

## What's wrong with Java (for beginners)?

Java was not designed for beginners, but for professionals.  
Java was made to look like C, and appeal to C/C++ pros.  
But it can be improved with JJ, for beginners.

Java is big, complex to install (for beginners)  
with set path etc..

Syntax sucks (except to C/C++ programmers)  
Many curly braces, semi-colons, sprinkled around,  
and still has the dreaded dangling-else

Many classes, libraries..  
overwhelming and unreadable for beginners

Much overhead early  
Everything is a class; "Hi World" is a method

Many details and distractions  
5 ways to increment, 4 types of ints; 3 kinds of  
comments, 2 kinds of reals, and a partridge ...

Input is "unusual"  
Command line is limited;  
input classes are often made for beginners;  
all are different: inInt, outReal, etc

Ugliness of type casts  
`(int)(real + 0.5)`

Non Built-in, intrinsic Math methods  
`Math.sin ( 2 * Math.PI * x )`

Type tyranny: allows mixing and promotion  
`System.out.println ("i + 1 = " + i + 1 );`  
`MilitaryTime = 0400; //is octal!`

Too many ways to do anything; clever  
`Increment i=i+1; i++, ++i, i += 1; i--=1;`

Poor error messages -- mainly for pros  
multitudes of errors in a few lines of code

Cryptic operators: alternate ands, ors  
`&& and &, || or |, "\n"`

Inconsistencies  
Semicolons follow the brace of a class  
but do not follow the brace of a function

Much relegated to later  
`public static void main (String[] args) or`  
`public static void main (String args[]) ??`

Etc, etc, etc ... please provide more.

## What's right with Java? Much over C/C++

Is portable, cross-platform  
Has no hazardous pointers  
Has garbage collection  
Checks array bounds  
Is object oriented  
Is secure

Has applets

Has sets of packages

and more ....