

**OBJECT ORIENTED PROGRAMING LAB****Experiment No.: 22****Name : Swetha Prakash****Roll No : 46****Batch : B****Date : 31-05-22****Aim**

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

**Source Code**

```
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 is 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;
}
```

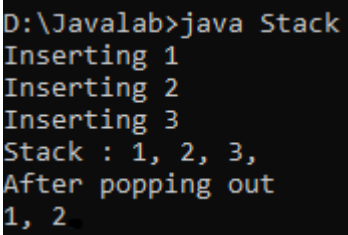
```
public void printStack(){
    for (int i = 0; i <= top; i++){
        System.out.print(arr[i] + ", ");
    }
}
```

```
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:\Javalab>java Stack  
Inserting 1  
Inserting 2  
Inserting 3  
Stack : 1, 2, 3,  
After popping out  
1, 2
```