

AVEIRO UNIVERSITY

# GEANY IDE

**Jodionísio Muachifi, 97147**  
**João Felisberto, 98003**  
**Diogo Santos, 98393**

**Human-Computer Interaction**  
**Class P4**

**Professor: Beatriz Sousa Santos**

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# What is Geany?


Is powerful, stable and lightweight programmer's text editor that provides tons of useful features. Is free and open source.

# Method used

**01** To perform the Heuristic Evaluation (HE) we used the 10 Heuristics proposed by Nielsen

**02** Severity Scale

- 0 - Not a problem at all
- 1 - Cosmetic problem
- 2 - Minor usability problem
- 3 - Major usability problem
- 4 - Usability catastrophe



**03** To perform the Cognitive Walkthrough (CW) we followed the Streamlined Cognitive Walkthrough proposed by Rick H. Spencer

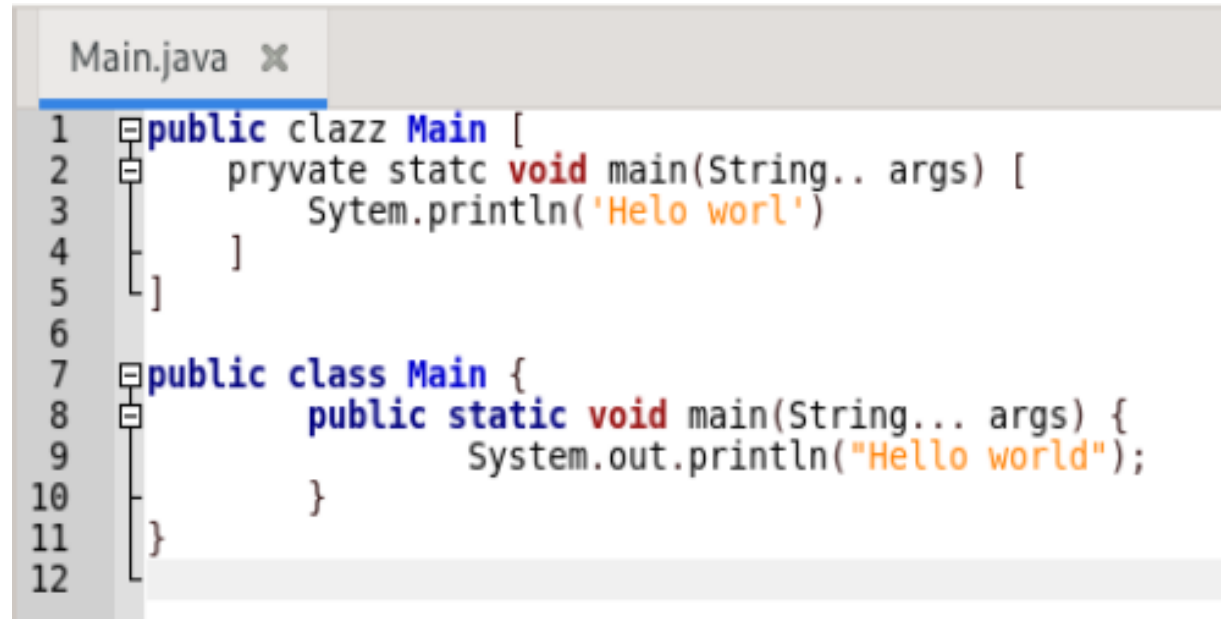
- **Q1 - Will the user know what to do at this step?**
- **Q2 - If the user does the right thing, will they know that they did the right thing, and are making progress towards their goal?**

# Results Obtained - HE

Syntactic erros are not detected

**Heuristic:** Error prevention

**Severity:** 4



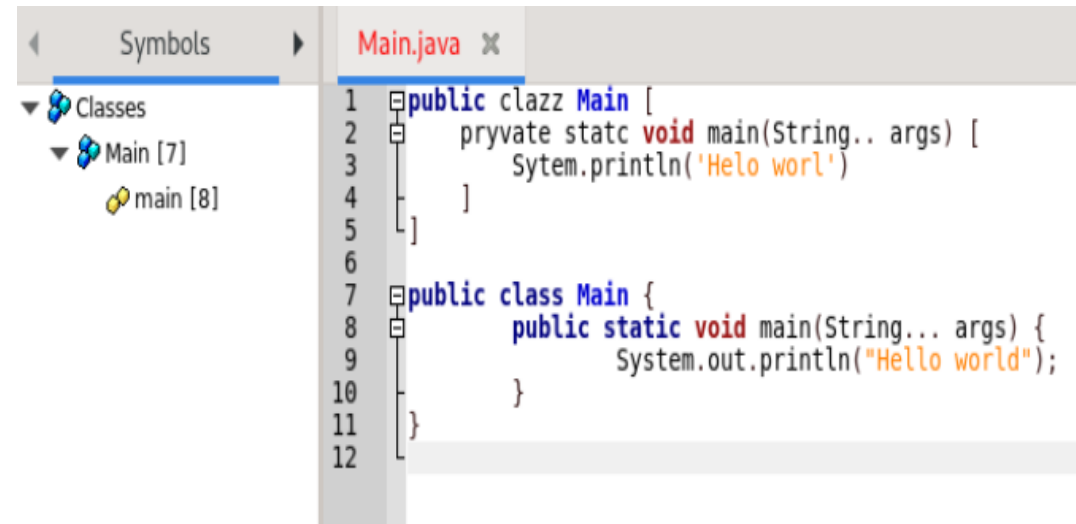
```
Main.java x
1 public clazz Main [
2     pryvate static void main(String.. args) [
3         Sytem.println('Helo worl')
4     ]
5 ]
6
7 public class Main {
8     public static void main(String... args) {
9         System.out.println("Hello world");
10    }
11 }
12
```

