



KIDCOIN

2024-2025

Software Process Modeling

Sprint #3

Team Members:

- Bouthainh AlGarni | 2211249
- Dimah Aloufi | 2210094
- Joud Mozahem | 2212477
- Joud Bahkali | 2210859
- Shahad AlGhamdi | 2210076
- Israa Bamarouf | 2211682

Instructors:

- Dr. Latifah Alharthi
- Dr. Muna aldhurawi



Story Backlog – Sprint #3

Sprint #2: Features for Sprint #3

Component Name: Reward Setup

Story Name: Parent Reward Setup

Story Sequence No: 009

Story Short Description: Parents set up rewards for their children

Story Long Description: Parents shall be able to set up to 5 rewards per child each month.

component Name: Reward Selection

Story Name: Child Reward Selection

Story Sequence No: 010

Story Short Description: Children select rewards each month

Story Long Description: Children shall be able to select one reward per month based on their progress.

Component Name: Space Game Access

Story Name: Accessing The Space Game

Story Sequence No: 007

Story Short Description: Children access a Space Game

Story Long Description: Children will access an interactive Space Game through the app, with the system managing game access and ensuring a smooth, secure experience on the external game website.

Component Name: Child Progress Report

Story Name: Viewing Child Progress Report

Story Sequence No: 011

Story Short Description: Parents can view a detailed progress report for each registered child.

Story Long Description: Parents shall be able to view a detailed progress report for each registered child. The system shall handle and retrieve the child's progress data from the database and display it in a user-friendly format on the parent's dashboard.

Component Name: Security

Story Name: Data Encryption and Privacy

Story Sequence No: 001

Story Short Description: Secure storage and encryption of user data

Story Long Description: All user data, including login credentials, child information, and financial data, must be securely encrypted and stored. The system shall protect user privacy and prevent unauthorized access to sensitive information

Component Name: Availability

Story Name: Basic App Availability

Story Sequence No: 002

Story Short Description: Keep the app available most of the time

Story Long Description: The app should be available for users most of the time, with occasional planned maintenance. Any downtime should be kept short to ensure users can access the app without long interruptions

Component Name: Performance

Story Name: App Responsiveness

Story Sequence No: 003

Story Short Description: Fast loading times for seamless user experience.

Story Long Description: The app shall be optimized for quick response times, ensuring a smooth and seamless experience for users, even during periods of high usage

Prioritize stories and define sprints:

Sprint #3:

Component name	Priorities
1. Reward Setup	High
2. Reward Selection	High
3. Child Progress Report	High
4. Space Game Access	High
5. Security	High
6. Availability	Medium
7. Performance	Medium

Sprint #3 - Meeting(s)

Project Name: KidCoin

Project Members:

- Dimah Aloufi
- Bouthainh AlGarni
- Israa Bamarouf
- Joud Mozahem
- Joud Bahkali
- Shahad Alghamdi

Sprint #3: Stand up Meeting 1# [10/11/2024]

Sprint Duration: 1 Week

Scrum Master: Shahad

Client: Dr. Latifah Alharthi

Pair Programmers:

- Bouthainh AlGarni & Shahad Alghamdi
- Dimah Aloufi & Joud Bahkali
- Israa Bamarouf & Joud Mozahem

Sprint #3: Final Sprint Meeting #2 [17/11/2024]

Sprint Duration: 1 Week

Scrum Master: Bouthainh

Client: Dr. Latifah Alharthi

Pair Programmers:

- Joud Bahkali & Shahad Alghamdi
- Dimah Aloufi & Bouthainh AlGarni
- Israa Bamarouf & Joud Mozahem

Stories: All stories for Sprint #3

Component Name	Story Sequence Number	Use Cases (e.g., functionalities)
Reward Setup	009	Parents shall be able to set up to 5 rewards per child each month
Reward Selection	010	Children shall be able to select one reward per month based on their progress
Child Progress Report	011	Parents shall be able to view a detailed progress report for each registered child.
Space Game Access	007	Children shall be able to access the Space Game through the app, to the external game website.
Security	001	All user data, including login credentials, child information, and financial data, must be securely encrypted and stored. The system shall protect user privacy and prevent unauthorized access to sensitive information.
Availability	002	The app should be available for users most of the time, with occasional planned maintenance. Any downtime should be kept short to ensure users can access the app without long interruptions.
Performance	003	The app shall be optimized for quick response times, ensuring a smooth and seamless experience for users, even during periods of high usage.

