Leiden University
Medical Center

GitLab as a Collaborative Working Environment - part 2

Introductory Course

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Outline

Time	Activity	Contents
09:00	Lecture 1	Introduction, version control.
09:30	Practical 1	GitLab: groups, projects, and file handling.
09:50	Break	
10:00	Lecture 2	GitLab: issues, labels, milestones,
10:20	Practical 2	and the issue board.
10:40	Break	
10:50	Lecture 3	GitLab: wiki, markdown, extras.
11:20	Practical 3	
11:50	Final questions	
12:00	Closing	

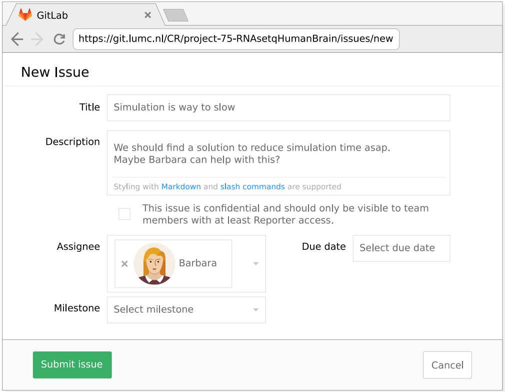
Issues

Allow you to signalize problems and to delegate their solving to project members.

You can make issues and:

- Assign them to people.
- Leave them general.
- Have discussions in them.
- File them under milestones.

Example: issue creation



https://git.lumc.nl/CR/project-75-RNAsetqHumanBrain/issues/new

New Issue

Title: Simulation is way to slow

Description: We should find a solution to reduce simulation time asap.
Maybe Barbara can help with this?

Styling with Markdown and slash commands are supported

☐ This issue is confidential and should only be visible to team members with at least Reporter access.

Assignee: Barbara

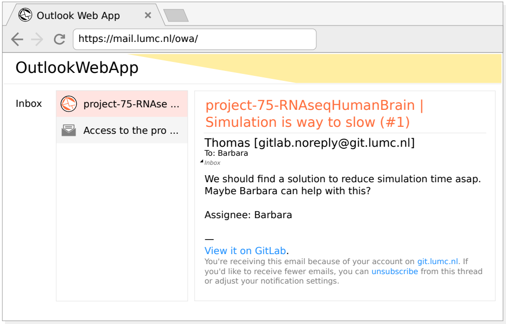
Due date: Select due date

Milestone: Select milestone

Thomas

Creates a general issue and assigns it to Barbara.

Example: issue assignation email notification



project-75-RNAseqHumanBrain | Simulation is way to slow (#1)

Thomas [gitlab.noreply@git.lumc.nl]
To: Barbara
Inbox

We should find a solution to reduce simulation time asap.
Maybe Barbara can help with this?

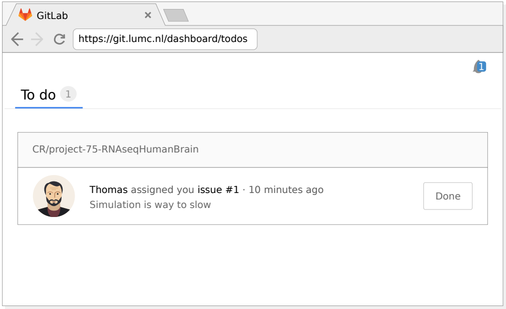
Assignee: Barbara

—
View it on GitLab.
You're receiving this email because of your account on git.lumc.nl. If you'd like to receive fewer emails, you can unsubscribe from this thread or adjust your notification settings.


Barbara

Receives email with the new issue created and assigned to her.

Example: the issue appears as a To do



https://git.lumc.nl/dashboard/todos

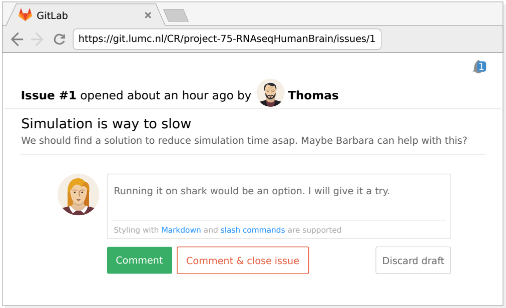
CR/project-75-RNAseqHumanBrain

Thomas assigned you issue #1 · 10 minutes ago
Simulation is way to slow


Barbara

Logs in to GitLab. The issue appears also as a To do notification.

Example: issue reply



Issue #1 opened about an hour ago by **Thomas**

Simulation is way to slow

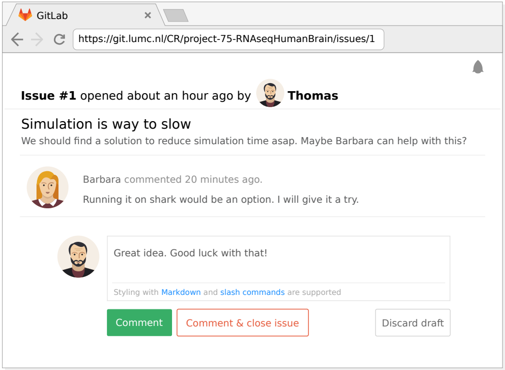
We should find a solution to reduce simulation time asap. Maybe Barbara can help with this?

Running it on shark would be an option. I will give it a try.

Barbara

Uses the issues discussion option to reply.

Example: issue reply again



Issue #1 opened about an hour ago by **Thomas**

Simulation is way to slow

We should find a solution to reduce simulation time asap. Maybe Barbara can help with this?

Barbara commented 20 minutes ago.

Running it on shark would be an option. I will give it a try.

