PROJECT: MEALMATE

Subject: CS691

Computer Science

Project 1

AGENDA

Team members roles and responsibilities	Improvements made from professor feedback	Project description	Team working agreement	Personas	MVP
Technologies	Algorithm	Diagrams	Sprint 1 Recap	Product Backlog	Sprint 3 Backlog
Metrics	Retrospective	Sprint 2	Project Demo	Github link	Live application Demo

TEAM MEMBERS ROLES

Sarath Upadrista

Full Stack Developer and Devops

Archana

Project Manager

Quality Analyst & Tester

Dharavath, Harika

Mobile Application Developer and UI/UX

TEAM MEMBERS ROLES

Pavan

Cloud Engineer and Developer

Avhad, Dipali Vijay

Developer and tester

Kundan Sai Datta Prasad,Gowru

Backend Developer and DevOps

IMPROVEMENTS MADE FROM PROFESSOR'S FEEDBACK

- Post the deliverable 2 presentation, we received feedback from the professor on adding the 'Sprint Burndown Chart', 'Completed/Committed Ratio', 'Team Velocity Chart', and 'Team's Historical Velocity (Average)' slides are included in the presentation as per the checklist. which we did accordingly which can be seen in the further slides.
- we received feedback from the professor to add test cases include User Story IDs to link them with the corresponding stories, indicating which stories the tests belong to.
- we received feedback from the professor to follow the order from the slide checklist present in your checklist workbook.
- we received feedback from the professor to utilizing the user stories syntax by including 'so that' after the functionality. For example, 'As a [user], I want [functionality], so that [benefit from it]'.

PROJECT DESCRIPTION

Project Description	
Project Name:	MealMate
Team Name:	MealMate
Project Description:	Introducing "Meal Mate" – your new kitchen companion! Simplifying meal planning with smart technology. Just snap a pic of your veggies, and we'll handle the rest, suggesting recipes tailored to your ingredients. Say goodbye to cooking stress! **For** customers **who** want to know the recipes using vegetable images, **the** MealMate **is a** mobile app **that** provides recipes suggestions , **unlike** the traditional way where we had to look into the youtube channels or recipe books **our solution** provides the easy way to get the suggested recipes using the available vegetables at the home.
Benefit Outcomes:	• Users can effortlessly discover recipes with Meal Mate by simply snapping a pic of your veggies, eliminating the need for browsing YouTube or recipe books • Users can enjoy convenient access to personalized recipe suggestions based on available vegetables at home with Meal Mate, streamlining your cooking experience.
GitHub Wiki:	https://github.com/upadristasarath/CS691_CapstoneProject_MealMate

TEAM WORKING AGREEMENT

Team Agreement

Participation :

- Attendance at all meetings is essential for effective teamwork.
- Regular absence may negatively impact team performance. Members should notify the team leader in advance if unable to attend and make arrangements to catch up before the next meeting.

Communication :

- Zoom meetings will be held weekly for meaningful discussions, fostering team cohesion. It's encouraged for members to keep their cameras on to enhance trust and transparency.
- For quick queries and urgent matters, a WhatsApp group will facilitate discussions on minute details and doubts.
- Google Docs will serve as the platform for sharing final deliverables, allowing collaborative editing by team members.
- Slack, our designated platform, offers various channels for different aspects of project management, ensuring efficient coordination among team members.

Work Division :

- Responsibilities should be evenly distributed among team members to ensure fairness.
- Completion of assigned tasks before the deadline is crucial to maintain team performance. In case of difficulties, members are encouraged to seek assistance from peers to meet deadlines collectively.

Meetings :

- Weekly virtual meetings on Zoom will be held every Monday and Wednesday, with mandatory attendance unless under exceptional circumstances.
- The team leader will organize and conduct meetings, ensuring all members receive necessary details.
- Meeting minutes will be documented after each session to monitor project progress.
- Active participation in discussions and providing updates on individual progress are expected from all team members.

Team Members:
Sarath Upadrista - SU72648N
Pavan kumar Varkala - PV24664N
Dipali Avhad -DA55674N
Archana Barka - AB96045N
Gowru, Kundan Sai Datta Prasad - kg99457n
Dharavath, Harika - hd34397n

PERSONAS

PERSONA 1

Demographics:

Name: Sarah
Age: 32
Occupation: Marketing Executive

Profile:

Sarah is a busy marketing executive who often struggles with meal planning due to her demanding job. She enjoys cooking but finds it challenging to make time for it amidst her busy schedule.

Interests:

Sarah enjoys experimenting with new recipes and flavors when she has the time. She is interested in maintaining a healthy lifestyle but struggles to find the time to plan and prepare nutritious meals.

Frustration:

Sarah is frustrated by the lack of time she has to plan and prepare meals, often resorting to unhealthy takeout options due to her busy schedule.

Goals:

Sarah's goal is to find a convenient solution for meal planning that fits into her busy lifestyle. She wants a tool that can help her quickly and easily plan nutritious meals using the ingredients she already has at home.

PERSONA 2

Demographics:

Name: Michael
Age: 25
Occupation: Recent College Graduate

Profile:

Michael is a recent college graduate who has just moved into his first apartment. He is eager to learn how to cook but feels overwhelmed by the variety of ingredients available at the grocery store.

Interests:

Michael is interested in learning how to cook simple and nutritious meals that he can enjoy at home. He wants to improve his culinary skills and become more confident in the kitchen.

Frustration:

Michael is frustrated by his lack of experience in the kitchen and feels overwhelmed by the prospect of cooking for himself. He often struggles to come up with meal ideas and ends up ordering takeout instead.

Goals:

Michael's goal is to improve his cooking skills and become more confident in the kitchen. He wants a tool that can provide him with easy-to-follow recipes based on the ingredients he has on hand, helping him to experiment with new flavors and techniques.

PERSONA 2

Demographics:

Name: Emily
Age: 35
Occupation: Stay-at-Home Mom

Profile:
Emily is a dedicated stay-at-home mom who prioritizes providing healthy meals for her family. She wants to reduce food waste and find creative ways to incorporate vegetables into her family's diet.

