College of Computer Science and Engineering

Department of Software Engineering

CCSW 315 Software Process Models

Academic Year: Spring 2023

final report

-students work-

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prepared for: Dr. Muna Altherwi

Sprint 0

1. about the project

0.1 Project description

Muafar is a financial educational application designed specifically for children. The app aims to teach children about money management and financial literacy in a fun and engaging way. Muafar uses gamification and interactive features to encourage children to learn about money, how to save, budget, and invest wisely.
The application includes a range of features such as saving goals, budget tracking, and saving challenges. The saving goals feature allows children to set a target amount they want to save for and tracks their progress toward achieving their goals. The saving challenges are designed to teach children about financial concepts such as budgeting, and saving, in a fun and interactive way.

The application is designed to be easy to use, with a simple and intuitive interface suitable for children.

1.2 Problem definition

The problem that Muafar seeks to solve is the lack of financial education and literacy among children. In today's society, many children grow up without a basic understanding of financial concepts such as budgeting, saving, and investing. This lack of financial education can lead to poor money management skills, which can have negative consequences in the long run.

Additionally, many parents may not feel equipped to teach their children about financial concepts, as they may not have received adequate financial education themselves. As a result, children may not have access to the knowledge and resources necessary to develop healthy financial habits.

Furthermore, traditional financial education methods such as textbooks and lectures may not be engaging or interesting for children. They may not be able to relate to the material and may quickly lose interest, resulting in a lack of understanding.

1.3 proposed solution

Muafar provides a comprehensive solution to the lack of financial education among children. By using gamification beside an interactive and engaging platform, Muafar can make learning about financial concepts fun and accessible for children, while also providing parents with the tools they need to support their child's financial education.

1.4 scope

the scope of Muafar is to provide children with a comprehensive financial education platform that is engaging, accessible, and effective. The application aims to empower children with the

knowledge and skills they need to make informed financial decisions and set them on a path toward a successful financial future.

1.5 users
The target users of Muafar are children aged 6-16 years old who are interested in learning about financial concepts.

2. requirements

Prioritized Functional and non-functional requirements:

2.1 Functional requirements	Influencing stakeholders
The system shall enable the user to create an account.	H
The system shall allow the user to View the history of completed goals.	M
The system shall allow the user to Add members to the challenge.	H
The system shall allow the user to view the winner of the challenge when the financial goal is completed.	H
The system should allow users to set saving goals and track their progress toward those goals.	M

2.2 Non-functional requirements	Influencing stakeholders
The system shall provide a login page.	M
The system shall provide a signup page.	M
The system shall provide the main page.	M
The system shall provide the profile page.	M
The system shall provide the challenges page.	M
The system shall provide the goal page.	M
The user interface should be intuitive, user-friendly, and appealing to children.	H
The system must be executed using Java.	L

3. Diagrams

3.1 Use case diagram

3.2 Class Diagram

Sprint 1

1. Requirements

1.1. product backlog

Component Name: Registration
Story Name: Registration
Story Sequence No: 001
Story Short Description: Users shall be able to register.
Story Long Description: Users shall be able to provide their personal information such as name, email, and username. The system shall handle and store the information entered, in the file**.**

Component Name: Log in and Authentication
Story Name: Log in and Authentication
Story Sequence No: 002
Story Short Description: Users shall be able to authenticate by logging in with their username and password.
Story Long Description: The system shall prevent unauthorized access. The system shall match the

entered username and password with the one stored in the file.