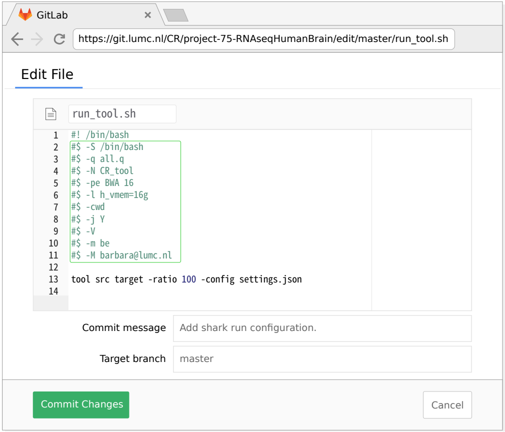
Great idea. Good luck with that!

Thomas

Replies back to Barbara.

Email notification not shown.

Example: edit file directly on GitLab



https://git.lumc.nl/CR/project-75-RNAseqHumanBrain/edit/master/run_tool.sh

Edit File

run_tool.sh

```
#! /bin/bash
#$ -S /bin/bash
#$ -q all.q
#$ -N CR_tool
#$ -pe BWA 16
#$ -l h_vmem=16g
#$ -cwd
#$ -j Y
#$ -V
#$ -m be
#$ -M barbara@lumc.nl

tool src target -ratio 100 -config settings.json

```

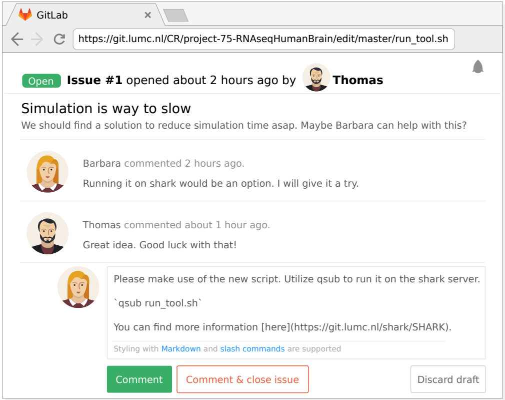
Commit message: Add shark run configuration.

Target branch: master

Edits the file using the GitLab interface.

Barbara

Example: close issue



Issue #1 opened about 2 hours ago by **Thomas**

Simulation is way to slow

We should find a solution to reduce simulation time asap. Maybe Barbara can help with this?

Barbara commented 2 hours ago.

Running it on shark would be an option. I will give it a try.

Thomas commented about 1 hour ago.

Great idea. Good luck with that!

Please make use of the new script. Utilize qsub to run it on the shark server.

`qsub run_tool.sh`

You can find more information [here](https://git.lumc.nl/shark/SHARK).

Barbara

Replies with solution and closes the issue.

Email notification not shown.

GitLab

Issues extras

- You can reassign an issue.
- You can reopen an issue.
- You can still make comments in closed issues.
- You can upvote/downvote issues or add emojis.
- You can categorize issues with labels (detailed later).

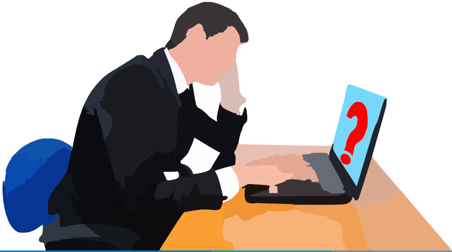
Todos

A chronological list of things that are waiting for your input.

Todos allow you to see where:

- You should spend your time.
- Your team members need help.
- You need to take some action.
- You need to keep an eye on.

Note that Todos are personal.



Todos triggering

A Todo is triggered when:

- An issue is assigned to you.
- You are @mentioned in an issue.
  - Be it the description or in a comment.

You can also manually add an issue to your Todos list.

Note that there is just one Todo per issue.

Todos dismissal

Any of the following action to the corresponding issue will mark your Todo as Done:

- Changing the assignee.
- Changing the milestone.
- Adding/removing a label.
- Commenting on the issue.

You can also manually mark the Todo as done.

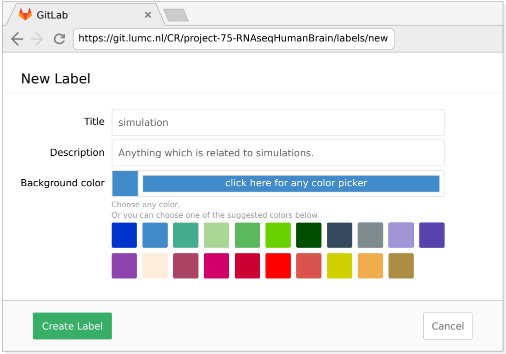
Todos are only marked as **Done** if the action is coming from you.

GitLab

Labels

- Categorize and filter issues based on descriptions.
- They can have different colors.
- Predefined labels are available.
- You can prioritize labels.
- You can subscribe to be notified when a label gets added to an issue.

Example: create a label



https://git.lumc.nl/CR/project-75-RNAseqHumanBrain/labels/new

New Label

Title: simulation

Description: Anything which is related to simulations.

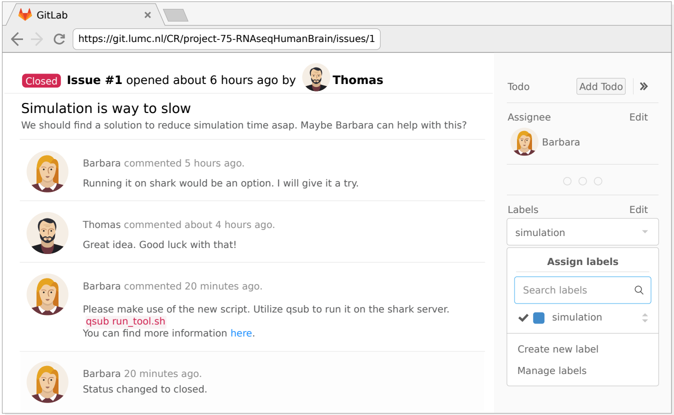
Background color

Choose any color.
Or you can choose one of the suggested colors below

Barbara

Creates a new label to be assigned to simulation related issues.

