Sprint 1 Retrospective

Hagglers

Dates of Sprint 1: 01/01/2024 - 1/12/2024
Sprint 1 Retrospective: 1/15/2024 - 1/19/2024

Team Roles

Product Owner: Nick Anaya
Scrum Master: Emmie Teng
Coding Monkey: Justin Abraham, Victor Pan, Griffith Thomas, Jackson Stone, Stella Yang

Goals For This Sprint

This Sprint was valuable as we set up the foundation for the rest of this project as well as listing out all the requirements from the client. We also planned our database design and structure along with UI ideas. We also wanted to have the inventory and character system complete by the end of the sprint with a stretch goal of a functioning bartering system.

For this Sprint, we planned on:

- Sticking with just text and redirection links to keep things simple
- Write scenarios for all of the Features
- Get the web app deployed on Heroku with Ruby on Rails
- Design and set up database structures for Players, NPCs, Items, Inventory
- Implement an interaction system between the player and NPC to initiate trade

(Stretch Goals)

- Implement an item value checker to only allow good trades to be accepted by the NPC
- Implement a bartering system that facilitates the trade

User Stories

For Sprint 1, we had the following stories in our backlog with 5 and 6 being stretch goals.

#	Feature	Description	Points
1	Inventory System	As a **player** I want to **keep track of the items I currently own in the game** So that **I can learn how much trading power I have**	3
2	Character System	As a **player** I want to **have characters represented on the screen**	2

		So that **I can have someone to barter with**	
3	Interaction System	As a **player** I want to **interact with NPCs** So that **I can initiate trade and gain goods**	2
4	Deployment	As a **user** I want to **be able to access the deployed website** So that **I can play the game**	1
5	Item value checker	As a **player** I want **each item to have an attached value** so that **I can make good deals**	2
6	Bartering System	As a **young player**, I want to **acquire items through exchanging** so that I can **learn the value of items**	5

Sprint Achievements

Throughout this sprint, we were able to complete our main sprint goals with a few bugs. We fully implemented the Inventory System, Character System, seeded all the tables with basic information, created a gameplay flow, and also allowed players to interact with the NPCS to view their information and inventories. We were unable to get to the stretch goals due to us underestimating our time restraints in Singapore and lack of understanding of our tools.

Completed Stories:

- Inventory System
    - User is able to view their own inventories
- Character System
    - User is able to see the NPCs seeded into the tables
- Interaction System
    - User is able to view the NPCs' information as well as their inventory
- Deployment
    - Hosted website on heroku