Interests:
Emily is passionate about cooking and enjoys finding new recipes to try. She is interested in nutrition and wants to ensure that her family eats balanced meals that are both healthy and delicious.

Frustration:
Emily is frustrated by the challenge of finding new and exciting recipes that her family will enjoy. She often feels guilty about wasting food and wants to find ways to reduce food waste in her household.

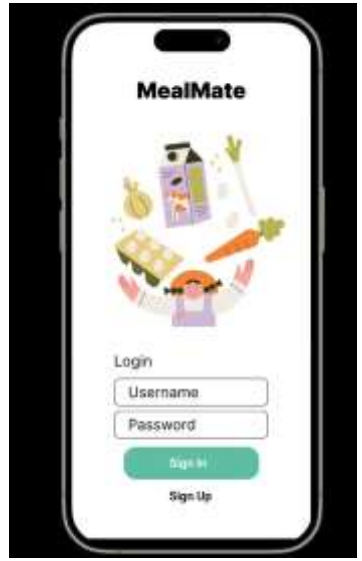
Goals:
Emily's goal is to find a tool that can help her plan healthy and balanced meals for her family while also reducing food waste. She wants an app that can suggest creative recipes based on the ingredients she has in her pantry, making mealtime both nutritious and enjoyable for her family.

MINIMAL VIABLE PRODUCT (MVP)

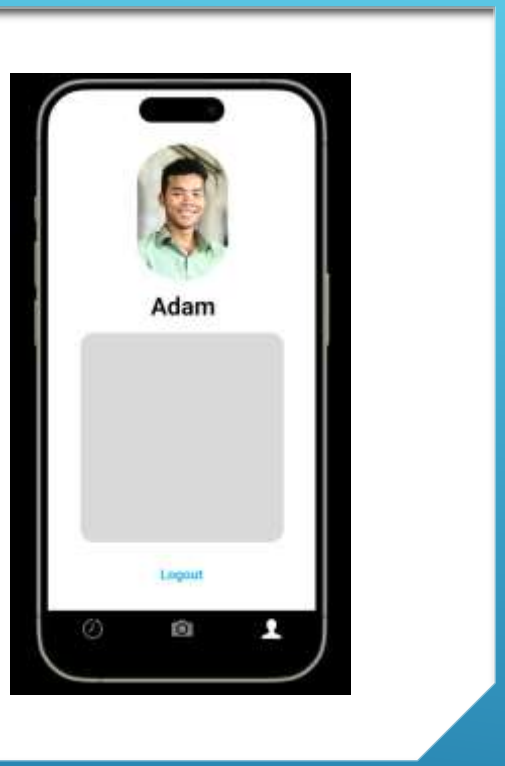
The following are the features that we are covering in our MVP:

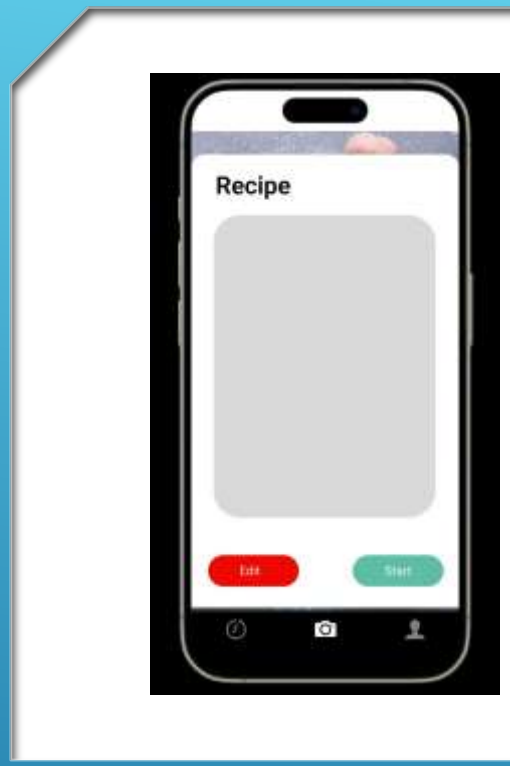
- Login Screen
- Sign in
- Home Page
- Camera screen
- Profile Screen
- History

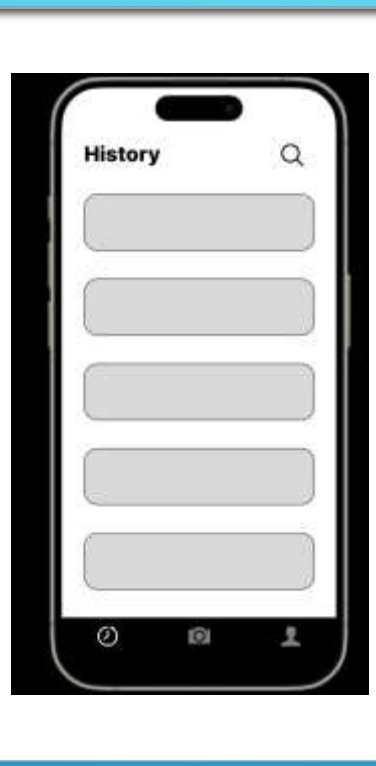
MINIMAL VIABLE PRODUCT (MVP)



