



CS499 - OPEN SOURCE SOFTWARE DEVELOPMENT

Lecture #07: How to contribute to Open Source Software:

The Process

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What is it about

- It is about contributing to Open Source!!!
- Different ways to do it HOW?
 - Code
 - Documentation
 - Support
 - Translation
 - Issues
 - etc.

And... how to contribute?



<https://www.triggerandfreewheel.com/comic/not-so-fast-buddy>

1111
1111

It can be tough!



Context

**“Newcomers are explorers
who must orient themselves
within an unfamiliar
landscape...”**

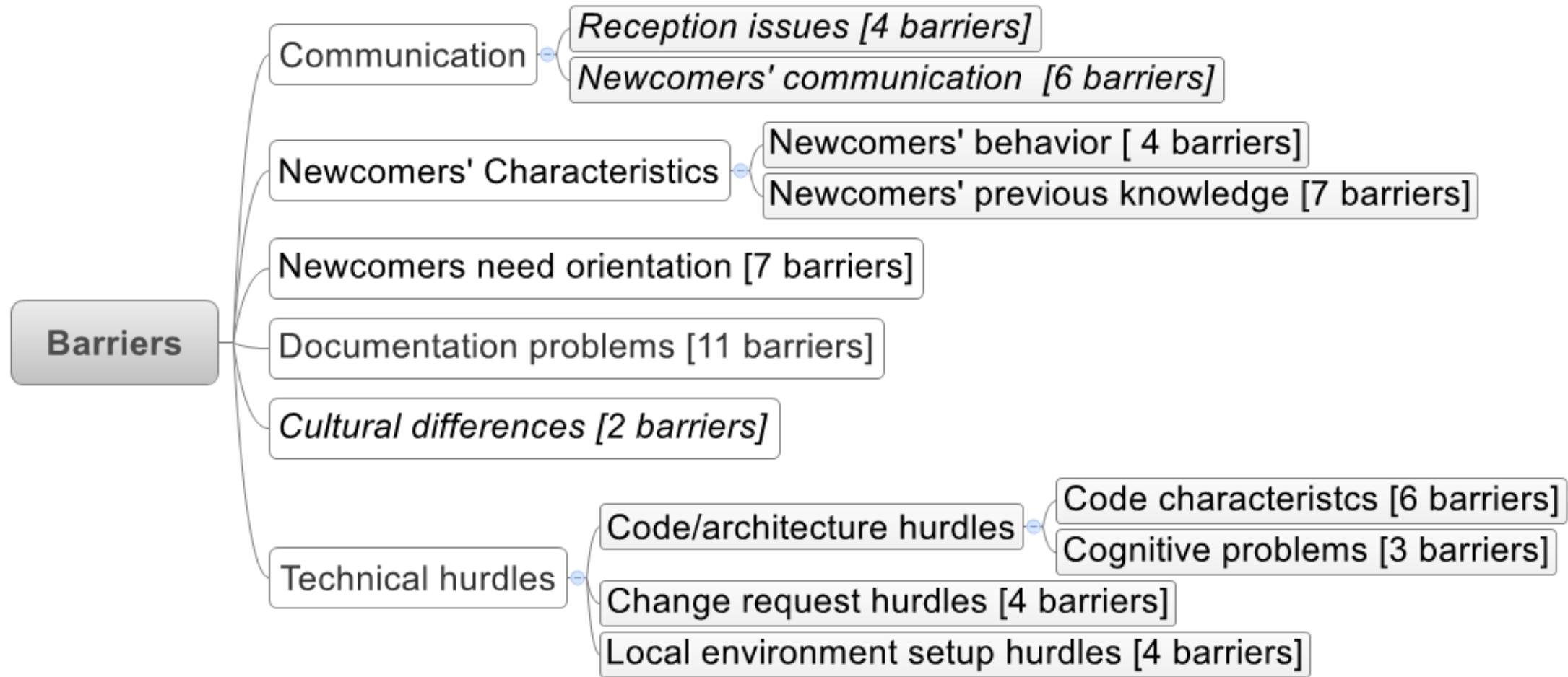
[Dagenais et al. 2010]

