

CS 102: Quiz #11, December 7, 2009

SOLUTION

1. Consider an initially empty stack of strings `s`. What is the content of `s` after the following code fragment is executed?

```
s.push("Happy");
s.pop();
s.push("Birthday");
s.push("Apple");
String st = s.pop();
s.push(st + " pie");
s.push("Camel");
```

Solution:

```
Birthday
Apple pie
Camel
```

2. Consider the `Stack` interface below. In the space provided, implement the `peek` and `isEmpty` methods for the class `AStack`.

```
public interface Stack{ // interface for a stack of ints
    public void push(int n);
    public int pop();
    public int peek(); // returns value of top of stack without
                       // popping it off
    public boolean isEmpty(); // whether stack is empty
}
public class AStack implements Stack{
    private int[] ar;
    private int top; // index of top of stack
    public AStack(){
        ar = new int[10];
        top = -1;
    }
    public void push(int n){
        top++;
```

```
        ar[top] = n;
    }
    public int pop(){
        int val = ar[top];
        top--;
        return val;
    }
    public int peek(){
        // write code here:

    }
    public boolean isEmpty(){
        // write code here:

    }
}
```

Solution:

```
public int peek(){
    return ar[top];
}
public boolean isEmpty(){
    return (top == -1);
}
```