Team Contributions

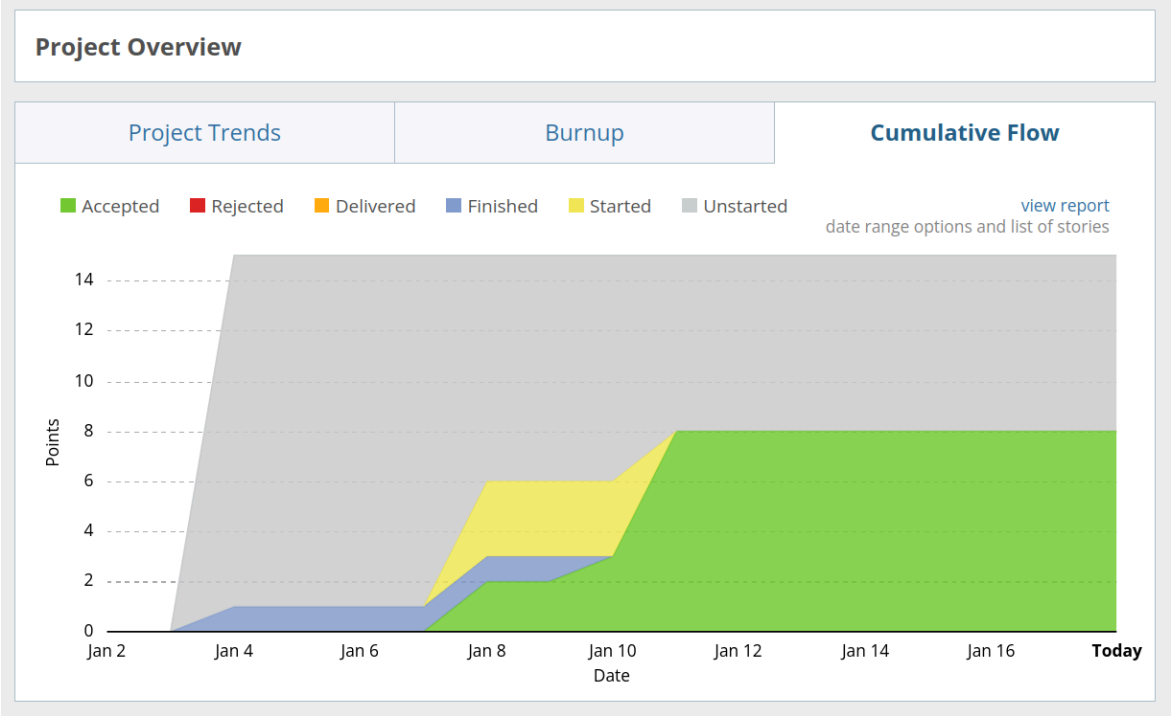
Name	Effort %	Work done
Nick	11%	Brainstorm and design of game attributes - 2hr Wrote cucumber tests - 3hr Sprint Retrospective Summary - 0.5hr
Emmie	13%	Drawing Lo-FI design and user flow - 1 hr Sprint Planning - 2hrs Daily Scrum Meetings - 1hr Peer Programming - 3 hrs Sprint Retrospective document - 2 hrs
Justin	11%	ROR Research - 1 hr Setup Initial Nonplayer Table - 0.5 hrs Wrote Cucumber Tests for Nonplayer table - 1 hr Connected Interaction System - 1hr Basic CSS and Styling for Web Page - 1hr
Victor	11%	Set up Inventory Table - 0.5 hrs Wrote and implemented RSpec tests for Items and Inventory - 1.5hr Implemented Cucumber tests for Items and Inventory - 4h
Griffith	18%	Character System - 6 hrs CRUD changes based on database changes - 2 hrs Bootstrap Investigation - 1 hr Pixijs Investigation - 1 hr
Jackson	18%	Creating the repo/project - 0.5 hrs CD pipeline - 2 hrs CI pipeline - 2hrs Character/NPC/Player model, STI stuff, and tests - 6 hrs Gameplay System and Tests - 2 hrs
Stella	18%	Designed database UML - 2.5 hr Designed gameplay flow - 1 hr Set up item model and scaffolding- 1 hr Seed item table - .5 hr Displaying inventories - 1 hr Implementation of gameplay flow - 1.5 hr Cucumber test rewrites - 2 hr

