

Assignment Questions

- i) What is Statically typed and Dynamically typed Programming Language.
- a) Statically typed Programming Language.
The programming language in which the type of data/information stored in the memory of the variable is defined during the compilation, those are called as Statically/Strictly/Strongly typed programming Language.
Ex! C, C++, java etc.
- b) Dynamically typed PL: The Programming Language in which the type of data ~~etc~~ stored in the memory location of the variable is defined during the execution, those are called Dynamically typed programming language.
Ex! PHP, Python, java script.

2.) What is the variable in java.

Variable is the name of the reserved area allocated in memory. in other words, it is the name of memory location.

Syntax of Variable

(i) Data_Type variable_name = value

- ① → Type of data stored in that variable
- ② → name of the variable/memory location
- ③ → Data/Information ~~store~~ that is being stored in that variable/memory location.

(3) How to assign a value to variable?

Initialization → Assigning a value to the variable
→ It is an optional mean

- It can be done during declaration
- or after the declaration.

→ We place assigning operator (=) after the variable name and place the variable value after it.

int a; // declaration

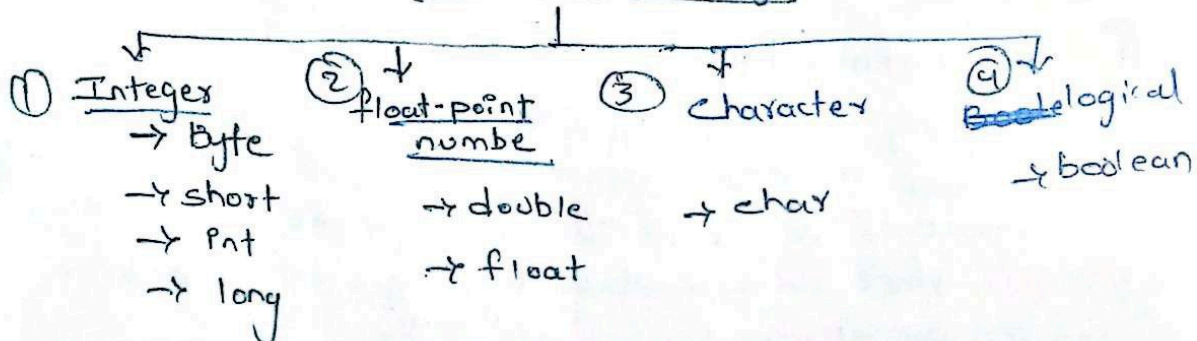
a = 5; // Initialization

The left operand of '=' sign will be assigned to right operand.

(4) What are Primitive Data Types.

Primitive Data Types are ~~primitive~~ predefined in java and are named by Reserved keywords.

Primitive Data types



① Integers

(a) Byte :

1 byte (8 bits) storage is allocated

Ex: `byte data = 45;` Value stored by byte data type
range from -128 to 127.

(b) short : 2 byte (16 bits) storage is allocated

values stored by short data type
range from

-2^{15} to $2^{15}-1$ Ex: `short data = 145;`

(c) int : 4 byte (32 bits)

values stored by int data type

`int data = 23456;`

range from -2^{31} to $2^{31}-1$

(d) long : 8 byte (64 bits)

Range -2^{63} to $2^{63}-1$

Ex: `long data = 23456769;`

② float-point number

(a) float : A float data type of 32 bits

stores a floating point with single precision

Ex: `float data = 15.6 f;`

(b) double : A double data type of 64 bits

stores a floating point number with
double precision.

Ex: `double data = 15667.9867;`

③ Character

• `char` : A char data type stores
a single character (A to Z, a to z
and any one symbol)

Ex: `char a = '$';`

④ Logical

• `boolean`, is a such a data type
which stores only either true or false

`boolean pavan = true;`

- ⑤ What are identifiers in Java
Identifiers are names given to packages, classes, variable etc.

Convention for identifiers

- The starting letter/character of identifier should be A to Z or a to z or (dollar sign) \$, - (underscore)
- After the starting character, there can be any kind of combination of character
- keyword can't be identifiers.
- In case of more than one word of identifiers use Camel case.

- ⑥ List of Operators in java

- Arithmetic Operator
- Logical operator
- Increment/Decrement Operator
- Relational Operator
- Bitwise Operator
- Assignment Operator
- Unary Operator.

- ⑦ Explain about Increment and Decrement Operators and give an example

① Increment Operator \rightarrow Increases the value of variable by one
(++)

② Decrement Operator \rightarrow Decreases the value of variable by one
(--)

① Increment $\left\{ \begin{array}{l} \text{Post} \\ \text{Pre} \end{array} \right.$ The result of post and pre decrement/increment are same but when they assign to another variable makes difference

② Decrement $\left\{ \begin{array}{l} \text{Post} \\ \text{Pre} \end{array} \right.$

Ex:

```
int a = 5;
```

```
int b = a++ // post increment
```

```
int c = ++a // pre increment
```

```
cout(b); // 5
```

```
cout(c); // 6
```


int a = 5

int b = --5; // pre decrement

int c = 5--; // post decrement

cout(b); // 4

cout(c); // 5