Design Wits - Version Control with Git

Branching Strategies Used

Feature Branching Strategy

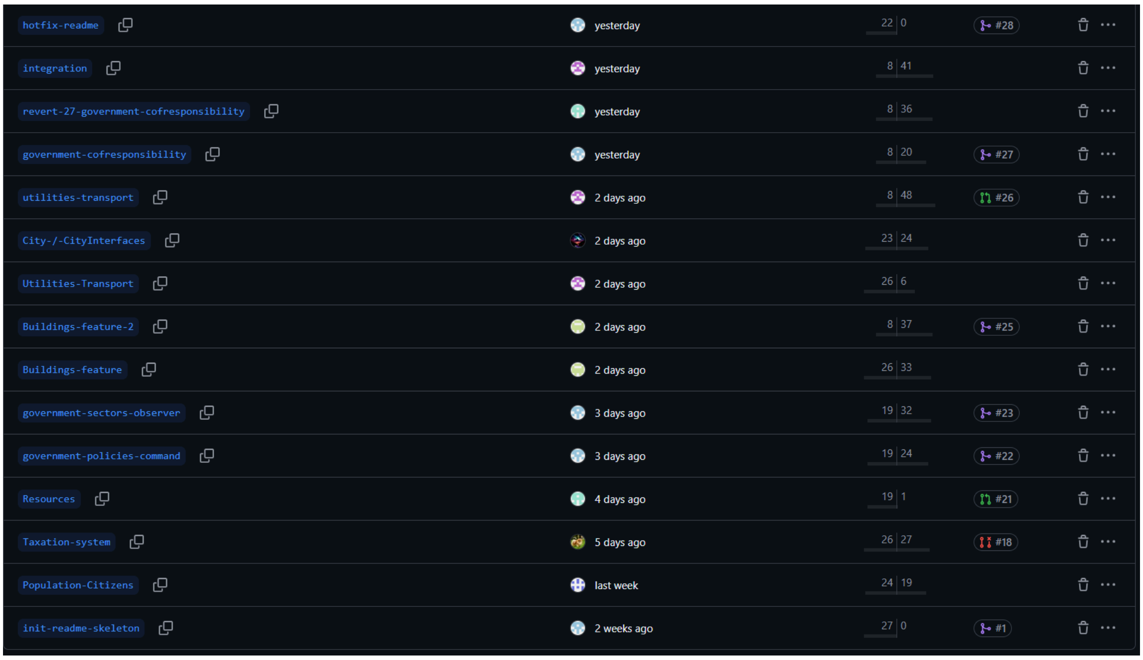
The feature branching strategy is a method used by developers to create isolated environments from the main codebase. They ensure that every developer works on their copies of the previously committed codebase by introducing their code to new branches from the master codebase.

This approach allowed us to experiment, develop, and test with great freedom as we were not influencing the main branch. Directly coordinated branch development helped to minimise chances for bugs with code. It helps several sufficiently skilled developers to work on an isolated module without interfering with each other which could be considered a good manner in terms of software deliveries.

Hot-Fix Branching Strategy

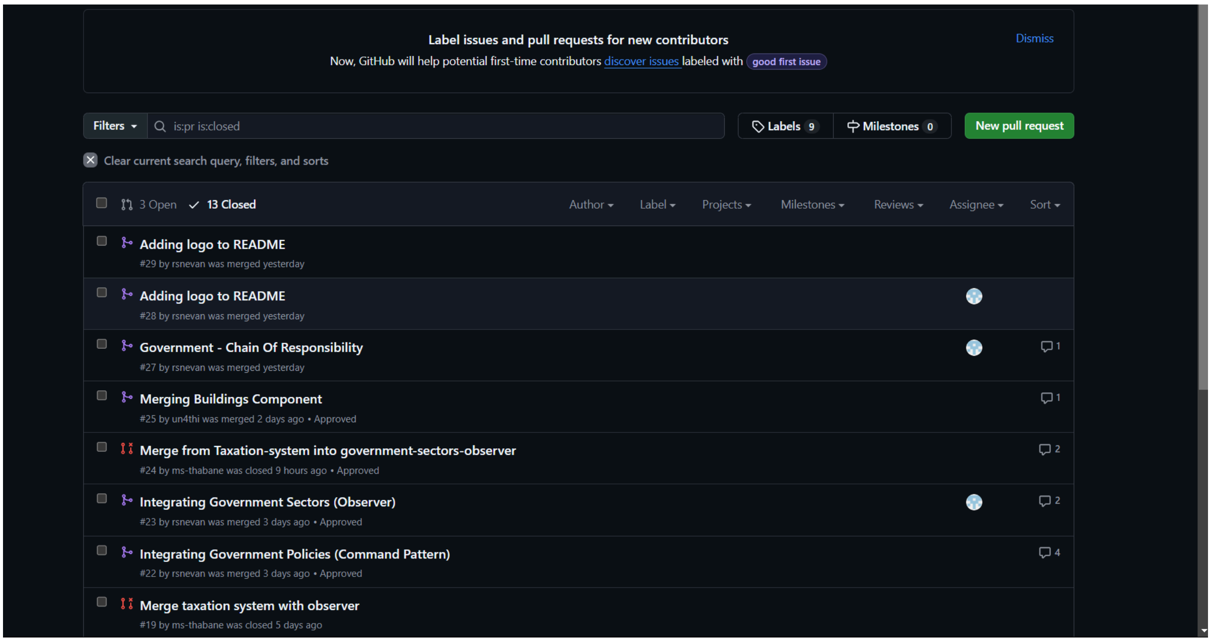
As soon as the error is discovered in production, a brand-new branch, which is usually named a "hot-fix branch," is formed. This new branch typically branches off the as it is the production code that is already running in the system. The benefits of using this branching strategy were that:

