Assignment - 1   CSAC96   Programming in Java. Data types in Java

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Data type:

Data type are at different size and value that can be stored in the variable, that is made to run operations. These are two types.

    1) Primitive data type

    2) non-primitive data type

Primitive data types:

Primitive data types are predefined by the language and named by a reserved keyword

1) Byte:-

It is a 8-bit signed integer. It is two's complement integer. Eg: Byte num=10;

2) Short:

It is a 16-bit signed integer. It is also two's complement integer

    Ex: Short num = 100;

3) Int:

It is a 32-bit signed two's complement integer.

    Ex: int num = 100000;

4) long:

* It is 64 bit signed two's complement integer
* long is 8 byte in size.
* Ex: long num = 1000000000L;

5) Float:

* It is a 32-bit floating point number datatype.
* Ex: float num = 10.55f.

6) double:

* It is a 64-bit floating point number datatype.
* Ex: double num = 10.555

7) Char:

* It is a 16-bit unicode character datatype.
* Ex: char a = 'A';

8) boolean:

* It is a different data type which represents either "true" or "false"
* Ex:- boolean is valid = true;

Non-primitive data types

Non-primitive data types are not pre defined by the language, but are created by the programmer. This are also called reference types because they refer to objects.

1) Arrays:

It is a collection of similar types of elements

Ex: int [] arr = {1,2,3,4,5};

2) Strings:

It is a sequence of characters in data types

Ex: string name = "Jass";

3) classes:

It is a user defined blueprints by prototype from which objects are created.

Ex: class Car {
    String model;
    int year;
}

Car mycar = new car ();
mycar.model = "suzuki";
mycar.year = 2020;

4) Interfaces:

* It is a data type in which declared in Blueprint of methods.

Ex: interface Shape {
    void draw ();
}

class circle implements Shape {
    public void draw () {
        System.out.println ("Drawing circle");
    }
}

5) collections:

It is framework that provides an architecture to store and manipulate a group of objects

Ex: import java.util.ArrayList;

ArrayList<Integer> numbers = new ArrayList<>();
numbers.add(1);
numbers.add(2);

6. Enums:

It is special data types that enables for a variable to be a set of predefined constants

Ex: enum Days {
    Sunday, Monday, Tuesday, Wednesday, Thursday, Friday Saturday }

Day today = Day.monday