Data Type, Operator & Expression

Variable Declaration:-

Java is Statically Typed language. For this reason we have to write type when declare variable.

Variable Types:-

1. Instance Variable.
2. Class Variable.
3. Local Variable.
4. Parameter Variable.

Rules of Variable Declaration:-

1. We can Variable Declare with start ‘$’,’-‘ symbol.
2. Static Final field have to write Capital letter.

Ex:- TOTAL\_BALANCE=10;

Data Types:-

1. Primitive Type
2. Reference Type

Primitive Type have no Class , for this we can’t create object of primitive type.

Wrapper Class:-

In java we have Reference Types of every Primitive Type. It’s called Wrapper class.

It memory type like primitive type.

We create object of Reference type with ‘new’ keyword.

We have use Primitive type & Reference Type with one. It called Automatic Conversion.

Primitive ---> Wrapper class It called Autoboxing.

Wrapper class ---> Primitive It called Unboxing.

Primitive Data Type have a Default value.

Ex:- char=’\u000’;

Literal

Underscore symbol in Numeric literal:-

We use underscore symbol for read easily.

Ex:-

Int a=1\_100\_969; // 1100969

Int b=1\_\_192;//1192

O=octal

Ob=Binary

Ox=Hexadeciaml.

Division Operator:-

Integer number is rounding inside 0.

Double d=1/3; //0.0

Because, 1 & 3 is division for this reason the java will Divide integer.

Rounding Error:-

Float point number is not wont absolute .

Ex:-

System.out.println(0.1+0.1+0.1+0.1+0.1+0.1+0.1+0.1+0.1+0.1);

This output will 0.99999 but, it should have 1.0 the reason is Rounding Error.

Double balance=1000.45;

If balance money is 100, 45 is poysa . here have Rouding Error.

But, if we convert the money into poysa here have no problem.

Int balance=100045;

Unary Operator:-

+, --, ++, -, !

Int result=+1;

Result= - result;

OverFlow & UnderFlow:-

Overflow:-

Int a=Integer.Max\_VALUE;

Int b=a\*10;

Here have overflow.

Underflow:-

When we divide integer values, then have underflow.

System.out.println(1/2); // 0

Type Conversion & Type Custing

When we convert small ---> large : Type conversion/ widening primitive Conversion.

When we convert large ---> small : Type casting/ Narrowing primitive Conversion.

Expression:-

A=1+2;

Here have two expression.

‘1+2’ and ‘=’ .

Statement:-

প্রোগ্রাম এ ব্যবহত আর্থবোধক লাইঙ্কে বলা হয় Statement.

কতকগুলো Expression ‘;’ দ্বারা শেষ করলে সেটি হয়ে Statement যায়। it called Expression Statement.