CSE8B Discussion

Wednesday, April 18, 2013
public int countNum( int[] myArray, int num ) {
    int count = 0;
    for ( int x : myArray ) {
        if ( x == num )
            count += 1;
        else
            return count;
    }
    return count;
}

ArrayPlay a = new ArrayPlay();
int[] myA = {3, 3, 2, 3};
System.out.println( a.countNum( myA, 3 ) )
What does the last line above (i.e. the call to System.out.println) print?

Answer: 2
public int countNum(int[] myArray, int num) {
    int count = 0;
    for (int x : myArray) {
        if (x == num) {
            x = 42;
            count += 1;
        } else {
            x = 64;
            // NO RETURN HERE
        }
    }
    return count;
}

ArrayPlay a = new ArrayPlay();
int[] myA = {3, 3, 2, 3};
System.out.println(a.countNum(myA, 3));
1. Write a method named `countRun` that takes a String, `s`, and a char, `c`, as input and returns the number of times `c` (exactly) appears consecutively in `s`. If `c` appears in more than one location in `s` separated by one or more other characters, your method should return the number of times `c` first appears consecutively in `s`, even if it’s a single occurrence of `c`. For example:

```java
countRun( "Add dog", 'd' ) returns 2 (note that any char, including a space, breaks the consecutive run)
countRun( "Add dog", 'D' ) returns 0.
countRun( "Hope you’re happy", 'p' ) returns 1
```
public int countRun(String s, char c){
    int count=0;
    for(char x : s.toCharArray()){
        if(x == c)
            count++;
        else
            if(count!=0)
                return count;
    }
    return count;
}
public int countRun2(String s, char c) {
    int count=0;
    for(int i=s.indexOf(c); i>0 && i<s.length(); i++) {
        if(c==s.charAt(i))
            count++;
        else
            return count;
    }
    return count;
}
class Account{
    public int balance;

    public void withdraw(int amount){
        balance = balance - amount;
    }
    public void deposit(int amount){
        balance = balance + amount;
    }

    public static void main(String[] args){
        Account obj = new Account();
        obj.deposit(1000);
        obj.withdraw(600);
        System.out.println(obj.balance);
    }
}
Exercise

Write a method to print the letters in a string and how many times they appear. Assume the letters are sorted in the string.

```java
public void printLetterCounts(String word) {

}

exercises f = new exercises()
> f.printLetterCounts("aaabcccddeee")
Letter: a Times: 3
Letter: b Times: 1
Letter: c Times: 3
Letter: d Times: 2
Letter: e Times: 3
```
Issues when working on your own machine via PUTTY.

Solution:
Piazza @17 "Turning in Assignments from your own Computer"
While Loops

Syntax

```java
while (loop-continuation-condition) {
    // Loop body
    Statement(s);
}
```

```java
int count = 0;
while (count < 100) {
    System.out.println("Welcome to Java!");
    count++;
}
```
While Loops

Common Error
- Infinite Loop (Never terminates)
- Off-by-one (Execute loop one more time or one less time)

Exercises
How many times is the following loop body repeated? What is the printout of the loop?

```
int i = 1;
while (i < 10)
    if (i % 2 == 0)
        System.out.println(i);
```

(a) Infinite

```
int i = 1;
while (i < 10)
    if (i % 2 == 0)
        System.out.println(i++);
```

(b) Infinite

```
int i = 1;
while (i < 10)
    if ((i++) % 2 == 0)
        System.out.println(i);
```

(c) 4
Open discussion

Anything you want to talk about?