Sprint Backlog Status

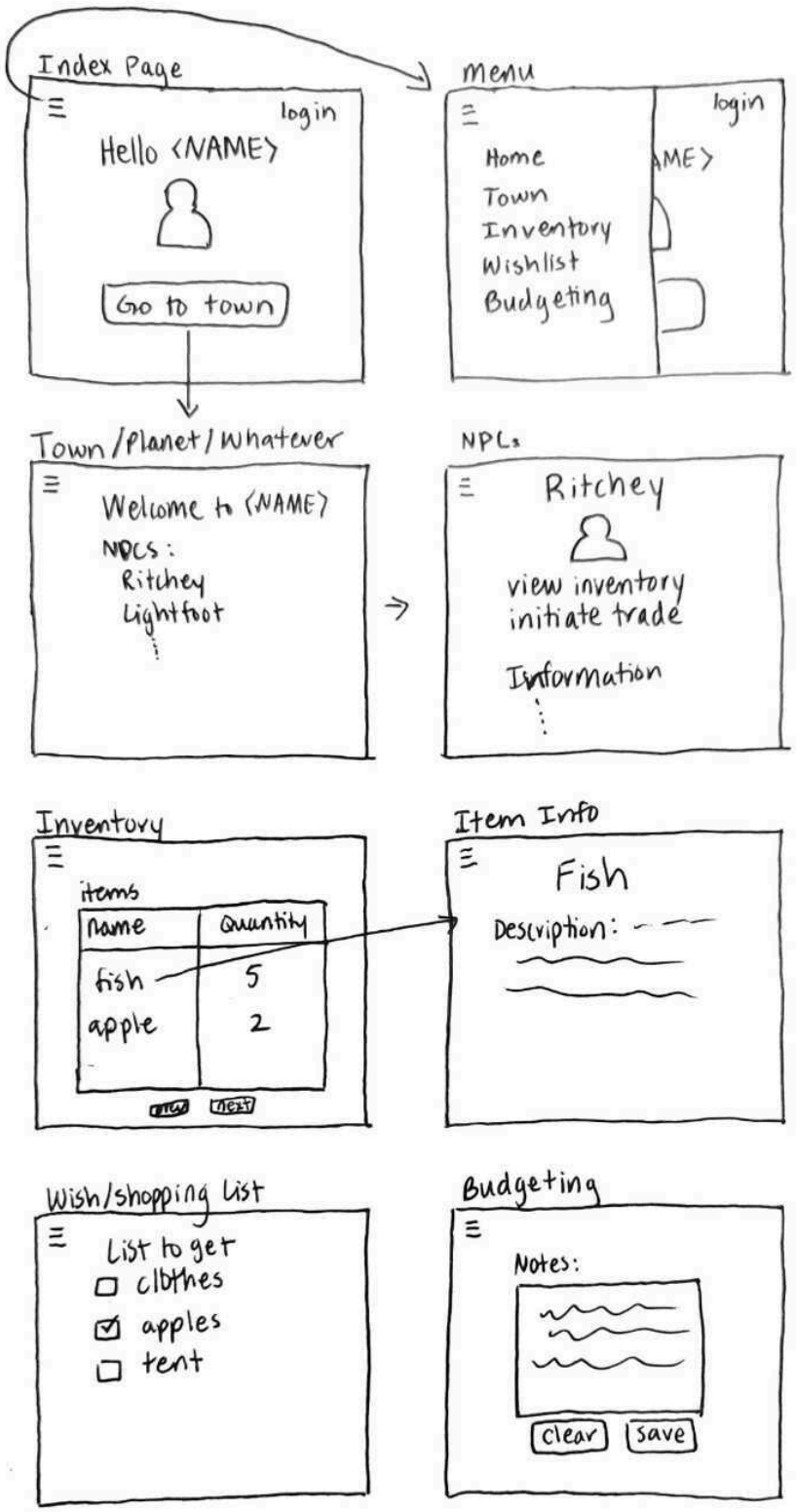
Story	Type	Description
Deployment	+	We added a story for deployment as it was a little more than a chore and was important for the functionality of our project.
CRUD changes based on database changes	+	Added as a bug due to a redesign of the database. The database was changed to make the linkages of the different tables more meaningful, and changing the database required changes to the CRUD operations.
Prettify the user gameplay flow	+	Added chore to create and add css to the different menu/pages of the game.
Item Value Checker	-	Moved Item Value checker to the next sprint as we had issues with getting inventory to work properly and ran out of time to implement this stretch goal.
Bartering System	-	The Bartering System relies on Item Value Checker as well as a fully functioning Inventory System. We underestimated the amount of time the other stories took and didn't get to the bartering system.
Inventory System	*	Broke the inventory system down to many small tasks as well because the setup, seeding, and testing process were all too big to be on its own.
Character System	*	Same modification as the inventory system, broke down to small tasks because it was too big on its own.
Interaction System	*	Changed it into three separate features to better reflect the user interactions. The original feature was too broad and general. Dividing it into shorter stories helped to deliver those stories faster and increase productivity.

Burn Down Chart

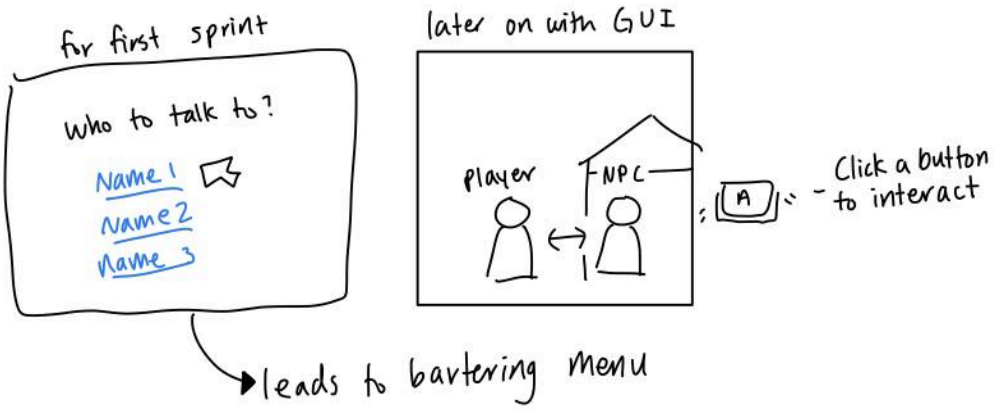
We expected to finish 8 points of normal stories with 12 points being our stretch goal. In this time period, we were able to start and finish all 8 points of user stories but could not put work into our stretch goals.



