Identifiers:

A name in java program is called identifier. It may be class name, method name, Variable name and label name.

Rules to define java identifiers:

Rule 1: The only allowed characters in java identifiers are:

1) a to z
2) A to Z
3) 0 to 9
4) _ (underscore)
5) $

Rule 2: If we are using any other character we will get compile time error.

Example: Total#----------invalid

Rule 3: identifiers are not allowed to starts with digit.

Example: 123ABC---------invalid

Rule 4: java identifiers are case sensitive of course java language itself treated as case sensitive language.

Rule 5: There is no length limit for java identifiers but it is not recommended to take more than 15 lengths.

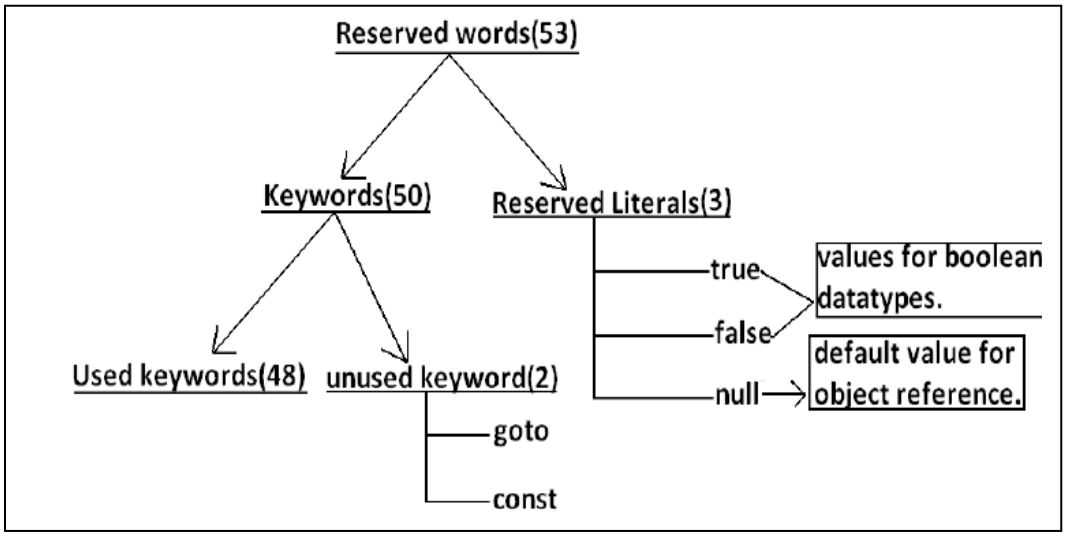
Rule 6: We can't use reserved words as identifiers.

Example: int if=10; ----------invalid

Rule 7: All predefined java class names and interface names we use as identifiers. Even though it is legal to use class names and interface names as identifiers but it is not a good programming practice.

Reserved word and keywords:

In java some identifiers are reserved to associate some functionality or meaning such type of reserved identifiers are called reserved words.



Reserved words for data types: (8)

1) byte
2) short
3) int
4) long
5) float
6) double
7) char
8) Boolean

Reserved words for flow control:(11)

1) if
2) else
3) switch
4) case
5) default
6) for
7) do
8) while
9) break
10) continue
11) return

Keywords for modifiers:(11)

1) public
2) private
3) protected
4) static
5) final
6) abstract
7) synchronized
8) native
9) strictfp(1.2 version)
10) transient
11) volatile

Keywords for exception handling:(6)

1) try
2) catch
3) finally
4) throw
5) throws
6) assert(1.4 version)

Class related keywords:(6)

1) class
2) package
3) import
4) extends
5) implements
6) interface

Object related keywords:(4)

1) new
2) instanceof
3) super
4) this

Void return type keyword:

1) void

Data types:

Java every variable has a type, every expression has a type and all types are strictly define more over every assignment should be checked by the compiler by the type compatibility hence java language is considered as strongly typed programming language.

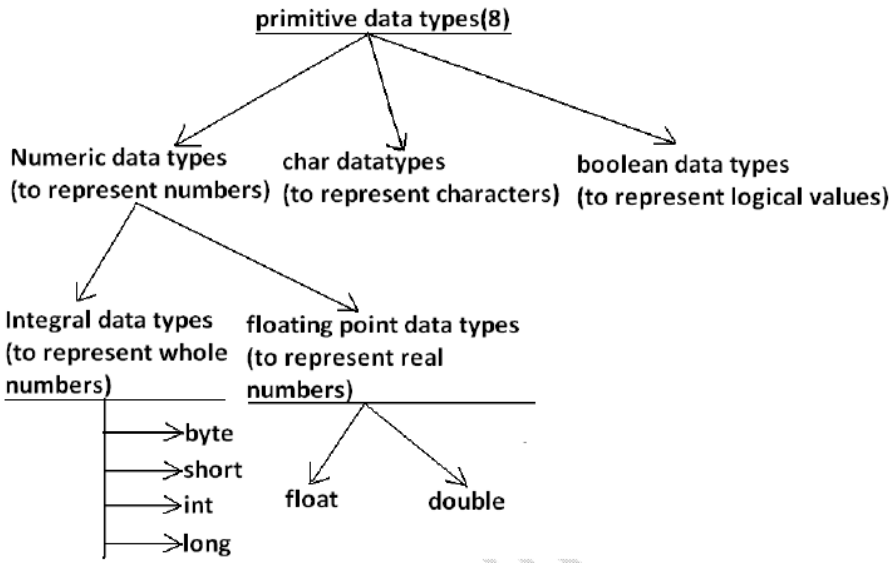
Datatypes are of two type:

1) Primative Data type (Already defined in Java)

- This are the data type which are predefined in Java
- For ex. Boolean, int, long, etc

2) Non Primative Data type

- Programmer defines it. Not already defined in Java, except String
- For ex. Student, Employee,etc.



Data type	Size	Range	Corresponding Wrapper class	Default value
byte	1 byte	-2^7 to 2^7-1 (-128 to 127)	Byte	0
short	2 bytes	-2^{15} to $2^{15}-1$ (-32768 to 32767)	Short	0
int	4 bytes	-2^{31} to $2^{31}-1$ (-2147483648 to 2147483647)	Integer	0
long	8 bytes	-2^{63} to $2^{63}-1$	Long	0
float	4 bytes	-3.4e38 to 3.4e38	Float	0.0
double	8 bytes	-1.7e308 to 1.7e308	Double	0.0
boolean	NA	Not applicable(but allowed values true|false)	Boolean	false
char	2 bytes	0 to 65535	Character	0(represents blank space)