

Final Sample Question 1

Given the following ArrayStack class definition complete the following definition.

```
class StackUnderflowException extends Exception {} // Custom checked exception

public class ArrayStack {
    int[] stack; //Array structure
    int topIndex = -1; //Holds the index of the top item, begins at -1

    public int pop() throws StackUnderflowException {
        //removes and returns the top integer from the stack
        //if you try to remove an element and one does not exist, throw the
        StackUnderflowException
        //set the 'popped' element to 0

        if(topIndex == -1) {
            throw new StackUnderflowException();
        }
        int v = stack[topIndex]; // getting value
        stack[topIndex] = 0;//cleaner
        topIndex--;
        return v;
    }
}
```