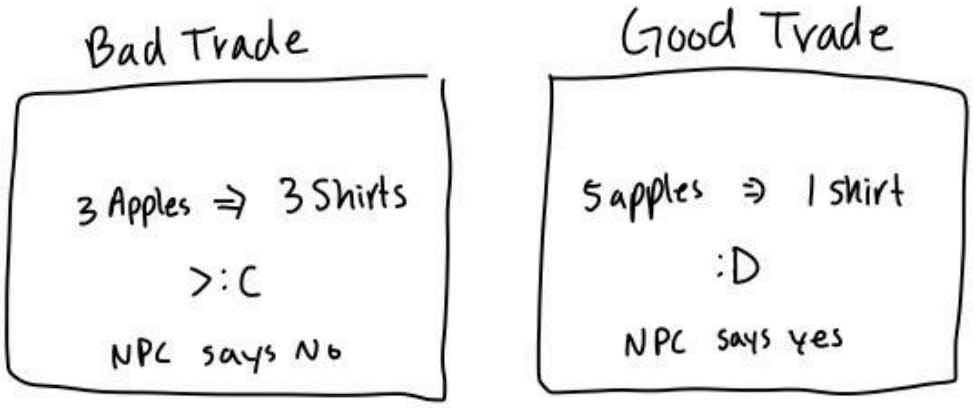
Design Diagrams



Interaction System

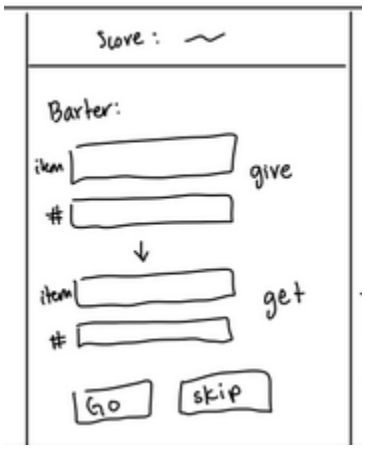


Item Value Checker

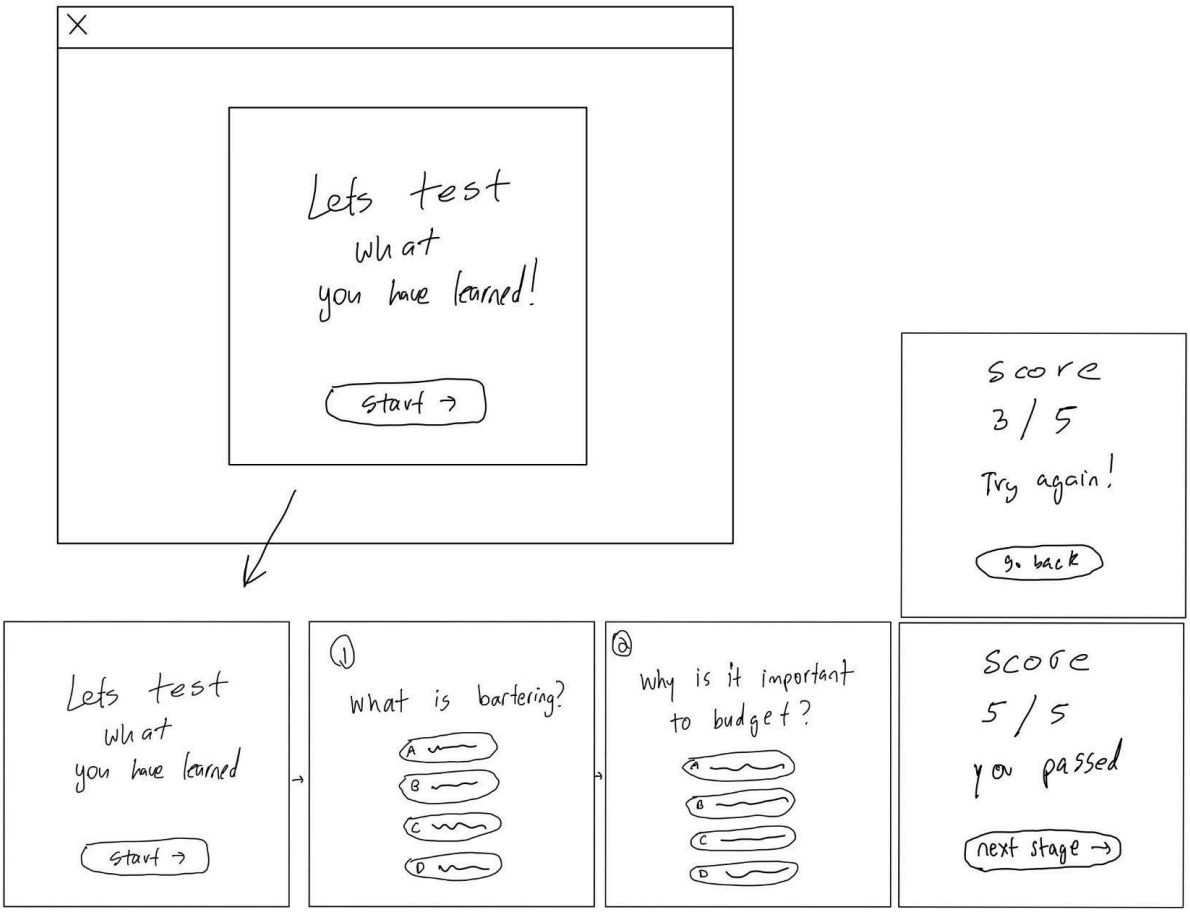