Component Name: Goal
Story Name: Add a new Goal
Story Sequence No: 003
Story Short Description: Users shall be able to add a new Goal.
Story Long Description: The user shall be able to add a new goal by adding the goal name, goal, and goal period, the system shall validate all the user's input and store it in the file.
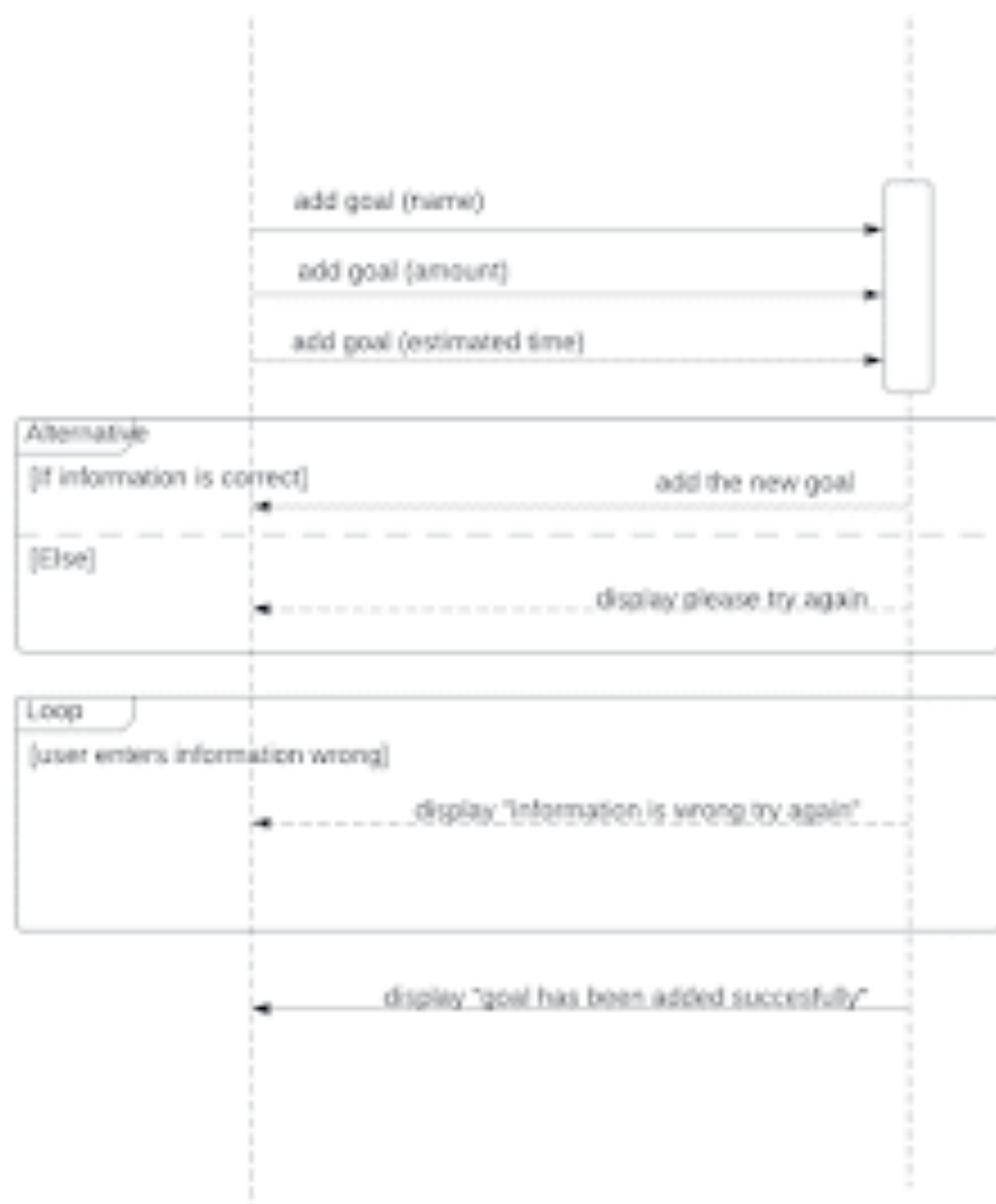

2. **Design and Analysis**

2.1 Activity Diagram for Login

display the home screen

2.2 Sequence for Add Goal

Child : User

AddGoal : Goal

add goal (name)

add goal (amount)

add goal (estimated time)

Alternative

[If information is correct]

add the new goal

[Else]

display please try again

Loop

[user enters information wrong]

display "information is wrong try again"

display "goal has been added succesfully"

Sprint Meeting

Name: [Muafer Application]
Members: [Dana-Suhaila-Lama-Sara]

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Sprint #1 Stand-up Meeting - [19/4/2023]

ration: **2 weeks**
aster: **Suhaila**
: Muna
rammers: Dana-Suhaila-Lama-Sara

ent Name	Story Sequence Number	Use Cases (e.g., functionalities)
ation	**001**	Users shall be able to register.
nd Authentication	**002**	Users shall be able to authenticate by logging in with their username and password.
	003	Users shall be able to add a new Goal.

p meeting questions:
nat has been completed since the last meeting?
e completed gathering information.
nat are you going to be working on next?

lat are you going to be working on next?
start gathering our requirements design and analysis and implement our code
you have any issues/impediments?

