

**Syntax for a standalone application in Java:**

```
class <classname>
{
    public static void main(String args[])
    {
        statements;
        _____;
        _____;
    }
}
```

**Steps to run the above application:**

1. Type the program in the DOS editor or notepad. Save the file with a .java extension.
2. The file name should be the same as the class, which has the main method.
3. To compile the program, using javac compiler, type the following on the command line:  
**Syntax:** javac <filename.java>  
**Example:** javac abc.java
4. After compilation, run the program using the Java interpreter.  
**Syntax:** java <filename> (without the .java extension)  
**Example:** java abc
5. The program output will be displayed on the command line.

**Java Comments:**

Delimiters	Use
//	Used for commenting a single line
/* _____ */	Used for commenting a block of code
** _____*/	Used for commenting a block of code. Used by the Javadoc tool for generating Java documentation.

**Primitive datatypes in Java:**

Data Type	Size	Default	Min Value Max Value
byte (Signed integer)	8 bits	0	-128 +127
short (Signed integer)	16 bits	0	-32,768 +32,767
int (Signed integer)	32 bits	0	-2,147,483,648 +2,147,483,647
long (Signed Integer)	64 bits	0	-9, 223, 372,036,854, 775,808, +9,223,372,036, 854, 775, 807

**Java reserved words:**

abstract	default	if	package	this
boolean	do	implements	private	throw
Break	double	import	protected	throws
Byte	else	instanceof	public	transient
case	extends	int	return	null
try	Const	for	new	switch
continue	while	goto	synchronized	super
Catch	final	interface	short	void
char	finally	long	static	volatile
class	float	native		

**Java naming conventions:**

**Variable Names:** Can start with a letter, '\$' (dollar symbol), or '\_' (underscore); cannot start with a number; cannot be a reserved word.

**Method Names:** Verbs or verb phrases with first letter in lowercase, and the first letter of subsequent words capitalized; cannot be reserved words.  
 Example: setColor()

**Class And Interface Names:** Descriptive names that begin with a capital letter, by convention; cannot be a reserved word.

**Constant Names:** They are in capitals.  
 Example: Font.BOLD, Font.ITALIC

float (IEEE 754 floating-point)	32 bits	0.0	1.4E-45 3.4028235E38
double (IEEE 754 floating-point)	64 bits	0.0	4.9E-324 1.7976931348623157E308
char (Unicode character)	16 bits	\u0000	\u0000 \uFFFF
boolean	1 bit	false	

**Variable Declaration:**

<datatype> <variable name>  
**Example:** int num1;

**Variable Initialization:**

<datatype> <variable name> = value  
**Example:** double num2 = 3.1419;

**Escape sequences:**

Literal	Represents
\n	New line
\t	Horizontal tab
\b	Backspace
\r	Carriage return