

## Quiz 4, CSCI 150, Fall 2003

Name: \_\_\_\_\_

1. [5 pts] Suppose the user ran the program at right and typed what is in boldface below.

? **Java Programming**

What would the program then print?

```
import csbsju.cs150.*;

public class Mystery {
    public static void run() {
        IOWindow io = new IOWindow();
        io.print("? ");
        String str = io.readLine();
        String a = str.substring(5, 9);
        String b = str.substring(1, 3);
        io.println(a + b);
    }
}
```

2. [5 pts] Suppose the user ran the program at right and typed what is in boldface below.

**2**  
**4**  
**1**  
**3**  
**5**

What would the program then print?

```
import csbsju.cs150.*;

public class Mystery {
    public static void run() {
        IOWindow io = new IOWindow();
        int[] a = new int[5];
        int i = 0;
        while(i < 5) {
            a[i] = io.readInt();
            i++;
        }
        i = 0;
        while(i < 5) {
            i = a[i];
            io.println(i);
        }
    }
}
```

3. [10 pts] Complete the program at right so that it reads two lines from the user and displays either “same” or “different” depending on whether they are the same. For example, a user typing the program should see the following, assuming the user types what is in boldface.

? **First**  
? **Second**  
different

```
import csbsju.cs150.*;

public class SameDifferent {
    public static void run() {
        IOWindow io = new IOWindow();

    }
}
```

4. [10 pts] Suppose the first  $j$  elements of an array are in increasing order. In the gap of the Java code below, write Java code to shift up all elements of the array more than  $t$  one spot, and insert  $t$  in the blank spot.

```
int j = 1;
while(j < a.length) {
double t = a[j];
```

```
    j++;
}
```

## Solutions, Quiz 4, CSCI 150, Fall 2003

### Statistics

mean	18.435 (424.000/23)
stddev	5.999
median	19.000
midrange	13.750-22.250
#1.	3.65 / 5
#2.	2.52 / 5
#3.	8.43 / 10
#4.	2.83 / 10
+ 1-point bonus	

#### 1. Progav

2

2. 1  
4  
5

```
import csbsju.cs150.*;
```

```
public class SameDifferent {  
    public static void run() {  
        IOWindow io = new IOWindow();  
        io.print("? ");  
        String a = io.readLine();  
3.    io.print("? ");  
        String b = io.readLine();  
        if(a.equals(b)) {  
            io.println("same");  
        } else {  
            io.println("different");  
        }  
    }  
}
```

```
int j = 1;  
while(j < a.length) {  
    double t = a[j];  
    int i = j;  
    while(i > 0 && a[i - 1] > t)
```

4. `a[i] = a[i - 1];`  
`i--;`

```
    a[i] = t;  
    j++;  
}
```