Bartering

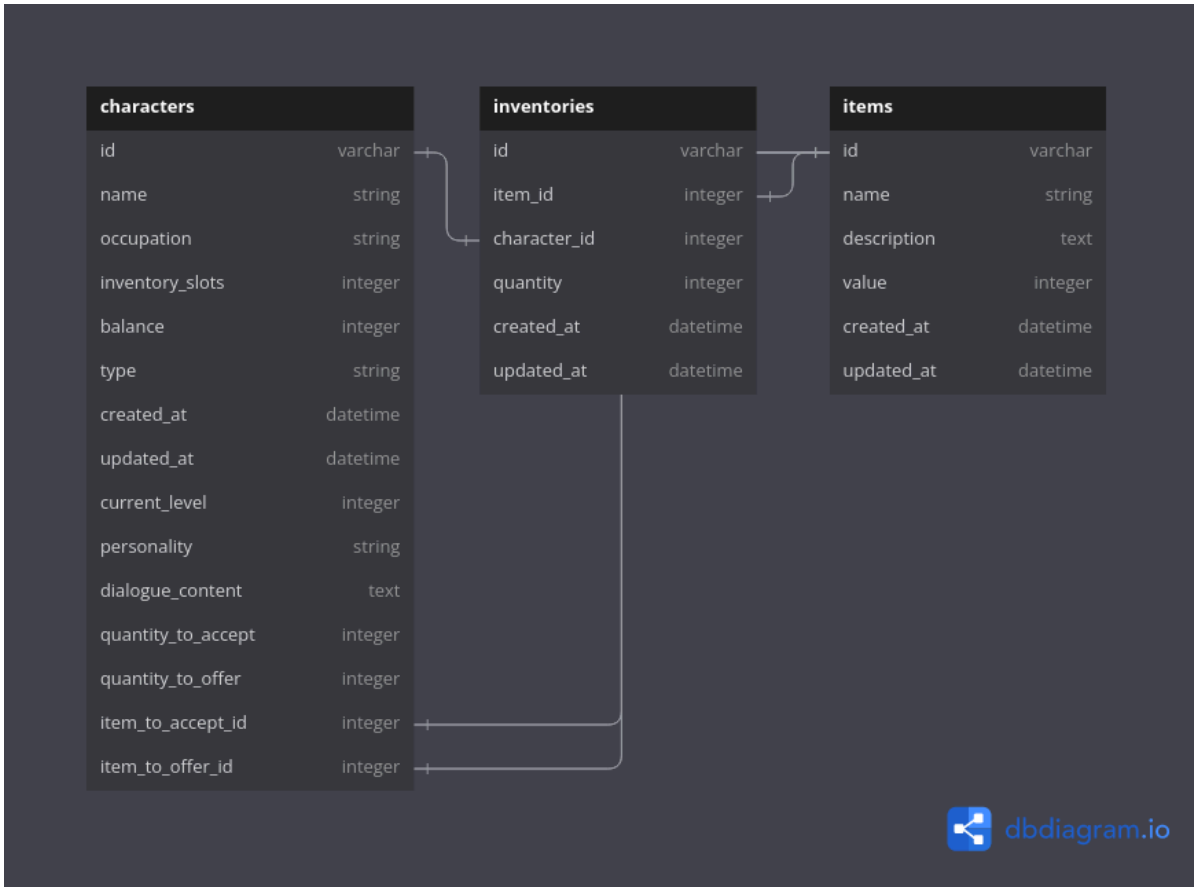
The game will be a 2d side scroller with the player moving along to different stalls to barter



