Hack BI V JAVA: The Cheatsheet

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**What is Java?:** Java is a class based Object Oriented Programming language that uses a compiler and an interpreter to analyze code and run functions. It can be applied to solve a wide array of problems.

**Purpose:** Help participants become familiar with Java’s faculties and create a basic file displaying the information/skills learned.

**Learning the Basics**

Terms to Know:

● **Compiler**: A system used to interpret what we type (known as source code or \*.java) into information that the computer can read, aka byte code (\*.class)

● **Public class**: begins the main method

● **Method**: a function block of code that completes an action when called, this is indicated by public class i.e. **public class** Hello World{

● **Parameters**: identified by parentheses and used to pass data to a method (in this case the words “Hello World” is the data passed to our main method)

● **Semi colons (;)**: used to end most statements i.e. System.out.println (“Hello World”)**;** ● **Statements**: We mainly use Expression, Declaration, and Control Flow statements

○ **Expression**: used to change values of variables, call methods, and create objects i.e. score = 10 ■ Note: notice that semi colons are not used in expressions

○ **Declaration**: used to declare variables i.e. myAge = 18;

**○ Control Flow**: the ones we’ll use today are if statements and if...else statements

● **Braces {}**: used to group statements 8

● **Public static void**: creates a main method that is public (usable by other parts of the program) and void (meaning it does not return a value when called)

● Don't worry about what static means, but remember that the main method of your program should always be static

● **Println ()**: method that displays its parameters in a console

● **Variables**: used to store data in computer’s memory; designated with identifiers

● **Note**: always use meaningful and descriptive names for variables i.e. if making a variable containing an age it would be better to use “myAge” instead of “x”

● **Camel Case**: naming convention in which the first letter of each word in a compound word is capitalized, except for the first word. I.e. My name turns to myName

● **Declaring a variable**: Defining a variable’s type (int, double, bullion, char, string) ● **Types of variables**:

○ **Int**: stores integers/whole numbers values

○ **Double**: stores decimal values

○ **Boolean**: stores True or False values

○ **Char**: returns single character values i.e. char x would declare x as a char value

○ **String**: returns multiple character values i.e. string “Hello World” would store Hello World as a string value

● **Initializing a variable**: the process of assigning an initial value to a variable (i.e. int myNum = 18 will initialize a variable called myNum into the number 18)

**If You Want to Learn More**

Java Hello World - Your First Java Program (programiz.com)