Data types in Java:

Variables are nothing but reserved memory locations to store values. This means that when you create a variable you reserve some space in the memory. Based on the data type of a variable, the operating system allocates memory and decides what can be stored in the reserved memory. Therefore, by assigning different data types to variables, you can store integers, decimals, or characters in these variables.

Data types specify the different sizes and values that can be stored in the variable. There are two types of data types in Java:

1. Primitive data types.
2. Non-primitive data types.
Primitive data types.

There are eight primitive data types supported by Java. Primitive data types are predefined by the language and named by a keyword. Let us now look into the eight primitive data types in detail.

**byte**

Byte data type is an 8-bit integer
- Minimum value is -128
- Maximum value is 127
- Default value is 0
- Example: byte a = 100, byte b = -50

**short**

Short data type is a 16-bit integer
- Minimum value is -32,768
- Maximum value is 32,767
- Default value is 0.
- Example: short s = 10000, short r = -20000

**int**

int data type is a 32-bit integer.
- Minimum value is -2,147,483,648
- Maximum value is 2,147,483,647
- The default value is 0
- Example: int a = 100000, int b = -200000
long

Long data type is a 64-bit integer
This type is used when a wider range than int is needed
Default value is 0L
Example: long a = 100000L, long b = -200000L

float

Float data type is a single-precision 32-bit floating point
Default value is 0.0f
Example: float f1 = 234.5f

double

double data type is a double-precision 64-bit floating point
Double data type should never be used for precise values such as currency
Default value is 0.0d
Example: double d1 = 123.4

boolean

boolean data type represents one bit of information
There are only two possible values: true and false
Default value is false
Example: boolean one = true

char

char data type is a single 16-bit Unicode character
Char data type is used to store any character
Example: char chr = 'A'
Non primitive Data type:

The non-primitive data types in Java are objects and arrays. These non-primitive types are often called "reference types" because they are handled "by reference" in other words, the address of the object or array is stored in a variable,

- Class objects and various type of array variables come under reference data type.
- Default value of any reference variable is null.

Programs in java:

Program 1.

Input a number and print the table of the number up to 10 multiples.

class display
{
    public static void main(int n )
    {
        int i, x=0;
        for(i=1 ;i <= 10; i ++)
        {
            x = n * i;
            System.out.println(x);
        }
    }
}
Program 2:
Write a program to print the given output.

1  3  6  10  15  21  28  36  45  55

class display
{
    public static void main( )
    {
        int i, s=0;

        for(i=1 ;i <= 10; i++)
        {
            s=s+i;
            System.out.println(s);
        }
    }
}
Program 3:

The given series is known as Fibonacci series.

0 1 1 2 3 5 8 13 21 34

In the series every third number is sum of previous two numbers.

class Fibo
{
    public static void main( )
    {
        int i , a=0,b=1, c=0  ;
        for(i=1;i<=10;i=i+1)
        {
            System.out.println(a);
            c=a+b;
            a=b;
            b=c;
        }
    }
}