Follow-up meeting questions:

1. What has been completed since the last meeting?

Since our last meeting, we have concentrated on upgrading the app by including features that provide a smooth and engaging user experience. We have made improvements in the app interfaces for it to be more understandable and visually attractive. Additionally, we incorporated Space Game into this to spark interest and attract young users. Alongside the rewards feature which stimulates interaction while maintaining lasting curiosity, these changes are done following our aim for the growth of this application.

2. What are you going to be working on next?

Moving forward, we plan to invest our time and resources to develop the app to bring it into the real world. We aspire to develop a valuable tool which will serve young, intelligent learners all over the world in an effective manner.

3. Do you have any issues/impediments?

We face each challenge with a strong commitment and enthusiasm. Recently, we encountered difficulties in developing the Space Game, as it required significant effort and resources. Additionally, implementing smooth interfaces was made harder by the lack of available tools and a tight timeline. However, we successfully overcame these obstacles and are pleased to report that all features are now functioning as expected, ensuring a more streamlined and effective user experience.

Tasks Allocation

Student Name	Accomplished Tasks	Hours Completed for Each Task
Dimah Aloufi	<ul style="list-style-type: none"> ○ Reward Selection Code ○ Storing Selected Reward in Firebase ○ Reward Selection Test Cases Table ○ Reward Selection Test Cases Applying ○ Reward Selection Sequence Diagram Drawing ○ Updating UI ○ Adding Selected Reward to the Child Report 	<ul style="list-style-type: none"> ○ Coding: 3 Days ○ Test Cases: 7 Hours ○ Sequence Diagram: 3 Hours ○ Updating UI: 1 Day ○ Updating Child Report: 1 Hour
Bouthainh AlGarni	<ul style="list-style-type: none"> ○ Space GAME Code ○ Update Budget & Child Page Code ○ Update Firebase and add new variables ○ Draw the Access Game Sequence Diagram ○ Update the needed Diagrams ○ Update class diagram ○ UI 	<ul style="list-style-type: none"> ○ Coding: 5 Days ○ Drawing: 3 Hours ○ UI: 5 Hours
Israa Bamarouf	<ul style="list-style-type: none"> ○ Resolved Child Progress Report code errors. ○ Documented and created needed diagram. ○ Created Progress Report & Space Game Test Cases 	<ul style="list-style-type: none"> ○ Coding: 4 Hours ○ Documenting 4 Hours ○ Test Case: 3 Hours
Joud Mozahem	<ul style="list-style-type: none"> ○ Progress report code ○ Parent main page code ○ Child list code 	<ul style="list-style-type: none"> ○ Coding: 2 days ○ Test case: 2 hours
Joud Bahkali	<ul style="list-style-type: none"> ○ UI: Design the interfaces (home screen – parent login page – parent main screen -sign up page) ○ Code the UI ○ Test the UI 	<ul style="list-style-type: none"> ○ Coding: 2 days ○ Test: 2 hours
Shahad Alghamdi	<ul style="list-style-type: none"> ○ Reward Setting Code ○ Reward Setup Test Case ○ Create and update sequence diagrams ○ Update class diagram ○ UI: Modify on interfaces (child main page – reward selection page) 	<ul style="list-style-type: none"> ○ Coding: 3 days ○ Documenting: 2 hours ○ Test case: 2 hours ○ Diagrams: 8 hours

Sprint #3 - Test Cases(s)

Sprint #3 Test Cases - [11/12/2024]

Test Case Name: Sprint #3 – Reward Setup for the Child

Test Case ID: KidCoin – Reward Setup

Test Case No.	Test Case Description	Expected Results	Outcome (Pass/Fail/Other (Comments))
TC001	Parent Add multiple rewards (up to the limit of 5) and check for correct storage and display.	All rewards should be stored in the array, displayed correctly in separate boxes, and no error should occur until the 5th reward is added.	Pass
TC002	Parent Attempt to add a 6th reward when the limit of 5 has been reached.	System should not allow more than 5 rewards.	Pass
TC003	Parent Attempt to submit the form without setting any reward.	System should display an error message or notification prompting the user to add at least one reward before submitting.	Pass