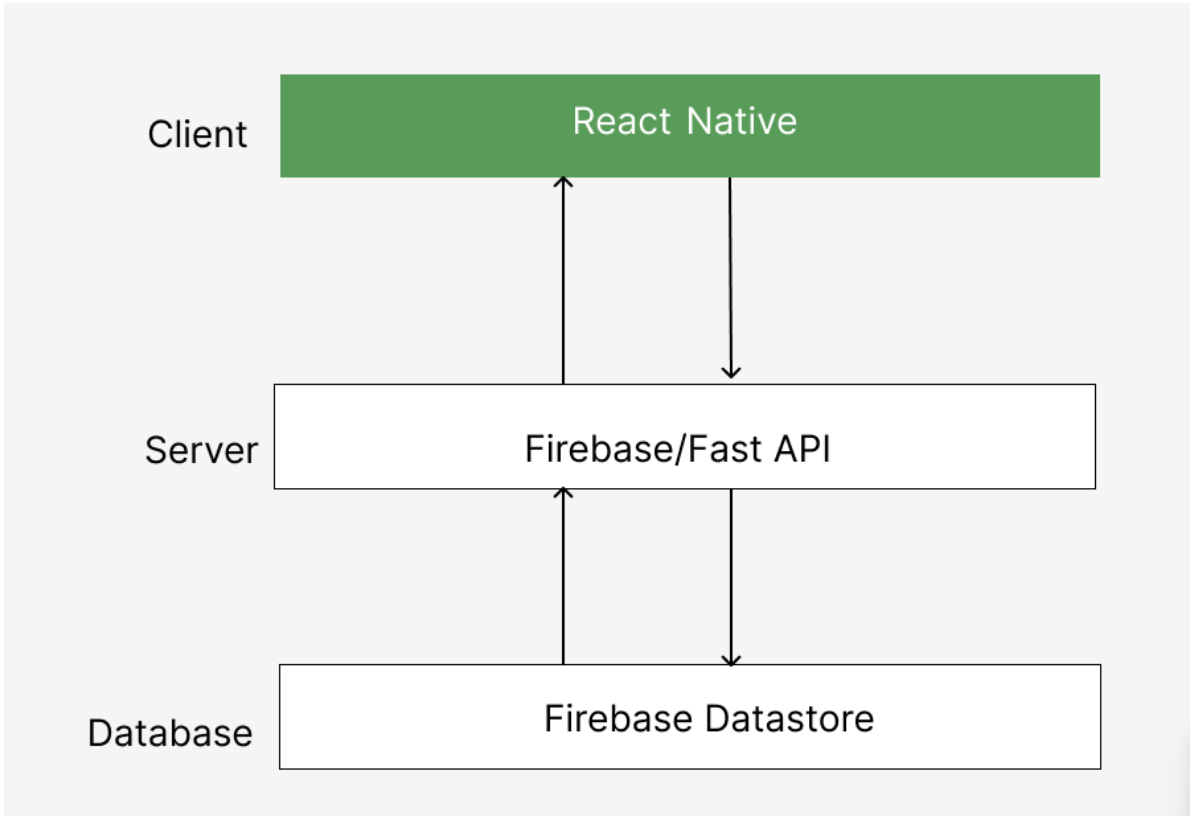
MINIMAL VIABLE PRODUCT (MVP)







MINIMAL VIABLE PRODUCT (MVP)

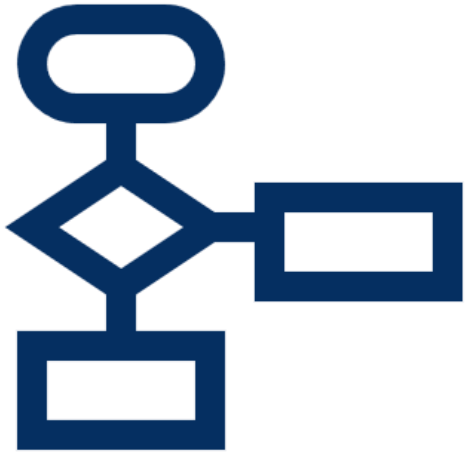


TECHNOLOGIES

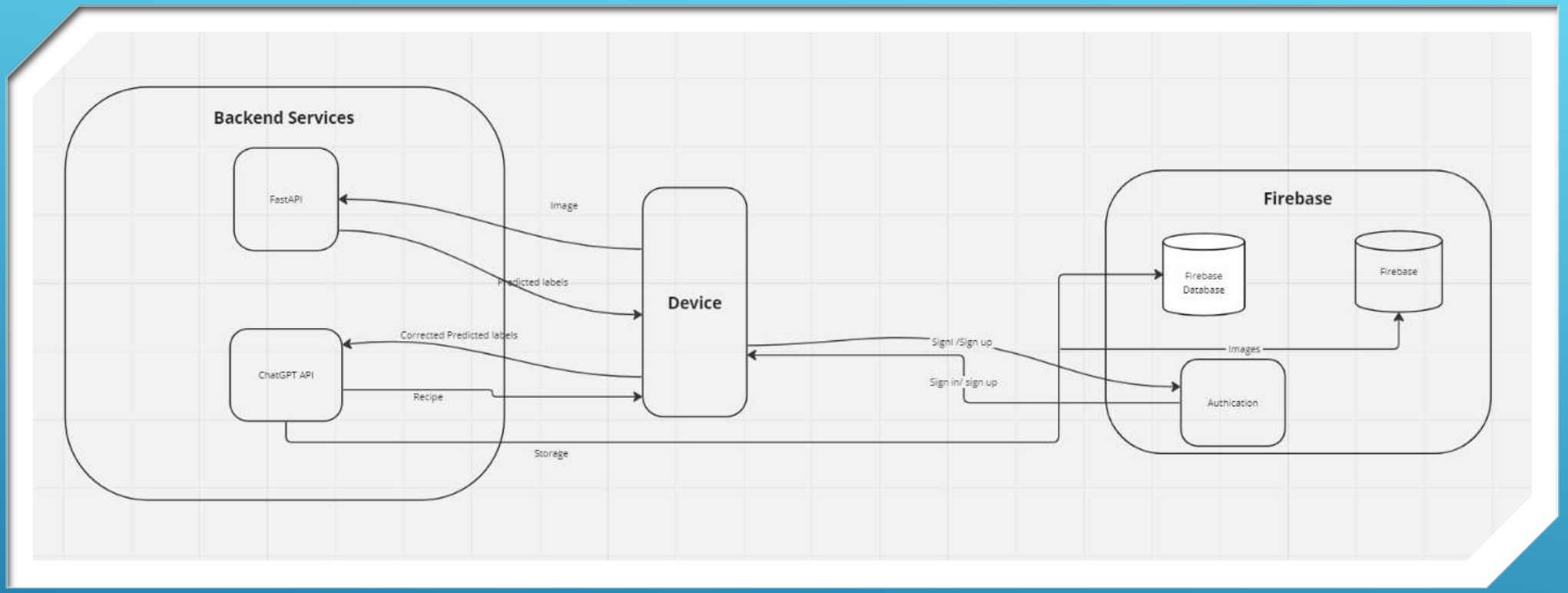
- React Native
- Python
- Firebase
- FastAPI
- Firebase Datastore
- ChatGPT API
- Git/Github
- JIRA

ALGORITHMS

YOLOv7 (You Only Look Once version 7) is the latest advancement in the YOLO series of deep learning models, renowned for their exceptional object detection capabilities. This iteration further enhances the model's accuracy and processing speed, making it exceptionally adept at real-time object detection tasks. YOLOv7 is distinguished by its ability to quickly and accurately identify and classify multiple objects within images or video streams, a feature that has made it indispensable in applications requiring rapid and reliable object detection such as autonomous driving, surveillance systems, and various industrial automation processes. Its improved performance, coupled with its scalability and ease of integration into existing systems, solidifies YOLOv7's position at the forefront of object detection technology.



