

# Freshman RPG Companion Application and Game Manager

**SWE420: Extreme Programming**

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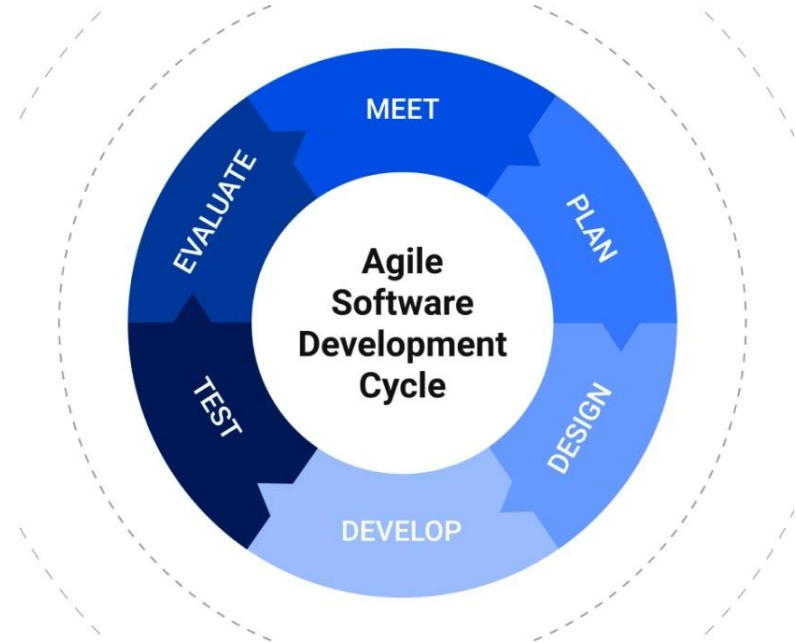


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## Our Development Process

- Agile development process
  - Task planning and load balancing
  - Standups
  - Retrospectives
  - Customer meetings
- Tools used
  - Zentao
  - Jamboard
- Development strategies used
  - Pair programming
  - Sit together
  - TDD





## Freshman RPG Project Overview

### Desktop Game

- Provide an interactive way for first-year students to learn about Shippensburg University, where they can walk around a virtual representation of the campus and complete objectives to earn points.

### Companion App

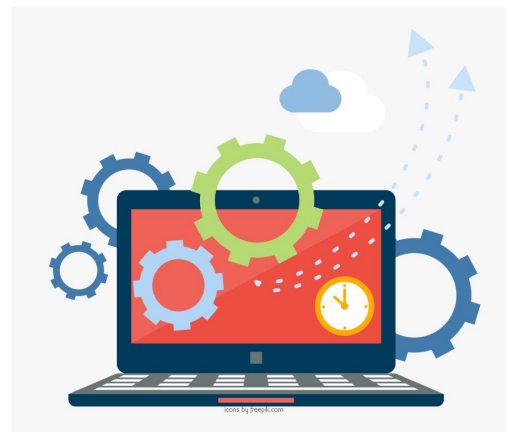
- Provided students a way to scan QR codes across campus to complete select objectives.
- Became main focus of our project

### Game Manager

- Provide game administrators with a method to manage the game (i.e. add objectives, players, NPCs, etc)

## Spring 2024 Goals

- Add more functionality to the game manager for more control and capabilities.
- Expand the companion app to more than just a QR code scanner.
- Make our customer happy!





# Iteration 1: Game Manager- QuizBot, Crews, and Quest Control

Adding more functionality to the manager for more control



QuizBot			
NPCs			
Question 1	Answer 1	Start Date 1	End Date 1
Question 2	Answer 2	Start Date 2	End Date 2
Question 3	Answer 3	Start Date 3	End Date 3
Question 4	Answer 4	Start Date 4	End Date 4
Question 5	Answer 5	Start Date 5	End Date 5



The screenshot shows a Jira board titled "Iteration 2" with a "Manager : Quest" label. The board is organized into four columns: "Not Started", "In Progress", "Awaiting Story Verificaiton", and "Completed". The "Not Started" column contains one orange card: "Get the 2018 version of the data". The "In Progress" column contains two orange cards: "Implement the 2018 version of the data" and "Implement the 2018 version of the data". The "Awaiting Story Verificaiton" column contains three orange cards: "Implement the 2018 version of the data", "Implement the 2018 version of the data", and "Implement the 2018 version of the data". The "Completed" column contains three orange cards: "Implement the 2018 version of the data", "Implement the 2018 version of the data", and "Implement the 2018 version of the data". A blue card is also visible in the "In Progress" column: "Implement the 2018 version of the data". The board is titled "When quest details functions properly".

