

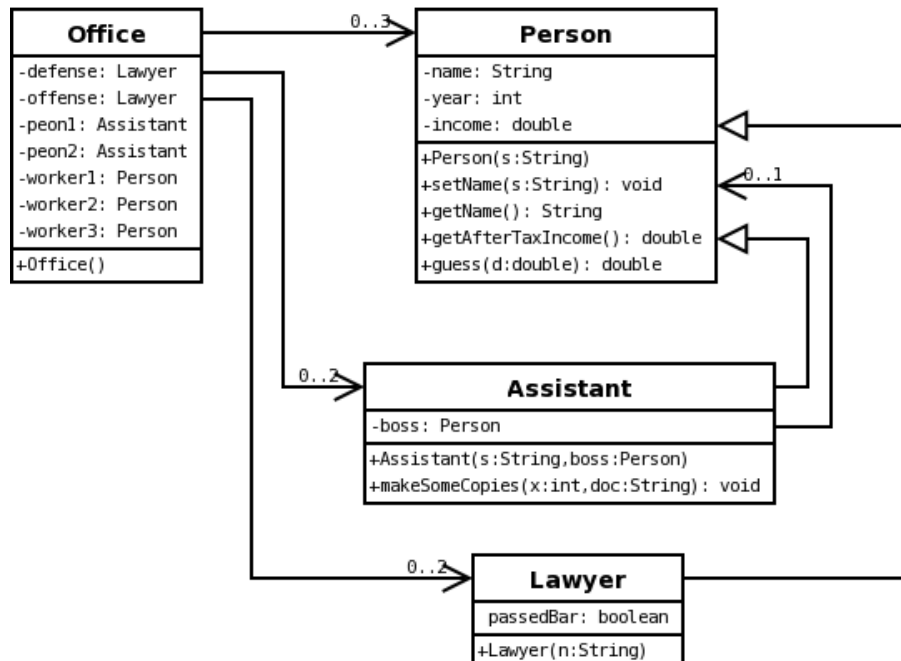
CSCE 145 Practice Test 2 Solutions

[1]
Robin
Starfire
BeastBoy

[2]
40
36
32
28
24
To infinity
10
11
12
11
12
12
and beyond!

[3]
1-Penn
2-Penn
3-Teller
4-10000.0
5-9000.0
6-10000.0
7-10000.0
8-400.0

[4]



[5]

```
public interface ISimpleNumber {
    public boolean isEven();
    public int multiplyByTwo();
}

public class SimpleNumber implements ISimpleNumber {

    private int value;

    public SimpleNumber(int v){
        this.value = v;
    }

    public boolean isEven() {
        return this.value % 2 == 0;
    }

    public int multiplyByTwo() {
        this.value *= 2;
        return this.value;
    }
}
```

[6]

```
public static String fullStateName(String abbrev){
    int abbrevIndex, beginIndex, endIndex;
    String abbrevPlsFirst, nextAbbrev, nextAbbrevPlsFirst;

    abbrevIndex = acro.indexOf(abbrev);
    String subAcro = acro;
    while(abbrevIndex % 2 != 0){
        subAcro = subAcro.substring(abbrevIndex + 1);
        abbrevIndex += subAcro.indexOf(abbrev) + 1;
    }

    abbrevPlsFirst = abbrev + abbrev.charAt(0);
    beginIndex = acroStates.indexOf(abbrevPlsFirst) + 2;

    if(abbrevIndex < acro.length() - 2){
        nextAbbrev = acro.substring(abbrevIndex + 2, abbrevIndex + 4);
        nextAbbrevPlsFirst = nextAbbrev + nextAbbrev.charAt(0);
        endIndex = acroStates.indexOf(nextAbbrevPlsFirst);
        return acroStates.substring(beginIndex, endIndex);
    }else{
        return acroStates.substring(beginIndex);
    }
}
```

[7]

```
public static String decode(String message, int key){
    String decodedMessage = "";
    char nextChar;

    for(int i = 0; i < message.length(); i++){
        nextChar = (char)(message.charAt(i) - key);
        if(nextChar < 'a'){
            nextChar += 'z' - 'a' + 1;
        }
        decodedMessage += nextChar;
    }

    return decodedMessage;
}
```