DIAGRAMS



CONCEPTUAL ARCHITECTURE DIAGRAM

ER DIAGRAM

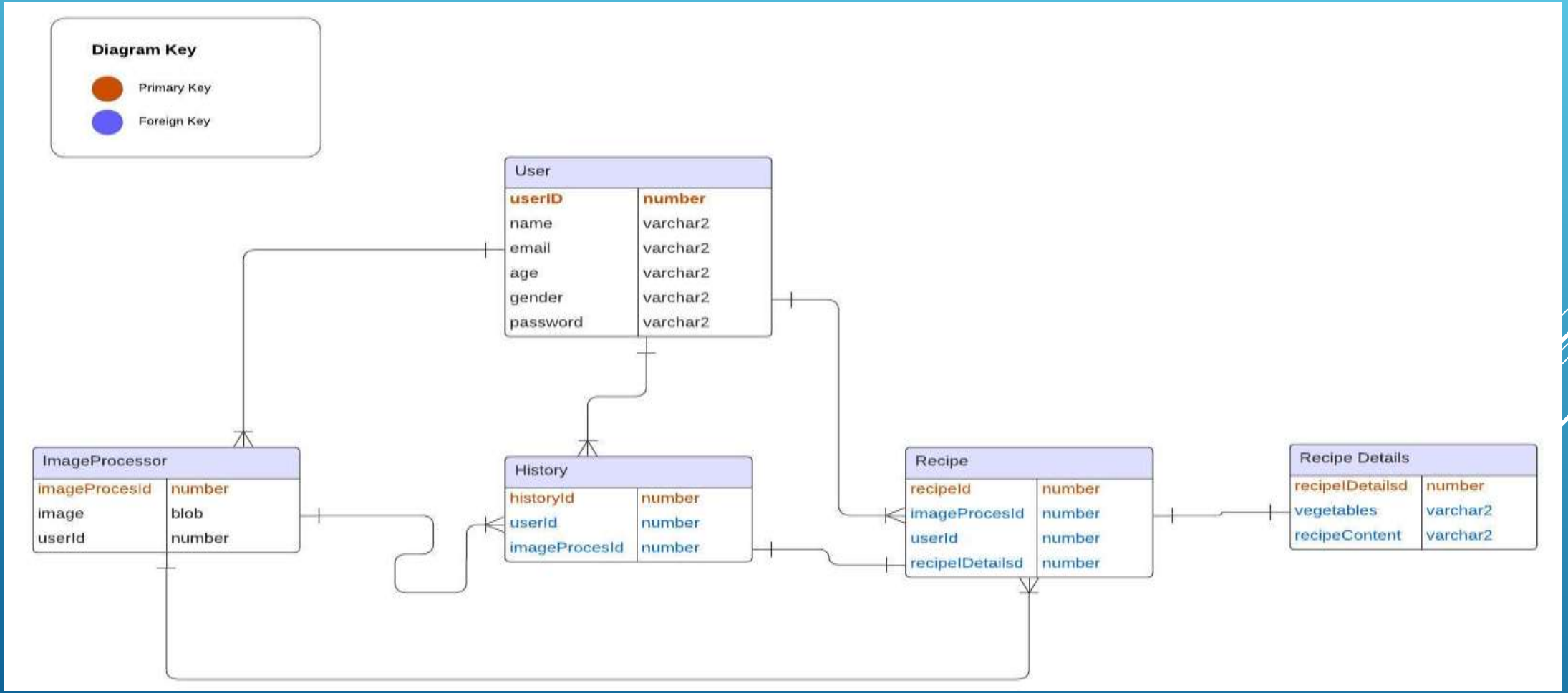
