Dt : 19/7/2023

faq:

define "Object"?

=>"Object" is a Storage related to a class holding the members of Class.

=>we use "new" keyword in Java to create "Objects".

syntax of Object Creation:

Class_name obj_name = new Class_name();

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(a)Classes in Java:

=>Class in Java is a "Structured Layout" generating "Objects".

=>Class is collection of Variables,Methods,blocks,Constructors and main().

=>Classes in Java are categorized into two types:

1.Pre-defined classes

2.User defined classes

1.Pre-defined classes:

=>The classes which are ready constructed and available from JavaLib are known as Pre-defined classes or Built-in classes.

Ex:

String

System

2.User defined classes:

=>The classes which are defined by the programmer are known as User defined classes.

Ex:

Display

Addition

DataTypes

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Variables in Java:

=>Variables are the data holders in the programs.

=>Based on datatypes,the variables in Java are categorized into two types:

1.Primitive datatype variables

2.NonPrimitive datatype variables

1.Primitive datatype variables:

=>The variables which are declared with primitive datatypes like byte, short,int,long,float,double,char,boolean are known as Primitive datatype variables.

=>These Primitive datatype variables will hold "values".

2.NonPrimitive datatype variables:

=>The variables which are declared with NonPrimitive datatypes like Class, Interface,Array,Enum are known as NonPrimitive datatype variables or Referential datatype variables.

=>These NonPrimitive datatype variables will hold "object references"

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"static" keyword in Java:

=>"static" keyword in Java "will specify the location of Programming Component memory" in Class or Object.

=>static programming components will get the memory within the class.

=>NonStatic programming components will get the memory within the Object.

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=>Based on "static" keyword the variables in Java are categorized into two type:

1.static variables

2.NonStatic variables

1.static variables:

=>The variables which are declared with "static" keyword are known as Static variables or Class Variables.

=>These static variables will get the memory within the class while class loading and can be accessed with class_name.

2.NonStatic variables:

=>The variables which are declared without static keyword are known as NonStatic variables.

=>These NonStatic variables are categorized into two types:

(a)Instance variables

(b)Local Variables

(a)Instance variables:

=>The NonStatic variables which are declared outside the methods are known as Instance variables or Object Variables.

=>These Instance variables will get the memory within the object while Object creation and can be accessed with Object name.

(b)Local Variables:

=>The NonStatic variables which are declared inside the methods are known as Local variables or method Variables.

=>These Local variables will get the memory within the method while method

execution.

Ex-program : DemoVariables.java

```
class Test
{
        int x;
        static int y;
}
class DemoVariables
{
        int a;
        static int b;
        public static void main(String[] args)
        {
    DemoVariables.b=12;
          Test.y=13;
    DemoVariables ob1 = new DemoVariables();
    ob1.a=14;
    Test ob2 = new Test();
    ob2.x=15;
          System.out.println("b value="+DemoVariables.b);
          System.out.println("y value="+Test.y);
```

```
        System.out.println("a value="+ob1.a);
            System.out.println("x value="+ob2.x);
        }
}
```

o/p:

b value=12

y value=13

a value=14

x value=15

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