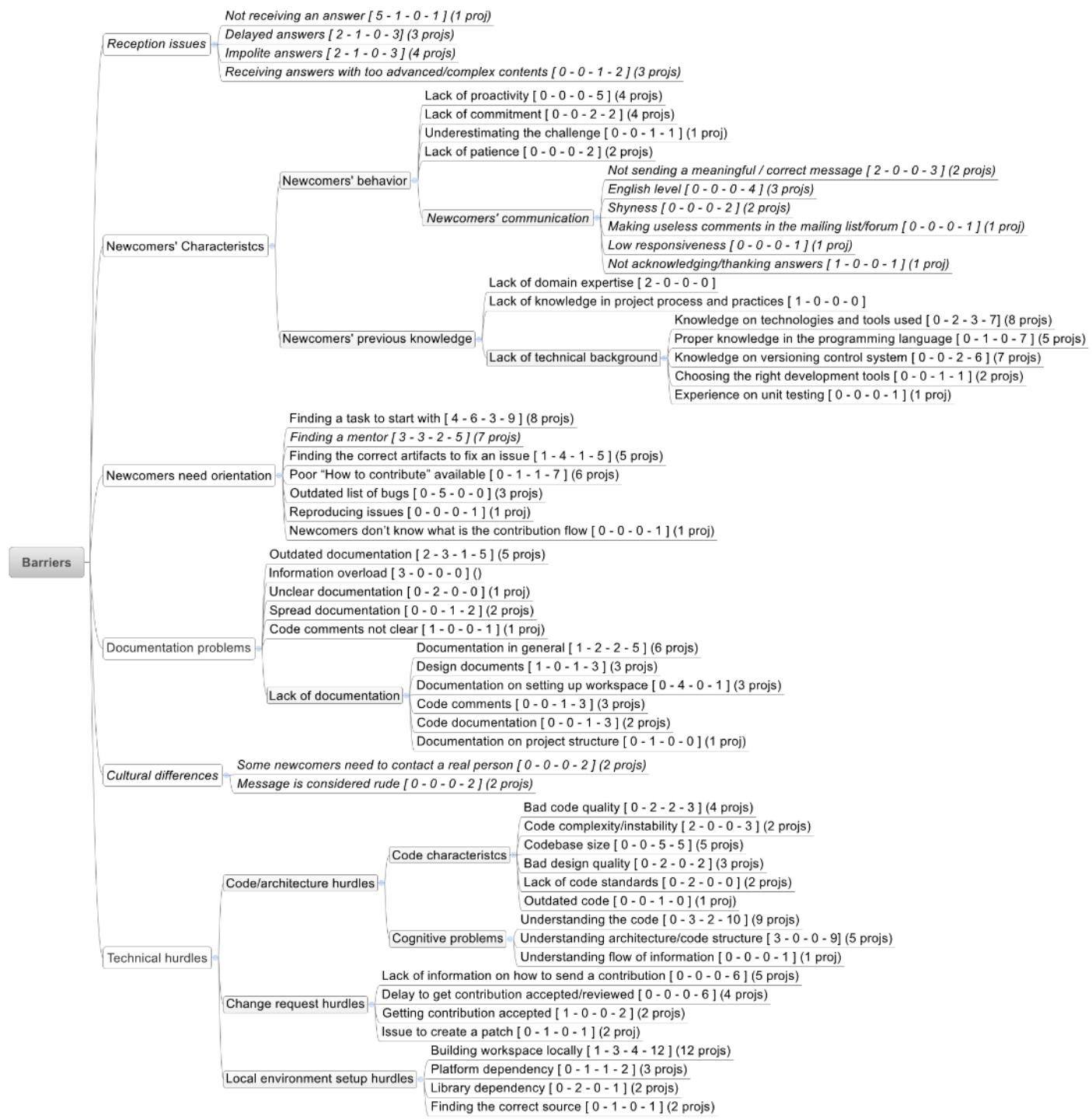


**... and need support on
their first steps**

B. Dagenais, H. Ossher, R.K.E Bellamy, M.P. Robillard and J.P. de Vries, **Moving into a new software project landscape**, in ICSE 2010.

Barriers ahead!