# Results Obtained - HE

Symbols tab is the default

**Heuristic:** Consistency and standards

**Severity:** 3



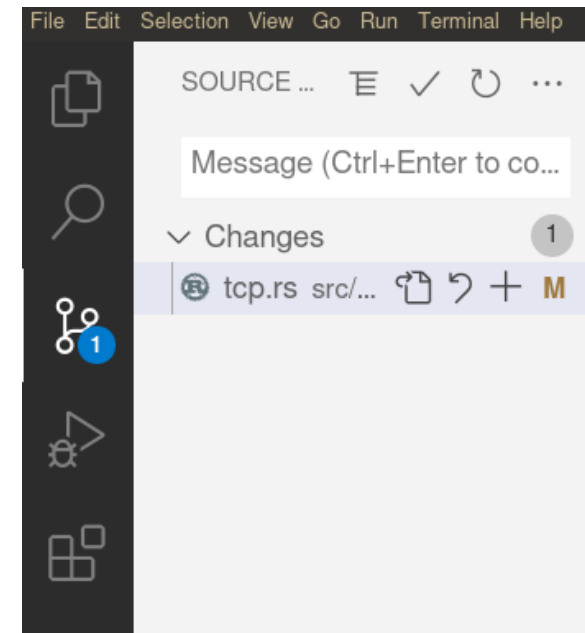
```
1 public class Main [  
2     pryvate static void main(String.. args) [  
3         Sytem.println('Helo worl')  
4     ]  
5 ]  
6  
7 public class Main {  
8     public static void main(String... args) {  
9         System.out.println("Hello world");  
10    }  
11 }  
12
```

