

Typical Java Errors and How To Fix Them:

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Compile-time Errors

How to read:

File: <filename> [line: x]

Error: y

There is a y error at or around line x in the file named filename

Typical error table:

Error Message Example	Type of Error	How to Fix
';' expected	Code is missing a ';' or '('	Ensure all statements end in ';' and for each '(' you have a ')'
not a statement	Most likely typed something incorrect	Fix incorrect spelling
<identifier> expected	Normally have extra '}' somewhere about line #	Make sure only one } for each {
Incompatible types found: x expected: boolean	Probably = vs. == in an if/else if statement	= is assignment, while == is comparison. If you're meaning to compare two things, use == or .equals()
cannot return a value from method whose result type is void	Returning from a void function	You shouldn't return values from void functions – either change the function declaration to return a variable, or remove the unnecessary return statement
Cannot find symbol symbol: variable x location: class y	You're using an undeclared variable ex: x = 2;	Declare the variable: ex: int x = 2; OR Check to make sure you're spelling the variable right (same capitalization)
Missing return statement	Missing a return statement from a void function	Make function void or return correct value
Variable x might not have been initialized	You aren't initializing a variable	Make sure you initialize all variables to something before you start using them

Run-time errors

How to read:

```
ErrorType: data
    at Babe.attempt(Babe.java:<line 6>)
    at Babe.try(Babe.java:<line 20>)
    ....
```

The error is the type of ErrorType. The 'at' data below shows the call stack and should be followed from top to bottom at the specified lines to try to find where in the code the error is. For instance, in the above, the first place you should look is at the line 6 in the function attempt in the class, Babe. If it's not there, look at line 20 in the function try in Babe.

Typical Error Table:

Error Message	Type of Error	How to Fix
No 'main' method in <class name> with arguments: ([Ljava.lang.String;)	Declared main method incorrectly	Main method should be: public static void main(String[] args)
ArrayIndexOutOfBoundsException: x	Tried to access the index x in the array (this index does not exist)	Remember, arrays are 0-indexed: meaning they start with index 0. Make sure you're accessing only indexes 0 to (size of array - 1)
/ by zero	You're dividing by 0	Don't do it, it doesn't work
NullPointerException	You're trying to do something with nothing	Make sure you don't try to do something when a variable is null