



# KIDCOIN

2024-2025

Software Process Modeling

Sprint #1

## | Team Members:

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- Dimah Aloufi | 2210094
- Joud Mozahem | 2212477
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## | Instructors:

- Dr. Latifah Alharthi
- Dr. Muna aldhurawi



## Story Backlog – Sprint #1

### Sprint #1: Features for Sprint #1

**Component Name:** Parent Sign Up

**Story Name:** User Registration for Parents

**Story Sequence No:** 001

**Story Short Description:** Parents can sign up using their email and password

**Story Long Description:** Parents shall be able to create an account in the app using their email address and a secure password via a dedicated registration page. The system shall validate the registration information and store it securely in the database, allowing parents to log in and access their account

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**Component Name:** Parent Login

**Story Name:** User Authentication for Parents

**Story Sequence No:** 002

**Story Short Description:** Parents can log in to the app using their information

**Story Long Description:** Parents shall be able to log in to the app using their email and password via a dedicated login page, The system shall handle and authenticate the login information

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**Component Name:** Child Registration

**Story Name:** Registering a New Child

**Story Sequence No:** 003

**Story Short Description:** Parents can register a new child

**Story Long Description:** Parents shall add a new child by entering the child's name, date of birth, and gender

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**Component Name:** Unique Child ID Generation

**Story Name:** Automatic Child ID Generation

**Story Sequence No:** 004

**Story Short Description:** A unique ID is generated for each registered child

**Story Long Description:** The Backend system shall automatically generate a unique ID for each child upon successful registration by the parent.

**Component Name:** View Registered Children

**Story Name:** View All Registered Children

**Story Sequence No:** 005

**Story Short Description:** Parents can view all registered children

**Story Long Description:** Parents shall be able to view a list of all their registered children within the app. The list will display key information for each child, such as name, date of birth, a unique child ID, and gender

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**Component Name:** Update Child Information

**Story Name:** Update Children's Information by Parents

**Story Sequence No:** 006

**Story Short Description:** Parents can update their children's information

**Story Long Description:** Parents shall be able to update their children's information through a dedicated form in the app. The system shall retrieve the current information for each child and allow parents to edit details such as name, date of birth, and gender. Upon submission, the updated information will be securely stored in the database

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**Component Name:** Delete Child Information

**Story Name:** Delete Children's Information by Parents

**Story Sequence No:** 007

**Story Short Description:** Parents can delete their children's information

**Story Long Description:** Parents shall have the option to delete their children's information from the app. The system will retrieve each child's information and provide the option for parents to delete it. Upon confirmation, the system will permanently remove the child's record from the database.

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**Component Name:** Budget List Generation

**Story Name:** Child Budget List Creation

**Story Sequence No:** 008

**Story Short Description:** Generate a budget list for children

**Story Long Description:** The system shall generate a budget list for each child, divided into predefined spending categories: Food and Snacks, Entertainment, Needs, and Savings.

## Prioritize stories and define sprints:

### Sprint #1:

Component name	Priorities
1. Budget List Generation	High
2. Parent Sign Up	High
3. Parent Login	High
4. Child Registration	High
5. Unique Child ID Generation	High
6. View Registered Children	High
7. Update Child Information	Low
8. Delete Child Information	Low

## Sprint #1 - Meeting(s)

**Project Name:** KidCoin

**Project Members:**

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

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### **Sprint #1: Stand up Meeting 1# [6/10/2024]**

**Sprint Duration:** 2 Weeks

**Scrum Master:** Dimah

**Client:** Dr. Latifah Alharthi

**Pair Programmers:**

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

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### **Sprint #1: Final Sprint Meeting #2 [8/10/2024]**

