int x = 10;

if x value is divisible by 5 then print "Hello" // 10
if x value is divisible by 3 then print "Welcome" // 9
if x value is divisible by 5 and 3 then print "Hello Welcome" // 15,30
if x value is not divisible by 5 and 3 then print "invalid number" //2,11

Datatypes in java:
==========

--java supports 8 primitive datatypes under 4 categories:

A. Integers:

1.byte 8 bit/1 byte 0 -128 to 127
2.short 16bit / 2 byte 0
3.int 32 bit/ 4 byte 0
4.long 64 bit/ 8byte 0

B.Real numbers:

5. float 32 bit or 4 bytes 0.0
6.double 64 bit or 8byte 0.0

C. Charecters:

7.char --- 16 bit or 2 byte ' '

D. Boolean

8. boolean -- 1 bit (true or false) : false

Note: any number with the decimal point value would be accepted by the jvm as double not as a float

*****local variable must be initialized before we use it.**

typecasting:
=========

--the procedure of converting one data type into its equivallent another data type is known as typecasting.
--we have 2 types of typecasting:

1.implicit typecasting: (widening or upcasting)

--storing the smaller datatype value into its equivallent bigger datatype

2.explicit typecasting: (narrowing or downcasting)

--storing the bigger datatype value into its equivallent smaller datatype

```
byte b =10;

byte c = (byte)(b+1);
```

Note: if we use arithmatic operator (+, - , * , /, %) with two datatypes then the resultent data type will be according to the following rule:

max(int, type1, type2, ...);

int= max(int, byte, byte);

byte to char conversion:
==========

--byte and char both are compatible type, their value can be assignd to each other, implicitly conversion takes places.

```
char c1 = 'A';
char c2 = 100;


System.out.println(c2);
```

ex2:

```
char c1 = 'A';
```

```
byte c2 = (byte)c1;

System.out.println(c2);
```

ex3:

```
byte b =70;

char c = (char)b;


System.out.println(b);
```

****

1) For compute-launch-button-tooltip Error:
https://stackoverflow.com/questions/12529629/eclipse-an-internal-error-occurred-during-compute-launch-button-tooltip

Try setting the launch properties in:
Window>Preferences>Run/Debug(Expand)>Launching(Click)

Under launch Operations menu set it to: Always launch the previously launched application Click: Apply>Ok

----

2) For Pushing in Github directly From STS:

https://www.geeksforgeeks.org/how-to-export-eclipse-projects-to-github/#:~:text=Step%25201%253A%2520Open%2520Eclipse%2520IDE,go%2520to%2520Team%252D%253Ecommit.

If still facing issue push it manually for now.

----

3) for jdk error: change version of JDK to 1.7

****

Class and Object concept:
==========

Java is an Object Orineted Programming language:

OOP supports OOPs concept:

oops concept having some principles:

1.encapsulation :- it is the backbone of OOPs concept.
2.abstraction
3.polymorphism
4.inheritance

Java mostly used to develop Business application:

Business Organization: without computer: manually
Goal : earn profit

---to computerize the services offered by any business organization whatever application we develop is known as Business application.

any program or application common part:

1. data

variables

2.logic

functions/ methods

example:

Banking application:
----
class Account{

private String customerName

```
private int accno
private double balance = 10000;

public deposit(int amt){
//security

balance = balance+amt;

}
public withdraw(int amt){
//securty logic
balance = balance - amt;
}
checkBalance()
transferAmount()

}

class Authentication{

changePassword()
login()
logout()

}
```

---untill anything(data) loaded into the RAM (primary memory) it will not be available to the CPU for the execution.