**HELLO THERE THIS THE KNOWLEDGE GAINED IN THE JAVA TUTORIAL.**

***Knowledge precedes understanding, understanding precedes change.***

JAVA can be used for mobile and enterprise applications.

Why use eclipse Integrated Development Environment?

1. It is free.
2. It is used industry-wide.

***HOW JAVA WORKS***

The code written in the IDE is the ***source code.*** It is converted into ***byte code*** using thee compiler. The byte code is then fed into the ***Java Virtual Machine.***

**Variables-** This are containers. They are called variables because you can change their value. ***Ensure that all variable names are logical. e.g. int num =5 instead of int a=5;***

**Primitive Data Types**.

* Character-2 bytes(16bits)
* Byte-1 byte- Stores range of -128 to 127
* Short-2 bytes- Stores range of -32768 to 32767
* Integer-4 bytes- Stores range of -2,147,483,648 to 2,147,483,647
* Float-4 bytes
* Long-8 bytes
* Double-8 bytes
* Boolean-N/A

**DISCLAIMER.**

By default, all decimal values in Java are of data type ***double.*** To use datatype ***float,*** we have to include ***f*** at the end if the value ***e.g. float 5.5f;***

This also applies to the data type ***long.***

***Implicit and explicit type conversion.***

**Implicit conversion*. e.g. double a =5 //when you print it, it prints out as 5.0.***

**Explicit conversion *e.g. int a= (int)5.5 // prints out 5.***  This is also called **type casting.**

**Naming Conventions.**

1. **Interface & Class –** The first letter **should be CAPITAL.**  For an interface, the name should be an ***adjective. e.g. Readable, Serializable.***  For a class, the name should be a ***Noun e.g. Student, Person, MyFirstJavaClass***
2. **Method –** The first letter is a **small letter.**  The name should be a ***verb. e.g. add, read***
3. **Constant - ALL WORDS** should be in **CAPITAL *e.g. PI, MAX\_PRICE***
4. **Packages & Variables –** Should be **small letters. *e.g. stockprice, bank\_details***

The right naming conventions make the code to be more readable.

**Logical Operators.**

***Ternary operator:***

Syntax: ***condition? expression1: expression2 –*** If the condition is ***true, the FIRST expression is executed, else the second operation is executed.***

The ternary operator is used to replace/shorten the if-else statement.

***Switch statement***

This is used for multiple cases where writing multiple if-else statements is cumbersome. It is only used with the **int and char data types.**