Example: assign label to issue



Closed **Issue #1** opened about 6 hours ago by **Thomas**

Simulation is way to slow

We should find a solution to reduce simulation time asap. Maybe Barbara can help with this?

Barbara commented 5 hours ago.

Running it on shark would be an option. I will give it a try.

Thomas commented about 4 hours ago.

Great idea. Good luck with that!

Barbara commented 20 minutes ago.

Please make use of the new script. Utilize qsub to run it on the shark server.
`qsub run_tool.sh`
You can find more information here.

Barbara 20 minutes ago.
Status changed to closed.

Assignee: Barbara

Labels: simulation

Assign labels

✓ 🟦 simulation

Barbara

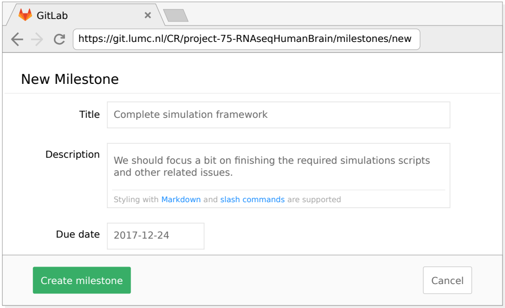
Assigns the "simulation" label to the closed "Simulation is way to slow" issue.

GitLab

Milestones

- Allow you to organize issues into a cohesive group and, optionally, to set a due date.
- Milestones are usually created per-project.
- You can create a milestone for several projects in the same group simultaneously.

Example: create milestone



https://git.lumc.nl/CR/project-75-RNAseqHumanBrain/milestones/new

New Milestone

Title: Complete simulation framework

Description: We should focus a bit on finishing the required simulations scripts and other related issues.

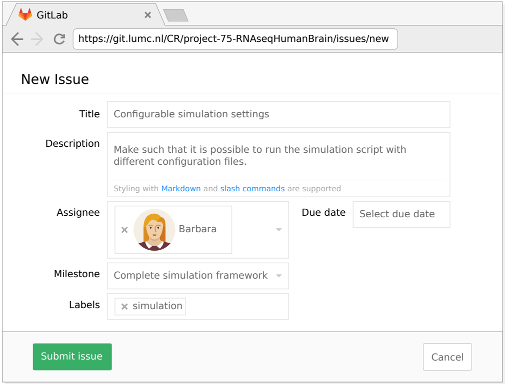
Styling with Markdown and slash commands are supported

Due date: 2017-12-24

Thomas

Creates a new milestone to push things a bit :).

Example: create issue under milestone



GitLab

https://git.lumc.nl/CR/project-75-RNAseqHumanBrain/issues/new

New Issue

Title	Configurable simulation settings
Description	Make such that it is possible to run the simulation script with different configuration files.
Assignee	Barbara
Due date	Select due date
Milestone	Complete simulation framework
Labels	simulation

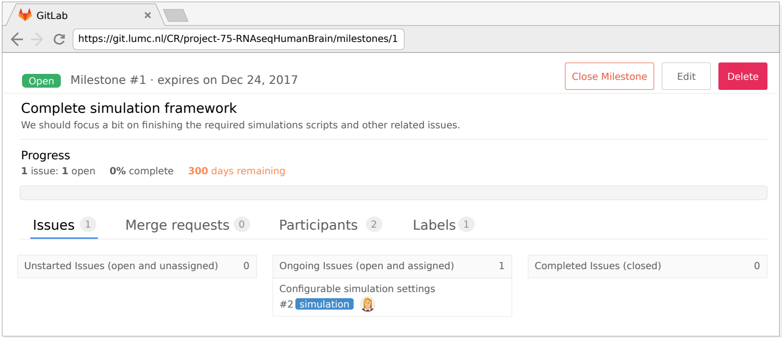
Styling with Markdown and slash commands are supported

Thomas

Creates an issue for the new milestone utilizing the "simulation" label.

GitLab

Example: milestone summary



Open Milestone #1 · expires on Dec 24, 2017

Complete simulation framework

We should focus a bit on finishing the required simulations scripts and other related issues.

Progress

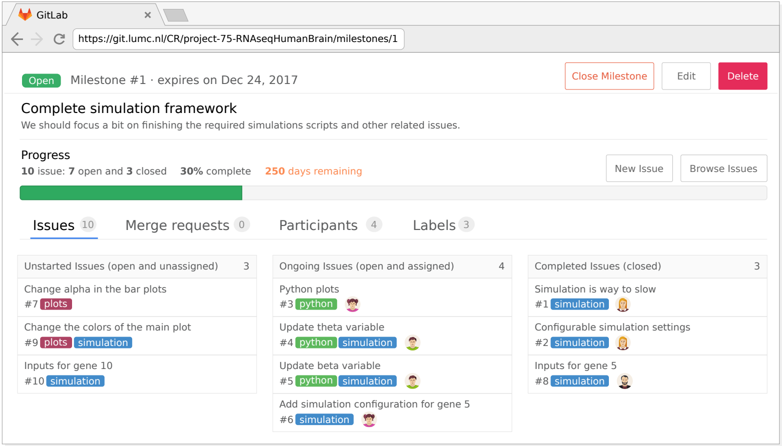
1 issue: **1** open **0%** complete **300** days remaining

Unstarted Issues (open and unassigned)	Ongoing Issues (open and assigned)	Completed Issues (closed)
0	1	0
	Configurable simulation settings #2 simulation	

GitLab

Example: skip some steps

Example: milestone summary after fast forward



https://git.lumc.nl/CR/project-75-RNAseqHumanBrain/milestones/1

Milestone #1 · expires on Dec 24, 2017

Complete simulation framework

We should focus a bit on finishing the required simulations scripts and other related issues.

