OBJECT-ORIENTED PROGRAMMING LAB

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Batch: MCA - B
Date: 31-05-2022

Experiment No.: 20

Aim

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

Program

```
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(4);     stack.push(5);
stack.push(6);

    System.out.print("Stack: ");
stack.printStack();



    stack.pop();     System.out.println("\nAfter
popping out");     stack.printStack();
  }
}
```

Output Screenshot