Part A
Cursors in PL/SQL
Aim: - To understand Implicit and explicit cursor in PL/SQL - Implement PL/SQL cursor
Prerequisite: Oracle, SQL
Outcome: Students will be able to write PL/SQL Cursor programs.

Theory:
 	
A cursor holds multiple rows returned by a SQL statement.
 	
Type of Cursor
 	
1. Implicit cursor (Generated by Oracle)
 	
2. Explicit cursor (Created by User)
 	
    For steps to use a cursor
 	
        I.   Declare
 	
        II.   Open
 	
        III.   Fetch
 	
        IV.   Close
 	
             Cursor C1 IS select statement
 	
             Open C1
 	
             Fetch C1 INTO ….
 	
             Close C1

Example:
 	
Declare
    c_id customers.cid%type;
    c_name customers.cname%type;
    cursor C1 IS select cid, cname from customers;
Begin
    Open C1;
    loop
    fetch c1 into c_id, c_name;
    exit when c1%notfound;
    DBMS_OUTPUT.PUT_LINE(C_ID || ','|| C_NAME);
    end loop;
    close C1;
End;

Practice Exercise	
1	Create following tables student(id number,name varchar2(25),programme varchar2(25));

	diploma(id number,name varchar2(25));
2	Insert following data in student table: Id name programme 1 rohan diploma 2 anu MA 3 robert diploma 4 tom btech 5 sunny diploma
3	Retrieve all students who have registered for Diploma and store their details into another table called diploma (id, name) using cursors.

Instructions:
1. Write and execute the query in Oracle SQL server/ SQL* Plus.
2. Paste the snapshot of the output in input & output section.

Part B

Code and Output:

1.

```
1  create table student(id number,name varchar2(25),programme varchar2(25));
2  |
```

```
Table created.
```

2.

```
1  begin
2  insert into student values (1,'rohan','diploma');
3  insert into student values (2,'anu','MA');
4  insert into student values (3,'robert','diploma');
5  insert into student values (4,'tom','btech');
6  insert into student values (5,'sunny','diploma');
7  commit;
8  end;
```

```
Statement processed.
```

3.

```
1   create table diploma(id number,name varchar2(25));
2   |
3   declare
4       cid student.id%type;
5       cname student.name%type;
6       cursor c1 is select id,name from student where programme='diploma';
7   begin
8       open c1;
9       loop
10      fetch c1 into cid,cname;
11      exit when c1%notfound;
12      insert into diploma values(cid,cname);
13      end loop;
14      close c1;
15  end;
16  /
17
18  select * from diploma;
```

Table created.

Statement processed.

ID	NAME
1	rohan
3	robert
5	sunny

Download CSV
3 rows selected.

Observation & Learning:

Understood use of cursors and how to Declare ,Open ,Fetch data ,Close implicit and explicit cursors in pl/sql and practiced them.

Conclusion:
Learned pl/sql cursors and its implementation.