Java Basics:

1. Whenever we are going to write any program in java, the business logic/code/logical behavior must be inside a class or an interface

Class/Interface:
It's basically a design pattern/structure/blue print.

Declaring a class:
Syntax:
<access specifier> <class name>
{
    <codes>;
}

Q. What class contains?
Ans: Methods/functions and variables

Variables:
It's a container/memory location where we can store the data

Datatypes:

1. These are different types of data which can be stored in the memory location
2. In java there 2 different types of datatypes
    1. Primitive
    2. Derived/Non-primitive

Primitive:

1. boolean ——> Can take only true/false value ———> Default value: false
2. char ———-> can allow a single character value and must enclosed inside single quote ———> Default value: 0
3. byte ———-> Memory use : 1byte = 8 bits ———> Can hold only real numbers ———> Default value: 0
4. short ———-> Memory use : 2bytes = 16 bits ———> Can hold only real numbers ———> Default value: 0
5. int ———-> Memory use : 4bytes = 32 bits ———> Can hold only real numbers ———> Default value: 0
6. long ———-> Memory use : 8bytes = 64 bits ———> Can hold only real numbers ———> Default value: 0
7. float ———-> Memory use : 4bytes = 32 bits ———> Can hold only decimal numbers ———> Default value: 0.0
8. double ———-> Memory use : 8bytes = 64 bits ———> Can hold only real numbers ———> Default value: 0.0

Non-primitive/Derived:
All class type variables/reference. ———> Default value: null
Ex: String, Arrays, Long, Boolean, Double, Integer, Short, Character, Byte, Float

etc.

Keywords:
Each & every programming and scripting languages have their set of keywords. These keywords are the reserved words for the respective programming/ scripting language.

Note:
1. All keywords in java must be in lower case
2. All variable names should start with lower case i.e. in camel case. ex: textEditing
3. All class names should start with upper case i.e. in Pascal. Ex: FindEven
4. All method names should start with lower case. Ex: findLargest()

Declaring a variable:
1. Variable declaration only
   Syntax: datatype variableName
   Ex: int count;
2. Variable declaration with initialization
   Syntax: datatype variableName = value;
   Ex: int count = 5;
3. Declaring multiple variables of similar type
   Syntax: char c1, c2, c3,...;
4. Initializing multiple variables of similar datatype
   Syntax: datatype var1=value1, var2=val2,....;
   Ex: float f1=4.3, f2=5.8;

Different types of variables:
1. local
2. static
3. non-static

Methods:
It's a block which contains a piece of business logic/code/set of logics to perform a specific task.

Declaration of the method:
<access specifier> <static/non-static> <return type> <method name>
{
    <lines of code>
}

Hierarchy:
Class/Interface
    1. Variables ————> Global variables

2. Methods
    Variables ———> Local Variables

Local Variable:

1. Declared inside the method
2. The scope of local variable is inside the declared method. If trying to use/access outside of the declared method then we are going to get compilation error
3. Mandatory to initialize the variable before its use else we are going to get compilation error

Global Variable:

1. Declared inside the class/interface
2. The scope of the global variable is inside the declared class/interface
3. Not mandatory to initialize the variable. If initialized then it’ll take the assigned value else it’ll be assigned with the default value.