Sprint #3 Test Cases - [11/13/2024]

Test Case Name: Sprint #3 – Reward Selection for the Child

Test Case ID: KidCoin – Reward Selection

Test Case No.	Test Case Description	Expected Results	Outcome (Pass/Fail/Other (Comments))
TC001	Child selects a reward from the list of available rewards	The app should highlight the selected reward by changing its box color to green and display a confirmation message	Pass
TC002	Child selects "Reward 1" and then selects a different reward	The app should update the reward color, showing the newly selected reward with a green box and removing the selection from the previously selected reward	Pass
TC003	Child selects a reward, and the system updates Firestore with the selected reward	The app should successfully update the selected reward in Firestore, and the app should show a confirmation message such as "Reward selected successfully."	Pass
TC004	Child selects a reward and then navigates back to the child main page screen	The app should retain the previously selected reward and keep it highlighted (green)	Pass
TC005	Child selects a reward, and then the connection to Firestore fails (simulate an error)	The system should display an error message such as "Failed to select reward," and no changes should be made in Firestore	Pass

Sprint #3 Test Cases - [11/16/2024]

Test Case Name: Sprint #3 – Child Progress Report

Test Case ID: KidCoin – Child Progress Report

Test Case No.	Test Case Description	Expected Results	Outcome (Pass/Fail/Other (Comments))
TC001	Parent can log in successfully and access the main dashboard options.	The app should display two options (Register a child, View children list) successfully.	Pass
TC002	Parent can view a list of registered children, which the system retrieves correctly.	The app should retrieve the names and mood statuses of the children from Firebase and display them in an ordered format.	Pass
TC003	Parent can select a child to view their accurate budget dashboard.	The app should query Firebase for the child's budget information so it can display it correctly on the parent's dashboard.	Pass
TC004	Parent view children list but no children are registered	The app should display "No children registered" message	Pass
TC005	Parents can easily check their child's progress report dashboard, which allows for fast data retrieval and display.	The app should fully load and display the report within an acceptable time frame of 2-3 seconds.	Pass

Sprint #3 Test Cases - [11/17/2024]

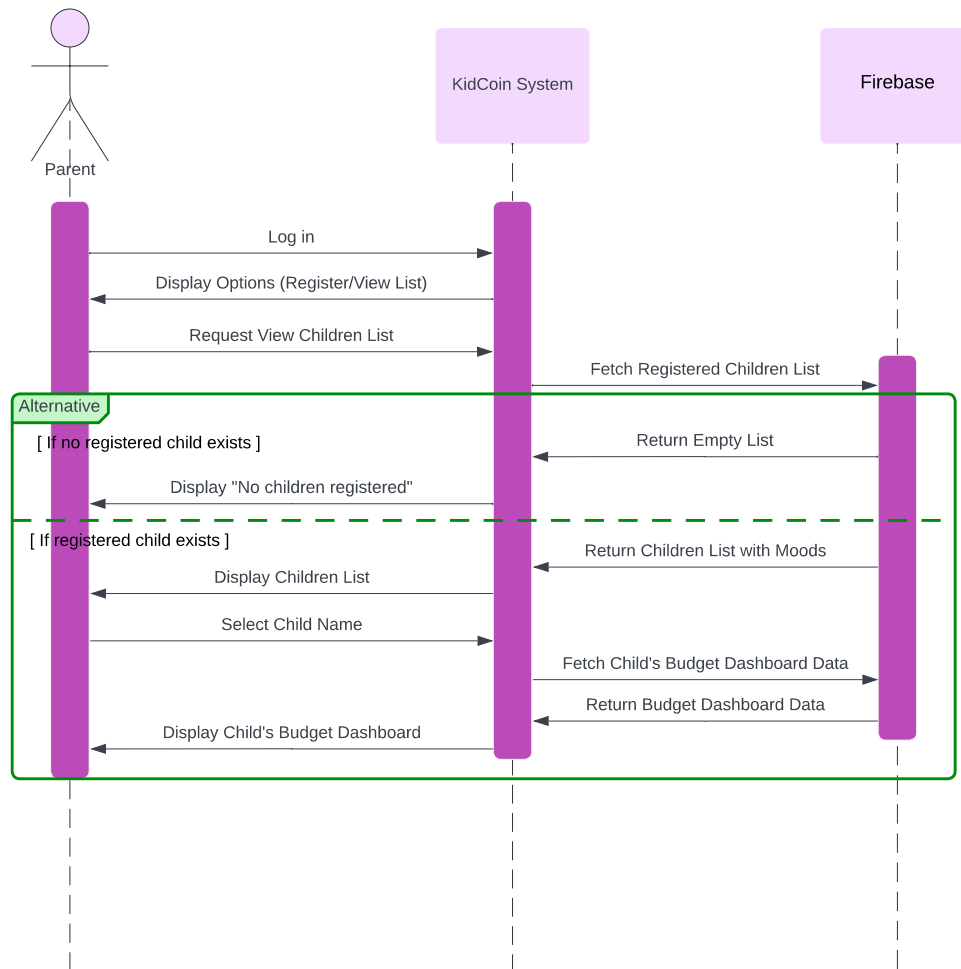
Test Case Name: Sprint #3 – Space Game Access for the Child