**Sprint Duration:** 2 Weeks

**Scrum Master:** Dimah

**Client:** Dr. Latifah Alharthi

**Pair Programmers:**

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

### Stories: All stories for Sprint #1

Component Name	Story Sequence Number	Use Cases (e.g., functionalities)
Budget List Generation	001	The system shall generate a budget list for each child
Parent Sign Up	002	Parents should be able to sign up using their email and password
Parent Login	003	Parents shall be able to log in to the app using their email and password
Child Registration	004	Parents shall be able to add a new child
Unique Child ID Generation	005	The backend system shall automatically generate a unique ID for each child
View Registered Children	006	Parents can view all registered children
Update Child Information	007	Parents can update their children's information
Delete Child Information	008	Parents can delete their children's information

### Follow-up meeting questions:

#### **1. What has been completed since the last meeting?**

We solved Flutter and GitHub, Firebase Problems and we started writing the methods for each feature above, we also implemented these features to enhance the app's functionality and improve the user experience for parents managing their children's information

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

Next, we will develop the Budget Management and Money Management features. This includes creating functionalities that allow parents to effectively manage their children's budgets, track spending, and provide money management tips. Our goal is to ensure that these features are user-friendly and provide valuable insights to parents in managing their children's financial literacy

## **3. Do you have any issues/impediments?**

We are encountering challenges related to the various operating systems on the programmers' devices. These differences may require additional time and effort to ensure compatibility and smooth operation across the team's development environments. Currently, we do not have any major issues or impediments, but we recognize that integrating the budget management features with Firebase will require careful attention to ensure data consistency and performance

## Sprint #1 - Test Cases(s)

### Sprint #1 Test Cases - [10/7/2024]

**Test Case Name:** Sprint 1 – Parent Sign Up

**Test Case ID:** KidCoin – Parent Sign Up

Test Case No.	Test Case Description	Expected Results	Outcome (Pass/Fail/Other (Comments))
TC001	User leaves the email and password fields blank and submits	The system should show a message: "Please fill in all field."	Pass
TC002	User enters a valid email but leaves the password field blank and submits	The system should show a message: "Please fill in all field."	Pass
TC003	User enters a valid password but leaves the email field blank and submits	The system should show a message: "Please fill in all field."	Pass
TC004	User enters a valid email, password, and a different confirm password, and submits	The system should show a message: "Passwords do not match."	Pass
TC005	User enters a valid email and matching password and confirm password and submits	The system should create the account, display a success message: "Sign Up successful!" and navigate to the Parent Login page	Pass
TC006	User enters a valid email and password but the sign-up fails (e.g., email already in use)	The system should show a message: "Sign Up failed: [error message from Firebase]."	Pass
TC007	User clicks on "Already have an account? Log In" link.	The system should navigate back to the Parent Login page without any errors	Pass



**Sprint #1 Test Cases - [10/7/2024]**

**Test Case Name:** Sprint 1 – Parent Login

**Test Case ID:** KidCoin – Parent Login

Test Case No.	Test Case Description	Expected Results	Outcome (Pass/Fail/Other (Comments))
TC001	User leaves the email and password fields blank and submits	The system should show a message: "Please enter both email and password"	Pass
TC002	User enters a valid email but leaves the password field blank and submits	The system should show a message: "Please enter both email and password"	Pass
TC003	User enters a valid password but leaves the email field blank and submits	The system should show a message: "Please enter both email and password"	Pass
TC004	User enters valid credentials (existing email and password) and submits	The system should log the user in and display a success message: "Login successful!" and navigate to the Child Registration page	Pass
TC005	User enters valid email and incorrect password and submits	The system should show a message: "Login failed: [error message from Firebase]."	Pass
TC006	User clicks on "Don't have an account? Sign Up" link	he system should navigate to the Sign-Up page without any errors	Pass
TC007	User enters valid email and password and waits for the login process to complete (e.g., network delay)	The system should still show the loading indicator and navigate appropriately once the login is successful	Pass
TC008	User interacts with the email and password fields (e.g., enters text, then clears it)	The system should correctly handle the changes in input and display the input fields without any errors.	Pass