	Task	Kanban	Burndown	View	Software Requirement	QA	Code	Doc	Build	Dynamic	Settings	
All	Unclosed 19	My	Involved	AssignedByMe	Changed	More ▾	Q Search		Report	Export ▾		
ID ↕	Name ↕	P ↕	AssignTo ↕	Status ↕	FinishedBy	Deadline :	Est. ↕	Cost ↕	Left ↕	Progress	Action	⚙️
<input type="checkbox"/> 062	Create actual quiz bot page: quizbot_page.d <span>(3)</span>		Luke Henr	Waiting			2H	0H	2H	0%		
<input type="checkbox"/> 078	M Create crew_repository_test file to test c <span>(3)</span>		Devin	Doing		02-26	2H	2H	1H	67%		
<input type="checkbox"/> 069	Create quizbot requests and responses <span>(3)</span>		Austin Plisi	Done	Tommy ...		2.5H	5.8H	0H	100%		
<input type="checkbox"/> 068	Create restful handler and packer for quizbol <span>(3)</span>		Austin Plisi	Done	Tommy ...		1.5H	1.5H	0H	100%		
<input type="checkbox"/> 067	Make transition from quizbot.complete to qui <span>(3)</span>		Rachel Jot	Done	Rachel J...		1.5H	1H	0H	100%		
<input type="checkbox"/> 066	Make transition from quizbot.load to quizbot. <span>(3)</span>		Austin Plisi	Done	Austin P...		1.5H	3H	0H	100%		
<input type="checkbox"/> 065	Make transition from quizbot.initial to quizbot <span>(3)</span>		Austin Plisi	Done	Austin P...		1.5H	3H	0H	100%		
<input type="checkbox"/> 064	Create events in quizbot_event.dart <span>(3)</span>		Austin Plisi	Done	Austin P...		2H	2H	0H	100%		
<input type="checkbox"/> 063	Create states in quizbot_state.dart <span>(3)</span>		Austin Plisi	Done	Austin P...		2H	2H	0H	100%		
<input type="checkbox"/> 061	Make transition from crews.complete to crew <span>(3)</span>		Austin Plisi	Done	Mohame...		1.5H	2H	0H	100%		



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# Iteration 2: Switching Focus to the Companion App

Building Onto the QR Code Scanner



## The Companion App

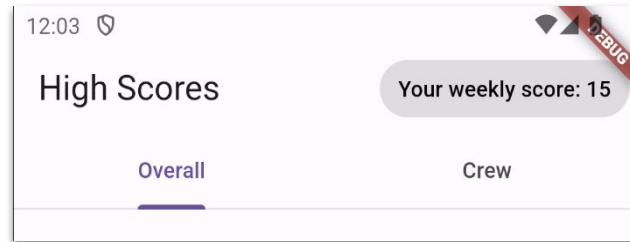
- We implemented functionalities to display the player score, and a list of high scores in the current week
- Added a time stamp to the quests to mark the date of their completion.
- The player can see the overall standing, and also within his crew
- By the end of this iteration the score was shown on the button that takes the player to the list of scores (will be changed afterwards)





User can switch between “overall” and “Crew” tabs to see overall standing and within crew standing