Test Case ID: KidCoin – Space Game Access

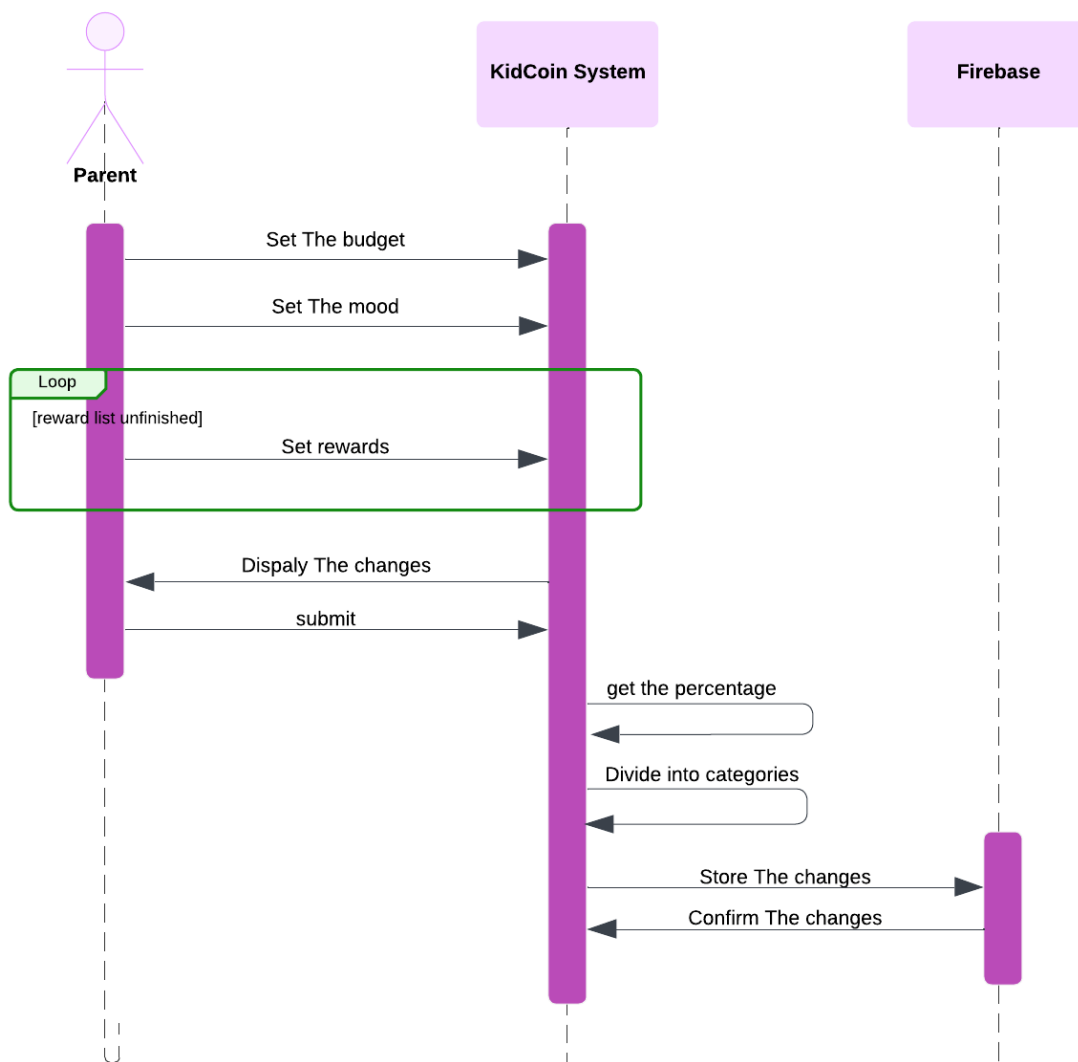
Test Case No.	Test Case Description	Expected Results	Outcome (Pass/Fail/Other (Comments))
TC001	Child can click on the "Play INTO SPACE!" button to start entering game.	The app will likely show a dialog box with this message: "You are amazing and you deserve to have fun! Do you want to play INTO SPACE?" Two buttons are displayed: "Yes" and "No."	Pass
TC002	Child can select "Yes" in the dialog to proceed into the game.	The app redirects the child to the designated game webpage, allowing them to begin playing the "Into Space" game.	Pass
TC003	Child can select "No" on the message box to remain on the present screen.	The app closes the message and allow child to stay on budget dashboard screen.	Pass
TC004	Child can see the dialog showing up quickly when "Play INTO SPACE!" button is pressed.	The app must show this dialog within half of one second after pressing the button for an effective user interaction experience.	Pass
TC005	Child can safely navigate to the external game page when they click on "Yes" in dialog button.	The system must direct the child to a secure HTTPS URL from list of trusted websites that is already defined to ensure safety.	Pass