**Sprint #1 Test Cases - [10/7/2024]**

**Test Case Name:** Sprint 1 – Child Registration

**Test Case ID:** KidCoin – Child Registration

<b>Test Case No.</b>	<b>Test Case Description</b>	<b>Expected Results</b>	<b>Outcome (Pass/Fail/Other (Comments))</b>
TC001	User leaves all fields blank on registration screen	User should be shown a message "Please enter the child's name," "Please enter date of birth," "Please enter gender"	Pass
TC002	User tries to enter numbers or special characters in the name field (e.g., "123")	The user should be unable to input any numbers or special characters, as the input is restricted to alphabets only	Pass
TC003	User enters valid name and leaves date of birth field blank	The user should be shown a message "Please enter date of birth"	Pass
TC004	User enters a valid name and date of birth but does not select a gender	The user should be shown a message "Please select a gender"	Pass
TC005	User enters valid name, valid date of birth, and selects a gender	The form should successfully be submitted and saved, and a success message "Child saved successfully!" should be displayed	Pass

**Sprint #1 Test Cases - [10/7/2024]**

**Test Case Name:** Sprint 1 – Child Unique ID Generation

**Test Case ID:** KidCoin – Child Unique ID Generation

Test Case No.	Test Case Description	Expected Results	Outcome (Pass/Fail/Other (Comments))
TC001	Generate Unique ID for a new child	A unique ID of 6 characters (e.g., "AB123C") is generated successfully.	Pass
TC002	Ensure Unique ID does not exceed specified length	Length of the generated ID should be exactly 6 characters	Pass
TC003	Check if Unique ID contains uppercase letters	The generated ID contains at least one uppercase letter	Pass
TC004	Validate uniqueness of Unique IDs generated from multiple requests	All generated IDs across multiple requests should be unique	Pass
TC005	Ensure Unique ID does not contain special characters	The generated ID does not include any special characters (e.g., @, #, \$, %, etc.)	Pass

**Sprint #1 Test Cases - [10/7/2024]**

**Test Case Name:** Sprint 1 – View Registered Children

**Test Case ID:** KidCoin – View Registered Children

Test Case No.	Test Case Description	Expected Results	Outcome (Pass/Fail/Other (Comments))
TC001	User is logged in and has children registered	The list of children should be displayed correctly, showing their names, child IDs, date of birth	Pass
TC002	User has no children registered	A message should be displayed: "No children registered."	Pass
TC003	User clicks the edit button on a child	The child should be removed from the list, and a message "Child deleted" should appear.	Pass
TC004	User clicks the delete button for a child	All generated IDs across multiple requests should be unique	Pass
TC005	User with multiple children registered interacts with the UI	Each child in the list should be clickable, and the UI should handle multiple interactions (editing and deleting) smoothly without crashes or errors	Pass

**Sprint #1 Test Cases - [10/7/2024]**

**Test Case Name:** Sprint 1 – Update Child Information

**Test Case ID:** KidCoin – Update Child Information

Test Case No.	Test Case Description	Expected Results	Outcome (Pass/Fail/Other (Comments))
TC001	User opens the registration form for editing a child's information	The form should populate with the child's existing data (name, date of birth, Child ID)	Pass
TC002	User submits the form with valid updated information	The child information should be updated in Firestore, and a message "Child saved successfully!" should be displayed	Pass
TC003	User submits the form with a blank name field	The form should show an error message indicating "Please enter the child's name."	Pass
TC004	User submits the form with an invalid date format	The form should show an error message indicating "Invalid date format."	Pass
TC005	User opens the registration form for editing a child, but cancels	The form should close, and no changes should be saved	Pass

