**Variable**

Type of Variable Name of variable Variable Assignment

**Int** age;

**Double** Price =10.5;

**Int** Count, Sum;

**Var** age =25;

//Compiler look at right hand side so there is 25 then it took age as **Int**

**Var** Price =10.5

//Compiler look at right hand side so there is 10.5 then it took age as **Double**

If we don’t have right had side value then we can not use **Var**.

**Primitive Type**

What are primitive type in java?

Byte

Short Integer (they can be Negative)

Int

Long

Float Floating Point

Double

Char

Boolean

Int 32 bit Signed twos compliment

8 bit = 1 byte

31 bit in use

1 bit for + or –

Double

64 bit Floating

**Literals**

A way to specify value inline

Int age = 25;

Int count = 0b101010

1. Used for sign

b-bit

int price=25**\_**000; Twenty five Thousand

Java ignore **\_** underscore

Instead of ,(comma) we use \_ (underscore)

Double literals

Double price =25.75;

Double Coeff= 23\_456.75\_01;

Double val=5.012E15

E –exponent =1015

Double price = 25D;

Var price = 25D;

boolean literals

boolean am confused= true;

Char literals

Char X = ‘x’;

String literals

String is not primitive Type

String name = “sauabh”;

Java is strongly Type language

Every variable has a type

Static typing

What is Static Typing?

Static typing refers to practice of specifying the data type of variable

When it is declared

<type> <varname> = <Value>

These Two types should ~~match~~ be **compatiable**

Means

Suppose

<type> is double (biger range)

<value> is int

But double also have whole number so java do the conversion and assign them

Conversion in number Type

Int a=10;

Double b=a;

But,

Double a =10.5;

Int b = a; ( does not work)

Type Conversion work when

-Compatible type

- Destination is larger than source

short to int

byte to int

float to double

Casting

when you know conversion is okay

double a = 10;

int b = a; (does not work)

int b = (int) a ;