# Results Obtained - HE

No VCS integration

**Heuristic:** Flexibility and efficiency of use

**Severity:** 3



# Results Obtained - HE

Lack of code completion by default

**Heuristic:** Flexibility and efficiency of use

**Severity:** 2

```
6 def coordinate():
5     pass
4
3 def code():
2     pass
1
7 coordinate
~ coordinate
~ code
```

# Results Obtained - HE

In the documents tab not all files under the open folders are shown

**Heuristic:** Visibility of system status

**Severity:** 3



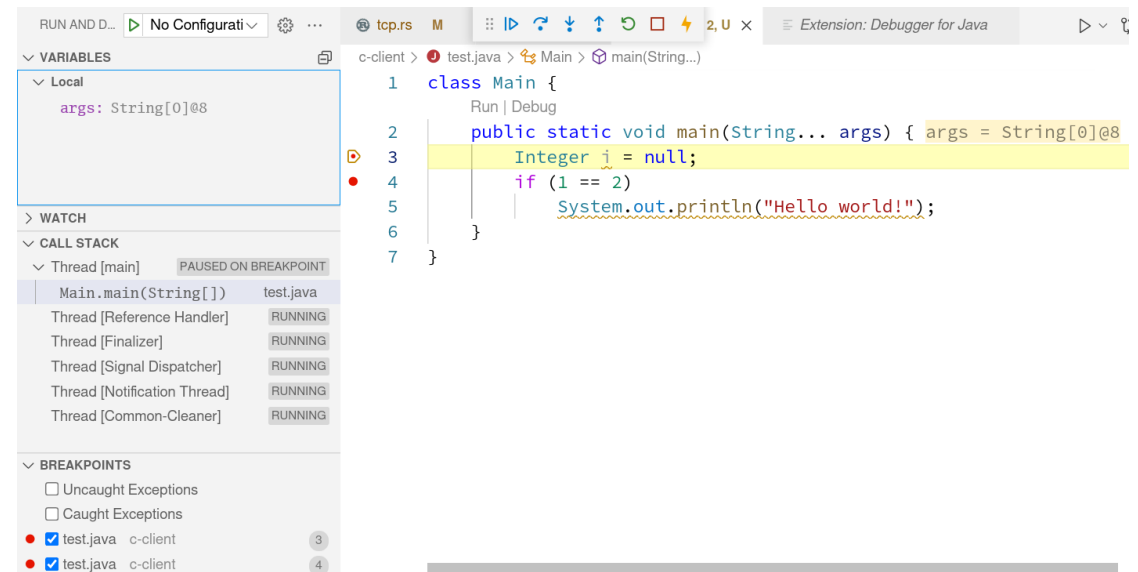


# Results Obtained - HE

Does not include an  
Integrated Debugger

**Heuristic:** Visibility of system status

**Severity:** 2

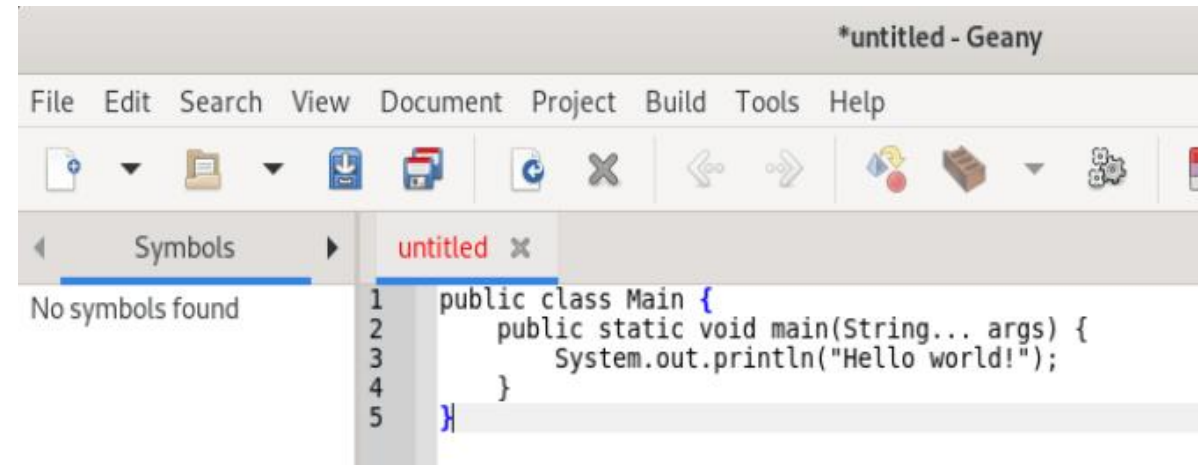


# Cognitive Walkthrough

## Write code

The text editing area is well placed and visible

The code will appear immediately, but syntax highlight will only take effect on the first save.

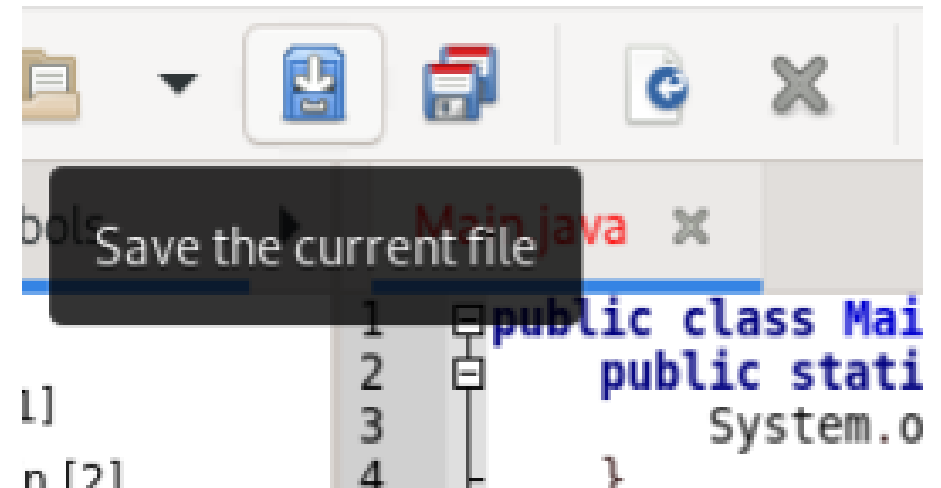


# Cognitive Walkthrough

## Save the file

The user might expect auto-save, but this is a feature not present in many text editors. The act of saving is obvious and the save icons will be gray while it is saved.

The file's name will not be red anymore, obvious and immediate feedback.