3.Test Cases

3.1 Sign up

Test Case Id: [Muafer – Signup]

Test Case No.	Test Case Description	Expected Results	Outcome (Pass / Fail / Other (Comments))
TC001	User taps on SIGN UP button on main screen.	User should be taken to the Registration screen.	Pass
TC002	User leaves all fields blank on Registration screen and taps SIGN UP button.	User should be displayed with a message: "fill the blank".	Pass
TC003	User enters First Name and leaves all other fields blank on the Registration screen and taps SIGN UP button.	User should be displayed with a message: "fill the blank".	Pass
TC004	User enters First Name and Last Name and leaves all other fields blank and taps SIGN UP button.	User should be displayed with a message: "fill the blank".	Pass
TC005	User enters First Name, Last Name, Email and leaves Password field blank	User should be displayed with a message "fill the blank".	Pass

	and taps SIGN UP button.		Pass
TC008	User enters information in all required fields and taps SIGN UP button.	User should be displayed with a message "Sign up successful." And user should be taken to the Login screen.	Pass

3.2 Login

Test Case Id: [Muafer – Login]

Test Case No.	Test Case Description	Expected Results	Outcome (Pass/Fail/Other (Comments)
TC001	User leaves all fields blank on Login screen.	User should be displayed with a message "Please fill in both fields".	Pass
TC002	User enters an invalid username.	User should be displayed with a message "User not foundl".	Pass
TC003	User enters a valid username and leaves password blank.	User should be displayed with a message: "Please fill in both fields.".	Pass
TC004	User enters valid username and password.	Application should hide the password by masking with **** on the password field.	Pass
TC005	User enters valid username and an invalid password.	User should be displayed with a message "Incorrect username or password"	Pass

Test Case No.	Test Case Description	Expected Results	Outcome
			Pass
TC006	User enters a valid username and a valid password.	User should be taken to Home page.	Pass

3.3 View information

Test Case Id: [Muafer – View Information]

Test Case No.	Test Case Description	Expected Results	Outcome (Pass / Fail / Other (Comments))
TC001	User tap on "عرض المعلومات الشخصية" button on personal information screen.	User should be taken to the view information screen.	Pass
TC002	user tries to change their information	user won't be able to edit any of their information	Pass
TC003	user clicks on the arrow	user will be back to the information page	Pass

3.4 Goal

Test Case Id: [Muafer –goal**]**

Test Case No.	Test Case Description	Expected Results	Outcome (Pass / Fail / Other (Comments))
TC001	the user clicks"اضافه"without filling any feilds	the message "please fill in all requiered feilds" will be displayed	Pass
TC002	the user enters letters in goal or period	the message"goal and period must be integer" will be displayed	Pass
TC003	the user clicks"اضافه" after filling all requierments correctly	the message"goal saved successfully" will be displayed	Pass
TC004	the user clicks on "الغاء" button	the user will be back in the main page	Pass

4. Github

5. Burndown chart for ASANA

Total time spent in Sprint 1 by Priority
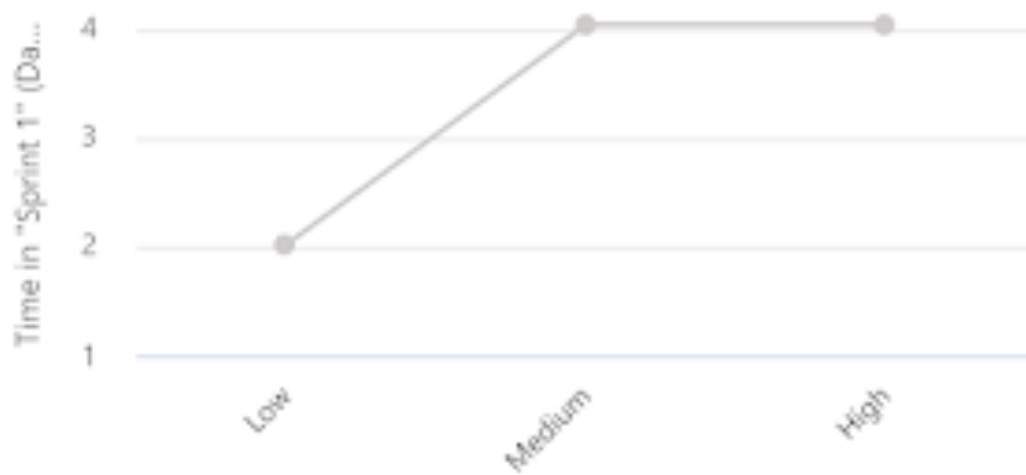
6. Sprint Backlog

7. Task allocation

Sprint 2

1. Requirements

1.1. product backlog

Component Name: Goal
Story Name: Goals History
Story Sequence No: 004
Story Short Description: Users can view all their previous Goals **Story Long Description:** Users shall be able to view all their previous goals and all the details about it goal name, statute, completion percentage, remaining amount, and a button for editing.