Progress

10 issue: **7** open and **3** closed **30%** complete **250** days remaining

Unstarted Issues (open and unassigned) 3

- Change alpha in the bar plots
  #7 plots
- Change the colors of the main plot
  #9 plots simulation
- Inputs for gene 10
  #10 simulation

Ongoing Issues (open and assigned) 4

- Python plots
  #3 python
- Update theta variable
  #4 python simulation
- Update beta variable
  #5 python simulation
- Add simulation configuration for gene 5
  #6 simulation

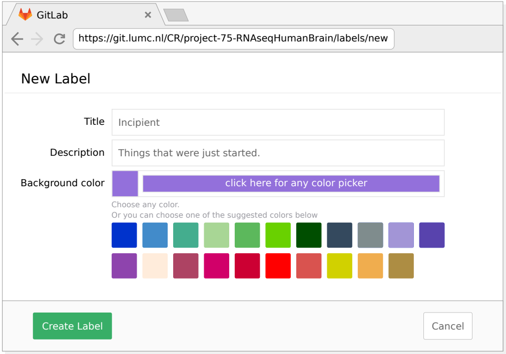
Completed Issues (closed) 3

- Simulation is way to slow
  #1 simulation
- Configurable simulation settings
  #2 simulation
- Inputs for gene 5
  #8 simulation

Issue board

- Organize issues using lists.
- Labels are utilized for lists creation.
- Lists types:
  - Custom: the ones you create based on your labels.
  - Default: **Open** and **Closed**.
- Available also for projects, but also for groups.

Example: issue board lists creation



https://git.lumc.nl/CR/project-75-RNAseqHumanBrain/labels/new

New Label

Title: Incipient

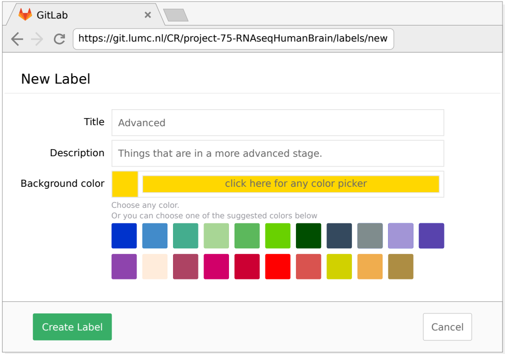
Description: Things that were just started.

Background color

Thomas

Creates a first label to be used as list on the issue board.

Example: issue board lists creation



New Label

Title: Advanced

Description: Things that are in a more advanced stage.

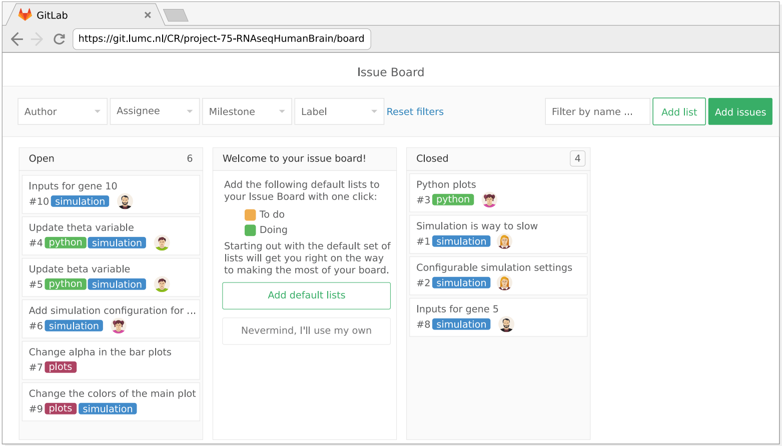
Background color

Choose any color.
Or you can choose one of the suggested colors below

Thomas

Creates a second label to be used as list on the issue board.

Example: issue board lists creation



https://git.lumc.nl/CR/project-75-RNAseqHumanBrain/board

Issue Board

Open 6

- Inputs for gene 10 #10 simulation
- Update theta variable #4 python simulation
- Update beta variable #5 python simulation
- Add simulation configuration for ... #6 simulation
- Change alpha in the bar plots #7 plots
- Change the colors of the main plot #9 plots simulation

Welcome to your issue board!

Add the following default lists to your Issue Board with one click:

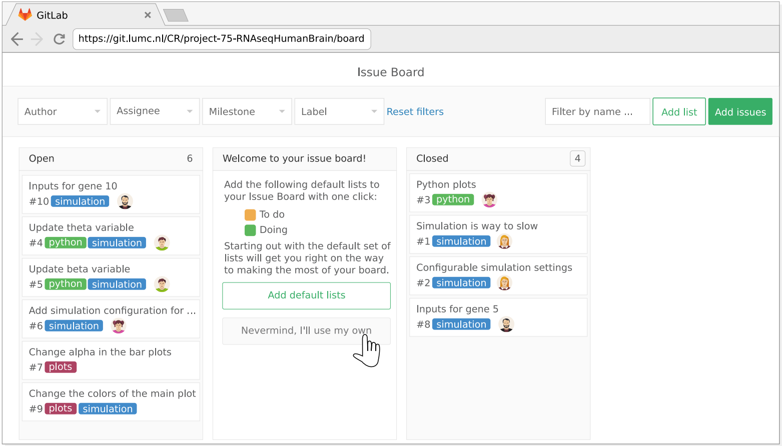
- 🟧 To do
- 🟩 Doing

Starting out with the default set of lists will get you right on the way to making the most of your board.

