Q write a Java program to create a generic class Stack which holds 5 integers and 5 double values.

```
class Generic stack<T>{
    private Object[] stack Array;
    private int top = -1;
    private static final int MAX_SIZE = 5;

    public Generic stack(){
        stackArray = new Object[MAX_SIZE];
    }

    public void push(T value){
        if(top < MAX_SIZE - 1) stack Array[++top] = value;
        else System.out.println("Stack is full. Cannot push more elements");
    }

    @SuppressWarnings("unchecked")
    public T pop(){
        if(top >= 0)
            return (T) stackArray[top--];
            else{
                System.out.println("stack is empty, Cannot pop more
                elements");
            return null;
        }
    }

    public boolean is full(){
        return top == MAX_SIZE - 1;
    }
```

```
class generics {
public static void main (String [] args) {
    GenericStack <Integer> integerStack = new GenericStack<>();
    GenericStack <Double> doubleStack = new GenericStack<>();

    for (int i = 1; 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());
    }
}
}
```

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Output:

Popped integers from the stack:

5
4
3
2
1

Popped dables from the stack

5.0

4.1

3.0

2.0

1.0