

To compare the differences between my program and another relevant AI language I decided to choose Javascript, and since I was not very familiar with it I utilized ChatGPT as a resource and took my code provided it and asked ChatGPT to create a copy of it in Javascript but to ensure it was accurate I had to install [node.js](#) in order to ensure it ran properly it did and I could immediately see some differences. For one there was no imports everything was embedded and `system.out.println` was changed with `console.log` along with other noticeable changes but this reflection is to compare the type systems, class and object definitions, error handling and type safety, and the ease of use. So Java is a static language because when the program is run the data types are checked when the program is being compiled right before its actually run. Meanwhile Javascript on the other hand is considered dynamic language system because the data types are checked only when the program actually runs, it also allows flexibility which means they can be assigned any type and still run the program but it won't show those errors until the program is physically run. When it comes to class declarations there is a big difference, in java classes are declared with fields and types whether thats public or private, but when I saw the javascript verison that didn't exist it only uses the class word and I learned that its due to the fact that javascript has been set to default automatically, even with the constructor in java we need to specify the type like String or float, but in javascript its just the constructor. When it comes to object instantiation the variable has to be declared for java, but the type declaration isn't needed for javascript. Now for error handling in the java program I had to create exceptions that would appear and I used the try/catch block to ensure the program caught exceptions but still continued to execute the rest of the program. In javascript the program generated by ChatGPT produced a version used `throw new Error` which works very similar. Again for type safety it boils down to the fact that in java type errors are found when the program is being compiled so it will let you know if you made a mistake trying to compile code if types don't match. As I now know though in Javascript the variables can have any type since it is not checked when compiled but rather when the program is run instead. For ease of use it was much simpler to compile the java program than the javascript version, since I used VSC I could just install a java plug in and run the program but for the Javascript version I could not do the same I actually had to follow a tutorial and learn about [node.js](#) install it and restart VSC to get the program to run. Another difference was that java requires the public class name of the file and the iconic `public static void main(String[] args)` but for Javascript it was `function main()`, the driver, and then just `main()`; to actually run it. From this reflection it seems that Javascript is definitely the more flexible version however personally just installing it and getting it to run Java was much more easier, but in terms of using it Javascript seems more flexible but personally I seem to still prefer Java maybe because I'm used to it and I prefer having compiling errors appear during compiling time.