Closed 4

- Python plots #3 python
- Simulation is way to slow #1 simulation
- Configurable simulation settings #2 simulation
- Inputs for gene 5 #8 simulation

Example: issue board lists creation



https://git.lumc.nl/CR/project-75-RNAseqHumanBrain/board

Issue Board

Open 6

- Inputs for gene 10 — #10 simulation
- Update theta variable — #4 python simulation
- Update beta variable — #5 python simulation
- Add simulation configuration for ... — #6 simulation
- Change alpha in the bar plots — #7 plots
- Change the colors of the main plot — #9 plots simulation

Welcome to your issue board!

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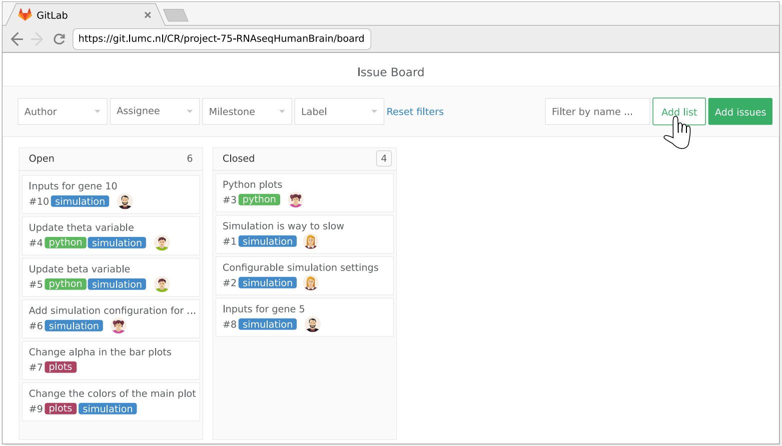
Starting out with the default set of lists will get you right on the way to making the most of your board.

Closed 4

- Python plots — #3 python
- Simulation is way to slow — #1 simulation
- Configurable simulation settings — #2 simulation
- Inputs for gene 5 — #8 simulation

Example: issue board lists creation



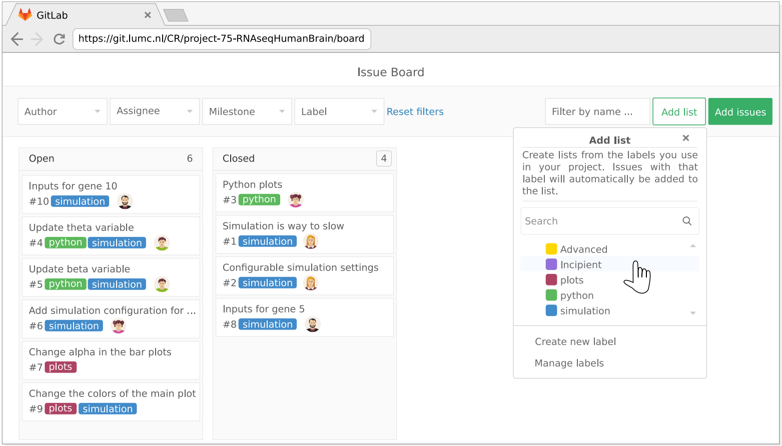
Open 6

- Inputs for gene 10 #10 simulation
- Update theta variable #4 python simulation
- Update beta variable #5 python simulation
- Add simulation configuration for ... #6 simulation
- Change alpha in the bar plots #7 plots
- Change the colors of the main plot #9 plots simulation

Closed 4

- Python plots #3 python
- Simulation is way to slow #1 simulation
- Configurable simulation settings #2 simulation
- Inputs for gene 5 #8 simulation

Example: issue board lists creation



Issue Board

Open 6

- Inputs for gene 10 #10 simulation
- Update theta variable #4 python simulation
- Update beta variable #5 python simulation
- Add simulation configuration for ... #6 simulation
- Change alpha in the bar plots #7 plots
- Change the colors of the main plot #9 plots simulation

Closed 4

- Python plots #3 python
- Simulation is way to slow #1 simulation
- Configurable simulation settings #2 simulation
- Inputs for gene 5 #8 simulation

Add list

Create lists from the labels you use in your project. Issues with that label will automatically be added to the list.

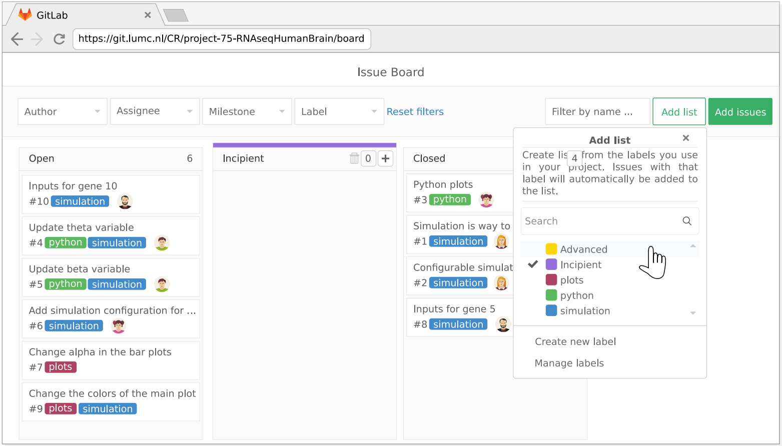
Search

- 🟨 Advanced
- 🟪 Incipient
- 🟥 plots
- 🟩 python
- 🟦 simulation

Create new label

Manage labels

Example: issue board lists creation



Open:
- Inputs for gene 10 #10 simulation
- Update theta variable #4 python simulation
- Update beta variable #5 python simulation
- Add simulation configuration for ... #6 simulation
- Change alpha in the bar plots #7 plots
- Change the colors of the main plot #9 plots simulation

Closed:
- Python plots #3 python
- Simulation is way to #1 simulation
- Configurable simulat #2 simulation
- Inputs for gene 5 #8 simulation

Add list

Create list from the labels you use in your project. Issues with that label will automatically be added to the list.