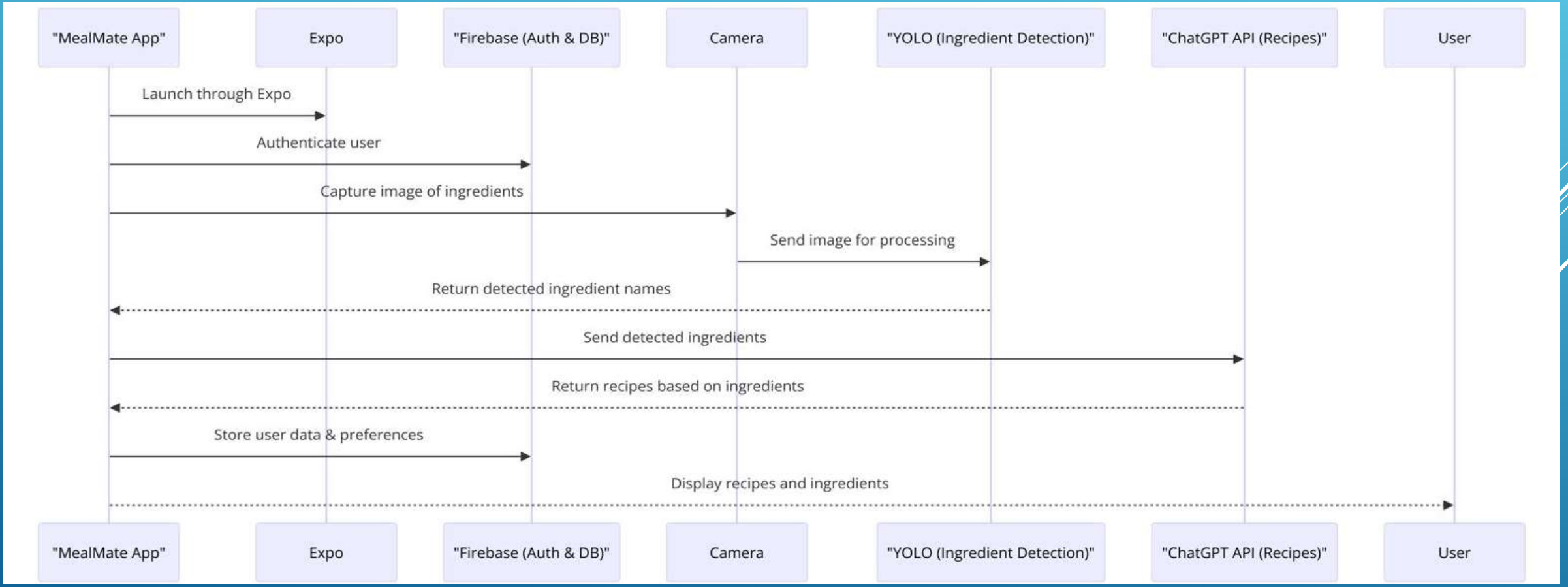
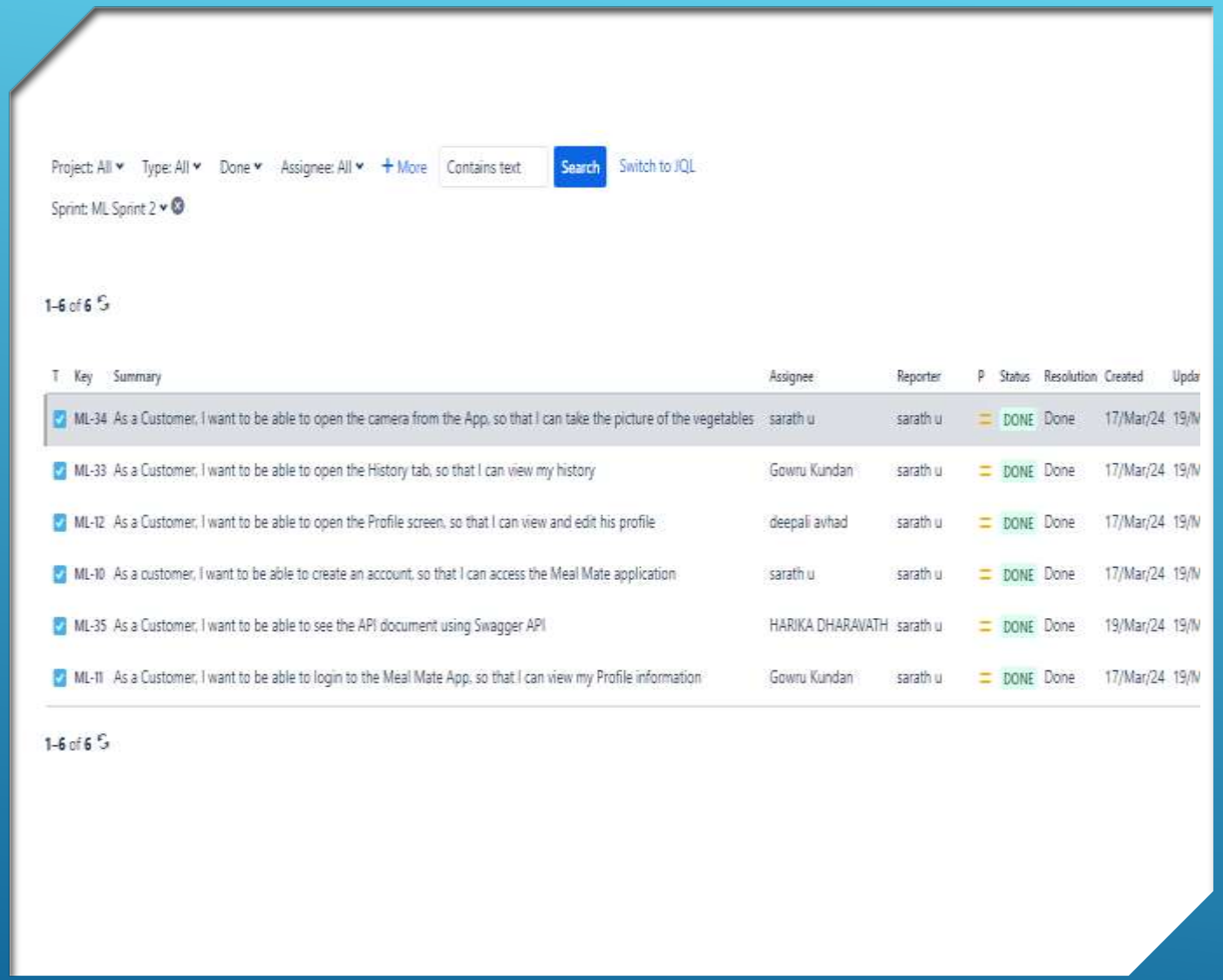


