## LAB 9

## Stacks

- 1. Write a menu-driven program to implement stack using array with following options:
  - 1.Push
  - 2.Pop
  - 3.Display
  - 4.Exit

## **Output Test cases**

- \*\*\* Stack Menu \*\*\*
- 1.Push
- 2.Pop
- 3.Display
- 4.Exit

Enter your choice(1-4):1

Enter element to push:3

- \*\*\* Stack Menu \*\*\*
- 1.Push
- 2.Pop
- 3.Display
- 4.Exit

Enter your choice(1-4):1

Enter element to push:6

- \*\*\* Stack Menu \*\*\*
- 1.Push
- 2.Pop
- 3.Display
- 4.Exit

Enter your choice(1-4):3

Stack is...

6

3

\*\*\* Stack Menu \*\*\*

- 1.Push
- 2.Pop

```
3.Display
4.Exit
Enter your choice(1-4):2
Deleted element is 6
*** Stack Menu ***
1.Push
2.Pop
3.Display
4.Exit
Enter your choice(1-4):3
Stack is...
3
*** Stack Menu ***
1.Push
2.Pop
3.Display
4.Exit
Enter your choice(1-4):2
Deleted element is 3
*** Stack Menu ***
1.Push
2.Pop
3.Display
4.Exit
Enter your choice(1-4):2
Stack is empty!!
```

2. Write a menu-driven program to implement stack using linked list with following options:

```
1.Push
```

2.Pop

3.Display

4.Exit

[Note: Output Test cases are same as in Que. 1]

- 3. WAP to convert an expression from postfix to infix.
- 4. WAP to convert an expression from infix to postfix.

- 5. WAP to convert an expression from infix to prefix.
- 6. WAP to evaluate postfix expression.
- 7. WAP to implement tower of Hanoi puzzle.