User can see his score on the top right corner of the screen



12:03

## High Scores

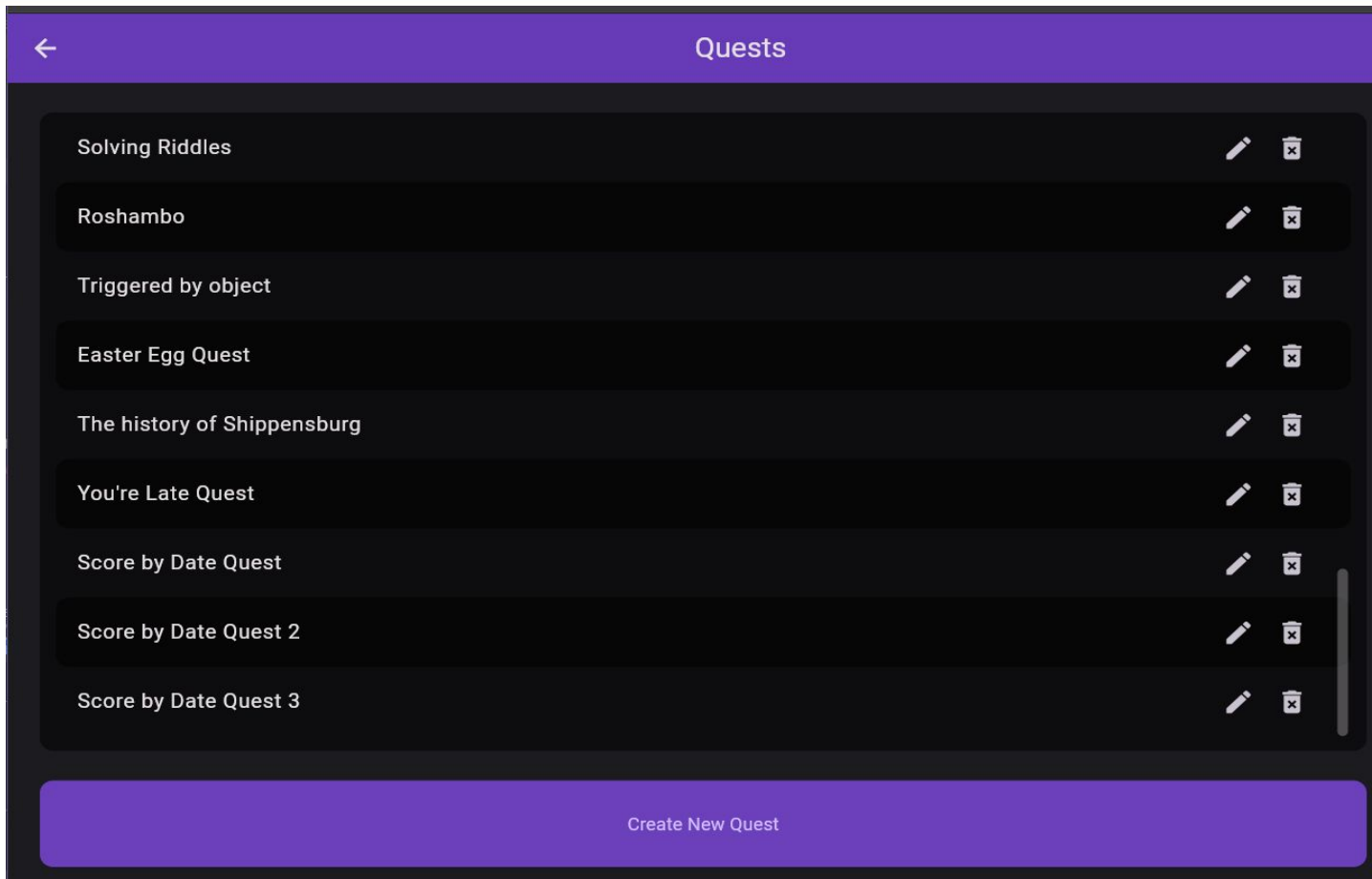
Your weekly score: 15

Overall Crew

Placement	Name	Scores
1	Merlin	15
2	ScoreP9	8
3	ScoreP8	6
4	ScoreP4	6
5	ScoreP6	6
6	ScoreP7	6
7	ScoreP5	5
8	ScoreP3	3
9	ScoreP10	2
10	ScoreP2	2



In the game manager, we added functionality to edit and delete quests.





-Initially there was only one page in which we use to create and edit a quest.

-Making separate pages for creating and editing a quest.

