bibek, Kathayat, Pokhara, M, 50000, 4, 3)
```

```
DEPARTMENT (Dname, Dnumber, Mgr_ssn, Mgr_start_date)
```

```
('PHYSICS', 1, 4, '30-DEC-52'),
```

```
('CHEMISTRY', 2, 5, '18-DEC-52'),
```

```
('COMPUTER', 3, 6, '17-DEC-52');
```

**Lab Sheet-1:** Use of SELECT and FROM clauses

Step-3: a) Retrieve the SSN values for all employees

b) Run following SQL command and check the output

```
SELECT Ssn
FROM EMPLOYEE, DEPARTMENT;
```

c) Run following SQL command and check the output

```
SELECT Ssn, Dname
FROM EMPLOYEE, DEPARTMENT;
```

d) Run following SQL command and check the output

```
SELECT Ssn, Dname
FROM EMPLOYEE, DEPARTMENT
WHERE Dno=Dnumber;
```

**Lab Sheet-2:** Use of SELECT, FROM and WHERE clauses

Q: Retrieve the name and address of all employees who work for the ' COMPUTER' department.

```
SELECT Fname, Lname, Address
FROM EMPLOYEE, DEPARTMENT
WHERE Dname='Research' AND Dnumber=Dno;
```

**Lab Sheet-3:** Use of GROUP BY clause

Q: For each department, retrieve the department number, the number of employees in the department, and their average salary.

```
SELECT      Dno, COUNT (*), AVG (Salary)
FROM        EMPLOYEE
GROUP BY    Dno;
```

**Lab Sheet-4:** Use of HAVING clause

Q: For each DEPARTMENT on which more than two employees work, retrieve the Dno, Dname, and the number of employees who work on that DEPARTMENT.

```
SELECT      Dno, Dname, COUNT(Ssn)
FROM        EMPLOYEE, DEPARTMENT
WHERE       Dnumber=Dno
GROUP BY    Dno
HAVING      COUNT (*) > 2;
```

**Lab Sheet-5:** Use of ORDER BY clause

Q: Retrieve Dname, Lname, Fname of employees ordered by the employee's department, and within each department ordered alphabetically by employee last name.

```
SELECT Dname, Lname, Fname, Pname
FROM   DEPARTMENT, EMPLOYEE, WORKS_ON, PROJECT
WHERE  Dnumber=Dno
ORDER BY Dname, Lname;
```