Agile Software Development
Expense Management System

This document contains information relevant to the development of the
Expense Management System Prototype proposed by our Software Development Team.
It comprises the Initial Project Plans and User Stories with DEV Estimates, as well as the
Project Schedule and Requirements.

CMSC 128 - SOFTWARE ENGINEERING
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Members:
Borromeo, Blesse Rachelle
Cimafranca, JV Renz
Lescano, Renmar
Lupac, Coebe Austin

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PRODUCT BACKLOG

Priority Value: (1 as the Highest Priority)

1. 🟥 Must Have   3. 🟨 Could Have
2. 🟦 Should Have   4. ⬛ Won't Have

Story Points Scale:

1 - takes 1-2 days   **5** - takes 3-5 days   **13** - takes 7-10 days
3 - takes 2-3 days   **8** - takes 5-7 days

ITERATION #1

Purchase List

As a User
I want to list out my expenses
So that I can budget them reasonably

Priority: 🟥 Must Have
Story Points: 5

Add/Edit Expense Feature

As a User
I want to add/edit my expenses
So that it will be easier to track

Priority: 🟥 Must Have
Story Points: 3

Expense Statistics

As a User
I want to see my expense statistics
So that I can see how much I've spent and/or saved

Priority: 🟦 Should Have
Story Points: 5

ITERATION #2

Login System

As a User
I want to set up a personal account
So that I can secure the details of my expenses

Priority: 🟥 Must Have
Story Points: 3

2-Factor Authentication

As a User
I want to have secured login process
So that I can keep my account secure and private.

Priority: 🟥 Must Have
Story Points: 5

ITERATION #3

"IPON" Feature

As a User
I want to have a virtual pet
So that it would be entertaining

Priority: 🟨 Could Have
Story Points: 13

Digital Savings Tracker

As a customer
I want to save money
So that I can use it in the future.

Priority: 🟦 Should Have
Story Points: 3

ITERATION #4

Digital Banking History Integration

As a Bank Account holder
I want to sync my account to an app
So that I can keep track of my transactions

Priority: 🟨 Could Have
Story Points: 8

TEST CASES

TestCase_No.	TCN_01
User story:	As a customer I want to set up an account so that I can have a personal account where I can secure the details of my expenses.
Actor:	Customer
Acceptance Criteria:	To successfully register personal credentials such as name, username, password, birthday, address, and email to the database.
Steps:	1. User will be prompted to the login and sign up page 2. User will be asked for his/her personal credentials such as name, username, password, birthday, address, and email. 3. The system will either accept or reject the user information if his/her personal credentials such as name, username, and email is unique. The system will reject if there is a duplication of name, username, and email. 4. User will be redirected to the main homepage of the expense tracker app.

TestCase_No.	TCN_02
User story:	As a customer, I want to add/edit my expenses so that it will be easier to track.
Actor:	Customer
Acceptance Criteria:	To successfully add or edit the user's savings in the app.

Steps:	1. User will login to his/her account if he/she has registered for an account already, otherwise, go to TCN_01.
	 2. User will go to the "my expenses" section of the app.
	 3. The system will display the current expenses of the user. It will display "No expenses" if there are no expenses.
	 4. User will click the "add" button to add and the "edit button to edit.
	 3.1. Add
	     01. User will input the expense he/she desires.
	     02. System prints "successfully added" and the expense will be added to the expense list.
	 3.2.User will click the "edit" button to edit.
	     01. User will select an expense from the list to edit.
	     02. User will click "edit".
	     03. User will input the name of his/her expense to the selected one.
	     04. System prints "edit successful" and the expense will be edited.
	 5. The system will display the final list of the added/modified expenses.

TestCase_No.	TCN_03
User story:	As a customer, I want to see my expense statistics so that I can see how much I've spent and/or saved.
Actor:	Customer
Acceptance Criteria:	To successfully list all the user's expenses for future expense tracking and future budget discipline.
Steps:	1. User will login to his/her account if he/she has registered for an account already, otherwise, go to TCN_01. 2. User will go to the "track my expenses" page. 3. The system will display the list of expenses on the app section.

