JAVA

Review Session

What is a Object ?

Objects have states and behaviors. Example: A dog has states - color, name, breed as well as behavior such as wagging their tail, barking, eating. An object is an instance of a class.

What is a Class ?

A class can be defined as a template/blueprint that describes the behavior/state that the object of its type supports.

What is a Method ?

Method - A method is basically a behavior. A class can contain many methods. It is in methods where the logics are written, data is manipulated and all the actions are executed.

Basic Syntax About Java programs

Case Sensitivity − Java is case sensitive, which means identifier Hello and hello would have different meaning in Java.

Class Names − For all class names the first letter should be in Upper Case. If several words are used to form a name of the class, each inner word's first letter should be in Upper Case. Example: class MyFirstJavaClass

Basic Syntax About Java programs

Method Names − All method names should start with a Lower Case letter. If several words are used to form the name of the method, then each inner word's first letter should be in Upper Case. Example: public void myMethodName()

public static void main(String args[]) − Java program processing starts from the main() method which is a mandatory part of every Java program.

When to use a semicolon vs curly brackets in java?

Semicolon- is used to set the end of the line, like you use a point (.) at the end of a sentence. The semicolon is our way of telling the system here is the end of the line.And if you don't use the semicolon, the system will give you a clear error message.

Curly brackets -The curly braces are to indicate a block of code.

When to use a semicolon vs curly brackets in java?

Ex. Public static void main(String [] args) {
}

Ex. Public class WhoIsThis {
}
Ex. System.out.println();

Ex. int a = 12;

What is a variable ?

A variable is a name for a location in memory used to store a data value.

We use variables to save and restore values or the results of calculations.

The programmer has to tell Java what type of data will be store in the variable's memory location. Its type cannot change.

Variable Declaration

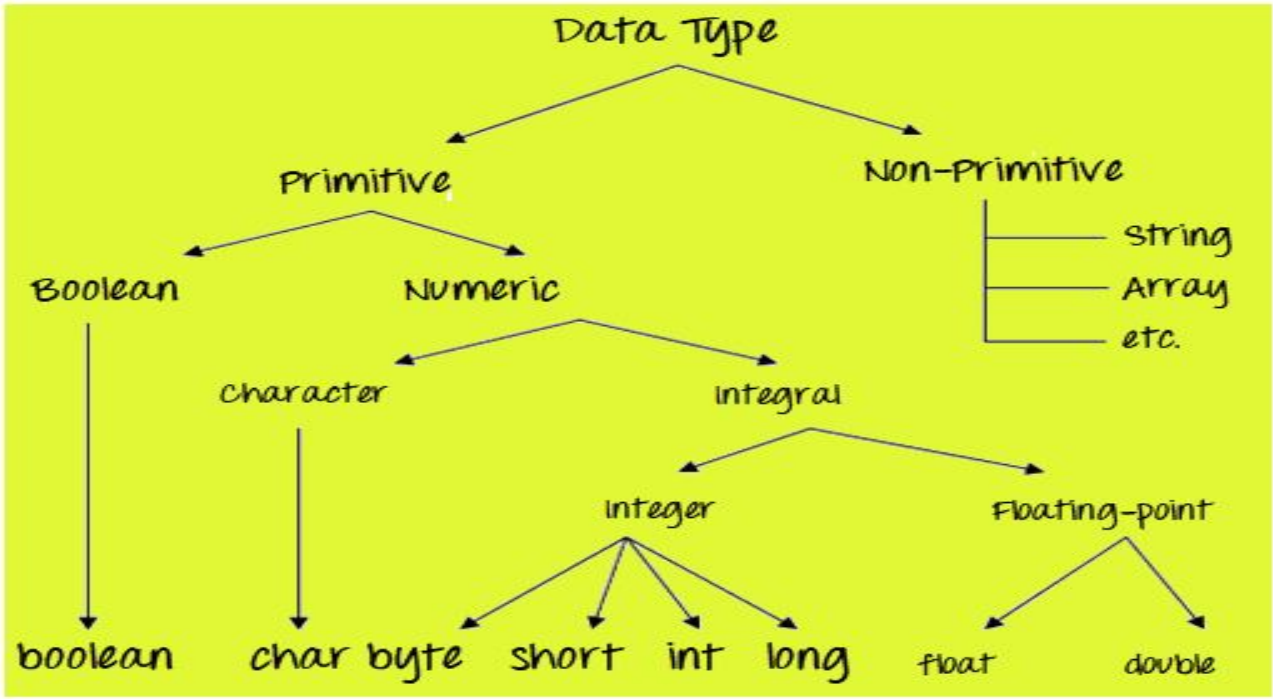
Before you can use a variable, you must declare its type and name.
You can declare a variable only once in a method.
Examples:

```
int numDimes;
double length;
char courseSection;
boolean done;
String lastName;
```

Data Types in Java

Data types classify the different values to be stored in the variable. In java, there are two types of data types:

1. Primitive Data Types
2. Non-primitive Data Types



Primitive Data Types

Primitive Data Types There are eight primitive datatypes supported by Java. Primitive datatypes are predefined by the language and named by a keyword.

byte

Byte data type is an 8-bit
Minimum value is -128
Maximum value is 127
Default value is 0
Byte data type is used to save space in large arrays, mainly in place of integers, since a byte is four times smaller than an integer. Example: byte a = 100, byte b = -50

short

Short data type is a 16-bit
Minimum value is -32,768
Maximum value is 32,767
Short data type can also be used to save memory as byte data type. A short is 2 times smaller than an integer Default value is 0. Example: short s = 10000, short r = -20000

int

Int data type is a 32-bit
Minimum value is - 2,147,483,648 (-2^31)
Maximum value is 2,147,483,647(inclusive) (2^31 -1)
Integer is generally used as the default data type for integral values unless there is a concern about memory.
The default value is 0
Example:int a = 100000;
int b = -200000;

long

Long data type is a 64-bit
Minimum value is -9,223,372,036,854,775,808
Maximum value is 9,223,372,036,854,775,807
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

Float is mainly used to save memory in large arrays of floating point numbers Default value is 0.0f

Float data type is never used for precise values such as currency Example: float f1 = 234.5f

double

double data type is a double-precision 64-bit
This data type is generally used as the default data type for decimal values, generally
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
This data type is used for simple flags that track true/false conditions
Default value is false
Example: boolean one = true

char

Char data type is a single 16-bit

Char data type is used to store any character Example: char letterA = 'A'

Strings

Strings, which are widely used in Java programming, are a sequence of characters.
Example: String a =”Hello”;
String b=”World”;