Component Name: Goal
Story Name: Edit Goal
**Story Sequence No:** 005
Story Short Description: Users shall be able to edit an existing goal and add money
Story Long Description: The user will be able to change the goal name, period, add money, and view other information that can't be edited like percentage and the remaining amount. user will be able to withdraw a goal.
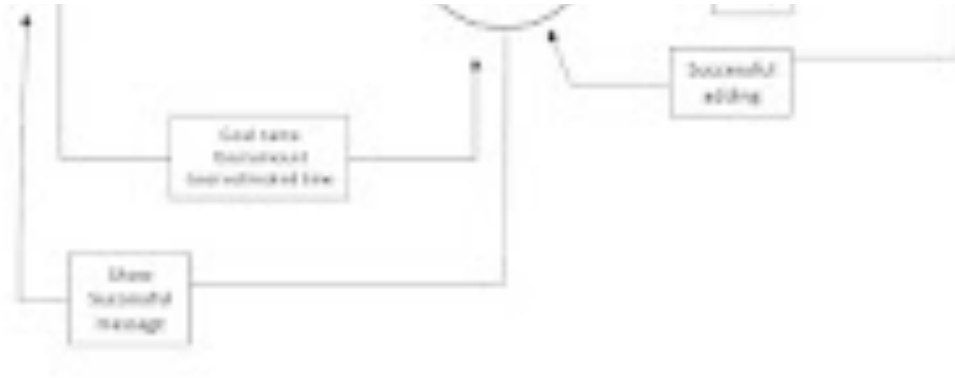
2. Design and Analysis