TestCase_No.	TCN_04
User story:	As a user I want to have a secured login process so that I can ensure security and privacy of my account.
Actor:	User
Acceptance Criteria:	To successfully activate 2 Factor Authentication such as email and mobile verification for extra security.
Steps:	1. User will login to his/her account if he/she has registered for an account already, otherwise, go to TCN_01. 2. User will go to the settings section of the app. 3. User will go to the security section of the settings. 4. User will click "Enable 2-factor-authentication" 5. System will send an OTP to the email and/or mobile number. 6. User will confirm the OTP sent to his/her email and/or mobile number on the given input box in the app. 7. System will pop up a message "2-factor-authentication enabled successfully.

TestCase_No.	TCN_05
User story:	As a user I want to have a secured login process so that I can ensure security and privacy of my account.
Actor:	User
Acceptance Criteria:	To successfully make the user reset the password for his/her account.
Steps:	1. User will login to his/her account if he/she has registered for an account already, otherwise, go to TCN_01. 2. User will go to the settings section of the app. 3. User will go to the "reset password" section of the settings. 4. System will ask the user to input his/her old password, his/her new password, and the confirmation of his/her new password. System will click the "change my password" button. 5. System will change his/her password, and pop up a message "password successfully changed".

TestCase_No.	TCN_06
User story:	As a customer, I want to save money so that I can use it in the future.
Actor:	Customer
Acceptance Criteria:	To successfully deposit money in the savings feature of the app.
Steps:	1. User will login to his/her account if he/she has registered for an account already, otherwise, go to TCN_01. 2. User will go to the "savings" section of the app. 3. User will click "add money to savings". 4. System will add money to the user's savings. 5. System will pop up a message "money successfully added to savings.

TestCase_No.	TCN_07
User story:	As a customer, I want to have a virtual pet so that it would be entertaining.
Actor:	Customer
Acceptance Criteria:	To successfully feed the virtual pet and keep it happy by having discipline in depositing money to the savings section.
Steps:	1. User will login to his/her account if he/she has registered for an account already, otherwise, go to TCN_01. 2. User will go to the "savings" section of the app" 3. User will see a puppy/dog. 4. System will display a puppy/dog. (i.e. Puppy will grow into a dog and the dog will be happy if the user is putting an amount to his/her savings, dog will be unhappy then eventually die if user does not input an amount for savings)

TestCase_No.	TCN_08
User story:	As a bank account holder, I want to synchronize my account to an application so that I can keep track of my transactions.
Actor:	Customer
Acceptance Criteria:	To successfully automate input transactions using online methods to the application.
Steps:	1. User will login to his/her account if he/she has registered for an account already, otherwise, go to TCN_01. 2. User will go to the "link a bank" section. 3. User will link his/her bank to the app. 4. System will link with the bank and will print "Bank successfully linked"