- We had minimal disruption as urgent issues were quickly addressed by the team without causing any issues with our feature development.
- Merging the fix back into both the main and development branches acts as a block, and the same bug cannot go ahead and cause them again in the next releases.
- It ensures production’s stability because only the most important ones are merged to the main branch and are deployed immediately.
- Developers, thus, can work on the main part of the problem only and as a result, the fix will be an extensive and verified one before the final stage.



hotfix-readme	yesterday	22	0	#28
integration	yesterday	8	41	
revert-27-government-cofresponsibility	yesterday	8	36	
government-cofresponsibility	yesterday	8	20	#27
utilities-transport	2 days ago	8	48	#26
City-/-CityInterfaces	2 days ago	23	24	
Utilities-Transport	2 days ago	26	6	
Buildings-feature-2	2 days ago	8	37	#25
Buildings-feature	2 days ago	26	33	
government-sectors-observer	3 days ago	19	32	#23
government-policies-command	3 days ago	19	24	#22
Resources	4 days ago	19	1	#21
Taxation-system	5 days ago	26	27	#18
Population-Citizens	last week	24	19	
init-readme-skeleton	2 weeks ago	27	0	#1

Pull Requests



Label issues and pull requests for new contributors

Now, GitHub will help potential first-time contributors discover issues labeled with good first issue

□ Adding logo to README
#29 by rsnevan was merged yesterday

□ Adding logo to README
#28 by rsnevan was merged yesterday

□ Government - Chain Of Responsibility — 1
#27 by rsnevan was merged yesterday

□ Merging Buildings Component — 1
#25 by un4thi was merged 2 days ago • Approved

□ Merge from Taxation-system into government-sectors-observer — 2
#24 by ms-thabane was closed 9 hours ago • Approved

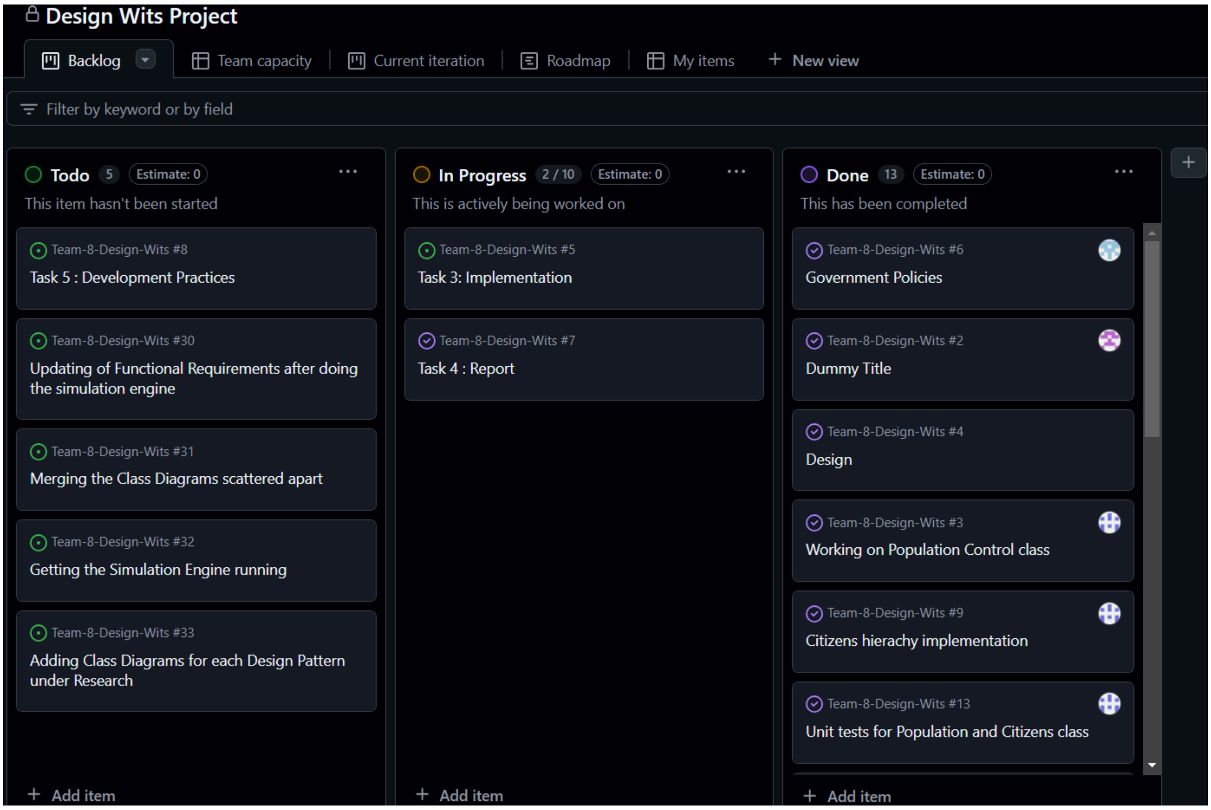
□ Integrating Government Sectors (Observer) — 2
#23 by rsnevan was merged 3 days ago • Approved