End of Phase Quiz



UML Diagram for tables



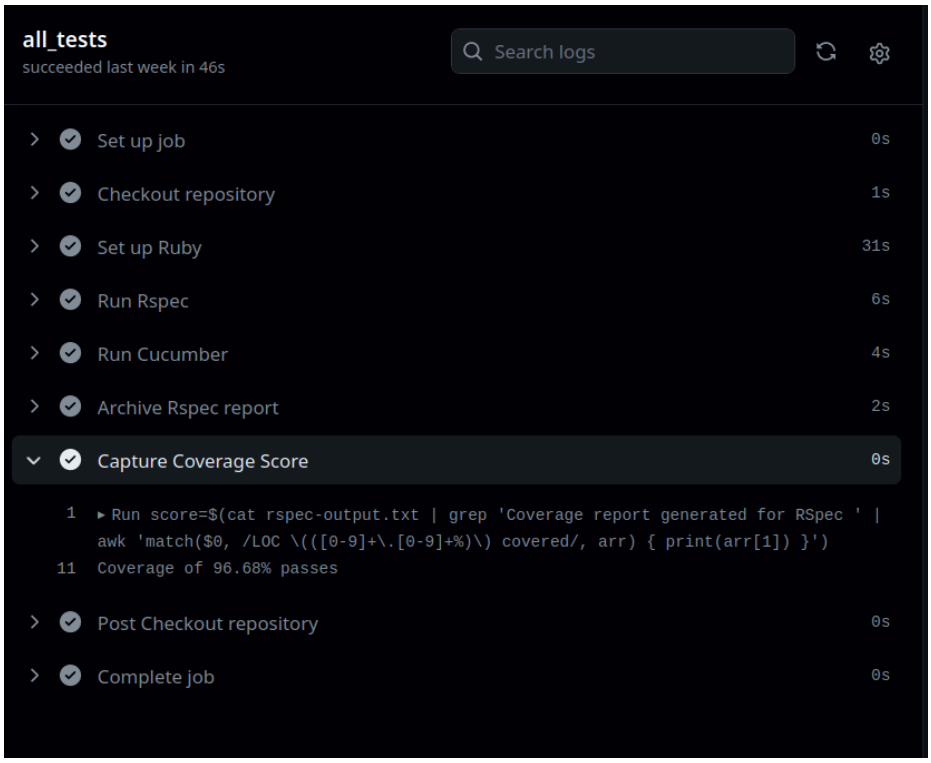
Documentation of Changes

There were some changes to the design sketches, namely the overall look and menu of the product, as our initial GUI design was too ambitious for us to implement this sprint. Mid way through our sprint, we decided to stick with a text based game with some images to gamify the web app.

The UML diagram was also changed mid sprint because there were some relationship issues in the tables that made it difficult to access inventories of NPCS and Players. Due to not understanding how Rails simplifies the processes for us. We prepared the UML to have a lot of foreign keys without the proper naming convention to connect them. Originally, we had characters, players, nonplayers, and dialogues tables as part of our character system. We were intending on handling inheritance through connecting foreign keys with the player and nonplayer database tables but this could be done a lot simpler with just one big characters table and have the models create that distinction. We also just simply condensed the dialogues table into characters because on further consideration, we did not think that multiple Non-players would be offering the same items in the same quantity, so each nonplayer owns those attributes individually. For the inventory system, we had inventories, items

tables. The columns in these tables were renamed to follow rails convention for the associations. In addition, we had a quiz questions table for an end of phase quiz that we did not end up including in our sprint so we just removed it until we more thoroughly plan it in the implementation of the quiz feature.

Evaluation of code and Test Quality



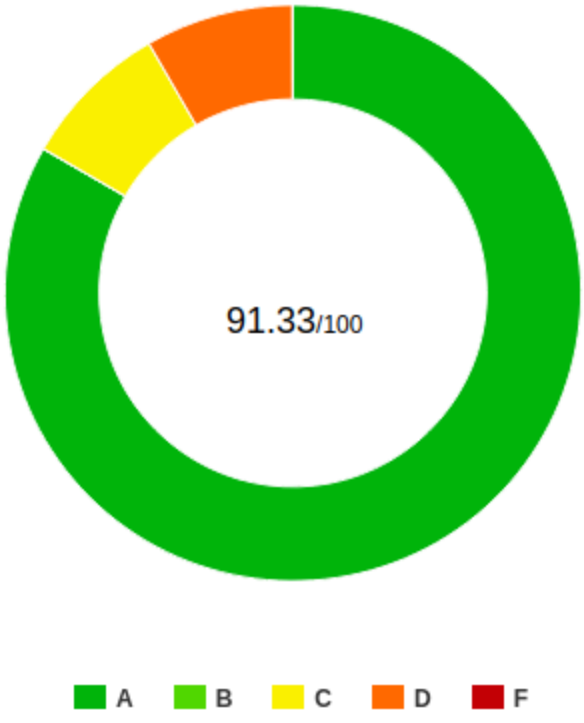
All Files (96.68% covered at 1.96 hits/line)

44 files in total.
542 relevant lines, **524** lines covered and **18** lines missed. (96.68%)

Search:

File	% covered	Lines	Relevant Lines	Lines covered	Lines missed	Avg. Hits / Line
app/controllers/gameplays_controller.rb	66.67 %	8	3	2	1	0.67
app/controllers/nonplayers_controller.rb	82.93 %	86	41	34	7	2.54
app/controllers/players_controller.rb	84.85 %	71	33	28	5	2.06
app/controllers/inventories_controller.rb	89.19 %	87	37	33	4	3.19
spec/rails_helper.rb	91.67 %	67	12	11	1	0.92
app/channels/application_cable /channel.rb	100.00 %	6	2	2	0	1.00
app/channels/application_cable /connection.rb	100.00 %	6	2	2	0	1.00
app/controllers/application_controller.rb	100.00 %	4	1	1	0	1.00
app/controllers/characters_controller.rb	100.00 %	39	20	20	0	1.00
app/controllers/items_controller.rb	100.00 %	72	33	33	0	2.67
app/helpers/application_helper.rb	100.00 %	5	1	1	0	1.00
app/helpers/characters_helper.rb	100.00 %	5	1	1	0	1.00
app/helpers/gameplays_helper.rb	100.00 %	5	1	1	0	1.00
app/helpers/inventories_helper.rb	100.00 %	5	1	1	0	1.00
app/helpers/items_helper.rb	100.00 %	5	1	1	0	1.00
app/helpers/nonplayers_helper.rb	100.00 %	5	1	1	0	1.00
app/helpers/players_helper.rb	100.00 %	5	1	1	0	1.00
app/jobs/application_job.rb	100.00 %	9	1	1	0	1.00
app/mailers/application_mailer.rb	100.00 %	7	3	3	0	1.00
app/models/application_record.rb	100.00 %	6	2	2	0	1.00
app/models/character.rb	100.00 %	7	3	3	0	1.00
app/models/inventory.rb	100.00 %	10	6	6	0	1.00
app/models/item.rb	100.00 %	10	6	6	0	1.00

