Task A : Independent and Corelated Nested Queries

Aim : To implement and understand Nested queries in SQL, including independent and coreleated subquires, with practical examples in a university database scenario.

Types of Nested Queries

1. Independent (simple) Nested Queries :

Syntax :-

```
SELECT    column - list
FROM      table
WHERE     column  OPERATOR  (SELECT column FROM
table   WHERE   condition);
```

Example 1 : Independent Nested Query

```
SELECT    student Name
FROM      students
WHERE     Dept ID = (
          SELECT   Dept ID
          FROM     Students
          WHERE    Student Name = 'Alice'.
```

Answer output :

Alice

charlie

2. Corelated Nested Queries:

Syntax:

```
SELECT   column - list
FROM   table t1
WHERE   EXISTS (
    SELECT 1
    FROM   table t2
    WHERE   condition   involving   t1. column = t2. column
);
```

Example 2 → Corelated Nested Array

```
SELECT  s. student Name
FROM   students s
WHERE   EXISTS (
    SELECT 1
    FROM   Enrollments e
    WHERE   e. student ID = s. student ID
);
```

Answer Output:

Alice.

Bob.

Charlie.

David.

Result : The implementation of nested queries in SQL, including independent and corelated subqueries, with practical examples in a university database scenario executed successfully.