OBJECT ORIENTED PROGRAMMING LAB

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Batch: S2 MCA

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AIM:

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

PROCEDURE:

```
public 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 Screenshot:

```
D:\jomol javalab>javac  Stack.java

D:\jomol javalab>java  Stack
Inserting 1
Inserting 2
Inserting 3
Stack: 1, 2, 3,
After popping out
1, 2,
D:\jomol javalab>
```