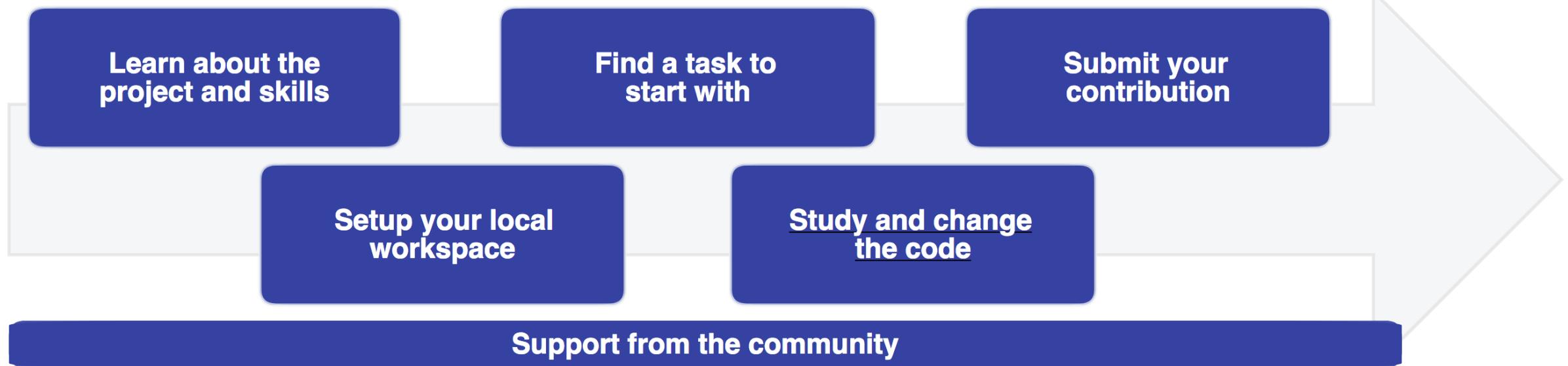
And... how to contribute?

- Yet...
 - Proactivity
 - Social skills
 - Technical skills
- Deviate from some barriers
- Persist to overcome others

And... how to contribute?

- The contribution process is project-dependent
 - How to interact
 - Tools and support infrastructure
 - Submission and Review process

THE Process



Open Source == Community

- Do not hide
- Do not be afraid of them
- Do not mind the rude/offensive messages (a hard one)
 - Understand the responder's side
- Always: do your part
 - Standards
 - Respect
 - Be Proactive



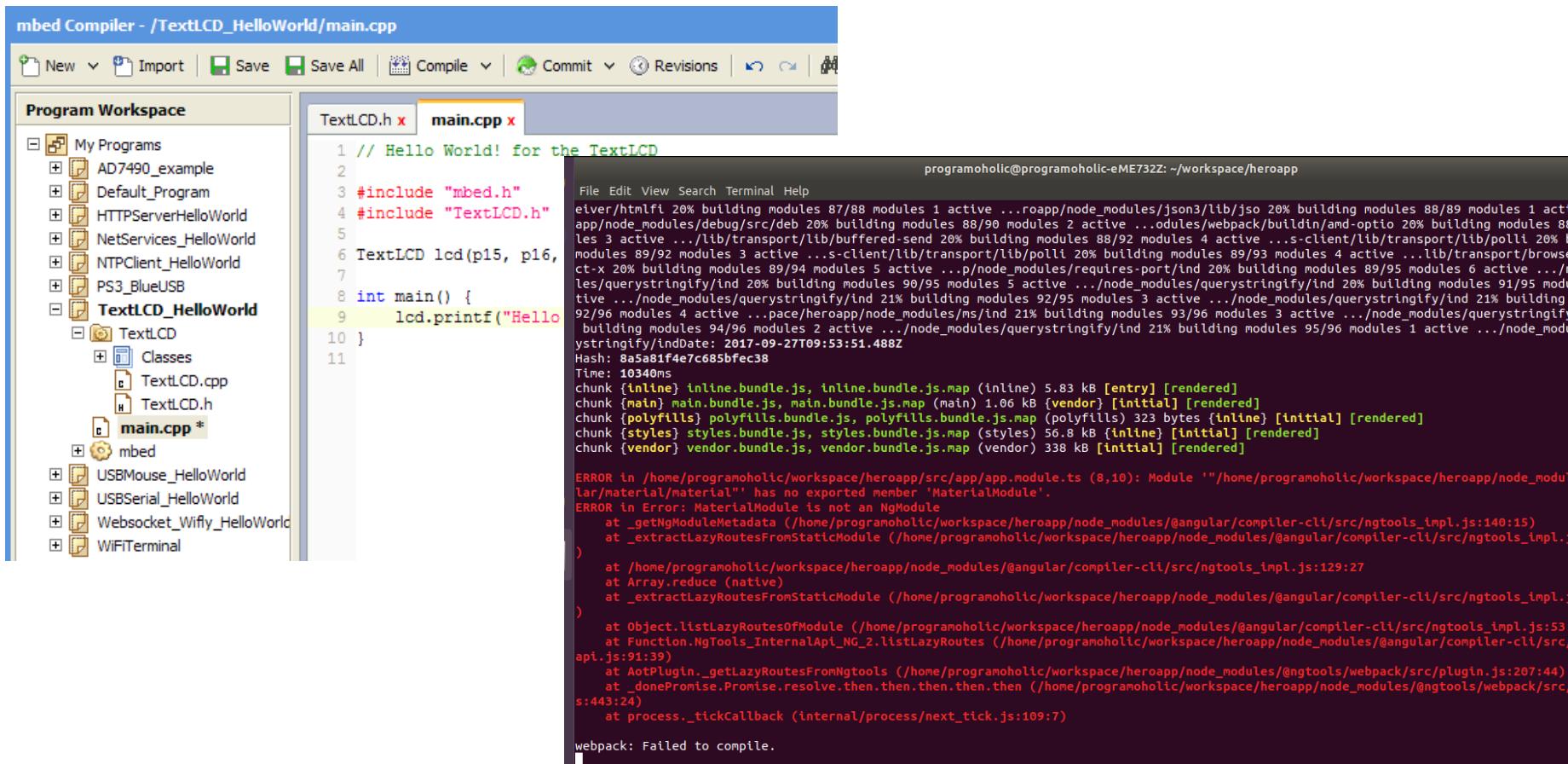
Learn about the project!

