OBJECT ORIENTED PROGRAMMING LAB

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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 Screenshot