

**OBJECT ORIENTED PROGRAMING LAB****Experiment No.: 24****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);  
        }  
    }  
}
```

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**Roll No: 45**

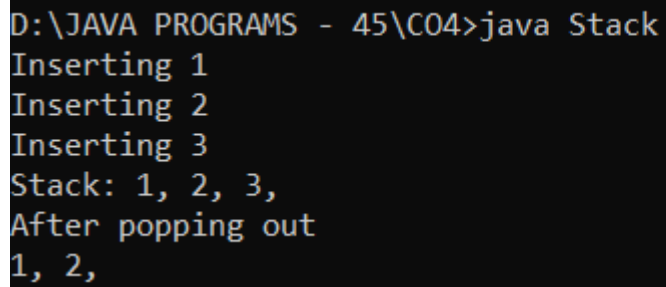
**Batch: S2 MCA**

**Date: 01-06-2022**

```
    }  
    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



A screenshot of a terminal window with a black background and white text. The text shows the execution of a Java program. It starts with a command prompt 'D:\JAVA PROGRAMS - 45\C04>java Stack'. The program then prints 'Inserting 1', 'Inserting 2', and 'Inserting 3' on separate lines. This is followed by 'Stack: 1, 2, 3,'. Then it prints 'After popping out' and '1, 2,' on the next line. The text is partially cut off at the bottom.

```
D:\JAVA PROGRAMS - 45\C04>java Stack  
Inserting 1  
Inserting 2  
Inserting 3  
Stack: 1, 2, 3,  
After popping out  
1, 2,
```