- Project page
- Where is the repo/source code?
- Issue tracker
- Communication means
- Wikis, documentation repos, etc.



Set up your local thing

\$ git clone 



Set up your local thing

Guidelines for setting up a local workspace

Oliver Kopp edited this page on Feb 14 · 35 revisions

Prerequisites:

- Java Development Kit ([Download JDK from Oracle](#) - or execute `choco install jdk8` when using [chocolatey](#))

An indication that `JAVA_HOME` is not correctly set or no JDK is installed is following error message:

```
compileJava FAILED

FAILURE: Build failed with an exception.

* What went wrong:
Execution failed for task ':compileJava'.
> java.lang.ExceptionInInitializerError (no error message)
```

Ensure you have a Java SDK installed

- In the command line (terminal in Linux, cmd in Windows) run `javac -version`
- If `javac` is not found, check your PATH environment variable, your `JAVA_HOME` environment variable or install the most recent SDK



Pro tip...



VM

Finding a task



Finding a task

- Read the project guidelines

Finding something to fix/improve

All issues on Clippy are mentored, if you want help with a bug just ask @Manishearth, @llogiq, @mcarton or @oli-obk.

Some issues are easier than others. The [good first issue](#) label is for issues that are particularly easy to get started on. If you're interested in working on an issue, please leave a comment so that we can assign it to you!

Issues marked [T-AST](#) involve simple matching of the syntax tree. Issues marked [T-medium](#) involve types and resolved paths.

[T-AST](#) issues will generally need you to match against a predefined structure. Since this structure is encoded in the AST, it is recommended to run [rustc -Z query-type=ast](#) and compare with the [nodes in the AST docs](#). Usually the lint will either fail or give a warning.

[E-medium](#) issues are generally pretty easy too, though it's recommended to use [rustc -Z query-type=expr](#). They are mostly classified as [E-medium](#), since they might be somewhat involved.

[T-middle](#) issues can be more involved and require verifying type annotations. These are useful, though one of the most useful would be [expr_ty](#) (given that Clippy's [utils](#) module can also be useful).

The screenshot shows a GitHub repository page for the project "TryGhost / Ghost". The repository has 870 stars, 14,306 forks, and 3,323 issues. The current branch is "master". The file being viewed is "CONTRIBUTING.md". A comment from user "ErisDS" dated Jan 13 suggests removing extra brackets from the contributing file. The file has 297 lines (193 sloc) and is 16.796 kb. There are buttons for "Raw", "Blame", and "History". Below the file content, there is a large heading "Welcome to the contributing guide for Ghost!" followed by a paragraph about getting started with contributing.

