DATABASE TECHNOLOGY
WEEK 7 ASSIGNMENT

1. **Write the syntax for Declaring Variables and Exceptions in Embedded SQL.**

- The variables defined in the host program are referred to by SQL statements with the prefixed colon (:)
- **Syntax:**

  EXEC SQL BEGIN DECLARE
  SECTION <language-specific delimiter> <language-specific variable declaration>,
  EXEC SQL END DECLARE SECTION <language-specific delimiter>
  Example:

```
EXEC SQL BEGIN DECLARE SECTION
char Empname [20];
long empid;
long salary;
float age;

EXEC SQL END DECLARE SECTION.
```

  The variable declarations look similar to the programming language. Each variable must be assigned a distinct Empname.

3. **Differentiate Static and Dynamic SQL.**

Static (Embedded) SQL :

- In Static SQL, how the database will be accessed is predetermined in the embedded SQL statement.
- It is more swift and efficient.
- SQL statements are compiled at compile time.
- Parsing, Validation, Optimization and Generation of application plan are done at compile time.
- It is generally used for situations where data is distributed uniformly.

Dynamic(Interactive) SQL :

- In Dynamic SQL, how the database will be accessed is determined at run time.
- It is less swift and efficient.
- SQL statements are compiled at run time.
- Parsing, Validation, Optimization and Generation of application plan are done at run time.
- It is generally used for situations where data is distributed non uniformly.

4. Write the syntax for Declaring the cursor.

```
DECLARE vend_cursor CURSOR
   FOR SELECT * FROM Purchasing.Vendor
OPEN vend_cursor
FETCH NEXT FROM vend_cursor;
```