2.1 Sequence Diagram For Edit Goal

2.2 Data Flow Diagram For History Goal
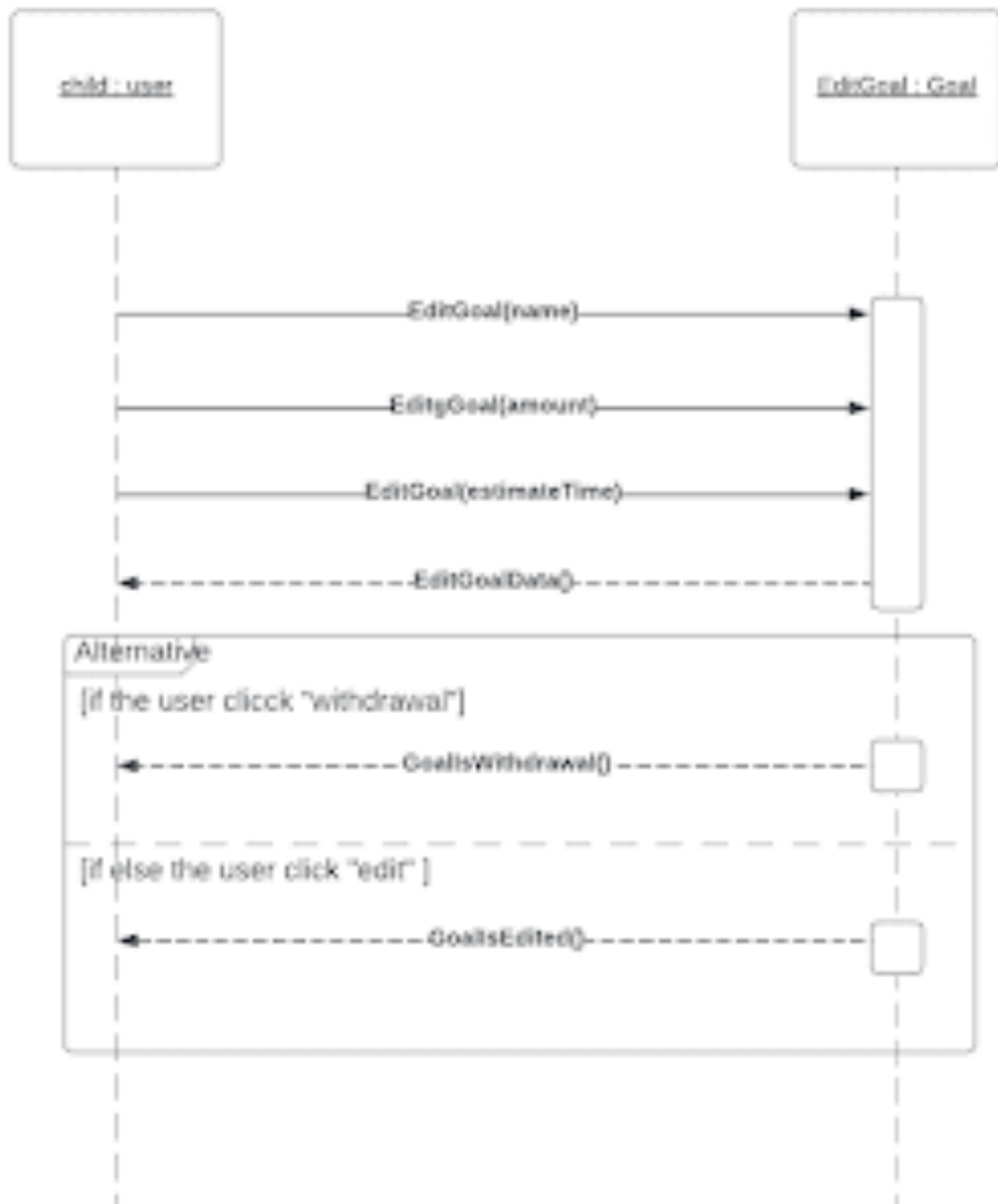
Data flow diagram for history goal

Sprint Meeting(s)

Name: [Muafer Application]
Members: [Dana-Suhaila-Lama-Sara]

_____

Sprint #*2* Stand up Meeting - [15/5/2023]

)uration: 2 weeks
Master: suhaila
Dr.Muna
)grammers: Dana, Suhaila, Lama, sara

onent Name	Story Sequence Number	Use Cases (e.g., functionalities)
history	004	the system shall display the goals history
)al	005	the user shall be able to edit the goal

up meeting questions: [SCRUM MASTER NAME or CLIENT NAME should ask the following
ns to the pair programmers**]:**
1. What has been completed since the last meeting?
registration function
1. What are you going to be working on next?
challenge feature
1. Do you have any issues/impediments?
no

3. Test Cases

3.1 Edit goal

Test Case Id: [Muafer – Edit goal]

| Test Case No.	Test Case Description	Expected Results	Outcome (Pass / Fail / Other (Comments))
TC001	the user changes "اسم الهدف"	"اسم الهدف" will be updated	Pass
TC002	the user changes "الهدف"	"الهدف" will be updated	Pass
TC003	the user changes "المدة الزمنية"	"المدة الزمنيه" will be updated.	Pass
TC004	the user adds an amount in "اضافة المبلغ" but the amount doesn't meet the goal	the amount will be subtracted from "نسبة الاكتمال" and "المبلغ المتبقي" will be updated	pass
TC005	the user adds an amount in "اضافة المبلغ" and the amount meets the goal	"الحالة" will change to complete	Pass
TC006	the user tries to change "نسبة الاكتمال"	the user won't be able to change it	Pass
TC007	the user tries to change "المبلغ المتبقي" .	the user won't be able to change it	Pass
TC007	the user tries to "تعديل" an ongoing goal	the user will be able to edit	pass
TC008	the user tries to "تعديل" a with a drawled goal	the user won't be able to change it	pass
TC009	the user tries to "تعديل" a complete goal	the user won't be able to change it	pass

Test Case No.	Test Case Description	Expected Results	Outcome (Pass/Fail/Other (Comments)
TC0010	the user clicks on "العودة"	the user will be back in "الاهداف" page	pass

3.2 History goal

Test Case Id: [Muafer –History goal]

| Test Case No.	Test Case Description	Expected Results	Outcome (Pass/Fail/Other (Comments)
TC001	user clicks on "تعديل" while the goal is ongoing	the user will be sent to edit goal	Pass
TC002	user clicks on "تعديل" while the goal is complete	the user won't be able to edit	Pass
TC003	user clicks on "تعديل" while the goal is withdrawal	the user won't be able to edit	Pass
TC004	user clicks on "العودة"	the user will be sent to the main page	Pass

