Parul University

Faculty of Engineering & Technology

Parul Institute of Technology

Assignment No. _3__

Assignment:3

UNIT 4 and Unit 5

Assignment Question
1. Explain Syntax-Directed Definitions (SDDs) and their importance in compiler design.
2. Differentiate between Synthesized and Inherited attributes with examples.
3. Explain evaluation orders for attributes in an SDD.
4. Construct a dependency graph for a given attribute grammar.
5. Explain S-attributed and L-attributed SDDs with their implementation in LR and Recursive Descent Parsers.
6. Describe the role of Symbol Tables and their data structures.
7. Explain how scope is represented and maintained in a compiler.
8. Perform semantic analysis of expressions, assignments, and control flow statements.
9. How are function declarations and function calls handled in semantic analysis?
10. Discuss the error recovery techniques in semantic analysis.
11. Explain different Intermediate Representations (IRs) used in compiler design.
12. Translate expressions and assignments into Intermediate Code (IC).
13. Discuss the translation of control-flow statements (if-else, while-do, switch).
14. Explain short-circuit code and Boolean expression translation.
15. Define Back patching and its role in control-flow translation.