Sprint #3 – Diagrams

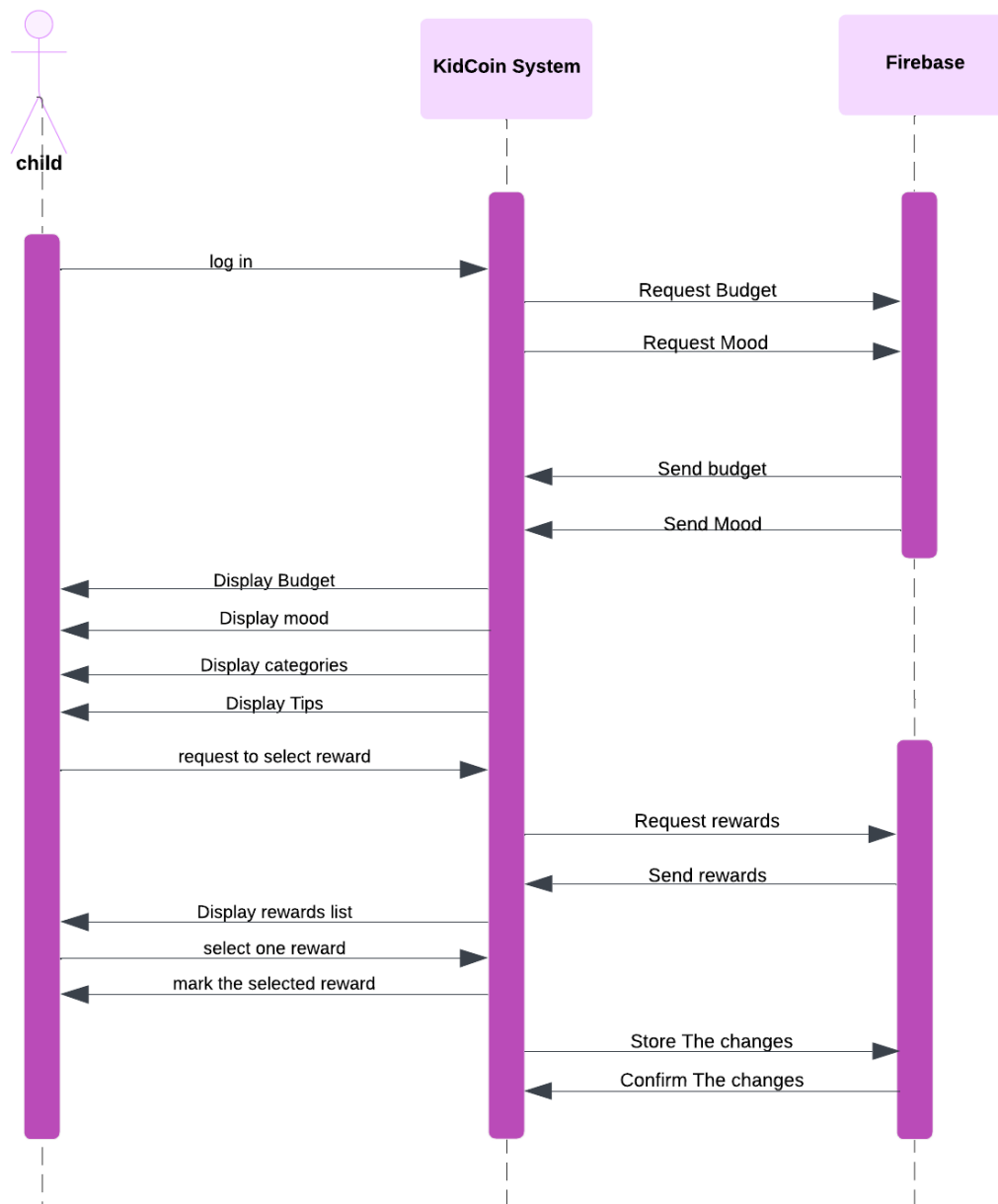
Child Progress Report Diagram



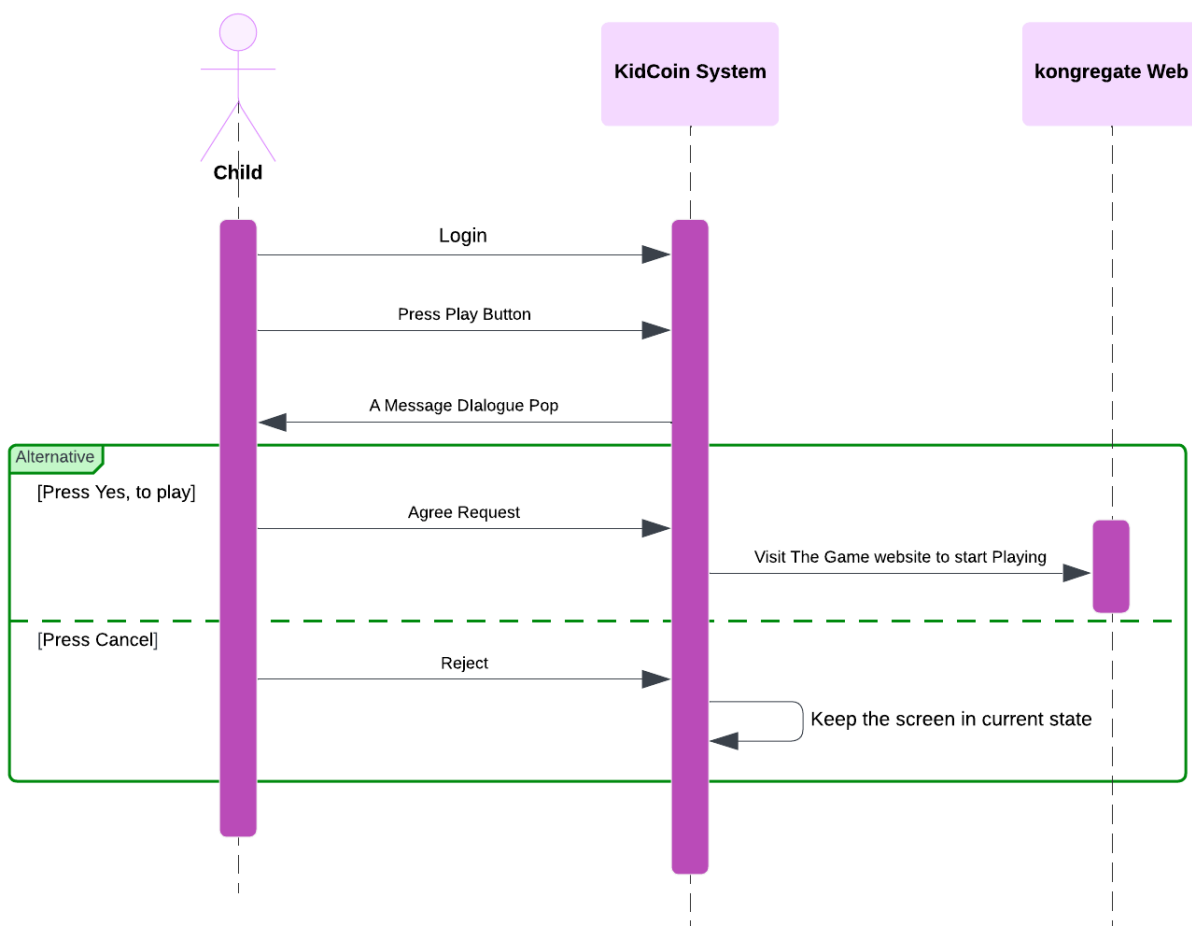