## ← Create/Edit a Quest

☰ Quest Title...

☰ Quest Description...

+1 Experience Gained

📖 Trigger Map

→ Trigger Row

→ Trigger Column

☰ Objectives for Fulfillment

🍷 Completion Action Type

📅 Start Date

📅 End Date



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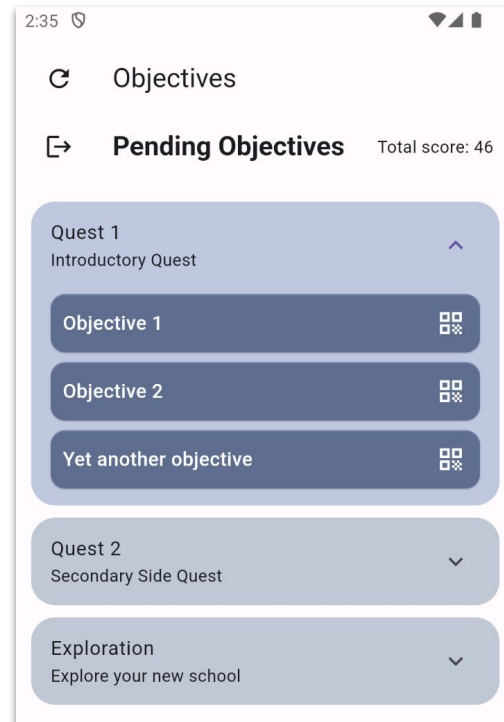
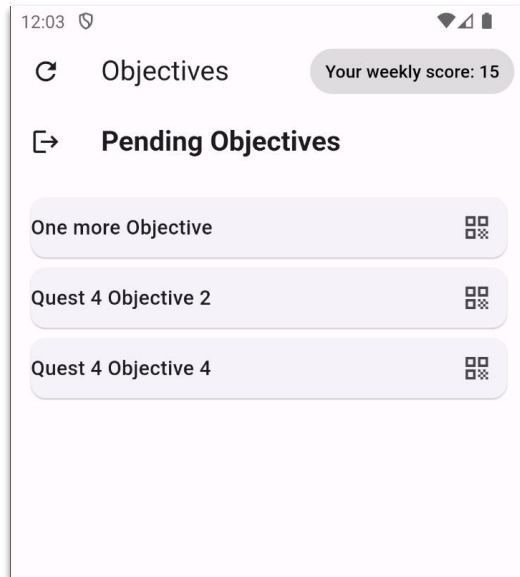
# Iteration 3: Companion App- Quest Page Intuitivity and Added Info Button

Designing Landing Page to be Clearer



## Grouping Objectives by Quest

- Instead of listing all available objectives, created dropdowns for quests that held objectives.
- Added Total Score to main objectives page and removed weekly score button





## High Scores Page Redesign

- Added Navigation Bar at the bottom of the page
- Weekly Score button became a Label

12:03

### High Scores

Your weekly score: 15

Overall Crew

Placement	Name	Scores
1	Merlin	15
2	ScoreP9	8
3	ScoreP8	6
4	ScoreP4	6
5	ScoreP6	6
6	ScoreP7	6
7	ScoreP5	5
8	ScoreP3	3
9	ScoreP10	2
10	ScoreP2	2