Github

1. Github
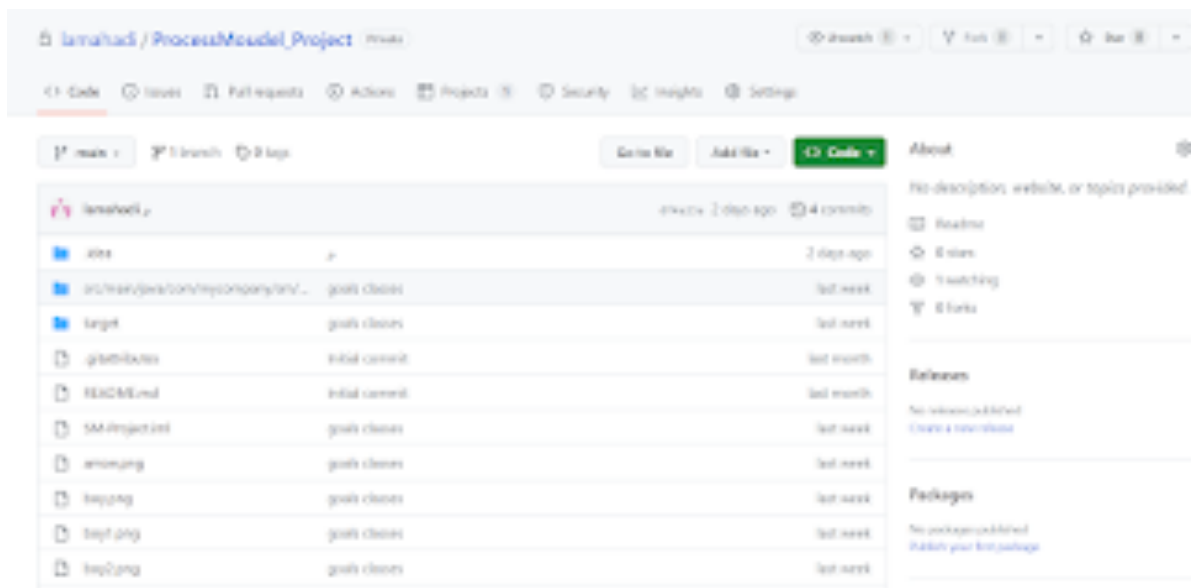
2. Burndown chart

Total time to complete by creation date
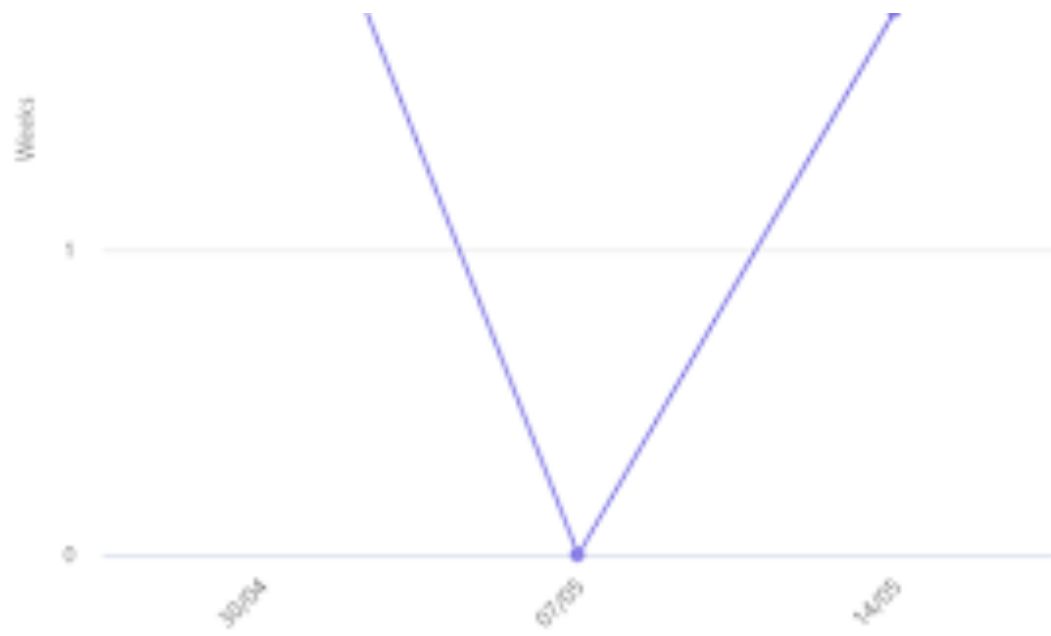
3. **Sprint Backlog**

Sprint 2

✅ requirement	🔵 suhaila hawi...	10 May	Medium	Done
✅ Design and Analysis	🟡 Lama alrub...	Yesterday	Medium	Done
⊘ Assignment 2	🔵 21109920hq...	friday	Low	In Progre...
✅ testing	🔵 Dana Saleh ...	Yesterday	High	Done
✅ implementation	🧑	13 May	High	Done

Sprint 0	Sprint 1	Sprint 2	+ Add section
✅ project description High Done 🔵 20 Apr	✅ implementation High In Progress 🔵 4 May	✅ requirement Medium Done 🔵 10 May	
✅ Functional requirement & Non-functional requirement High Done 🟡 28 Apr	✅ design Medium Done 🔵	✅ Design and Analysis Medium Done 🟡 Yesterday	
✅ use case diagram Medium Done 🧑 28 Apr	✅ analysis Low Done 🔵 4 May	⊘ Assignment 2 Low In Progress 🔵 Friday	
✅ class diagram Medium Done 🔵 28 Apr	✅ testing High InProg 🧑 2 May	✅ testing High Done 🧑 Yesterday	