TryGhost / Ghost

Watch 870 Unstar 14,306 Fork 3,323

branch: master Ghost / CONTRIBUTING.md

ErisDS on Jan 13 Remove extra brackets from contributing.md

16 contributors

297 lines (193 sloc) | 16.796 kb

Raw Blame History

Welcome to the contributing guide for Ghost!

So you're interested in giving us a hand? That's awesome! We've put together some guidelines that should help you get started quickly and easily. If you need help with contributing, visit the #ghost IRC channel on freenode. Thank you for stopping by!

Quick Links: [feature roadmap](#) - [support forum](#) - [documentation](#) - [developer wiki](#) - [community guidelines](#) - [dev blog](#)

Finding a task



GitHub Help

Version ▾

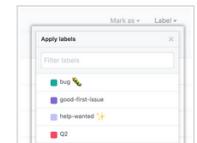
[Building a strong community](#) / [Helping new contributors find your project with labels](#)

Helping new contributors find your project with labels

Apply the `help wanted` and `good first issue` labels to issues in your repository to highlight opportunities for people to contribute to your project.

You can apply these labels to issues in your public repository so that people can find them when searching by labels. For more information about searching by labels, see "[Searching issues and pull requests](#)."

- 1 On GitHub, navigate to the main page of the repository.
- 2 Under your repository name, click **Issues**.
- 3 Select the checkbox next to the items you want to apply a label to.
- 4 In the upper-right corner, click **Label**, then start typing `help wanted` or `good first issue`. Click the label's name to associate it with the selected items.



Finding a task

- Reproduce the issue
- Confirm with the community
- Make the community aware
- Dive into the code!



Dive into the code



Apply your changes



While making changes

- Beware the standards
- Are tests needed?
- Re-read the contribution guidelines



```
Dim x As Int16
Dim sTempResult As String
Dim ActualIterations As Int16

'Loop as needed
For x = 1 To Iterations
    ActualIterations += 1
    If bDeep Then
        While Not Finished()
            DeepCopy(x)
        End While
    Else
        If Finished() Then
            ShallowCopy()
        End If
    End If
    Next x
End Function

Friend Function blnIsDigit(ByVal rsCheck As
    Char) As Boolean
    Dim nZERO As Integer = 48
    Dim nFIVE As Integer = 57
    Dim nDigit As Short
    Dim nAsciiChar As Integer
    Dim blnIsDigit As Boolean

    For sChar = 1 To Len(rsCheck)
        nAsciiChar = Asc(Mid(rsCheck,
            sChar, 1))
        If nAsciiChar < nZERO Or nASC
            blnIsDigit = False
        Else
            blnIsDigit = True
        End If
    Next sChar
    blnIsDigit = blnIsDigit And (nDigit >= nZERO And nDigit <= nFIVE)
End Function
```

LAND ONE

Submitting your changes

- Check the submission process
 - Pull-request?
 - Code review system (Gerrit)
- Tools and needs
 - License Agreement
 - Release notes changing

