

Implementing Data Structures

EECS 1030

`moodle.yorku.ca`

Problem

Implement a Stack by means of an array.

```
Stack stack = new ....  
stack.push("first");  
stack.push("second");  
System.out.println(stack.pop());  
stack.push("third");  
System.out.println(stack.pop());  
System.out.println(stack.pop());
```

Question

What is the output?

```
public class ArrayStack implements Stack
{
    private ...[] content;
    ...
}
```

Question

What is the base type of the array named `content`?

```
Stack stack = new ....
stack.push("first");
stack.push("second");
System.out.println(stack.pop());
stack.push("third");
System.out.println(stack.pop());
System.out.println(stack.pop());
```

Question

In the array with which index do we store the String "first"?

```
Stack stack = new ....  
stack.push("first");  
stack.push("second");  
System.out.println(stack.pop());  
stack.push("third");  
System.out.println(stack.pop());  
System.out.println(stack.pop());
```

Question

In the array with which index do we store the String "second"?

Question

How can we find the first array cell that contains null?