Sprint 3

1. **Requirements**

1.1. product backlog

Component Name: New Challange
Story Name: New Challange
Story Sequence No: 006
Story Short Description: Users shall be able to start new challenges
Story Long Description: Users shall be able to start a new challenge by entering the challenge name, amount, and 2 challengers. The system shall check if the entered amount is an integer and if the challenger usernames are existing and if they are duplicated

Component Name: Challenge page
**Story Name:** Challenge page
Story Sequence No: 007
Story Short Description: Users shall be able to see details about the challenge.
Story Long Description: users shall be able to see all the challenges as well as the challenge name, amount, and current Ranking. Users will be able to add an amount to the challenge as long as the challenge is still ongoing.

2. Design and Analysis

2.1. Sequence diagram for creating a challenge
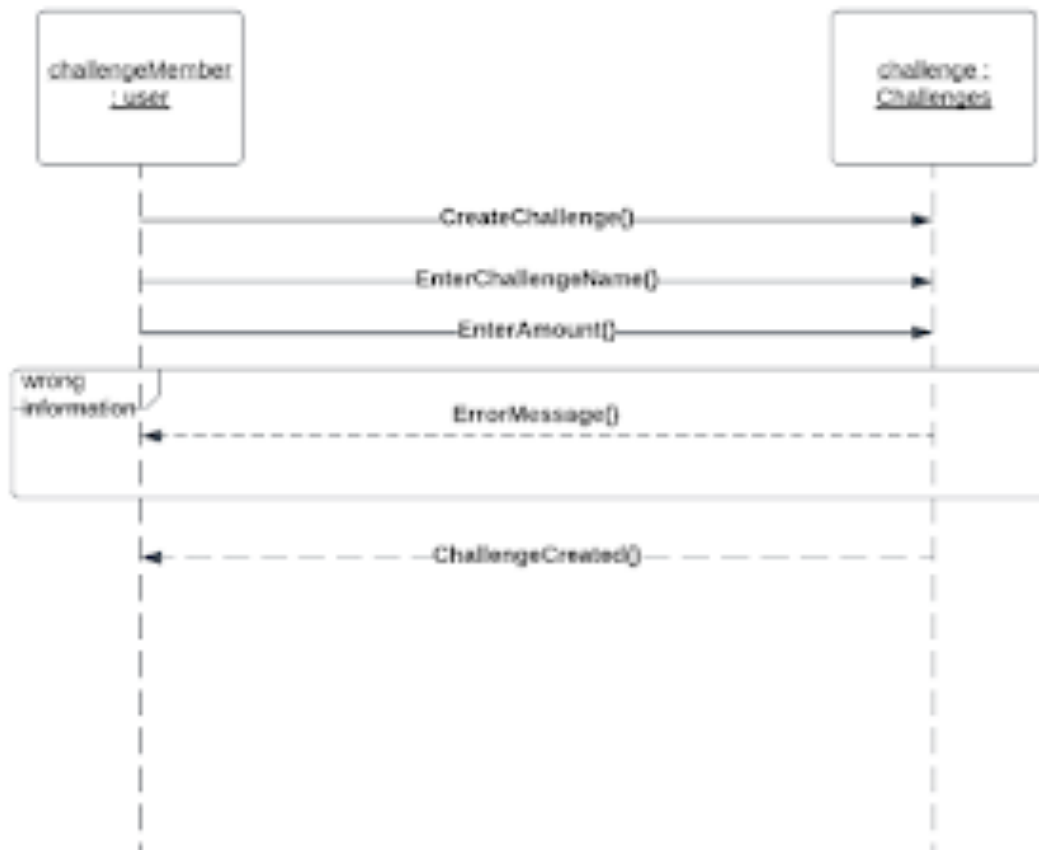
2.2. Activity diagram for creating challenge

Sprint Meeting(s)

ame: [Muafer Application]
/lembers: [Dana-Suhaila-Lama-Sara]
_____

Sprint #_3_ Stand up Meeting - [22/5/2023]

_ı_ration: 2 weeks
aster: suhaila
:.Muna
rammers:

_1_ent Name	**Story Sequence Number**	**Use Cases (e.g., functionalities)**
allane	006	Users shall be able to start new challenges
_:ge_ Page	007	Users shall be able to see details about the challenge.

