Java variables and data type · Assignme

1. What is statically typed and Dynamically typed programming ~~lgg~~ language?

→ A statically typed programming language is one in which the type of a value is determined at compile-time based on how the programmer has declared it. This means that if you try to assign a value of the wrong type to a variable the compiler ~~with~~ will catch the error before the program is run. Examples of statically typed language include Java, C++, and C#

A dynamically typed programming language is one in which the type of a value is determined at runtime, based on the value itself. This means that a variable can hold values of different types at different times during the execution of the program. Examples of dynamically types language include python, Ruby, and Javascript.

2. What is the variable in Java?

→ • A variable is the title of a reserved region allocated in memory.
• It is a container that holds the value while the Java program is executed

- Each variable should be given a unique name to indicate the storage area.
- A variable is assigned with a data type.

3. How to Assign a value to variable?
→ You can assign a value to a variable by using the "=" operator.

```
int x = 5;
```

4. What are primitive data types in Java?
→ Primitive data types are basic data types that are built into the language and can represent single values.
There are 8 primitive data types in Java:
i. byte ii. Short iii. int iv. long v. float vi. double vii. char viii. boolean.

5. What are the Identifiers in Java?
→ An identifier is a name given to variable class, method, or any other user-defined item.
1. An identifier must start with a letter (uppercase or lowercase), underscore (_) or dollar sign ($).
2. An identifier can contain letters, digits, underscores, or dollar sign.
3. An identifier cannot be a reserved word, such as "int", "class", or "Public".

4. An identifiers cannot contain spaces or special characters, such as !, #, @, %. etc
5. Java is case sensitive, so "count" and "Count" are considered two different identifiers.

6. List the operators in Java?

i. Arithmetic operators: +, -, *, /, %, ++, --
ii. Compassion operators: ==, !=, >, <, >=, <=
iii. Logical operators: &&, ||, !
iv. Bitwise operators: &, |, ^, ~, <<, >>, >>>
v. Assignment operators: =, +=, -=, *=, /=, %=
vi. Ternary operator: ? :
vii. Instance of operator: instance of.

7. Explain about Increment and decrement operators and give an example.

→ The increment and decrement in Java are used to increase or decrease the value of a variable by 1.

1. Increment operator (++): The increment operator increments the value of a variable by 1. It can be used in two forms: Prefix (++x) and Postfix (x++). In the prefix form, the value is increm-ented first, and then the expressio is evalulated. In the postfix form, the value is incremented after the expression is evaluated.

Example:

```
int x=10;
int y=++x; // x=11, y=11
int z=x++; // x=12, z=11.
```

2. Decrement operator (--): The decrement operator decrements the value of a variable by 1. It can also be used in two forms: Prefix (x--). In the prefix form, the value is decremented first, and then the expression is evaluated. In the postfix form, the value is decremented after the expression is evaluated.

Example:

```
int a=10;
int b=--a; // a=9, b=9
int c=a--; // a=8, c=9.
```