Reward Setup diagram



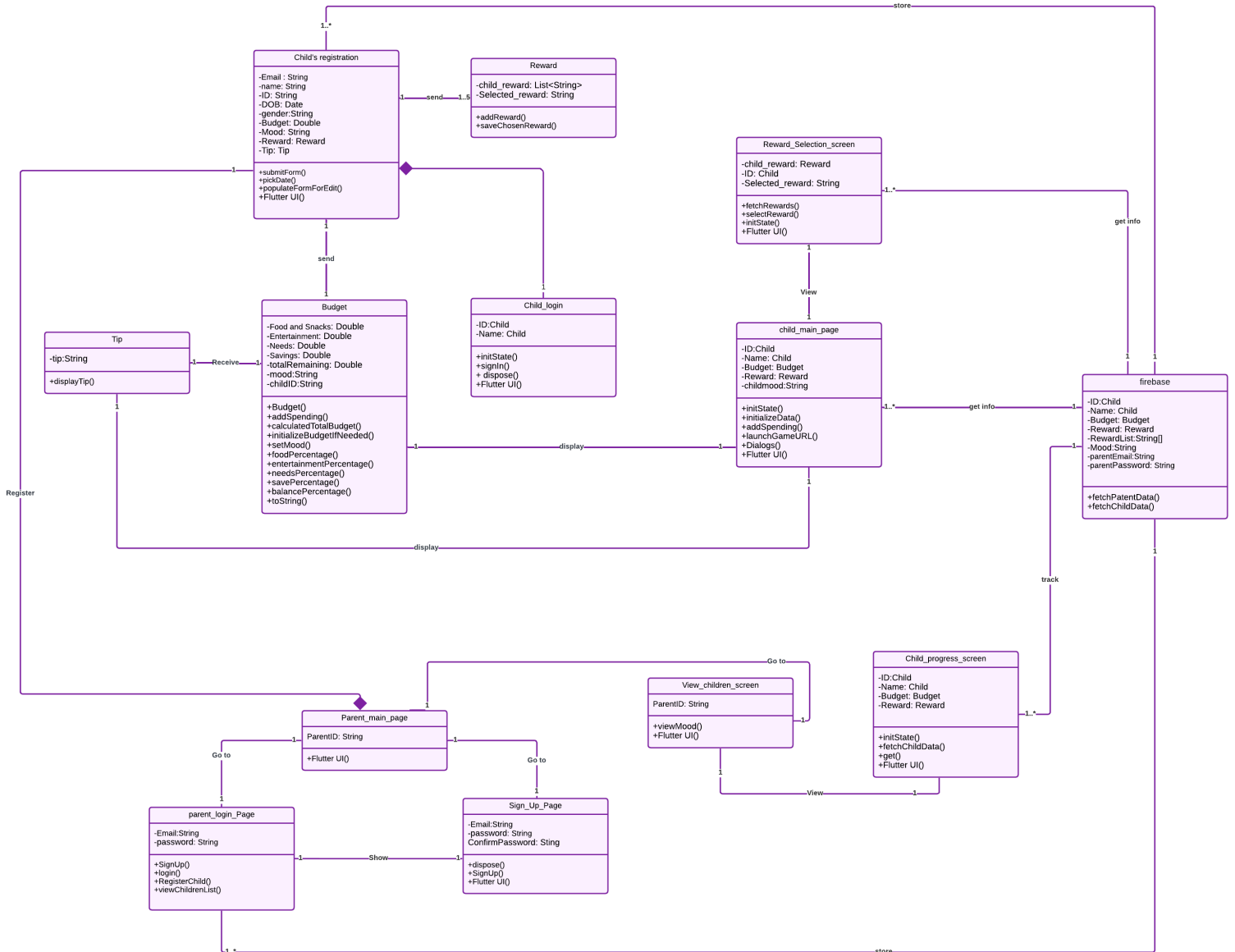
Reward selection diagram



