Error Exploration Activity

In IntelliJ, open the Unit 1 project. Create a file ChatBot.java. Copy & paste the working code from [ChatBot.java](https://drive.google.com/open?id=14ymtfIJ9OHzuWNvp8yGYiHYByUWFpWfz) and break it to find out the different errors that could occur in Java.

## **Define the different types of errors:**

Syntax Error:

|  |
| --- |
| An error that prevents code from running, due to the code that doesn’t follow |

Semantic Error:

|  |
| --- |
| An error that doesn’t stop the code from running, but runs unintentionally |

Logic Error:

|  |
| --- |
| An error that doesn’t stop the code from running, but runs unintentionally |

Compile-time Errors:

|  |
| --- |
| An error that occurs when you cannot compile your code |

Run-time Errors:

|  |
| --- |
| Error that crashes your code while it is running |

## **Break the Program:**

Make the following changes to ChatBot.java. This will cause you to break the program. Discover what error is being caused by running the program and what you could do to prevent it. After you have finished the assigned errors make five changes of your own.

|  |  |  |  |
| --- | --- | --- | --- |
| **What to remove?** | **Error Caused** | **Type of Error(from keywords above)** | **What can you do to prevent the error?** |
| Remove ; | Error:(6, 47) java: ';' expected | Syntax Error | Always remember to use semicolons |
| Remove } | Error:(43, 6) java: reached end of file while parsing | Syntax Error | Indent sufficiently to keep track of braces |
| Remove { | Error:(3, 21) java: '{' expected | Syntax Error | Indent sufficiently to keep track of braces |
| Change a variable name in the initialization statement | Error:(11, 17) java: cannot find symbol  symbol: variable text  location: class ChatBot | Syntax Error | Make sure you use the same variable name consistently |
| Delete line 30  *text = input.nextLine();* | Constantly prints and doesn’t allow for continuation of program | Semantic Error | Logically work out the code in your head to code it to your intention |
| Line 26 remove *(int)* | Error:(27, 46) java: cannot find symbol  symbol: variable num  location: class ChatBot | Syntax | Always declare your variables |
| Remove line 1 | Error:(7, 9) java: cannot find symbol  symbol: class Scanner  location: class ChatBot | Syntax | Don’t forget to import your modules first |
| Remove *else* { on line 20  Remove } on line 29 | Prints out multiple responses for “maroon” input | Semantic | Logically work out the code in your head to code it to your intention |
| Remove *else* on line 15 | Prints out all responses for “good” or “bad” input | Semantic | Logically work out the code in your head to code it to your intention |