```java
package com.geraldineciancanelli.week1videoclass;

public class App {

 public static void main String[] args) {
 // TODO Auto-generated method stub

 //Data Types

 //Primitive Data Types (pure date - 8 types)

 //boolean is true or false (true or false always lower case)
 boolean isTeaching = true;

 // ; is used when there is an action

 //int 32 bitsis an integer so any whole number positive or negative
 int age = 33;

 //double - 64 bits NASA calculations or a value
 double price = 789.90;

 //float - 32 bits not as accurate
 float number = 2378.1f;

 //long - 64 bits - like integers but bigger range
 short anotherNumber = 232098;

 //short - 16 bits - like integers but smaller range
 short num = 2;

 //byte - 8 bits is smaller is either a 1 or 0
 byte something = 1;

 //char - single character in single quotes letter or number off keyboard
 char letter = 'a'

 //Object Types - classic definitions
 String name = "Cassandra";
 //String is the Object always capitalized , name is the variable
 // you can add strings together but not subtract them
 // String something = firstName - lastName; //error

 //SYNTAX
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//dataType identifier = value;

boolean True = true;

boolean isRaining = true; // boolean isRaining = true;

//OPERATORS
//Arithmetic Operators

int x = 10;
int y = 20;

String firstName = "Cassandra"
String lastName = "Matos-Mendez"

int sum = x + y; //30
System.out.println(sum);

String fulName = firstName + " " lastName;
System.out.println(fulName);

int difference = x-y; //-10
System.out.println(difference);

int product = x * y; //200
System.out.println(product);

//String mulStrings = firstName * 3; // -ERROR

int quotient = y/x; //2
System.out.println(quotient);

int mod = y % x; // 0 - the remainder is returned  10 goes into 20 with nothing left over
System.out.println(mod);

int anotherMod = 15%2; // 1 - 7 goes twice into 15 with 14 and 1 left over.
System.out.println(mod);

// Use modulus 2 return a 1  = odd #
// Use modulus 2 return a 0 = even #

// Pre & Post Increment or Decrement

int a = 3;
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int b = ++a +4; //a pre increment (increment by 3 +1 = 4) +4 =8
int c = 2 + a++; //post increment increment  = 2 +(4 from above equation){increment by 3} = 6
System.out.println(a);

int a = 3
int b = 4 + a++ // =7  // 4 +3
int c = 2 + a++ // = 6  // 2 + (1 +3)
System.out.println(a);

//a++ the + 1 goes to the next line
//++a the +1 goes on the current line

int j = 1;
int k = --j + 7; // -1 +1 (0) +7 = 7
int l = 3 + j--; // 3 + 0 = 3
int m = ++j + 4; // -1 +1 +4 = 4
System.out.println(j);

// a-- the -1 goes to the next line
// --a the -1 goes to the current line


// Assignment Operators
// = assigning a value
int aNumber = 8;

aNumber += 2; // aNumber = aNumber +2; 10
aNumber -= 1; // aNumber = aNumber -1; 9
aNumber *= 3; // aNumber = aNumber *3; 27
aNumber %= 2; // aNumber = aNumber /2; 1

//Comparison Operators
// ==
int w = 12;
int z = 89;

System.out.println(w == z); // false


// !=   (not equal)

System.out.println(w == z); // true

// >  (greater than)
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System.out.println(w > z); // false

// >= (greater than or equal)
System.out.println(w >= z); // false

// <  (less than)
System.out.println(w < z); // true

// <= (less than or equal)
System.out.println(w <= l); // true



//Logical Operations
// AND &&
// Combing two ands it ALL needs to be true to be true

int a = 10;
int b = 7;
int c = 89;
int d = 4;

System.out.println(a < b && d != c && b == d); // false && true && false
// a < b = false
// d != c = true
// b == d  = false
// once you get a false they are all false = you need them all true for it to be true

System.out.println(a > b && d != c && d <= b); // true && true && true = true
// This is AND && true

// OR ||
// you only need ONE to be true for it to be true
System.out.println(a < b || d != c || b == d);  // false || true || false = true

// NOT !
// it makes it the opposite of what it is - true to false and false to true
System.out.println(!(a < b || d != c || b == d)); // false (was true originally)


// Java follows order of P() E^ M* D/ A+ S-
```