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**Section: BS(CS)-4A**

**ASSIGNMENT # 1**

**Data Structures and Algorithms**

**BSCS – 4A**

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**Problem Description**

1. **By Hand Procedure:**

Select any infix expression and convert it to its subsequent prefix and postfix expression by hand procedure without using stacks. Show the entire procedure step-wise as discussed in the class. (Make sure you choose different expression from the one discussed in class).

1. **By Stack Procedure:**

Create a class to implement a Stack providing appropriate operations in the class. Write a program that reads the above selected infix expression from a text file, converts it into postfix notation and writes the postfix expression to another file. Read the infix expression line by line and write the corresponding postfix expressions one by one to the output file. You are free to consult the algorithms available online to solve this problem. All consulted sources must be clearly mentioned/cited in your program.

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| **Sample input file:**  2+3\*6  4+5-2  3\*6 | **Sample output file:**  236\*+  45+2-  36\* |