CSC 257 Theory of Computation (Laboratory Assignment)

1. Write a program in C / C++ that accepts your alphabet symbols and a string from that alphabet as input and verify whether the string is from the input alphabet or not. Also print all the suffixes and prefixes of the input string.

2. Write a program in C or C++ that accepts a string and print the substrings as below. Construct function for each of these task below in your program.
    a. The leftmost substring of length n, where n is your input.
    b. The rightmost substring of length n, where n is your input.
    c. The substring from position n to m symbols where m and n are input

3. Write a program for List out the All Prefix of a given String.

4. Construct a DFA accepting strings ending at b, from alphabet {a,b}. Construct its transition diagram and implement your DFA in a program in C or C++.

5. Construct transition table for a DFA accepting all strings from {0,1}* ending with 01. Write a program in C or C++.

6. Write a Program to validate C identifiers and keywords.

7. Construct a DFA – Transition graph and Transition table , accepting strings from alphabet {0,1} having substring 010. Write a program in C or C++ to Simulate this DFA.

8. Design NFA for accepting strings over alphabet {0,1} starting with 01 and write program in C/C++.

9. Write a program to simulate a PDA accepting a language of strings over alphabet {0,1} with equal no of 0s and 1s..

10. Construct a PDA accepting language $L=\{0^n1^n \mid n>=1 \}$. Write a program to implement this PDA

The End