Re-read the contribution guidelines

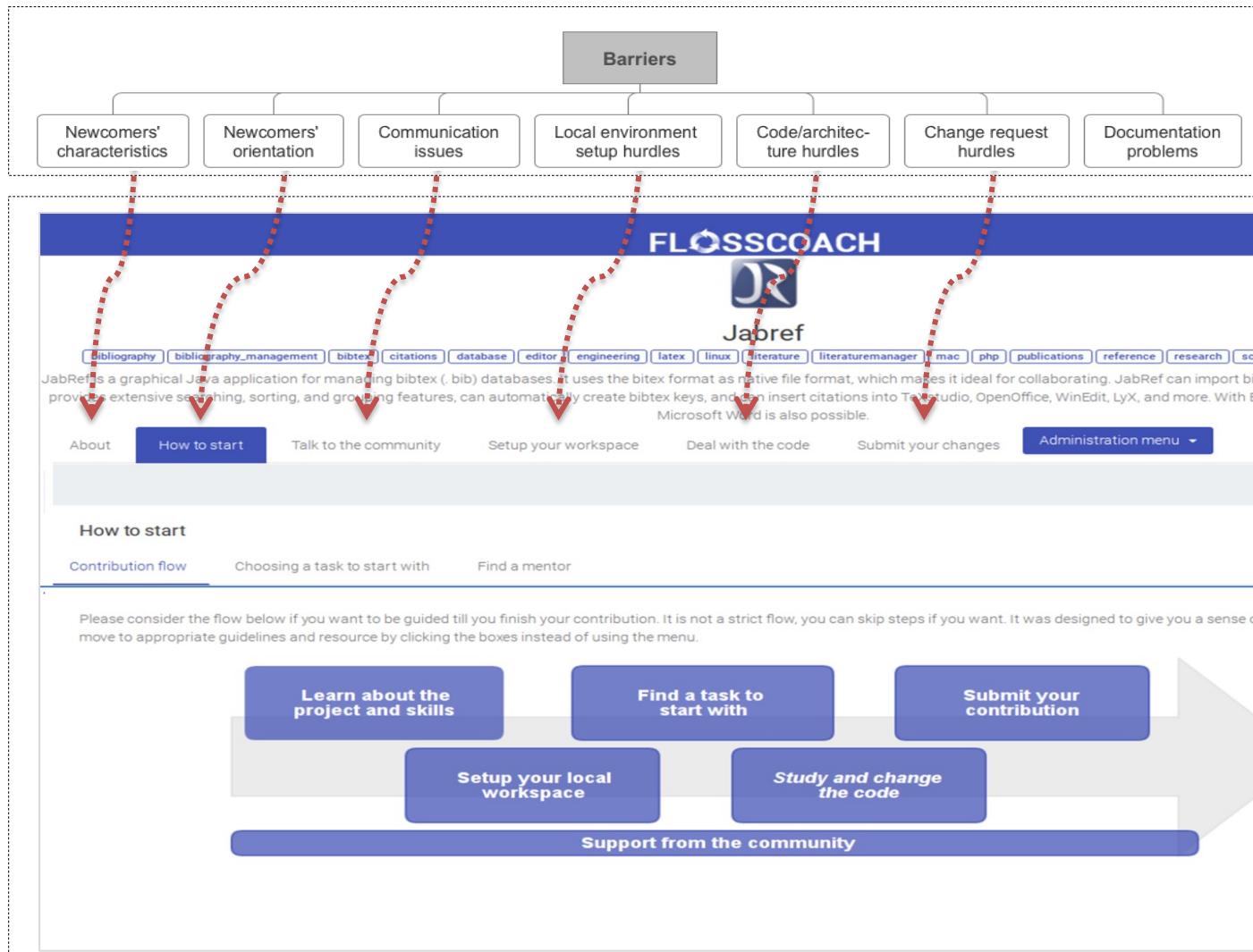
- Change in CHANGELOG.md described
- Tests created for changes
- Manually tested changed features in running JabRef
- Screenshots added in PR description (for bigger UI changes)
- Ensured that [the git commit message is a good one](#)
- Check documentation status (Issue created for outdated help page at help.jabref.org?)

