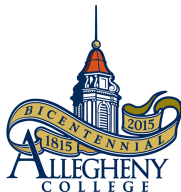# CMPSC 112

Lecture 2: Programming in Java, Part 2

Dr. Aravind Mohan

Allegheny College

September 5, 2017

Last Time

- Terminal and Editor
- Compiling and Running
- Functions
- Loops
- Passing Variables
- Reminder: MASTERY QUIZ

Switch/Case Vs If/Else

```
if (var == 0) {                    switch (var) {
    x = 3;                             case 0:
} else if (var == 1) {                     x = 3;
    x = 5;                                 break;
} else if (var == 2) {                 case 1:
    x = 7;                                 x = 5;
} else if (var == 3) {                     break;
    x = 12;                            case 2:
} else {                                   x = 7;
    x = 0;                                 break;
} //if-else                            case 3:
                                           x = 12;
                                           break;
                                       default:
                                           x = 0;
                                           break;
                                   } //switch
```

- If/Else - Used for taking decisions.
- Switch/Case - Used to test the value of given variable against list of cases.

Using Objects

- Import library
    - import java.util.Scanner;
    - import java.util.Random;
- Declare object and pass any default parameters
    - Scanner scan = new Scanner(System.in);
    - Random rand = new Random();
- Use the object
    - userChoice = scan.next().toUpperCase();
    - computerChoice = rand.nextInt(2);

Pick a Round Winner

- 9 outcomes. Can we write it with fewer?

Computer Choice		User Choice		
		ROCK	**PAPER**	**SCISSORS**
	ROCK	TIE (2)	USER (0)	CPU (1)
	PAPER	CPU (1)	TIE (2)	USER (0)
	SCISSORS	USER (0)	CPU (1)	TIE (2)

Pass by Reference/Value

- Pass by reference:
  - If you update the passed-in variable inside the function, it is also updated outside the function.
- Pass by value:
  - If you update the passed-in variable inside the function, the copy outside of the function is not changed.

To Do (Finish it off)

- Write the playAgain() and printScores() methods.

Reading Assignment

- GT Chapter 1

Any Questions

- Reminder: REVIEW FORM