Diagram Key
Primary Key
Foreign Key
User
userID number
name varchar2
email varchar2
age varchar2
gender varchar2
password varchar2
ImageProcessor
imageProcesId number
image blob
userId number
History
historyId number
userId number
imageProcesId number
Recipe
recipeId number
imageProcesId number
userId number
recipelDetailsd number
Recipe Details
recipelDetailsd number
vegetables varchar2
recipeContent varchar2

SEQUENCE ARCHITECTURE DIAGRAM





SPRINT 1 RECAP

- Login Screen
- Camera Screen
- Profile Screen
- History Screen

2:41

MealMate

Scan and get recipe

Username

Password

Log in

2:41

Username: Admin

Logout

History Camera Profile

2:41

History Screen

History Camera Profile

PRODUCT BACKLOG

T	Key	Summary	Assignee	Reporter	P	Status	Resolution	Created ↓	Updated	Due	Story Points	Story point estimate	
☑	ML-52	Prepare for scaling the application to handle increased user traffic	deepali avhad	sarath u	=	IN PROGRESS	*Unresolved*	19/Mar/24	19/Mar/24			8	•••
☑	ML-51	Plan deployment strategies for multiple platforms (iOS, Android).	Archana Barka	sarath u	=	IN PROGRESS	*Unresolved*	19/Mar/24	19/Mar/24			8	
☑	ML-50	Conduct usability testing and incorporate feedback for improvements	*Unassigned*	sarath u	=	TO DO	*Unresolved*	19/Mar/24	19/Mar/24				•••
☑	ML-49	Address any reported bugs or issues	*Unassigned*	sarath u	=	TO DO	*Unresolved*	19/Mar/24	19/Mar/24				
☑	ML-48	Address any reported bugs or issues	*Unassigned*	sarath u	=	TO DO	*Unresolved*	19/Mar/24	19/Mar/24				
☑	ML-47	Optimize app performance for smoother user experience	*Unassigned*	sarath u	=	TO DO	*Unresolved*	19/Mar/24	19/Mar/24				
☑	ML-46	Implement additional security measures such as encryption for user data	*Unassigned*	sarath u	=	TO DO	*Unresolved*	19/Mar/24	19/Mar/24				
☑	ML-45	Implement additional security measures such as encryption for user data	*Unassigned*	sarath u	=	TO DO	*Unresolved*	19/Mar/24	19/Mar/24				
☑	ML-44	Develop algorithms to filter and sort recipe results effectively	*Unassigned*	sarath u	=	TO DO	*Unresolved*	19/Mar/24	19/Mar/24				
☑	ML-43	Implement error handling for cases where ingredient detection fails	*Unassigned*	sarath u	=	TO DO	*Unresolved*	19/Mar/24	19/Mar/24				
☑	ML-42	Develop Image Processing model to detect the Vegetables	sarath u	sarath u	=	IN PROGRESS	*Unresolved*	19/Mar/24	19/Mar/24			12	
☑	ML-41	Improve image processing algorithms for ingredient detection	*Unassigned*	sarath u	=	TO DO	*Unresolved*	19/Mar/24	19/Mar/24				
☑	ML-40	Improve image processing algorithms for ingredient detection	*Unassigned*	sarath u	=	TO DO	*Unresolved*	19/Mar/24	19/Mar/24				
☑	ML-39	Enhance UI/UX	*Unassigned*	sarath u	=	TO DO	*Unresolved*	19/Mar/24	19/Mar/24				
☑	ML-38	Perform thorough testing, including functional, integration, and user acceptance testing	*Unassigned*	sarath u	=	TO DO	*Unresolved*	19/Mar/24	19/Mar/24				

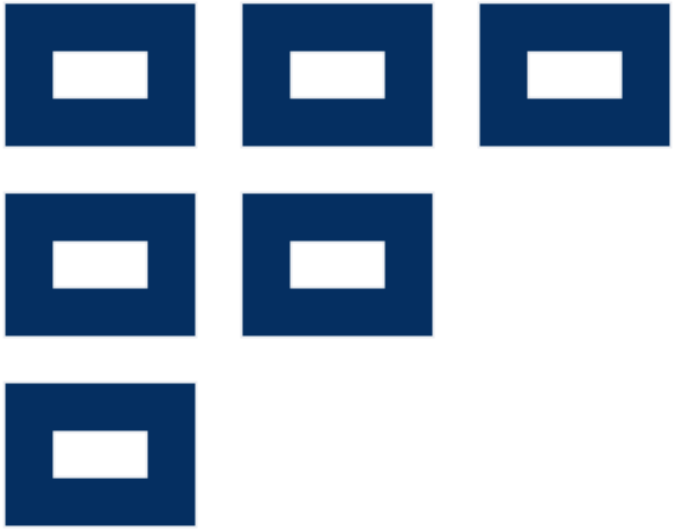
PRODUCT BACKLOG

ML-37	Create user documentation or manuals for using the application	*Unassigned*	sarath u	=	TO DO	*Unresolved*	19/Mar/24	19/Mar/24
ML-29	Complete Demo	*Unassigned*	sarath u	=	TO DO	*Unresolved*	17/Mar/24	17/Mar/24
ML-28	Work on Deliverable 4	*Unassigned*	sarath u	=	TO DO	*Unresolved*	17/Mar/24	17/Mar/24
ML-27	Finish Technical Paper	*Unassigned*	sarath u	=	TO DO	*Unresolved*	17/Mar/24	17/Mar/24
ML-26	Finish Development of Backend	*Unassigned*	sarath u	=	TO DO	*Unresolved*	17/Mar/24	17/Mar/24
ML-25	Add the Validations for all the forms	*Unassigned*	sarath u	=	TO DO	*Unresolved*	17/Mar/24	17/Mar/24
ML-24	Finish Development of Fronend	*Unassigned*	sarath u	=	TO DO	*Unresolved*	17/Mar/24	17/Mar/24

Stories and Acceptance criteria

User Stories And Acceptance Criteria

User Story ID	Summary
ML-10	**As** a customer **I want** to able to create an account **So that** I can get access the Meal Mate Application
	Scenario: Customer wants to use the application by registering "**Given** I'm in a role of customer **When** I open the registration page **Then** the system shows the registration form to create an account
ML-30	**As** a customer **I want** to be able to login to the application **So that** I can see the Home Page
	Scenario: Customer wants to login to the application "**Given** I'm in the role of customer **When** I open the login page **Then** the system shows me to enter username and password And the system shows Login button to sign-in to the application
ML-34	**As** a signed-in customer **I want** to be able to Open the camera from the application **So that** I can take the picture of the vegetables
	Scenario: Customer wants to take the picture of the vegetables to get the recipe suggestions "**Given** I'm in the role of signed-in customer **When** I open the camera module **Then** the system will open the camera to take the picture
ML-12	**As** a signed-in customer **I want** to open the profile screen **So that** I can find all the details of the login customer and update the profile details
	Scenario: Signed-in customer wants to see their profile details "**Given** I'm in the role of signed-in customer **When** I open the Profile module from the application **Then** the system shows the details of the signed-in customer.
ML-33	**As** a signed-in customer **I want** to be able to open the History **So that** I can view my History
	Scenario: Signed-in customer wants to see their suggested recipe history "**Given** I'm in the role of signed-in customer **When** I open the History module to view the history **Then** the system shows the whole history of my previous searches.

