Topic

1. Java data Type
2. Variable
3. How to print
4. My First Java program
5. Arithmetic

Java Data Type and Variables

Variables are containers for storing data values.

In Java, there are different **types** of variables:

- `int` - stores integers (whole numbers), without decimals, such as 3,5,6 or -5,-7
- `float or double` - stores floating point numbers, with decimals, such as 3.7 or -1.8
- `char` - stores single characters, such as 'a' or 'B'. Char values are surrounded by single quotes
- `String` - stores text, such as "NextTech". String values are surrounded by double quotes
- `boolean` - stores values with two states: true or false

Example:

Syntax: Datatype variablename=value;

int a=2; Integer (whole number)

double b=2.4; Floating point number

char c= ‘a’; // Character

```
String x= "NextTech" //String value

String School= "NextTech" //String value

String Pharm="CVS";

//data type and variable
            //integer
            int value1=5;
            double value2 =4.4;

            //we have 2 types of error 1. compile error 2. run time error

            String flower1="rose";

            String flower2="sunflower";


boolean myBool = true; // Boolean
```

Arithmetic Operators

Arithmetic operators are used to perform common mathematical operations.

Operator	Name	Description	Example
+	Addition	Adds together two values	x + y
-	Subtraction	Subtracts one value from another	x - y

*	Multiplication	Multiplies two values	x * y
/	Division	Divides one value by another	x / y
%	Modulus	Returns the division remainder	x % y
++	Increment	Increases the value of a variable by 1	X++
--	Decrement	Decreases the value of a variable by 1	X--

```
public class Arithmetic {
  public static void main(String[] args) {
    int a = 6;
    int b = 4;
    double mud= a % b ;
    System.out.println (mud);
  }
}
Ans: 2
```

Exercise:

A++

A=A+1

A+=2;

A=A+2;

B-=3;

B=B-3;

```
package com.nexttech.java;

public class Lec1Arithmetic {

	public static void main(String[] args) {
		// addition
		int value1= 4;
		int value3=5;
	double value2=3.4; //declaring variable and value

		double sum=value1+value2;
		System.out.println(value1); // always print variable to see the
result in console
		System.out.println(value3);
		//System.out.println("the total value is" +sum);
		System.out.println("the total value is"+" "+sum);
		System.out.println("my first code");
		System.out.println("anything");
		System.out.println("hdhd");
```

```
        //Subtraction

        double sub=value3-value1;
        System.out.println("the sub is "+sub );
//multiplication
        double mul=value1*value2*value3;

//Division

        double div=value3/value2;

//Modul

        double mud= value1%value2;
```

Java Comparison Operators

Comparison operators are used to compare two values:

Operator	Name	Example
==	Equal to	a== b
!=	Not equal	a != b
>	Greater than	a > b
<	Less than	a < b
>=	Greater than or equal to	a >= b
<=	Less than or equal to	a <= b

Example

```
public class Operator {
```

```
  public static void main(String[] args) {
    int a = 8;
    double b = 4.6;
    System.out.println(a == b); // returns false because 8 is not equal to
4.6
  }
}
```

Java Logical Operators

Operator	Name	Description	Example
&&	Logical and	Returns true if both statements are true	x < 5 && x < 10
||	Logical or	Returns true if one of the statements is true	x < 5 || x < 4

```
public class Arithmetic{
  public static void main(String[] args) {
    int a = 8;
    System.out.println(a > 4 && a < 9); // returns true because 8 is
greater than 4 and less than 9
  }
}
```