Hack BI An Introduction to Java 

**Cheat Sheet:**

* Eight types of primitives: byte, short, **int** (integer #s), long, float, **double** (decimal #s), **boolean** (true or false), **char** (a single character, denoted by ‘’)
* String is an object type that holds text
* Primitives only have values; Objects have fields and methods.
* Example of declaration and initialization of a variable:

int num = 5; *//how to initialize a primitive*

String word = new String(“hello”); *//how to initialize an Object*

String word2 = “hello”; *//can initialize a String like a primitive but only String*s

* Five arithmetic operators: +, -, / (division), \* (multiplication), % (modulo)
* *NOTE:* modulo returns the remainder (like in division), and when you divide one int by another, it will ignore everything after the decimal (called integer division)
* Main method is where everything that needs to happen goes:

*//don’t forget to always put your program inside of a class*

public class Sample {

public static void main(String[] args) {

System.out.println(“hello”); *//calls the print method from inside main*

int num = add(3, 4); *//calls add method you created and stores its return*

}

public static int add (int num1, int num2) {

return num1 + num2;

}

}

* If you only want something to happen dependent on other things, put it in an if-else statement.

public static String check(int first, int second) {

if(first > second) { return “greater”; }

else if(first < second) { return “lesser”; }

else {return “equals”; }

 }

* Four boolean operators: && (and), || (or), ! (not)
* To use user input, you need a Scanner object
* Put a Scanner import outside of your class

import java.util.Scanner;

* Create a Scanner object

Scanner keyboard = new Scanner(System.in);

* Use Scanner

System.out.println(“What is your name?”); *//always remember to tell the user what you’re asking of them*

String response = keyboard.nextLine();

* To make code repeat again and again, you need a loop
* For a “for loop,” you can specify a specific amount of times for something to run

For (int i = 0; i < 10; i++) {}

For (declare variable that will be used for counting; the comparison that when true, the loop ends; manipulation of the variable that happens each loop (++ is increment, -- is decrement)) {code that will be executed each time}

* For a “while loop,” you can make a loop run until a condition is met

while (x <= 10) {}

while (a condition that will be checked every loop, and if true, the loop will end) {code that will be executed each time}

**Resources:**

StackOverflow: [https://stackoverflow.com](https://stackoverflow.com/)  *//a good forum for Java related questions*

Java Documentation: <https://docs.oracle.com/javase/7/docs/api/>  *//has all the classes of objects Java has created for you (like String) and all the necessary info on them*