Variables and Datatypes by Munawar

Component or Anatomy of Java program

Documentation Section   --------------------- Suggested

Package statement --------------------- Optional

Import statements -------------------- Optional

Interface statements-------------------- Optional

Class Definitions -------------------- Optional

Main Method Class

{

Main method definition --------------------- Essential

}

Data Types in Java

Variable like a container

Two types of data types

1. Primitive Data Type   2. Non primitive Data types

Int   non primitive data types derived from primitive

Byte   data types

Long

Float

Double

Short

Bool

Short

Char

Variable

Variable is container that store a value this value can be changed during the execution of the program.

Example:

 Int number=4;

Int is data type   number is variable name   8 is value store in variable

Rules for declaring a variable name

We can choose a name while declaring a java variable if the following rules are followed.

1. Must not begin with a digit. -----------   Int 1mun=8;

2. Name is case sensitive -----------   munawar and Munawar are deferent

3. Should not be a keyword -----------   like void

4. White space is not allowed -----------   char munawar Hussain=148;

5. Can condition alphabet, $ character, _character and digits if the other conditions are met. ------------------ char munawar_148=10;

Data Types

Data types in java fall under the following categories.

1. Primitive data types (intrinsic)

2. Non primitive data types (derived)

Primitive Data Types

Java is statically typed. Variable must be declared byte use.

There are 8 primitive data types supported by java.

1. Byte: value ranges from -128 to 127

Take 1 byte

Default value is 0

2. Short: value range from - (2^16)/2 to (2^16)/2-1

Takes 2 bytes

Default value is 0

3. Int: value range from - (2^32)/2 to (2^32)/2-1

Takes 4 bytes

Default value is 0

4. Float: value range from (see docs)

Takes 4 bytes

Default value is 0

5. Long: value range from - (2^64)/2 to (2^64)/2-1

Takes 8 bytes

Default value is 0

6. Double: value range from (see docs)

Takes 8 bytes

Default value is 0.0d

7. Char: value range from 0 to 65535 (2^16-1)

Takes 2 bytes

Default value is '\0000'

8. Boolean: Value can be true or false

Size depend on JVM

Default value is false

Quick quiz print the sum of three numbers?

```java
public class Main {
    public static void main(String[] args) {
        int a=10;
        int b=20;
        int c=30;
        int sum=a+b+c;
        System.out.println("The sum of a b and c is :");
        System.out.print(sum);
    }
}
```

Source Code

```java
public class Main {
    public static void main(String[] args) {
        int a=10;
        int b=20;
        int c=30;
        int sum=a+b+c;
        System.out.println("The sum of a b and c is :");
        System.out.print(sum);
    }
}
```

Thank You