**Sprint #1 Test Cases - [10/7/2024]**

**Test Case Name:** Sprint 1 – Delete Child Information

**Test Case ID:** KidCoin – Delete Child Information

Test Case No.	Test Case Description	Expected Results	Outcome (Pass/Fail/Other (Comments))
TC001	User clicks the delete button for a child	A confirmation dialog should appear asking the user to confirm the deletion	Pass
TC002	User confirms the deletion of a child	The child should be removed from Fire store, and a message "Child deleted" should be displayed	Pass
TC003	User cancels the deletion of a child	The child should remain in the list, and no deletion message should be displayed	Pass
TC004	User refreshes the child list after deletion	The child list should update correctly, confirming the deletion by not showing the deleted child	Pass

**Sprint #1 Test Cases - [10/7/2024]**

**Test Case Name:** Sprint 1 – Child Budget List Creation

**Test Case ID:** KidCoin – Child Budget List Creation

Test Case No.	Test Case Description	Expected Results	Outcome (Pass/Fail/Other (Comments))
TC001	The system applies the specified categories on the given Budget.	The system should divide the total amount into predefined categories: Food and Snacks (30%), Entertainment (20%), Needs (40%), and Savings (10%)	Pass
TC002	The system by default set the budget to 100\$.	For a total of 100, the categories should be: Food and Snacks = 30, Entertainment = 20, Needs = 40, Savings = 10	Pass

