**COMPILER DESIGN AND CONSTRUCTION**

**LABORATORY MANUAL**

**CSIT**

**(Year III – VIth Semester)**

**DEPARTMENT OF CSIT**

**PRIME COLLEGE**

|  |  |  |  |
| --- | --- | --- | --- |
| **S.No** | **Topic** | **Date** | **Remark** |
| 1 | 1.1 Write a program to check whether the input is digit or not. (flex)  1.2 Write a program to identify tokens. (flex) |  |  |
| 2 | Write a program to DFA that accept string.   1. baab 2. abba |  |  |
| 3 | 3.1 Write a program to check valid identifier.  3.2 Write a program to check valid comment or not. |  |  |
| 4 | Write a program to count number of operators used in given input.  a=b+c\*d |  |  |
| 5 | 5.1 Write a program to find the first of given grammar.  SL+R  SR  L\*R  La  RL  5.2 Write a program to find the follow of the given grammar.  RaS  R(R)S  S+RS  SaRS  Sa**S** |  |  |
| 6 | Write a program for construction of LL(1) Parser. |  |  |
| 7 | Write a program to implement shift reduce parsing.  EE+E  EE/E  EE\*E  Ea/b  Input symbol a+b+a |  |  |
| 8 | *Write a program to implement intermediate code generation.*  *X=a+b-c\*d/e* |  |  |
| 9 | *Write a program to implement machine code generation.* |  |  |
| 10 | ***Case Study of Compiler*** |  |  |

**Note:** Lab 10 is the case study which is performed as a group study. Each group may contain 1-4 students.

The Format for the Case Study is provide below:

1. Cover Page

2. Table of Contents

Case Study should include following chapters and sub chapters:

Introduction

Background

History of Compiler ( Name of an Compiler You Prepare a Case For)

Present Situation

Design of Compiler ( Your )

1. Preprocessing

2. Parsing

3. Semantic Analysis

4. Optimization

5. Code Generation

6. Assembling

7. Linking

Implementation

Testing and Evaluation

Conclusion

References

Follow below points for proper documentation:

**Font : Times New Roman**

**References: IEEE**

1. Heading 14 pts , Sub-heading 13 pts

2. Page Margin : 1 inch each side

3. Alignment:

Heading (Center) , Subheading (Left) , Body (Justify )