**LAB TERMINAL**



**Submitted to: Sir Bilal Haider**

**Submitted by: Sara Ali**

**Reg: Fa21-bcs-011**

**Course: CC**

**Dated: 03-01-2025**

**Ans4)**

**Semantic Analysis in the code:**

Semantic Analysis will be performed in Abstract Syntax tree(AST) after it has been generated by the Parser.

The **Parser.cs file** processes the tokens generated by the lexer and builds the AST. During this process, it may also include semantic analysis, such as:

1. **Type checking:** Ensuring the types of operands in expressions are compatible.
2. **Scope validation:** Verifying that variables and functions are declared before being used.
3. **Function argument matching:** Ensuring the number and types of arguments match the function definition.

Function to process variable decalrations and ensure that they are declared properly













