

WIX1002 Fundamentals of Programming
Tutorial 3 Flow of Control (Selection)

1. Write statements for each of the following
- Determine whether $3 \times 8 = 27$.
 - Determine whether an input integer is an odd number or even number.
 - Determine whether a character is a capital letter.
 - Display two strings in alphabetical order ignoring their case.
 - A switch statement that display Sunday, Monday, ..., Saturday if the input is 0, 1, ..., 6.

a) `System.out.println(3 * 8 == 27)`

b) `if (input % 2 == 0)`
 `System.out.println("Even number");`

else
 `System.out.println("Odd number");`

c. `System.out.println(c == Character.toUpperCase(c));`

d. `s1 = s1.toLowerCase();`
 `s2 = s2.toLowerCase();`
 `if (s1.compareTo(s2) <= 0)`
 `System.out.println(s1 + " " + s2);`

else
 `System.out.println(s2 + " " + s1);`

e) `switch (day) {`
 case 0 :
 `System.out.println("Sunday");`
 case 1 :
 `System.out.println("Monday");`
 case 2 :
 `System.out.println("Tuesday");`
 case 3 :
 `System.out.println("Wednesday");`

```

        System.out.println("Wednesday");
    Case 4 :
        System.out.println("Thursday");
    Case 5 :
        System.out.println("Friday");
    Case 6 :
        System.out.println("Saturday");
    }

```

2. Correct the error for the following statements.

a.

```

if (num1 = num2)
    System.out.println("Number 1 is equal to number 2.");

```

a. `if (num1 == num2)`

b.

```

if (x > y > z)
    System.out.println("x is the largest number");

```

b. `if (x > y && y > z)`

c.

```

String s1, s2;
if (s1==s2)
    System.out.println("They are equal strings.");
else (s1!=s2)
    System.out.println("They are not equal strings.");

```

c. `if (s1.compareTo(s2) == 0)`
`else`

d.

```

if x>0 or y>0;
    System.out.println("Either x or y is positive");

```

`if (x > 0 || y > 0)`

3. Write the output for the following statements when x=9 and y=10

a.

```
if (x < 10)
if (y > 10)
System.out.println("*****");
else
System.out.println("#####");
System.out.println("$$$$$");
```

a. #####
\$\$\$\$\$

b.

```
if (x < 10) {
if (y < 10)
System.out.println("*****");
else {
System.out.println("#####");

System.out.println("$$$$$");
}}
```


\$\$\$\$\$

c.

```
if (x < 10) {
if (y < 10)
System.out.println("*****");
System.out.println("#####");
}
else {
System.out.println("$$$$$");
}
```

#####

d.

```
if (x > 10) {
if (y > 10) {
System.out.println("*****");
System.out.println("#####"); }
else
System.out.println("$$$$$");
}
```

4. Write the java statements that used the if statement to find the biggest number among three given integers.

```
if (num1 > num2 && num2 > num3 || num1 > num3 && num3 > num2 )
    System.out.println(num1);
else if (num2 > num1 && num1 > num3 || num2 > num3 && num3 > num1)
    System.out.println(num2);
else if (num3 > num1 && num1 > num2 || num3 > num2 && num2 > num1 )
```

```
System.out.println(num2);  
else if (num3 > num1 && num1 > num2 || num3 > num2 && num2 > num1)  
System.out.println(num3);
```

5. Write the java statements that determine whether the Leap year. A Leap year is divisible by 4 but not by 100. However, a Leap year is also divisible by 400.

```
System.out.println( year % 4 == 0 && year % 100 != 0  
&& year % 400 == 0 )
```