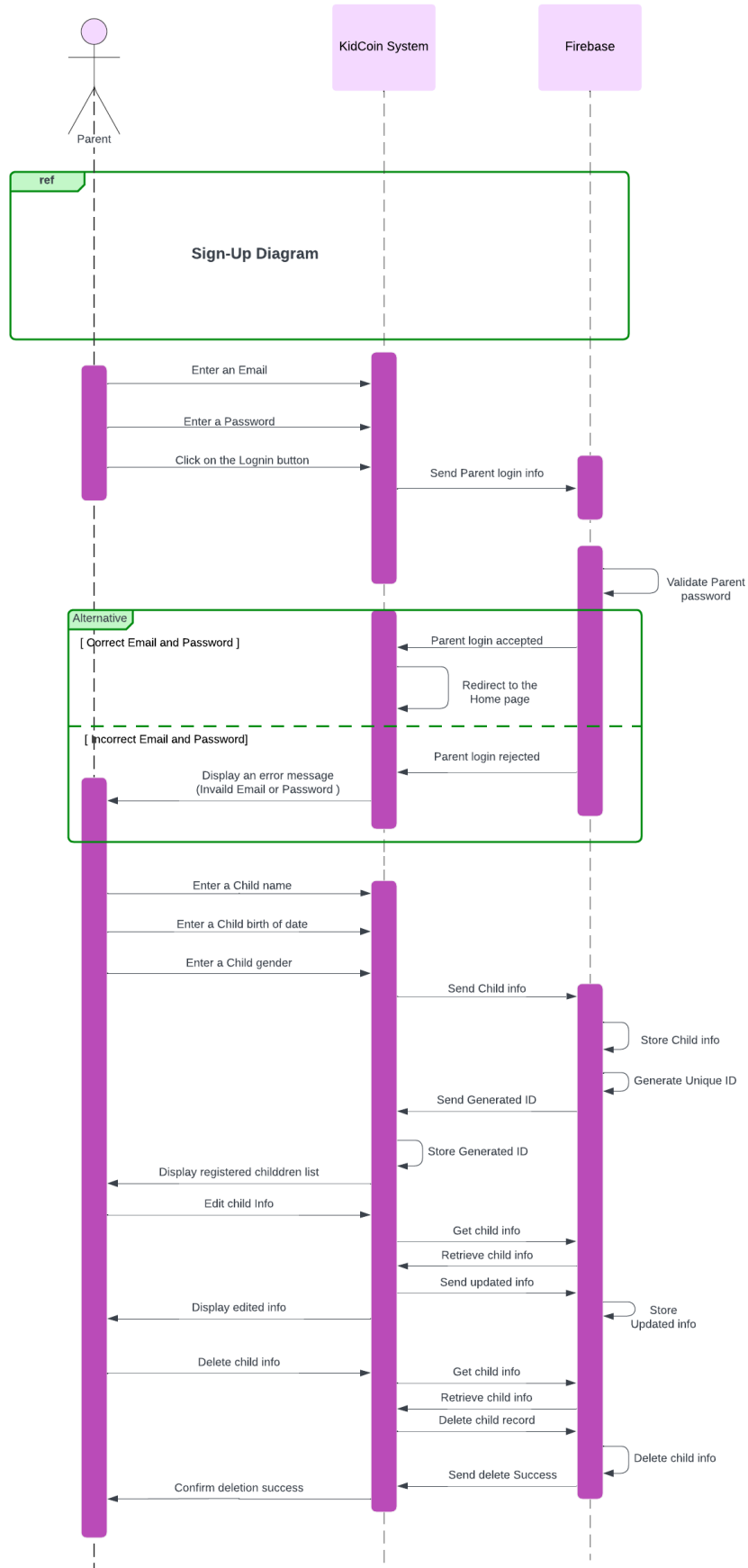
## Sprint #1 - Diagrams

### 1. Parent Sign-Up Sequence Diagram



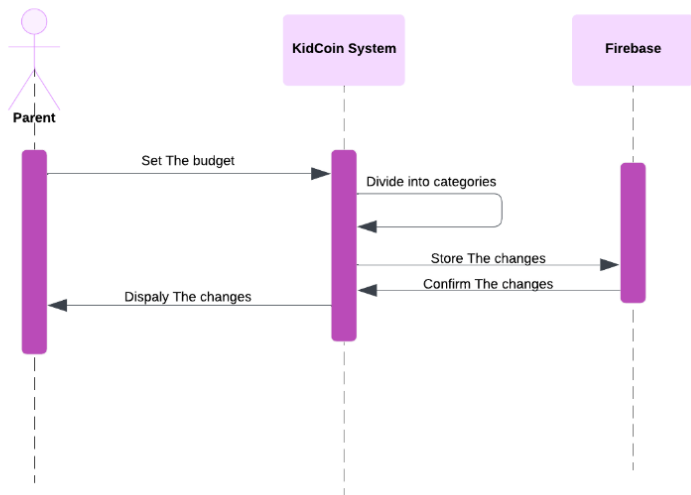


## 2. Parent Login & Register and Manage child Sequence Diagram

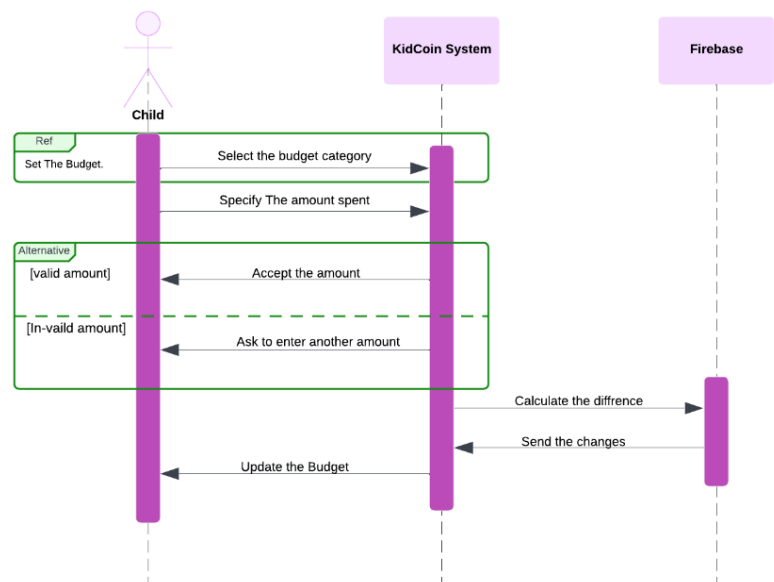


### 3. Budget Sequence Diagram

#### Set The Budget



#### Spend end The Budget





## 5. Updated Class Diagram

**kidCoin system**

