**Sprint 0:**

*PLANNING MEETING 4/20 (product backlog creation)*

Roles:

Scrum Master: Nicolas Lininger  
Product Owner: Griffin McCool  
Developer: Brandon McCoy

Developer: Ethan Nerone

Schedule:

Sprint 1 planning 4/21

Daily scrum 1 4/22

Sprint 1 review 4/23

Sprint 2 planning 4/23

Daily scrum 2 4/24

Sprint 2 review 4/25

Tech Stack:

* Java for backend
* Javafx and Java Swing for UI
* Coding game is ran on the users local machine using the JVM (Java Virtual Machine)
* Database stored in a .properties file

Product Backlog:

(Requirements)

FR1 User Authentication: First time users shall be able to create an account by providing a valid email and password. Existing users must be able to log in securely using their credentials.

FR2 Choose an Account Type: Upon creating an account, a user shall be given a choice to sign up as either an educator or a student.

FR3 Track Progress: Players shall be able to view their completed challenges, current scores, and achievements.

FR4 Provide Challenges: The system should provide a comprehensive library of coding challenges categorized by difficulty level and programming concept. Each coding challenge should have a clear objective, description, and expected outcome.

FR5 Manage Challenges: Educators should have access to a dashboard where they can create, edit, and delete coding challenges.

FR6 Create a Challenge: Educators shall be able to select an option to create a new coding challenge. The system should prompt educators to provide essential information about the challenge, including a title, description, objective, difficulty level, and programming language(s).

FR7 Edit a Challenge: Educators shall be able to select an option to edit an existing coding challenge. The system should provide educators with options to modify the title, description, objective, difficulty level, and programming language(s) of the challenge.  
  
FR8 Delete a Challenge: Educators shall be able to select an option to remove a coding challenge that they previously created. Upon deletion, the challenge should be permanently removed from the challenge library and no longer accessible to players.

FR9 Select a Challenge: Players shall be able to select a challenge from the system’s library to play. Once a challenge is selected, the system should load the challenge interface, allowing the user to read its instructions, write code, and submit their solution.

FR10 Offer Feedback: Upon a player submitting a challenge, the system shall provide immediate feedback on their code, including error messages, hints, and explanations.

FR11 Select Language: Players shall be able to select their preferred language from the list of available languages for a given challenge.

FR12 Receive Hint: Players shall be able to request additional hints when solving a challenge.

NFR1 Quick Response Time [Performance]: The system shall respond to all user interactions within 1 second on average.

NFR2 Available [Reliability]: The system shall be available for use 24/7. Any scheduled maintenance windows should be communicated to users in advance.

NFR3 Portable [Supportability]: The system should be compatible with the latest versions of popular web browsers, including Google Chrome, Mozilla Firefox, Microsoft Edge, and Safari.

NFR4 User Friendly [Usability]: User interface elements (buttons, menus, etc.) should be appropriately labeled and visually distinct to facilitate ease of use.

NFR5 Enjoyable Challenges [Usability]: The system should measure user satisfaction with periodic surveys. The average user satisfaction score for challenge enjoyment should be at least 4 out of 5.

NFR6 Protect Users [Security]: The system shall store passwords using strong cryptographic hashing algorithms to prevent unauthorized access to user accounts.

(Prioritized)

1. FR1 User Authentication: As a user, I want to be able to create/login to my account to track my progress
2. FR6 Create a Challenge: As an educator, I want to be able to create a new coding challenge for my students
3. FR9 Select a Challenge: As a player, I want to be able to select a coding challenge to complete
4. FR2 Choose Account Type: As a user, I want to be able to select my account type to be a player or an educator
5. FR7 Edit a Challenge: As an educator, I want to be able to edit a challenge in case of errors or needed changes

Product Goal:

Create a fun, challenging, educational, and functional coding challenge game for students and educators.

**Sprint 1:**

*PLANNING MEETING 4/21*

Roles:

Scrum Master: Nicolas Lininger  
Product Owner: Griffin McCool  
Developer: Brandon McCoy

Developer: Ethan Nerone

Questions:

Why is this Sprint valuable?

* Starts to realize basic product backlog items
* Sets a base to work on for the product
* Kicks off entire product development

What can be Done this Sprint?

* Create a general structure for the product
* Implement basic functionality of the system

How will the chosen work get done?

* All developers will use github to work on system

Sprint goal:

Set up the general structure of the product. Allow for user login as a base for the product.

Sprint backlog:

* FR1 User Authentication: As a user, I want to be able to create/login to my account to track my progress
* NFR4 User Friendly: As a user, I want to have a easy to navigate and clean user interface

Daily Scrum 1 (4/22):

Griffin:

* Status:
  + Created github
  + Added collaborators
  + Made codingGame.java file
  + Started basic code structure
  + Implemented basic version of createAccount()
* Impediments:
  + Had to figure out how to use github
* Promises:
  + Help implement functionality in codingGame.java

Nicolas:

* Status:
  + Started working on deployment diagram and tech stack
* Impediments:
  + How should we implement the tech stack?
* Promises:
  + I plan to finish and upload the deployment diagram, and record the tech stack for our implementation of the coding challenge platform.

Brandon:

* Status:
  + Added a GUI using Swing for logging in
  + Implemented a fake/temporary database scheme with a .properties file
* Impediments:
  + Figuring out how to get a GUI/learning Swing
  + Database doesn’t encrypt the passwords
* Promises:
  + Refactor the code for the GUI

Ethan:

* Status:
  + Added functionality for create a challenge button
* Impediments:
  + None
* Promises:
  + Check code and run over possible issues

Sprint 1 Review (4/23):

* Basis for system created
* Successfully created user login/create account (FR1)
* Successfully implemented basic UI

**Sprint 2:**

*PLANNING MEETING 4/23*

Roles:

Scrum Master: Nicolas Lininger  
Product Owner: Griffin McCool  
Developer: Brandon McCoy

Developer: Ethan Nerone

Questions:

Why is this Sprint valuable?

* Adds essential functionality to the product

What can be Done this Sprint?

* Start to implement needed features
* Product starts to take shape

How will the chosen work get done?

* All developers will use github to work on system

Sprint goal:

Implement the first features of the product, mainly being the structure of a “challenge” and the creation process.

Sprint backlog:

* FR6 Create a Challenge: As an educator, I want to be able to create a new coding challenge for my students
* Add a manual for the system (readme): As a user, I want to have a guide to navigate the system so I don’t have to search around aimlessly
* Add a test case for login: As a user, I want to be able to create an account to track my progress

Daily Scrum 2 (4/24):

Griffin:

* Status:
  + Started challenge object
  + Made login test case
* Impediments:
  + Had to change some previous code to work with JUnit
* Promises:
  + Finish challenge object, help with “create challenge”

Nicolas:

* Status:

Since last meeting, I finished and uploaded the deployment diagram for our program, and updated the tech stack accordingly.

* Impediments:
  + Had some issues determining how to display the database end of our implementation on the deployment diagram.
* Promises:
  + I plan to have a finished version of the deployment diagram and tech stack uploaded to our github repository.

Brandon:

* Status:
  + Refactored the code to improve modularity
* Impediments:
  + Learned more that Swing is very limited as a GUI and doesn’t allow for much customization or user friendly design
* Promises:
  + Help with testing the code so far

Ethan:

* Status:
  + Solidified create challenge functionality
* Impediments:
  + None
* Promises:
  + Continue working on other parts of project as needed

Sprint 2 Review (4/25):

* Challenge object created
* Successfully implemented “create a challenge” button
* Added a readme
* Created test case for createAccount