□ Integrating Government Policies (Command Pattern) — 4
#22 by rsnevan was merged 3 days ago • Approved

□ Merge taxation system with observer
#19 by ms-thabane was closed 5 days ago

Using Pull requests provided us with a structured and collaborative way to review, discuss, and merge code changes into our shared codebase. With a pull request, developers are able to have in-depth conversations on specific code changes, request feedback, or divulge the intent of the revisions. This is a kind of constructive forum and a place for the team to work out the issues that came up, which is even more vital for virtual teams.

Projects



Design Wits Project

Todo 5 Estimate: 0
This item hasn't been started

- Team-8-Design-Wits #8 Task 5 : Development Practices
- Team-8-Design-Wits #30 Updating of Functional Requirements after doing the simulation engine
- Team-8-Design-Wits #31 Merging the Class Diagrams scattered apart
- Team-8-Design-Wits #32 Getting the Simulation Engine running
- Team-8-Design-Wits #33 Adding Class Diagrams for each Design Pattern under Research

In Progress 2 / 10 Estimate: 0
This is actively being worked on

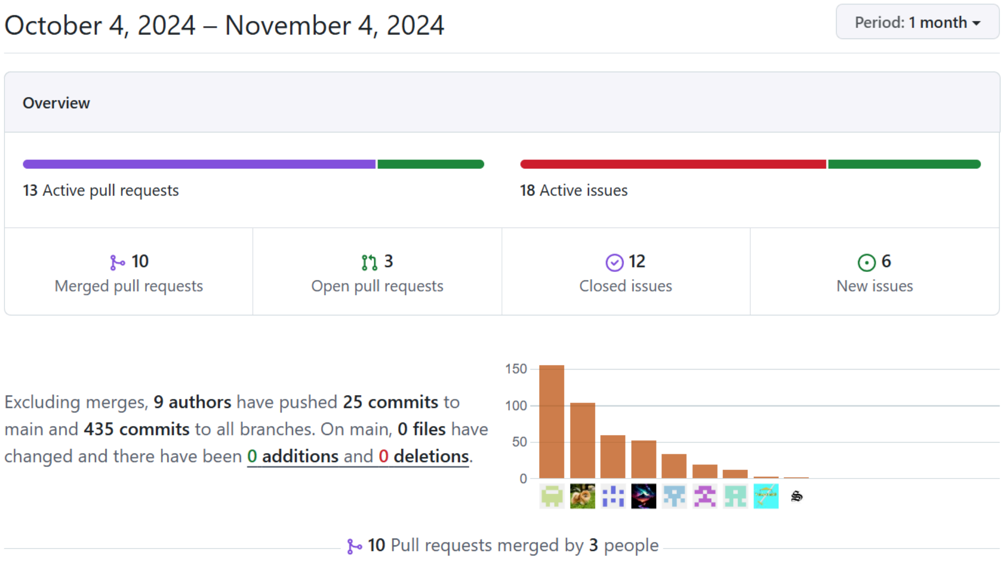
- Team-8-Design-Wits #5 Task 3: Implementation
- Team-8-Design-Wits #7 Task 4 : Report

Done 13 Estimate: 0
This has been completed

- Team-8-Design-Wits #6 Government Policies
- Team-8-Design-Wits #2 Dummy Title
- Team-8-Design-Wits #4 Design
- Team-8-Design-Wits #3 Working on Population Control class
- Team-8-Design-Wits #9 Citizens hierachy implementation
- Team-8-Design-Wits #13 Unit tests for Population and Citizens class

Using GitHub Projects gave our team a chance to plan and oversee tasks directly in connection with our code. GitHub Projects allowed us to easily plan, track, and prioritise our and ensure that we know who is working on what . The team was able to introduce issues, and appoint tasks, set deadlines, and monitor the performance of which the team as a whole is up-to-date and in alignment as well.

Commits, Pull Requests and Issues



October 4, 2024 – November 4, 2024

Period: **1 month** ▾

Overview

13 Active pull requests

18 Active issues

10	3	12	6
Merged pull requests	Open pull requests	Closed issues	New issues

Excluding merges, **9 authors** have pushed **25 commits** to main and **435 commits** to all branches. On main, **0 files** have changed and there have been 0 **additions** and 0 **deletions**.

10 Pull requests merged by **3** people