

IF CONSTRUCT LAB

OBJECTIVE: Students will be able to write code using “if” statements and “if else” statements

Creating Random Numbers by call the method Math.Random()

//a variable you declare and assign it the largest random value you want.

```
int max = 10;
```

// you declare a variable called random and assign it a value by calling the Math.random() method
→see note below

```
int random = (int)((Math.random()*max)+1);
```

- The Math.random() returns a **double value up to .9999**. The max value sets the end of the range you are looking for. **+1 rounds the value up to a whole number**. **(int) is the cast that allow you to store the result in the int value named random**.
- + 1 allows for a range of **1 to max**
- A range would look like this: **int random = min+(int) ((Math.random()*(max-min))+1);**

1. Write a class called RandomNumbers_yourName.java
2. Write a method called printRandomOne() with a return type void
 - a. Create a variable named randomNum that stores a value between 1 and 10 (see textbox above)
 - b. Write an if statement that tests the randomNum variable
 - i. If randomNum is greater than 5 print out the word “Bananas”
 - ii. Else print the value of the random number
3. Write a method called printRandomTwo() with a return type void
 - a. Create 2 variables name randomOne and randomTwo that store values between 1 and 10
 - b. Write an if else statement that tests randomOne and randomTwo
 - i. If randomOne is greater print out randomOne’s value
 - ii. Else if randomTwo is greater print out randomTwo’s value
 - iii. Else print out the values for randomOne and randomTwo
4. Write a method called printRandomGradeGenerator() with a return type void
 - a. Create a variable randomGrade that stores a value between 50 and 100
 - b. Write and if else statement that tests randomGrade
 - i. If grade is between 50 and 59 print: “F”
 - ii. If else grade is between 60 and 69 print: “D”
 - iii. If else grade is between 70 and 79 print: “C”
 - iv. If else grade is between 80 and 89 print: “B”
 - v. Else grade is between 90 and 100 print: “A”
5. Write the **main()** method
6. In the **main()** method create a new RandomNumbers_yourName object named testObject
7. Call all three methods above using testObject
8. Run your code multiple times to make sure it is working.