Search

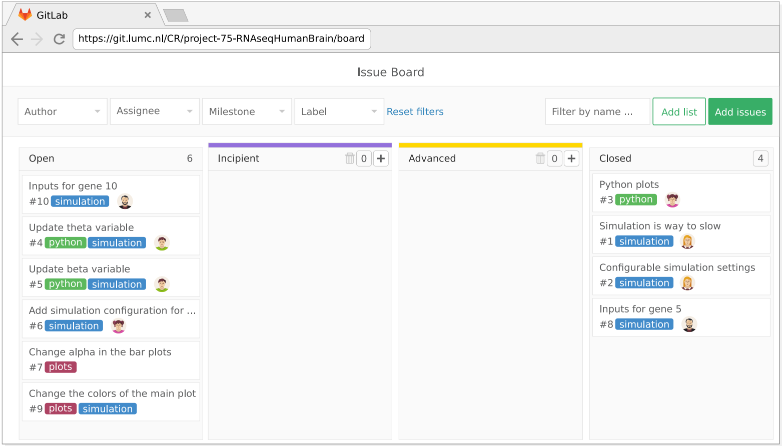
- Advanced
- ✓ Incipient
- plots
- python
- simulation

Create new label

Manage labels

GitLab

Example: issue board lists creation



Open 6

- Inputs for gene 10 #10 simulation
- Update theta variable #4 python simulation
- Update beta variable #5 python simulation
- Add simulation configuration for … #6 simulation
- Change alpha in the bar plots #7 plots
- Change the colors of the main plot #9 plots simulation

Incipient 0

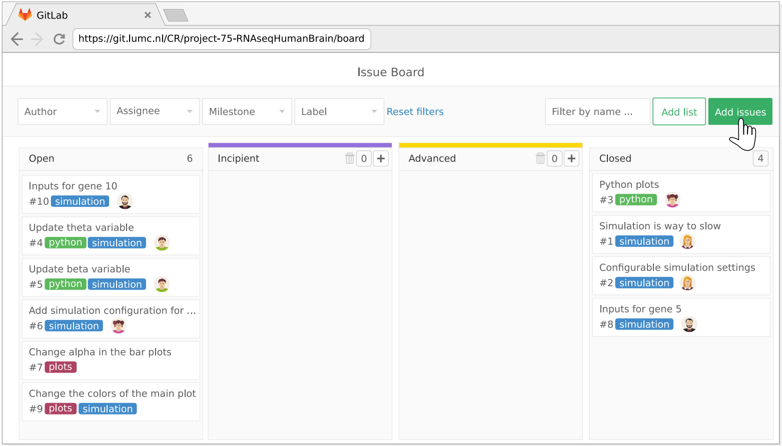
Advanced 0

Closed 4

- Python plots #3 python
- Simulation is way to slow #1 simulation
- Configurable simulation settings #2 simulation
- Inputs for gene 5 #8 simulation

GitLab

Example: add issues to the custom lists



Issue Board

Open 6

Inputs for gene 10
#10 simulation

Update theta variable
#4 python simulation

Update beta variable
#5 python simulation

Add simulation configuration for ...
#6 simulation

Change alpha in the bar plots
#7 plots

Change the colors of the main plot
#9 plots simulation

Incipient 0

Advanced 0

Closed 4

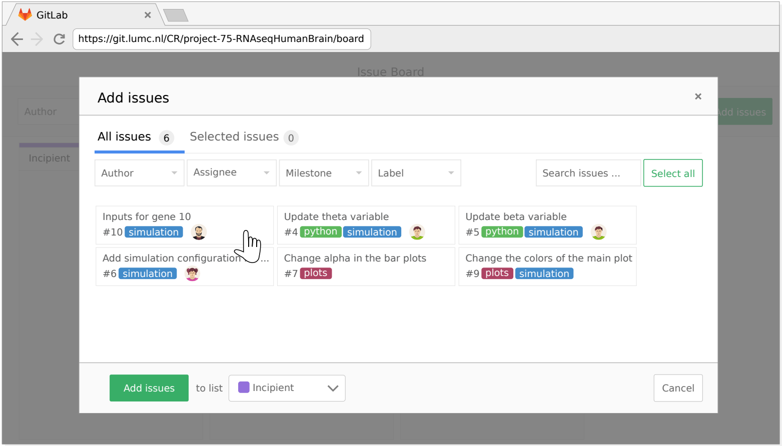
Python plots
#3 python

Simulation is way to slow
#1 simulation

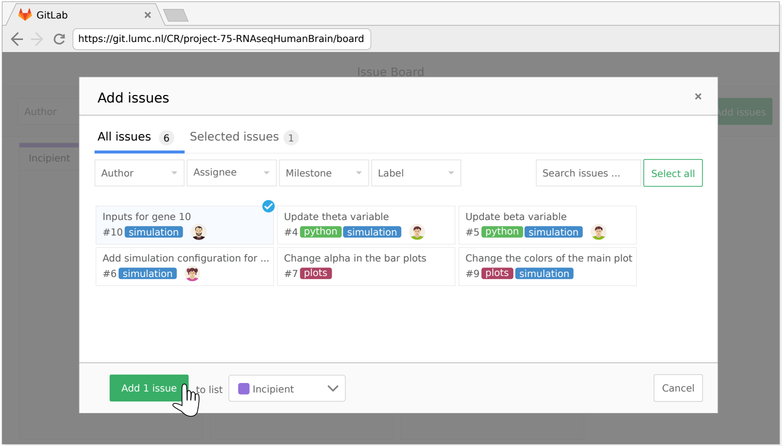
Configurable simulation settings
#2 simulation