Overview

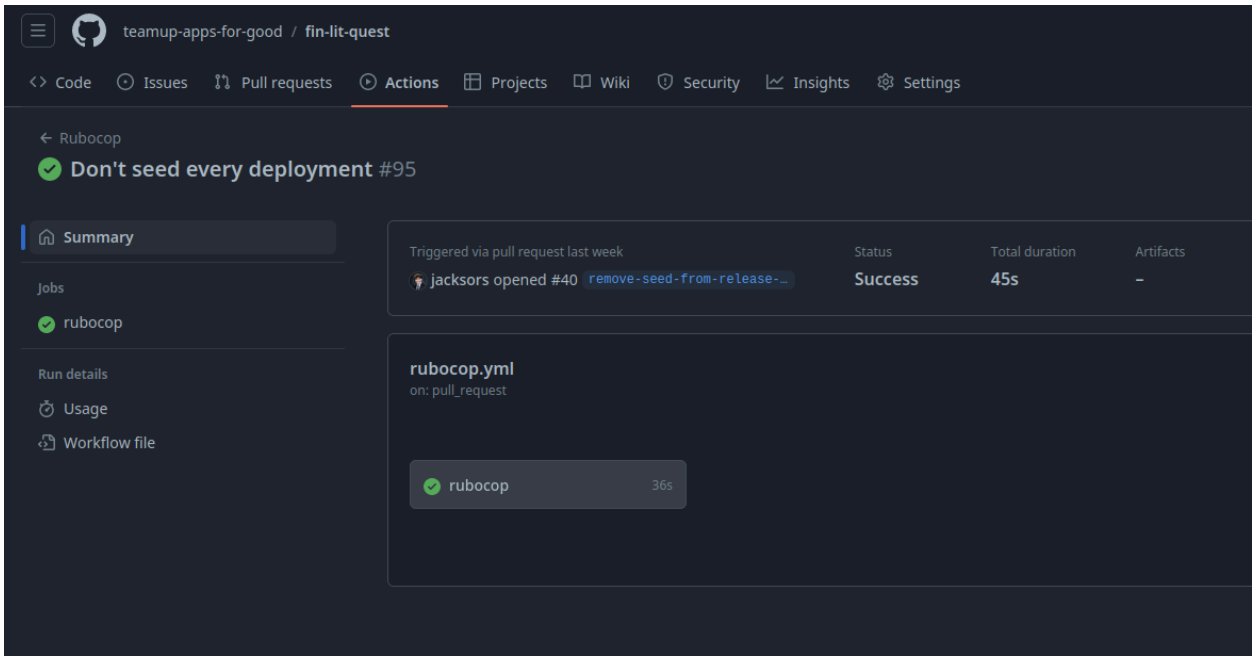


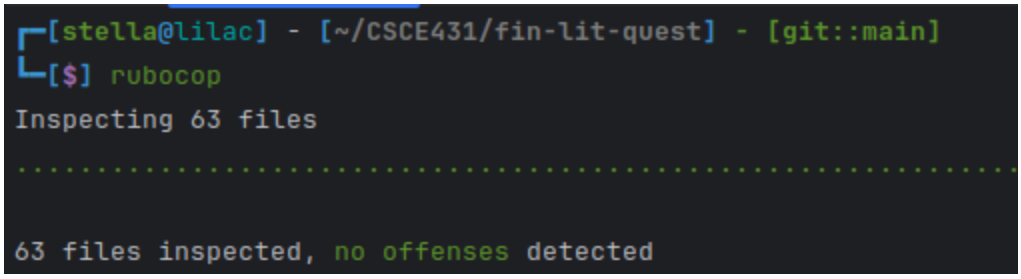
Summary

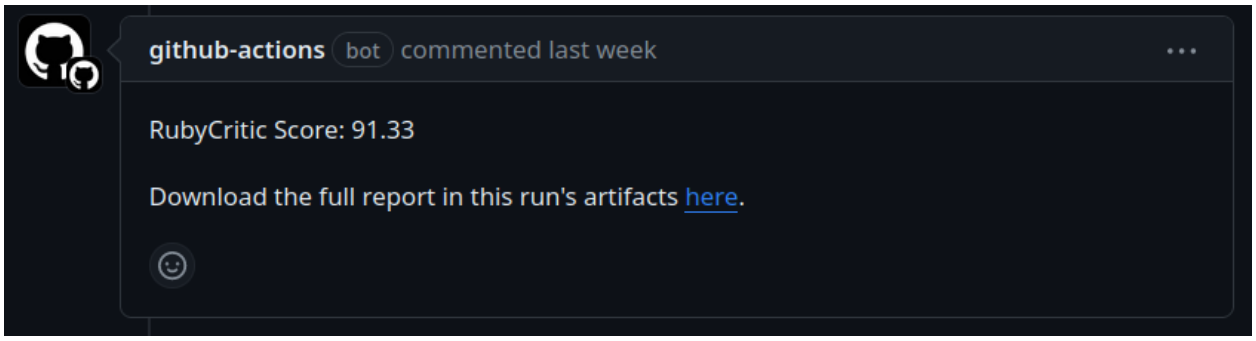
A	20 files	20 churns	13 smells
D	2 files	2 churns	23 smells

Smells

Smell	Locations
DuplicateCode	InventoriesController ItemsController PlayersController
DuplicateCode	ItemsController PlayersController
DuplicateCode	ItemsController PlayersController
DuplicateCode	NonplayersController NonplayersController
DuplicateMethodCall	InventoriesController InventoriesController
DuplicateMethodCall	InventoriesController InventoriesController
DuplicateMethodCall	InventoriesController InventoriesController
DuplicateMethodCall	InventoriesController InventoriesController
DuplicateMethodCall	ItemsController ItemsController







Customer Meeting

Date: 01/16/2024
Time: 04:00 pm Central Time
Location: Google Meet

Summary of Meeting:

In this meeting, we talked about the current state and future direction of our project, especially focusing on the first sprint's MVP and the next sprint. At the end of the demo, the client provided positive feedback about this first sprint/MVP, considering the development had certain constraints and challenges. While talking about the upcoming sprint, we planned to focus on improving the current game phase and implementing a functional bartering system. The client showed a strong interest for us to integrate motivational elements for payer trade, this could be achieved through narrative-driven incentives or gameplay objectives. The client also stated that while these additions/implementations are exciting, they represent a challenge and should be incrementally addressed throughout the next sprints. One of our next goals will be to implement a gradual transition from bartering to a monetary system, with a strategic approach to avoid limiting future development choices.

When asked advice for project management tools, specifically for bug tracking, the client recommended we continue using Pivotal Tracker. In our discussion on planning, the client made an emphasis on reflecting what user stories represent and breaking down features to ensure they accurately reflect user interactions and system responses. The stories should be concise, focusing on single interactions for clarity and efficiency. This will help in releasing fewer, but well-defined

features earlier than expected. Finally, we talked about the importance of retrospective meetings in improving productivity. These meetings should empower the team to identify and implement actionable improvements. This meeting set a clear direction for our next steps by defining our goals in alignment with our client's vision.

Project Links

Github: https://github.com/teamup-apps-for-good/fin-lit-quest
Project Tracker: https://www.pivotaltracker.com/n/projects/2687724
Slack: https://hagglerdev.slack.com
UML-Diagrams: https://dbdocs.io/stella/FinLit-Quest