OBJECT ORIENTED PROGRAMMING LAB

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Experiment No: CO4-5

Aim

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

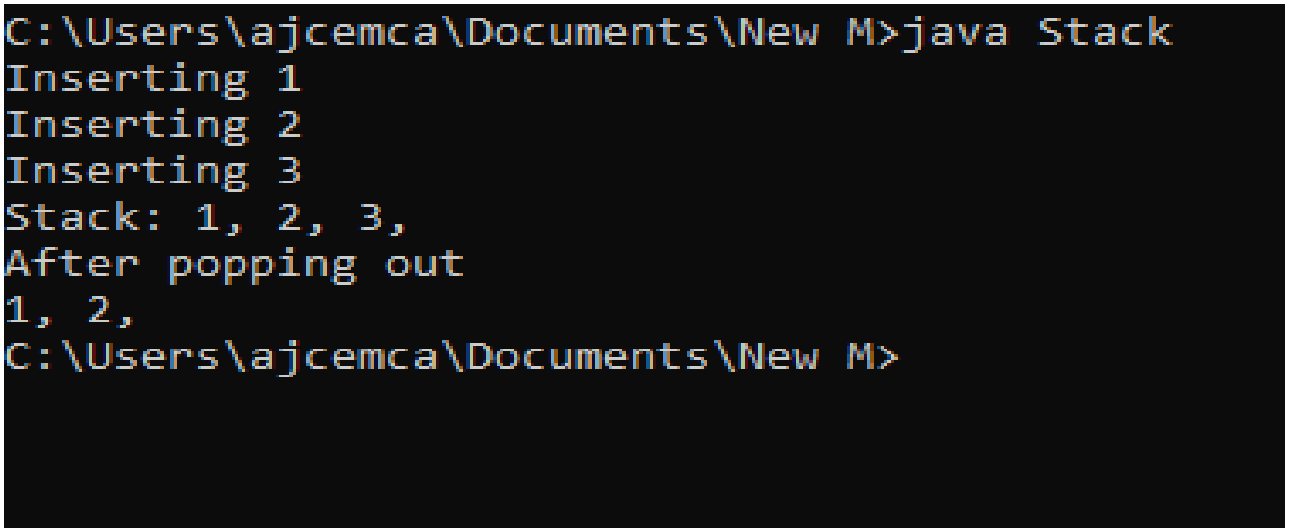
Procedure:

```
class Stack{
        private int arr[];
        private int top;
        private int capacity;
 Stack(int size) {
   arr = new int[size];
   capacity = size;
   top = -1;
  }
  public void push(int x) {
   if (isFull()) {
     System.out.println("Stack OverFlow");
     System.exit(1);
   }
   System.out.println("Inserting " + x);
   arr[++top] = x;
  }
 public int pop() {
  if (isEmpty()) {
     System.out.println("STACK EMPTY");
```

```
      System.exit(1);
    }
   return arr[top--];
  }
 public int getSize() {
    return top + 1;
  }
 public Boolean isEmpty() {
    return top == -1;
  }
 public Boolean isFull() {
    return top == capacity - 1;
  }
 public void printStack() {
    for (int i = 0; i <= top; i++) {
      System.out.print(arr[i] + ", ");
    }
  }
  public static void main(String[] args) {
    Stack stack = new Stack(5);
    stack.push(1);
    stack.push(2);
    stack.push(3);
    System.out.print("Stack: ");
    stack.printStack();
    stack.pop();
    System.out.println("\nAfter popping out");
    stack.printStack();
```

```
  }
}
```

Output:


C:\Users\ajcemca\Documents\New M>java Stack
Inserting 1
Inserting 2
Inserting 3
Stack: 1, 2, 3,
After popping out
1, 2,
C:\Users\ajcemca\Documents\New M>