***Patrick Siewe***

***Summary of the Learning this week***

1. **DATA TYPES**

**There different 02 types of data types**

1) Primitive data types

**Byte** hold number between -128 to 127

**Short** hold Its range is -32,768 to 32767.

**Int** hold wider range: -2,147,483,648 to 2,147,483,647

**Long** wider range: -2,147,483,648 to 2,147,483,647

**Double** Can hold 15 decimal digits

**Float** Can hold 6 to 7 decimal digits

**Char** holds characters.

**Boolean** holds either true of false

2) Non-primitive data types

**Arrays and Strings**

# Variables in Java

## **1-How to Declare a variable in Java ?**

To de a variable follow this syntax: **data\_type variable\_name = value;**

# Variable Name cannot contain spaces exple: num\_name instead of num name

## **2-Types of Variables in Java**

There are **three types of variables** in Java.

**1) Local variable:** These variables are declared inside method of the class. Their scope is limited to the method which means that You can’t change their values and access them outside of the method.

**2) Static (or class) variable:** Associated with the class and common for all the instances of class

**3) Instance variable:** have their own separate copy of instance variable.

# Access Modifiers in Java

As the name suggests access modifiers in Java helps to restrict the scope of **a class, constructor, variable, method, or data member**. There are **four types of access modifiers** available in java:

1. **Default** – No keyword required

When no access modifier is specified for a class, method, or data member – It is said to be having the **default** access modifier by default.

**EXPLE: void display()**

The data members, class or methods which are not declared using any access modifiers i.e. having default access modifier are accessible **only within the same package**.

1. **Private**

The private access modifier is specified using the keyword **private**.

The methods or data members declared as private are accessible only **within the class** in which they are declared.

**EXPLE: private void display()**

1. **Protected**

The protected access modifier is specified using the keyword **protected**

The methods or data members declared as protected are **accessible within the same package or subclasses in different packages**

**Exple: protected void display()**

1. **Public**

The public access modifier is specified using the keyword **public**.

* 1. The public access modifier has the **widest scope** among all other access modifiers.
  2. Classes, methods, or data members that are declared as public are **accessible from everywhere** in the program. There is no restriction on the scope of public data

**Exple: public static void main(String args[])**

**Recap**