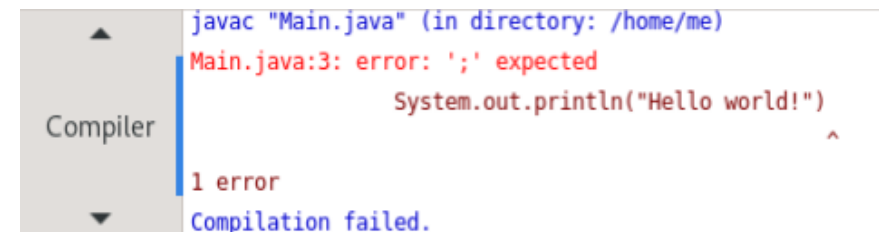
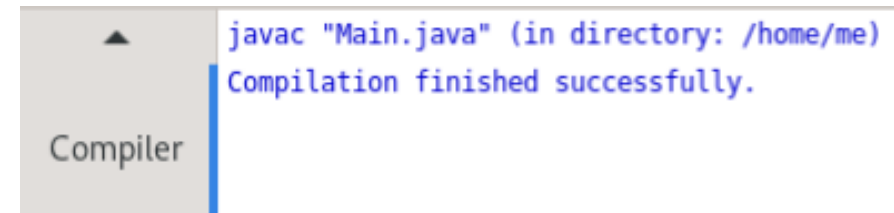
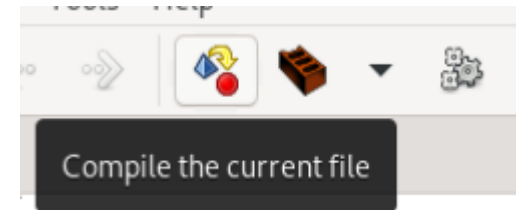


# Cognitive Walkthrough

## Compile the code

Assuming the user knows Java, and seeing the compile button, they will most likely assume that the run button will not compile. Those who don't know will learn it quite quickly.

When the compilation finishes there is feedback on the status window.



# Cognitive Walkthrough

## Run the code



Run button visible near compile and build.

When pressed, code will run and give feedback.

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# Our appreciation

- In general it serves its purpose
- Is a great editor text for beginners

However,...

There are a lot of improvements to be made

43 problems  
found

To conclude the  
results of HE, we  
include a table  
summarizing the  
findings of all the  
analysts

# Table of all Results - HE

Problema	Diogo	João	Jodionísio	Mediana
Sintatic errors are not detected	4	4	4	4
Does not support remote file editing protocols	3	2	3	3
Does not support RTL (Right To Left – Arabic format)	3	2	3	3
Build doesn't indicate status	2	3	3	3
Symbols tab is default	2	4	3	3
No input check on free input preferences	3	3	3	3
Errors from config issues are not clearly announced	3	3	2	3
Wiki somewhat hard to navigate, although adhering to presentation standards	3	3	2	3
No VCS integration	2	3	3	3
Does not run all languages out of the box	3	4	3	3
In the documents tab not all files under the open folders are shown	3	3	2	3
Does not support Error Markup	2	4	2	2
Does not include Unit Testing	2	1	3	2
Does not have collaborative editing	2	0	2	2
Does not have interactive console	2	1	4	2
Does not include an Integrated Debugger	0	2	3	2
Does not have a quickly help (JIT - Just In Time)	1	3	2	2
Does not have a quickly continuous Delivery updates releases	2	1	2	2
Difficult to change interface language	2	2	2	2
Execute doesn't show status	2	2	2	2
Document workspace doesn't show as file tree	2	3	2	2
"Jump to" button separated from textbox	1	3	2	2
Lack of code completion	2	3	2	2
Keybindings menu and advanced options do not have a search bar	2	2	2	2
Errors from configuration issues have no highlighting in the terminal	2	3	2	2
Documentation links only in dropdown toolbar	2	2	1	2
Plugins are hard to install	2	2	2	2
Does not close () [] " "" by default	2	2	1	2
Execute does not compile	0	2	1	1
Some icons may not be needed	1	0	2	1
When changing preferences, there is no prompt to revert or to confirm the changes	2	0	1	1
2 identical black arrows relatively next to each other that extend functionality of the button to their left	1	1	0	1

# Table of general Results - HE

No undo and redo buttons easily observable  
Not preserving unsaved files on exit and restoring on launch  
When modifying the file and then reverting the changes to the saved state, it doesn't recognize the file as saved  
When on a tab of the status window and an update occurs on another tab, there's no visible change  
Search stops if cursor is after/before the last/first occurrence of the expression  
Lack of tooltips  
Lack of shortcuts from popular IDEs  
"Jump to" takes too much space  
Execution errors don't have enough highlighting, are instead delegated to terminal window with small size lettering  
No warning prompt when closing files  
No easy support for certain frameworks like maven/gradle

1	0	1	1
1	0	1	1
1	1	1	1
1	2	1	1
2	1	1	1
1	1	0	1
1	1	0	1
1	1	0	1
2	1	1	1
2	0	0	0
0	1	0	0



# HCI

Thank you for your attention