## Experiment No: 25

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## Aim

Program to create a generic stack and do the Push and Pop operations.

## Procedure

```
import java.util.*;
class operations{
    public void operation()
    {
        int top =-1,ch,n,e;
        Scanner inp = new Scanner(System.in);
        System.out.println("Enter Size of Stack");
        n = inp.nextInt();
        int size=n-1;
        int[] arr = new int[n];
        do {
            System.out.println("\n=============\n  MENU : \n1.push \n2.pop
\n3.Display \n4.Exit \n=============");
            System.out.println("Enter your choice");
            ch = inp.nextInt();
            switch(ch)
            {
                case 1 :
                    if(top == size)
                    {
```

```java
                System.out.println(" ***  Stack is Full *** ");

            }

            else

            {

                System.out.println("Enter Element : ");

                e = inp.nextInt();

                top++;

                arr[top] =e;

            }

break;

        case 2 :

            if(top == -1)

            {

                System.out.println("\n***  Stack is empty *** ");


            }

            else

            {

                System.out.println("\n"+ arr[top] + " is removed ");

                top--;

            }

            break;

        case 3 :

            if(top == -1)

            {

                System.out.println(" ***  Stack is empty ***");

            }
```

```java
            else
            {
                System.out.println("\n***  Stack : ***\n");
                for(int i=top;i>=0;i--)
                {
                    System.out.println("  " +arr[i]);
                    System.out.println("-----");
                }
            }
            break;
        case 4 :
            System.exit(0);
        default : System.out.println("Invalid Choice");
        }
    }while(ch !=4);
    }
}
public class Stackopertaion{

    public static void main(String[] args) {
        operations obj = new operations();
        obj.operation();
    }
}
```

**Output**

```
C:\Users\Student\Documents\java>javac Stackopertaion.java

C:\Users\Student\Documents\java>java Stackopertaion
Enter Size of Stack
2

============
  MENU :
1.push
2.pop
3.Display
4.Exit
============
Enter your choice
1
Enter Element :
1

============
  MENU :
1.push
2.pop
3.Display
4.Exit
============
Enter your choice
1
Enter Element :
2

============
  MENU :
1.push
2.pop
3.Display
4.Exit
============
Enter your choice
3
```

```
============
Enter your choice
3

***  Stack : ***

  2
-----
  1
-----

============
 MENU :
1.push
2.pop
3.Display
4.Exit
============
Enter your choice
2

2 is removed

============
 MENU :
1.push
2.pop
3.Display
4.Exit
============
Enter your choice
4
```