**Built-in Packages:**

These packages consist of a large number of classes which are a part of Java API. Some of the commonly used built-in packages are:

1) **java.lang:** Contains language support classes(e.g classed which defines primitive data types, math operations java.lang.math). This package is automatically imported. Eg: byte, boolean, float, enum, int etc.

2)  **java.io:** Contains classed for supporting input / output operations, all file operations, streams etc.

3)  **java.util:** Contains utility classes which implement data structures like Linked List, Dictionary and support; for Date / Time operations.

Eg: arrays, calenders, collections, date, hashmap, dictionary, enum, maps , Scanner, stringTokenizer etc

4)  **java.applet:** Contains classes for creating Applets.

5)  **java.awt:** Contain classes for implementing the components for graphical user interfaces (like button , ;menus etc).

6)  **java.net:** Contain classes for supporting networking operations.

7)  **javax.swing:** Java Swing is a lightweight Graphical User Interface (GUI) toolkit that includes a rich set of widgets. Eg: Jlabel, Jtext, JList etc.

There are six numeric types four integer and two floating point:

* byte 1 byte -128 to 127
* short 2 bytes -32,768 to 32,767
* int 4 bytes -2,147,483,648 to 2,147,483,647
* long 8 bytes -9,223,372,036,854,775,808 to 9,223,372,036,854,775,80
* float 4 bytes 7 decimal digits
* double 8 bytes 16 decimal digits
* Char 2 bytes 65,536(unsigned)
* Boolean true or false

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| --- | --- | --- |
| **Operator Type** | **Category** | **Precedence** |
| Unary | postfix | *expr*++ *expr*-- |
| prefix | ++*expr* --*expr* +*expr* -*expr* ~ ! |
| Arithmetic | multiplicative | \* / % |
| additive | + - |
| Shift | shift | << >> >>> |
| Relational | comparison | < > <= >= instanceof |
| equality | == != |
| Bitwise | bitwise AND | & |
| bitwise exclusive OR | ^ |
| bitwise inclusive OR | | |
| Logical | logical AND | && |
| logical OR | || |
| Ternary | ternary | ? : |
| Assignment | assignment | = += -= \*= /= %= &= ^= |= <<= >>= >>>= |