

Language Fundamentals

1. Identifiers
2. Reserved words
3. Datatypes
4. Literals.
5. Arrays.
6. Types of variables.
7. var-arg methods (1.5 version)
8. main methods
9. command-line arguments
10. Java coding standards

Identifiers: a name in Java program is called as identifier which can be used for identification purpose. It can be method name, or variable name, class name or label name.

eg: class Test: ①

```

{
    public static void main (String[] args) ② ③ ④
    {
        int x = 10; ⑤
    }
}
  
```

↳ predefined java class

Rules for defining Java identifier

1. The only allowed character in Java identifiers are (a to z) (A to Z), (0 to 9), \$, - (underscore). If we are using any other character we will get compile time error.

eg: total-number - valid ✓
total # - invalid. ✗

② Identifier can't start with digit

eg: total 123 - valid ✓

123 total - invalid. ✗

③ Java identifiers are case sensitive. of course
Java language itself is treated as a
case sensitive program language.

eg: class Test

we can differentiate w.r. to case.

```
{ int number = 10;  
  int Number = 20;  
  int NUMBER = 20;  
}
```

④ there is no length limit for Java Identifier
but it is not recommended to take too
lengthy identifiers.

⑤ we can't use reserved words as identifiers

eg: int x = 10; - valid
int if = 20; - invalid.
 ↓
 Reserved word

⑥ all predefined java class name & interface name we can use as identifiers

eg: class Test
{ public static void main (String [] args)

Valid: { int string = 888; }
System.out.println (string);
}

eventhough it is valid, But is not a programming Practice it reduces the readability and create confusion.

Exercise:

Which of the following are valid java identifiers.

① total-number - ✓

② total# - ✗

③ 123total - ✗

④ total123 - ✓

⑤ cash - ✓

⑥ -.-.-.- - ✓

⑦ all@hands - ✗

⑧ Java@share - ✓

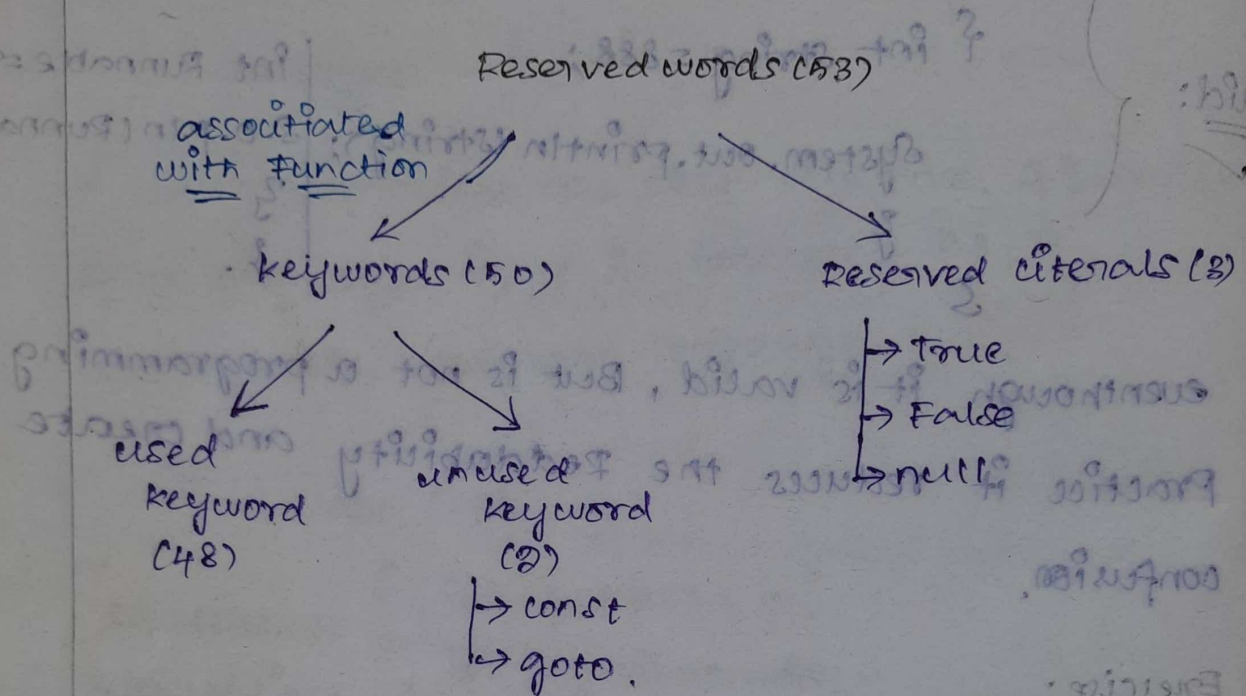
⑨ Integer - ✓

⑩ Int - ✓

⑪ int - ✗

Reserved words: [53]

In Java, some words are Reserved to represent some meaning or functionality such type of words are called Reserved words.



keywords for datatypes: (8)

* byte	* double	✓	total number ①
* short	* boolean	✓	total # ②
* int	* char	✓	total ③
* long		✓	total ④
* float		✓	total ⑤

keywords for Flow control: (11)

* if	* while	✓	total ⑥
* else	* do	✓	total ⑦
* switch	* for	✓	total ⑧
	* break	✓	total ⑨
* case	* continue	✓	total ⑩
* default	* return	✓	total ⑪

Keywords for modifiers (11): (11)

- * public
- * private
- * protected
- * static
- * final
- * abstract
- * synchronized
- * native
- * strictfp (1.8+)
- * transient
- * volatile

Keywords for exception handling: (6)

- * try
- * throws
- * catch
- * finally
- * throw
- * assert (1.4+)

Class Related keywords: (6)

- * class
- * interface
- * extends
- * implements
- * package
- * import

Object Related keywords: (4)

- * new
- * instanceof
- * super
- * this

Void Return type keyword:

- * void.

In Java Return type is mandatory if a method won't return anything then we have to declare the method with void Return type
But in C/C++. Return type is optional under default return type is "int"

unused keywords:

① goto: an usage of goto create a several problem in old languages and hence some people band these keyword in java.

② const: use of "Final" instead of const.

Note: goto and const are unused keywords and if we are trying to use we will get compile time error.

Reserved literals:

* true }
false } - values for Boolean data type

* null - default value for object reference.

enum keyword: (1.5 version)

we can use enum to define a group of named constant.

eg: enum month,

{
JAN, FEB, ... DEC
}

enum Beer

{
KE, KO, PC, FO,
}

}