Assignment Questions

1) 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 ~~sto~~ 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 (2) = value (3)

① → Type of data stored in that variable
② → name of the variable/memory location
③ → Data/Information 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 varrable 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 predefined in java and are named by Reserved keywords.

Primitive Data types

① Integer
→ Byte
→ short
→ Int
→ long

② float-point numbe
→ double
→ float

③ character
→ char

④ logical
→ boolean

① Integers

ⓐ Byte : 1 byte (8 bits) storage is allocated

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

ⓑ 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;

ⓒ int : 4 byte (32 bits)

values stored by int data type range from -2^{31} to $2^{31}-1$

int data = 23456;

ⓓ long : 8 byte (64 bits)

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

Ex: long data = 2345676l;

② float-point number

ⓐ float : A float data type of 32 bits stores a floating point with single precision

Ex: float data = 15.6f;

ⓑ 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

→ Arithmatic Operator
→ Logical operator
→ Increment / Decrement Operator
→ Relational Operater
→ Bitwise Operator
→ Assignment Operator
→ Unary Operator.

(7) Explain about Increment and Decrement Operators and give an ~~exp~~ examples

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

② Decrement Operator (--) → Decreases the value of variable by one.

① Increment — Post, Pre
② Decrement — Post, Pre

The result of post and pre decrement/increment are same but when they assign to another variable makes difference

Ex:

```
int a = 5;
Int b = a++; //post increment
int c = ++a; //pre increment
Sout(b); // 5
Sout(c); // 6
```

```
int a = 5
int b = --5; // pre decrement
int c = 5--; // post decrement
cout(b); // 4
cout(c); // 5
```