Popped doubles from the stack:

5.0

4.0

3.0

2.0

1.0

```java
class Main {
    public static void main(String args[]) {
        GenericStack<Integer> IntegerStack =
                new GenericStack<>();
        GenericStack<Double> doubleStack =
                new GenericStack<>();
        for(int i = 0; i <= 5; i++) {
            integerStack.push(i); }
        for(double i = 1.0; i <= 5.0; i++) {
            doubleStack.push(i); }
        System.out.println("Popped integers
                from the stack");
        while(! integerStack.isEmpty) {
            System.out.println(integerStack.
                pop();
        System.out.println("Popped doubles
                from the stack");
        while(! doubleStack.isEmpty()) {
            System.out.println(doubleStack
                .pop();
        System.out.println("shreyash sinha
                1BM22CS273");
    }
}
```

Output: Popped integer from the Stack :
    5
    4
    3
    2
    1

a) write JAVA program on generics stack program (class) for five integers and five double data types.

```java
class GenericStack <T> {
    Object [] stack Array;
    int top = -1;
    static final int max size = 5;
    public GenericStack() {
        stack Array = new Object[max size];
    }
    public void push(T value) {
        if (top < max size - 1)
            stack Array[++top] = value;
        else
            System.out.println("Stack overflow");
    }

    public T pop() {
        if (top >= 0)
            return (T) stack Array[top --];
        else
            System.out.println("Stack is empty");
        return null;
    }
    public boolean isEmpty() {
        return top == -1;
    }
    public boolean isFull() {
        return top == max size - 1;
    }
}
```