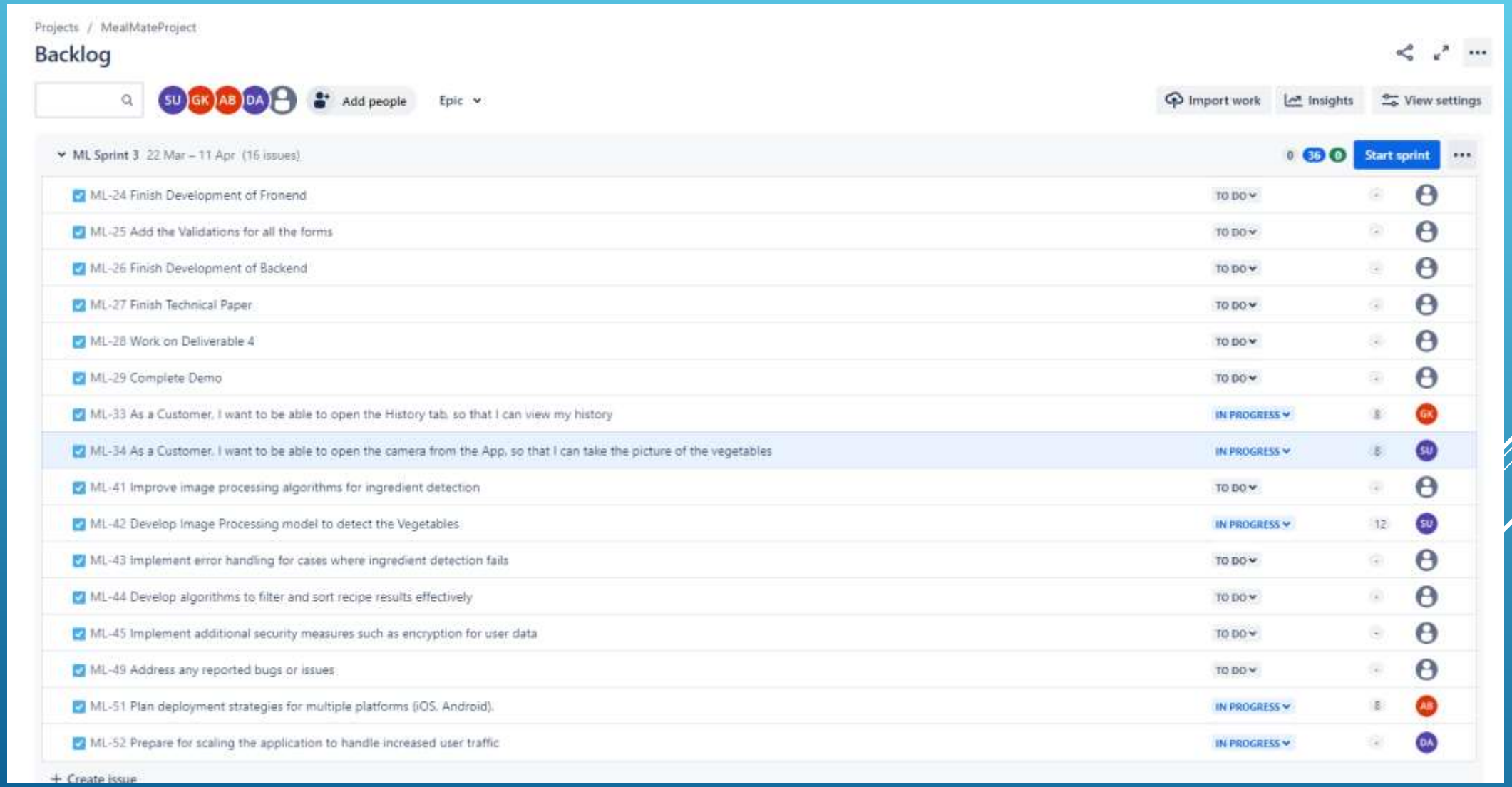


SPRINT 3 BACKLOG

TEST CASES

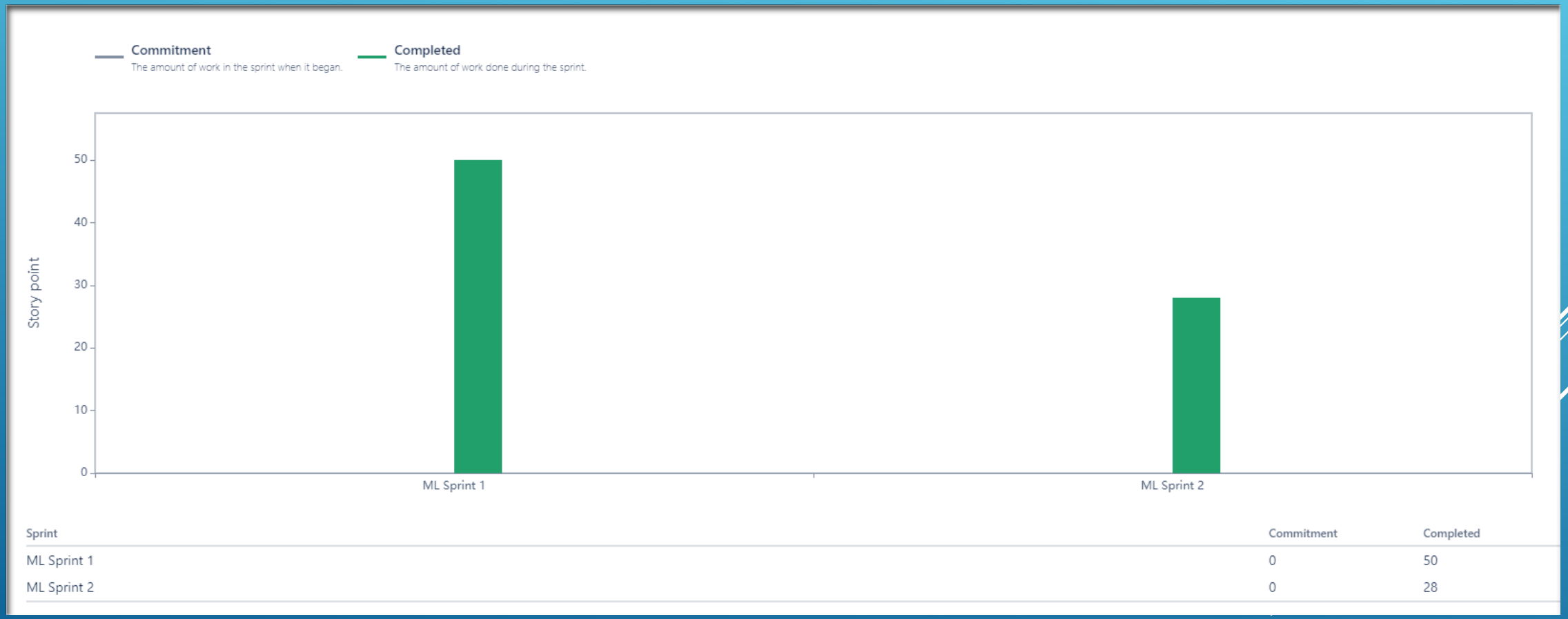
User Story ID	Unit to test	Assumptions	Test data	Steps to be executed	Expected Results
ML-53	Forgot password	Should direct to the email to reset the password		Homepage-> Login -> Forgot Password	Password Reset and directed to login page again
ML-11 & ML-25	Profile	Profile creation should be successful		Homepage-> Login-> Profile	Check all the details filled with valid zip codes and phone numbers.
ML-11 & ML-25	Profile	Show an error with missing fields		Homepage-> Login-> Profile	Check to missing/mandatory fields*
ML-42	Homepage	should display home page with camera icon		Homepage	Check if the categories are correct
ML-44	Recipe Page	Recipe should display the list of suggested vegetables		Homepage ->Recipe	Check if the vegerables are displaying or not
ML-42	Homepage	Customers should be able to access the homepage		Homepage	Once directed with url, you will be first redirected to homepage.
