LAB TASK:

A set of data was given. And the task was to create an USER and then a table and insert those data into the table. Then to perform necessary queries on that table and output the result.

Solution:

First we connect our database to System using
Conn SYSTEM/*****; command. Giving the username and password.
After that , an user is created where Username is s200042153 and password is cse4308. The task is done giving following command:-

- " Create user s200042153 identified by cse4308; "

After creating a user the following query is done to grant all privileges to user.

- "grant all privileges to s200042153 ; "

Creating a table:

Code:-

```
create table student(
   ID varchar2(20) primary key,
   NAME varchar2(20),
   DEPT_NAME varchar2(20),
   TOT_CRED int
);
```

here , varchar(20) and int is datatype. And ID, NAME, DEPT_NAME and TOT_CRED are attribute names. Where each represents a column.

Inserting Rows/Records into table:-

Code:-

```
insert into student values(00128, 'Zhang', 'Comp. Sci.', 102);
insert into student values(12345, 'Shankar', 'Comp. Sci.', 32);
insert into student values(19991, 'Brandt', 'History', 80);
insert into student values(23121, 'Chavez', 'Finance', 110);
insert into student values(44553, 'Peltier', 'Physics', 56);
insert into student values(45678, 'Levy', 'Physics', 46);
insert into student values(54321, 'Williams', 'Comp. Sci.', 5);
insert into student values(55739, 'Sanchez', 'Music', 38);
insert into student values(70557, 'Snow', 'Physics', 0);
insert into student values(76543, 'Brown', 'Comp. Sci.', 58);
```

```
insert into student values(76653, 'Aoi', 'Elec. Eng.', 60);
insert into student values(98765, 'Bourikas', 'Elec. Eng.', 9);
insert into student values(98988, 'Tanaka', 'Biology', 120);
```

In each line, given values are inserted into the table as a row or new record. And the respective values are given in brackets separated by commas.

Performing following Queries:-

(a) Display all records of ‘STUDENT’ table:-

SQL statement:-

```
select * from student;
```

Using * , all attributes are selected from table.

(b) Show student ID and name only.

SQL statement:-

```
select ID,NAME from student;
```

(c) Find name and department of students who have completed more than 100 credits.

SQL statement:-

```
select ID,NAME from student
where TOT_CRED>100;
```

Where Clause is used to filter or specify data based on given condition.

(d) Find name and department of students who have completed in between 80 and 120 credits :-

SQL statement:-

```
select ID,NAME from student
where TOT_CRED>= 80 and TOT_CRED<=120;
```

Using And operator, several conditions are checked.

(e) Find ID and name of students of Comp. Sci. department.

SQL statement:-
```
select ID,NAME from student
where DEPT_NAME = 'Comp. Sci.';
```

ID and NAME is selected if only the given condition DEPT_NAME is Comp. Sci. is fulfilled.

(f) Find name and total credit of students of Physics department.

SQL statement:-
```
select ID,TOT_CRED from student
where DEPT_NAME = 'Physics';
```

(g) Find ID and name of students of Comp. Sci. department or students who have completed
less than 10 credits.

SQL statement:-
```
select ID,NAME from student
where DEPT_NAME = 'Comp. Sci.' or TOT_CRED<10;
```

(h) Find the names of the department.

SQL statement:-
```
select unique  DEPT_NAME from student;
```

Unique statement is used to avoid repeated data. And only take the distinct ones. Also ‘select distinct ‘ statement can be used instead of ‘unique statement’.