Inputs for gene 5
#8 simulation

Example: add issues to the custom lists



Example: add issues to the custom lists



https://git.lumc.nl/CR/project-75-RNAseqHumanBrain/board

Add issues

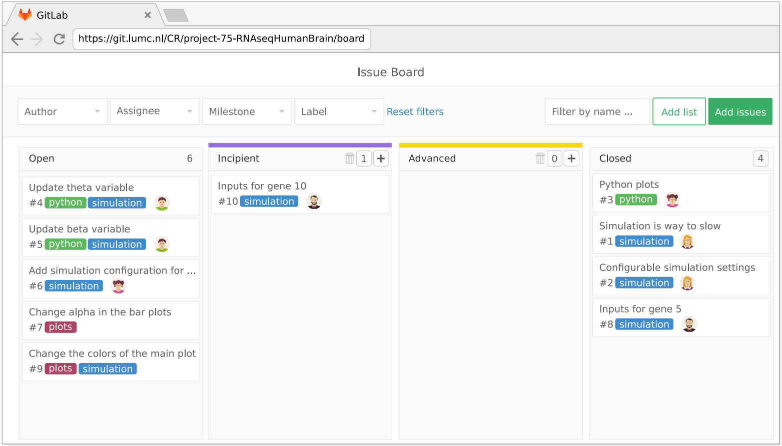
All issues 6 | Selected issues 1

Inputs for gene 10 #10 simulation	Update theta variable #4 python simulation	Update beta variable #5 python simulation
Add simulation configuration for ... #6 simulation	Change alpha in the bar plots #7 plots	Change the colors of the main plot #9 plots simulation

Add 1 issue to list Incipient

GitLab

Example: add issues to the custom lists



Open 6

- Update theta variable #4 python simulation
- Update beta variable #5 python simulation
- Add simulation configuration for … #6 simulation
- Change alpha in the bar plots #7 plots
- Change the colors of the main plot #9 plots simulation

Incipient 1

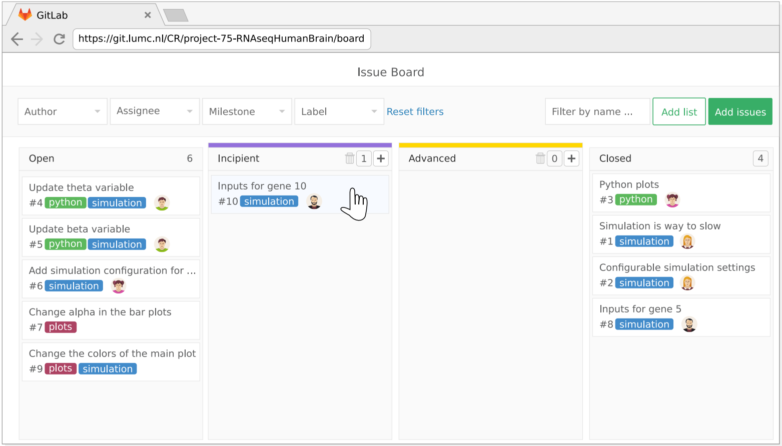
- Inputs for gene 10 #10 simulation

Advanced 0

Closed 4

- Python plots #3 python
- Simulation is way to slow #1 simulation
- Configurable simulation settings #2 simulation
- Inputs for gene 5 #8 simulation

Example: issue board list reallocation



https://git.lumc.nl/CR/project-75-RNAseqHumanBrain/board

Issue Board

Open 6

- Update theta variable #4 python simulation
- Update beta variable #5 python simulation
- Add simulation configuration for … #6 simulation
- Change alpha in the bar plots #7 plots
- Change the colors of the main plot #9 plots simulation

Incipient 1

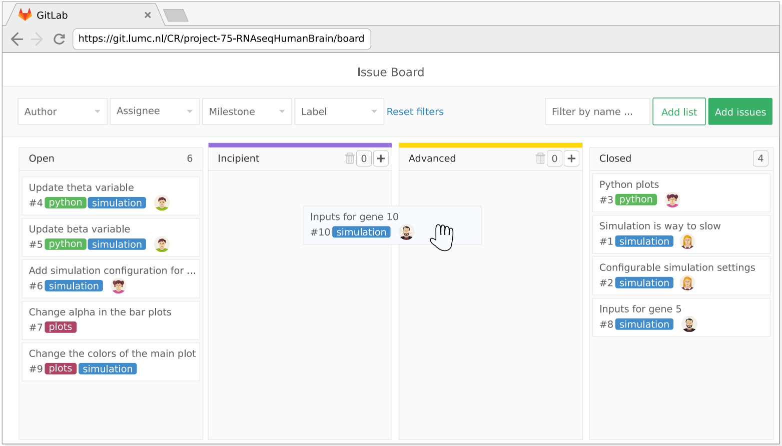
- Inputs for gene 10 #10 simulation

Advanced 0

Closed 4

- Python plots #3 python
- Simulation is way to slow #1 simulation
- Configurable simulation settings #2 simulation
- Inputs for gene 5 #8 simulation