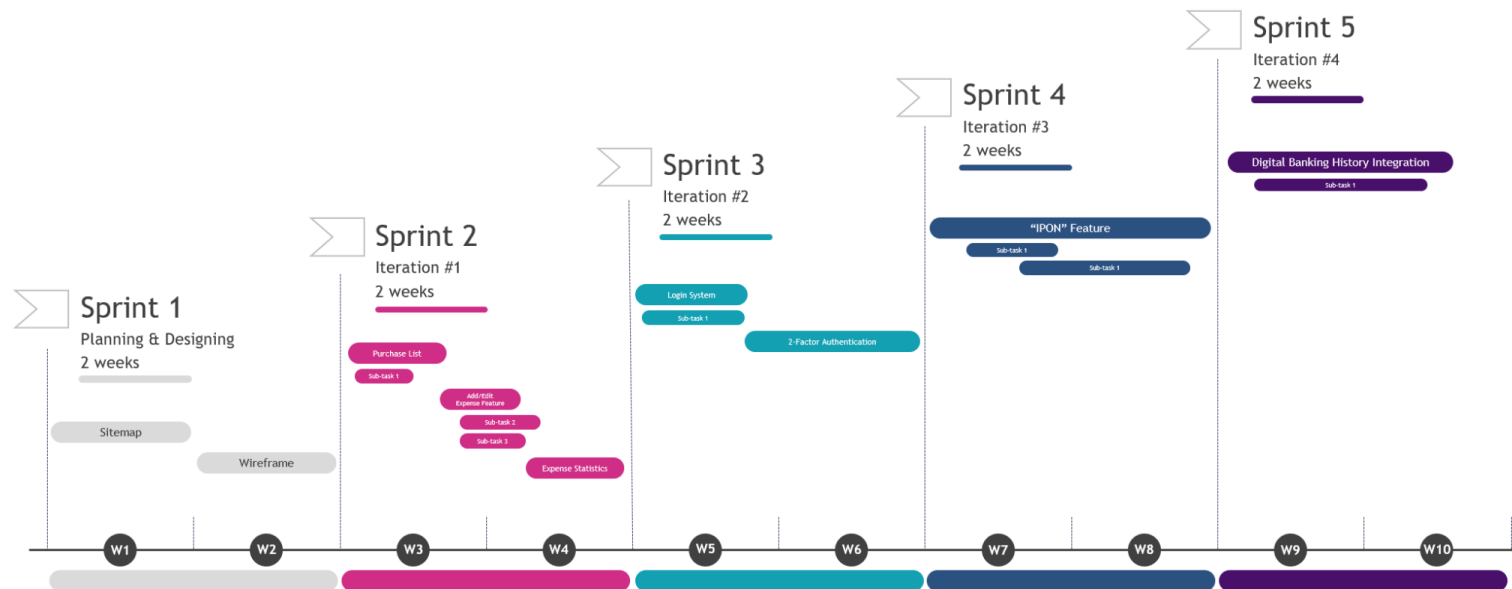| TestCase_No.	TCN_09
User story:	As a User, I want to list out my expenses so that I can budget them reasonably.
Actor:	User
Acceptance Criteria:	To successfully tabulate all the expenses as a reflection of the previous transactions.
Steps:	1. User will login to his/her account if he/she has registered for an account already, otherwise, go to TCN_01. 2. User will need to link his/her bank to the app, otherwise go to TC_08. 3. User will click "view bank transactions" 4. System will display the previous and current bank transactions in the app.

SPRINT PLANNING

Sprint Setup

Sprint 1	Sprint 2	Sprint 3	Sprint 4	Sprint 5
Duration: 2 weeks **Start date:** TBA **End date:** TBA **Sprint Goal:** Planning and designing of the web application, and creating a Sitemap and a Wireframe.	**Duration:** 2 weeks **Start date:** TBA **End date:** TBA **Sprint Goal:** Develop the website's fundamental features and functionalities.	**Duration:** 2 weeks **Start date:** TBA **End date:** TBA **Sprint Goal:** Develop a secure login system.	**Duration:** 2 weeks **Start date:** TBA **End date:** TBA **Sprint Goal:** Add new features to the website that will increase consumer satisfaction.	**Duration:** 2 weeks **Start date:** TBA **End date:** TBA **Sprint Goal:** Increase the product's potential by incorporating digital banking technologies.

10 Weeks Agile Sprint Project Roadmap

Kanban Board

To Do	In Progress	Done	Blockers
Sprint 1: Create a Sitemap	Schedule Sprint Planning Meeting	Create a Kanban Board	Power Interruptions
Sprint 1: Create a Wireframe		Create a Sprint Timeline	Network Problems
		Determine Sprint Goals	Faulty Device/s or Device Compatibility Issues
Sprint 2: Create Purchase List field		Formulate Sprints	Lack of Access to appropriate Tools
Sprint 2 | Sub-task 1: Create Input buttons		DEV Estimate on the User Stories	Internal Disagreement between members
Sprint 2: Create Add/Edit Expense feature		Create Test Cases for User Stories	Unexpected Health Issues
Sprint 2 | Sub-task 2: Create Calendar feature		Create Product Backlog	Unforeseen Accidents to team members
Sprint 2 | Sub-task 3: Create Notes feature		Create User Stories	
Sprint 2: Create Expense Statistics feature		Formulate Project Scope (Iterations)	
		Formulate Project Objectives	

Sprint 3: Create Login System feature		Formulate a Problem Statement	
Sprint 3 | Sub-task 1: Create a Database for user login information		Brainstorm for a Prototype Proposal	
Sprint 3: Implement 2 - Factor Authentication			
Sprint 4: Create "IPON" feature			
Sprint 4 | Sub-task 1: Generate a visual puppy			
Sprint 4 | Sub-task 2: Generate puppy animation			
Sprint 5: Integrate Digital Banking			
Sprint 5 | Sub-task 1: Create "Sync with Digital Banking" option			