_ɔ_ meeting questions:
What has been completed since the last meeting?
_ıe_ goal feature
What are you going to be working on next?
_ı_ the challenge feature
Do you have any issues/impediments?
_ɔ_

3.Test Cases

3.1 Create challenge

Test Case Id: **[**Muafer – Create Challenge**]**

Test Case No.	Test Case Description	Expected Results	Outcome (Pass / Fail / Other (Comments))
TC001	The user tries to write in the text field after the challenge ends	The Message' The challenge is complete' will be displayed	Pass
TC002	The user tries to enter character in the "المبلغ " text field	The Message' Please Enter digits ' will be displayed	Pass
TC003	The user click the " إضافة " button while the text field is empty	The Message' Please Enter digits ' will be displayed	Pass
TC004	The user clicks "العودة" button	the user will be back in the main page	pass
TC005	The user clicks "إضافة" button	User should be taken to iNew challenge screen.	Pass S

3.2 Add challenge

Test Case Id: [Muafer – add Challenge]

Test Case No.	Test Case Description	Expected Results	Outcome (Pass / Fail / Other (Comments))
TC001	the user click "ابدأ" button without filling the fields	The message "Please fill in all required fields" will be display	Pass
TC002	the user enter String text in "المبلغ" field	the message "Goal must be integer" will be display	Pass
TC003	the user enters one member as both challengers	the message "Please the challengers must be different" will display	Pass
TC004	the user enters the name of the first challenge member without having an account	the message "challenger 1 not found" will be display	pass
TC005	the user enters the name of the second challenge member without having an account	the message "challenger 2 not found" will be display	Pass
TC006	the users clicks "الغاء" button	the user will be taken back to the main page	pass

1. **Github**
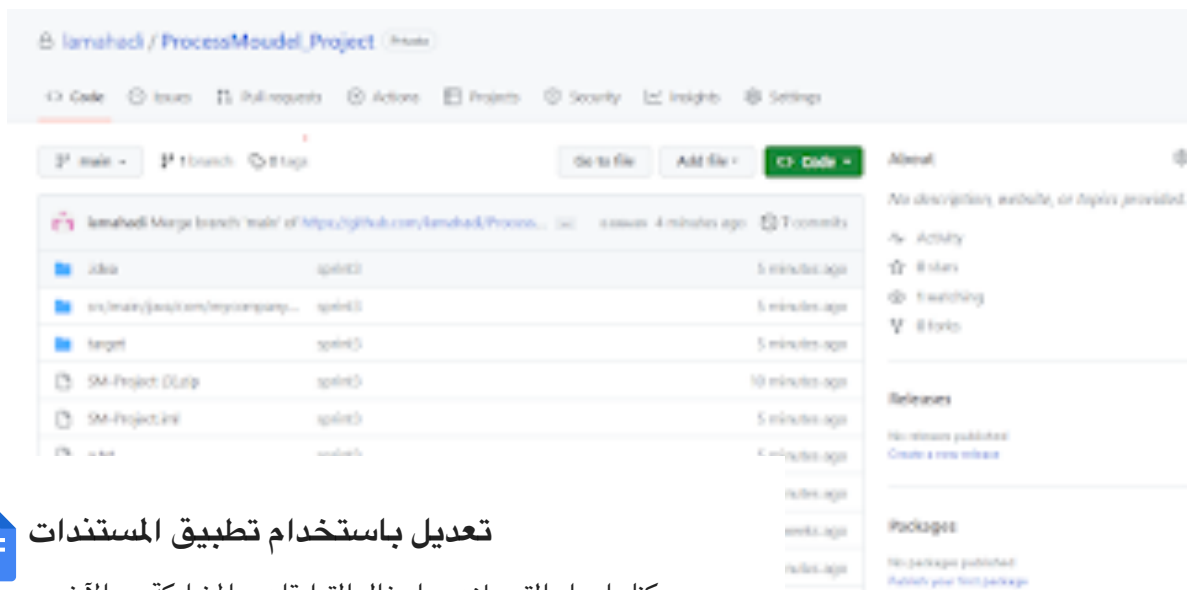
تعديل باستخدام تطبيق المستندات

يمكنك إجراء التعديلات، وإدخال التعليقات، والمشاركة مع الآخرين
للتعديل في آنٍ واحد.

لا، شكرًا   الحصول على التطبيق

oudel_Project.git

2. **Burndown chart**

Average time to complete by section

5

3. **Sprint Backlog**

▼ Sprint 3				
✅ Testing	🧑 Dana Sileh...	Today	High	Done
✅ Requirements	🧑 suhaila hawi...	10 May	Medium	Done
✅ Implementation	🧑 2110002@aj...	Today	High	Done
✅ Design and analysis	🧑 Lana alhalbi	10 May	Medium	Done