11:26

### Weekly High Scores

Your weekly score: 15

Overall Crew

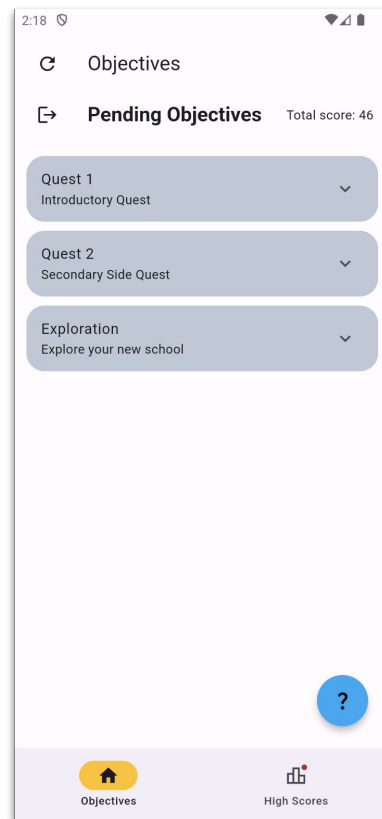
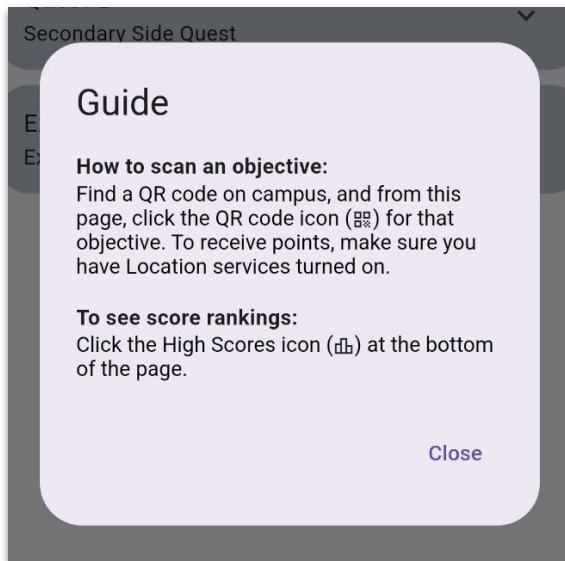
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8	ScoreP3	3
9	ScoreP10	2
10	ScoreP2	2

Objectives High Scores



## Info Button

- Added an Info Button
- Gives info on how to navigate and use the app





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# Iteration 4: Beautifying the Companion App

Branded the Application by Making  
Project-Wide Cosmetic Changes





## App-Wide Redesign

- Added Ship branding
- Changed app widgets to use non-native UI elements for a cleaner feel
- Customized styling of widgets and added color

11:56

### Login

Username

Password

Login

12:02

### Login


Username

Only Ship username (without @ship.edu).

Password

Login

For login help, contact [frpgadmin@engr.ship.edu](mailto:frpgadmin@engr.ship.edu).



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Objectives

Pending Objectives

t0  
Quest 1

t3  
Quest 4

Exploration  
Explore your new school

Objectives

High Scores

1:05

Objectives Total score: 46

Quest 1  
Introductory Quest

Objective 1

Objective 2

Yet another objective

Quest 2  
Secondary Side Quest

Exploration  
Explore your new school

Find the Library

Objectives

High Scores

12:03

High Scores

Your weekly score: 15

Overall

Crew

Placement	Name	Scores
1	Merlin	15
2	ScoreP9	8
3	ScoreP8	6
4	ScoreP4	6
5	ScoreP6	6
6	ScoreP7	6
7	ScoreP5	5
8	ScoreP3	3
9	ScoreP10	2
10	ScoreP2	2

Objectives

High Scores

11:48

Weekly High Scores

Weekly score: 15

Overall

Crew

Placement	Name	Scores
1	Merlin	15
2	ScoreP9	8
3	ScoreP8	6
4	ScoreP4	6
5	ScoreP6	6
6	ScoreP7	6
7	ScoreP5	5
8	ScoreP3	3
9	ScoreP10	2
10	ScoreP2	2

Objectives

High Scores



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# Iteration 5: Reset Password

Added Password Reset Capability to  
User Facing App



## Password Reset

- Added Reset Password Button
- User inputs username and 6 digit code gets sent to database and email
- User then inputs code that was sent to them and that gets validated with code in database
- User can then input new password, which gets saved to database

11:47 3G

### Login

Username

Only Ship username (without @ship.edu).

Password

Login

Forgot Password

For login help, contact frpgadmin@engr.ship.edu.

### Reset Password

Username

Reset

### User Authentication

Code

Done

### Change Password

New Password

Confirm Password

Submit



## Semester Reflection

- Customer seemed very satisfied with the product.
- As the semester progressed, each team member developed a “niche”.
- Productivity increased and workflow became smoother.
- Good team compatibility.
  
- Game manager can be improved to provide full control/management over players in case of any issues.
- Add more functionality from the desktop game to the companion app.



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## Data Analysis

