

Examples

WEEK 4

Nested if-else Statements -1

```
import java.util.Scanner;

public class Test {
    public static void main(String[] args) {

        Scanner input = new Scanner(System.in);

        System.out.print("Enter x value: ");
        int x= input.nextInt();

        System.out.print("Enter y value: ");
        int y= input.nextInt();

        if (x > 2) {
            if (y > 2) {
                int z = x + y;
                System.out.println("z is " + z);
            }
        }
        else
            System.out.println("x is " + x);
    }
}
```

Input: x = 3 , y = 2



No Output

Input: x = 3 , y = 4



z is 7

Input: x =2 , y = 2



x is 2

Nested if-else Statements-2

```
import java.util.Scanner;

public class Test {
    public static void main(String[] args) {

        Scanner input = new Scanner(System.in);

        System.out.print("Enter x value: ");
        int x= input.nextInt();

        System.out.print("Enter y value: ");
        int y= input.nextInt();

        if (x > 2)
            if (y > 2) {
                int z = x + y;
                System.out.println("z is " + z);
            }

        else
            System.out.println("x is " + x);
    }
}
```

Input: x = 2 , y = 3



No Output

Input: x = 3 , y = 2



x is 3

Input: x = 3 , y = 3



z is 6

Nested if-else Statements -3

- What is wrong in the following code?

```
if (score >= 60.0)
    System.out.println("D");
else if (score >= 70.0)
    System.out.println("C");
else if (score >= 80.0)
    System.out.println("B");
else if (score >= 90.0)
    System.out.println("A");
else
    System.out.println("F");
```

Are they equivalent?

```
if (income <= 10000)
    tax = income * 0.1;
else if (income <= 20000)
    tax = 1000 +
        (income - 10000) * 0.15;
```

```
if (income <= 10000)
    tax = income * 0.1;
else if (income > 10000 &&
        income <= 20000)
    tax = 1000 +
        (income - 10000) * 0.15;
```

Boolean Operators

```
import java.util.Scanner;

public class Test {
    public static void main(String[] args) {
        java.util.Scanner input = new java.util.Scanner(System.in);
        double x = input.nextDouble();
        double y = input.nextDouble();
        double z = input.nextDouble();
        System.out.println("(x < y && y < z) is " + (x < y && y < z));
        System.out.println("(x < y || y < z) is " + (x < y || y < z));
        System.out.println("!(x < y) is " + !(x < y));
        System.out.println("(x + y < z) is " + (x + y < z));
        System.out.println("(x + y > z) is " + (x + y > z));
    }
}
```

Input: 2 3 6



(x < y && y < z) is true

(x < y || y < z) is true

!(x < y) is false


(x + y < z) is true

(x + y > z) is false

Switch Statement

What is y after the following switch statement is executed?

```
x = 3; y = 3;  
switch (x + 3) {  
    case 6: y = 1;  
    default: y += 1;  
}
```



y=2

Conditional Expressions

```
public class Test {  
    public static void main(String[] args) {  
        java.util.Scanner input = new java.util.Scanner(System.in);  
        double x = input.nextDouble();  
        double y = input.nextDouble();  
        double z = input.nextDouble();  
  
        System.out.println((x < y && y < z) ? "sorted" : "not sorted");  
    }  
}
```

Input: 2 3 6



sorted