Example: issue board list reallocation



Issue Board

Open 6

- Update theta variable #4 python simulation
- Update beta variable #5 python simulation
- Add simulation configuration for … #6 simulation
- Change alpha in the bar plots #7 plots
- Change the colors of the main plot #9 plots simulation

Incipient 0

Inputs for gene 10 #10 simulation

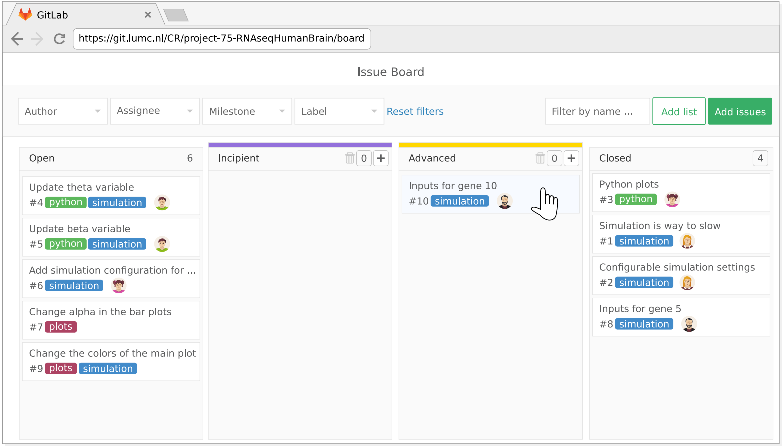
Advanced 0

Closed 4

- Python plots #3 python
- Simulation is way to slow #1 simulation
- Configurable simulation settings #2 simulation
- Inputs for gene 5 #8 simulation

GitLab

Example: issue board list reallocation



Issue Board

Open 6

Update theta variable
#4 python simulation

Update beta variable
#5 python simulation

Add simulation configuration for ...
#6 simulation

Change alpha in the bar plots
#7 plots

Change the colors of the main plot
#9 plots simulation

Incipient 0

Advanced 0

Inputs for gene 10
#10 simulation

Closed 4

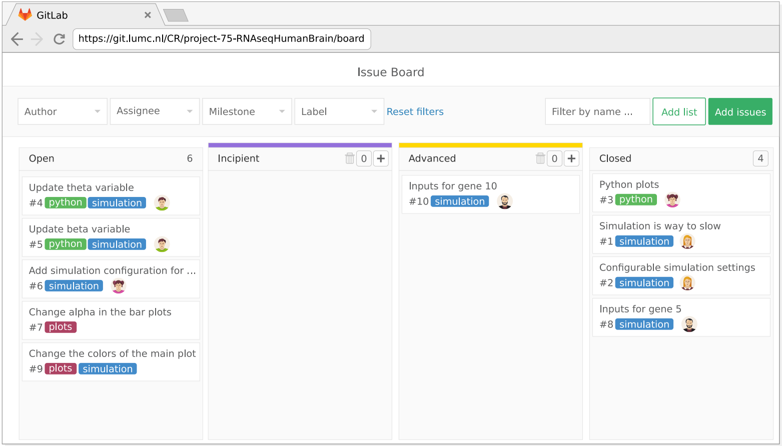
Python plots
#3 python

Simulation is way to slow
#1 simulation

Configurable simulation settings
#2 simulation

Inputs for gene 5
#8 simulation

Example: issue board list reallocation



Open 6

- Update theta variable #4 python simulation
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- Add simulation configuration for … #6 simulation
- Change alpha in the bar plots #7 plots
- Change the colors of the main plot #9 plots simulation

Incipient 0

Advanced 0

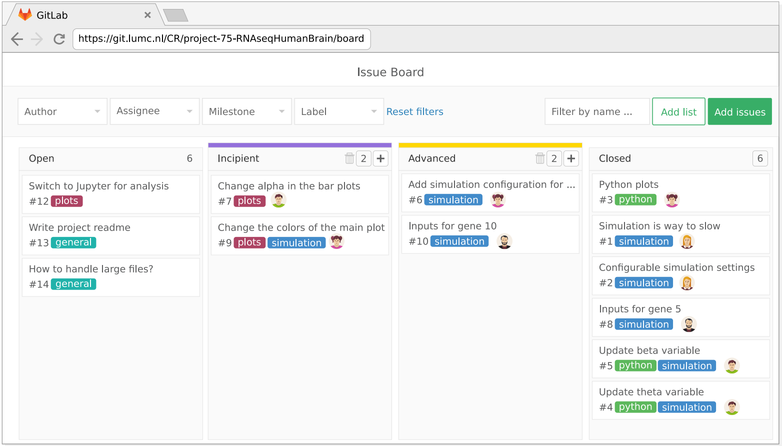
- Inputs for gene 10 #10 simulation

Closed 4

- Python plots #3 python
- Simulation is way to slow #1 simulation
- Configurable simulation settings #2 simulation
- Inputs for gene 5 #8 simulation

Example: skip some steps

Example: issue board after fast forward



Open 6

- Switch to Jupyter for analysis #12 plots
- Write project readme #13 general
- How to handle large files? #14 general

Incipient 2

- Change alpha in the bar plots #7 plots
- Change the colors of the main plot #9 plots simulation

Advanced 2

- Add simulation configuration for ... #6 simulation
- Inputs for gene 10 #10 simulation

Closed 6

- Python plots #3 python
- Simulation is way to slow #1 simulation
- Configurable simulation settings #2 simulation
- Inputs for gene 5 #8 simulation
- Update beta variable #5 python simulation
- Update theta variable #4 python simulation

Practical 2

Issues, labels, milestones, and the issue board.