Follow up your submission

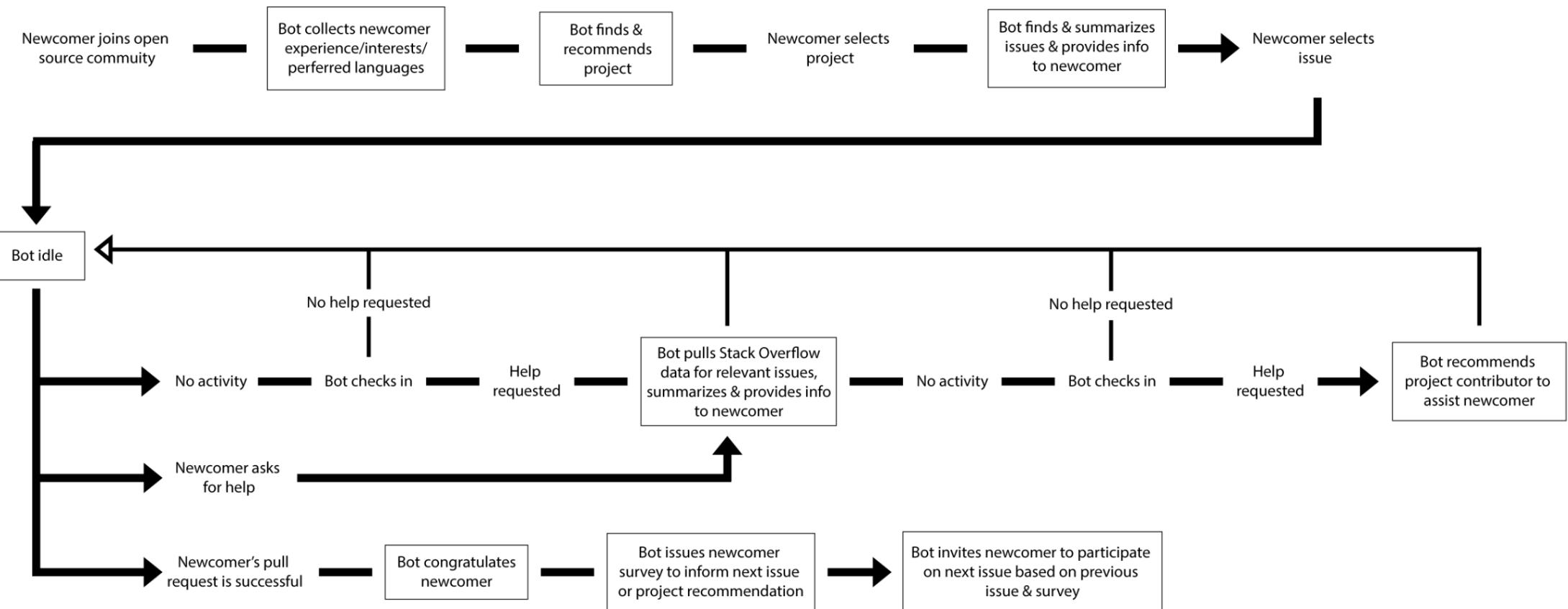
- Own it!
- Be responsive
- Revise it
- Discuss it

make it
happen.

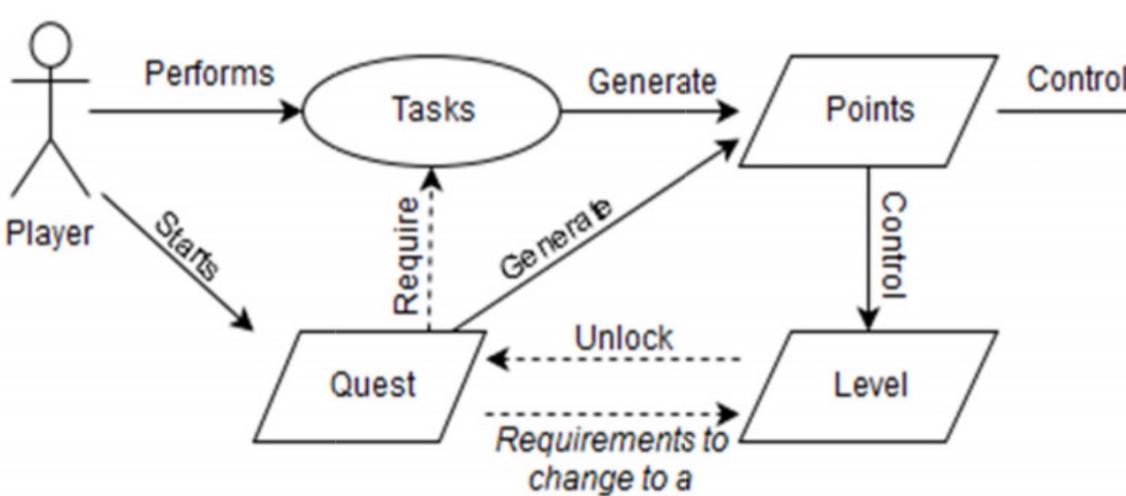
How are we approaching the problem?



How are we approaching the problem?



How are we approaching the problem?



The screenshot shows a GitLab interface with a sidebar and a main quest list.

GitLab Sidebar:

- Points: 670 (1)
- Level: 4
- Projects
- Ranking (2)
- Quest
- Todos: 0
- Activity
- Groups
- Milestones
- Issues: 7
- Merge Requests: 2
- Snippets

Quest List:

Name	Level	Score	
Quest1	Unblocked	1	140
Quest2	Unblocked	2	215
Quest3	Unblocked	3	200
Quest4	Unblocked	4	600
Quest5	Blocked	5	500
Quest6	Blocked	6	650