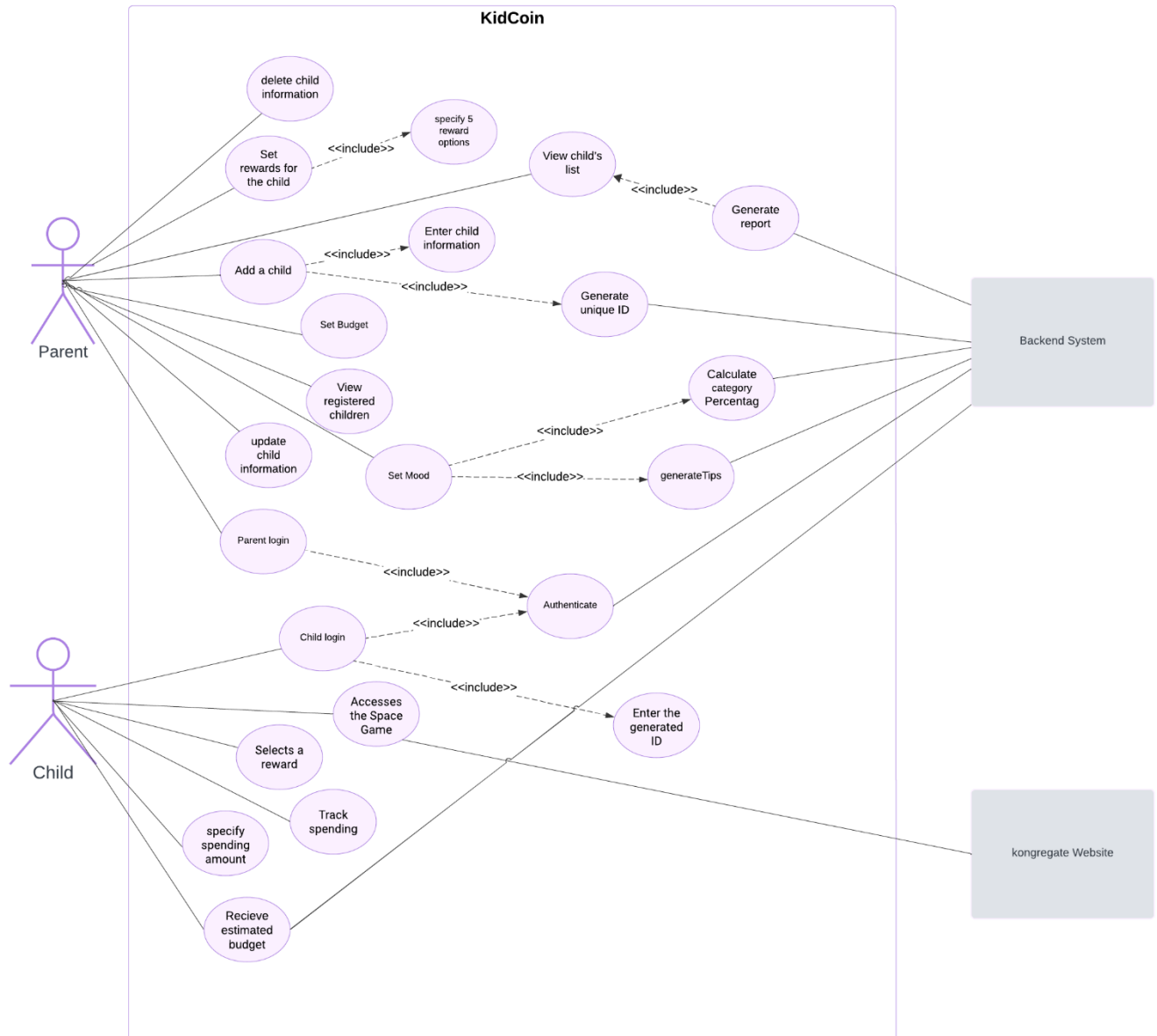
Access Space Game



Class diagram



Use case diagram



Sprint #3 – Code & Links

- To visit KidCoin Repository please [click here](#)
- To visit Firebase Repository please [click here](#)
- Game Website [click here](#)