ML-44	History	Customer should be able to search for images listed		Homepage-> History	History must provide the search box for user to search for desired services.
ML-44	History	History displayed in search field should be relevant to logged in user only		Homepage-> History	Search box on History must display relevant information previously searched by the user.

Sprint 3 Backlogs



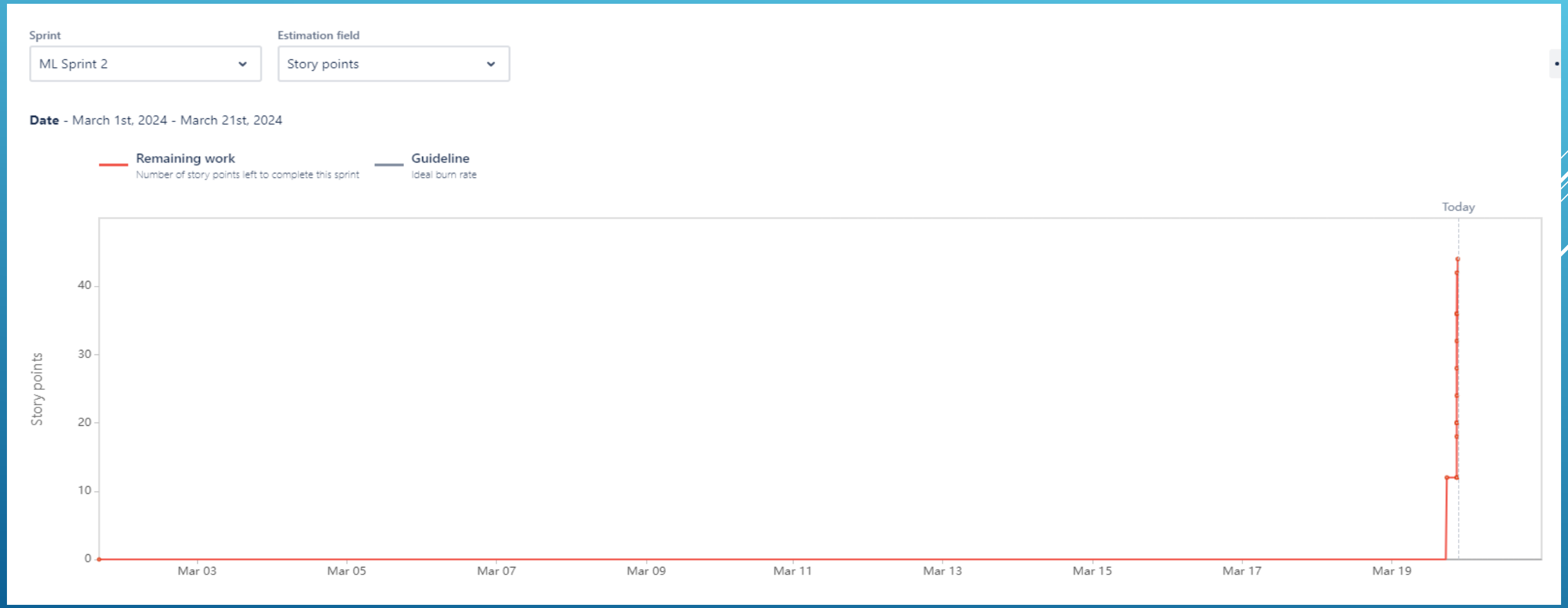
METRICS

TEAM VELOCITY



Sprint	Commitment	Completed
ML Sprint 1	0	50
ML Sprint 2	0	28

BURNDOWN CHART



COMPLETED/COMMITTED RATIO

Committed Story Points = 72
Completed Story Points = 44

Our Completed to Committed Ratio is 61.11%

RETROSPECTIVE

WHAT WENT WELL

- Because of Slack, we are able to communicate well be connected
- Teamwork helped in requirement gathering.
- We have listed down the technologies which will be used. Although we still need to learn the concepts in depth to be able to make a good product.
- Using JIRA has helped us to track the status

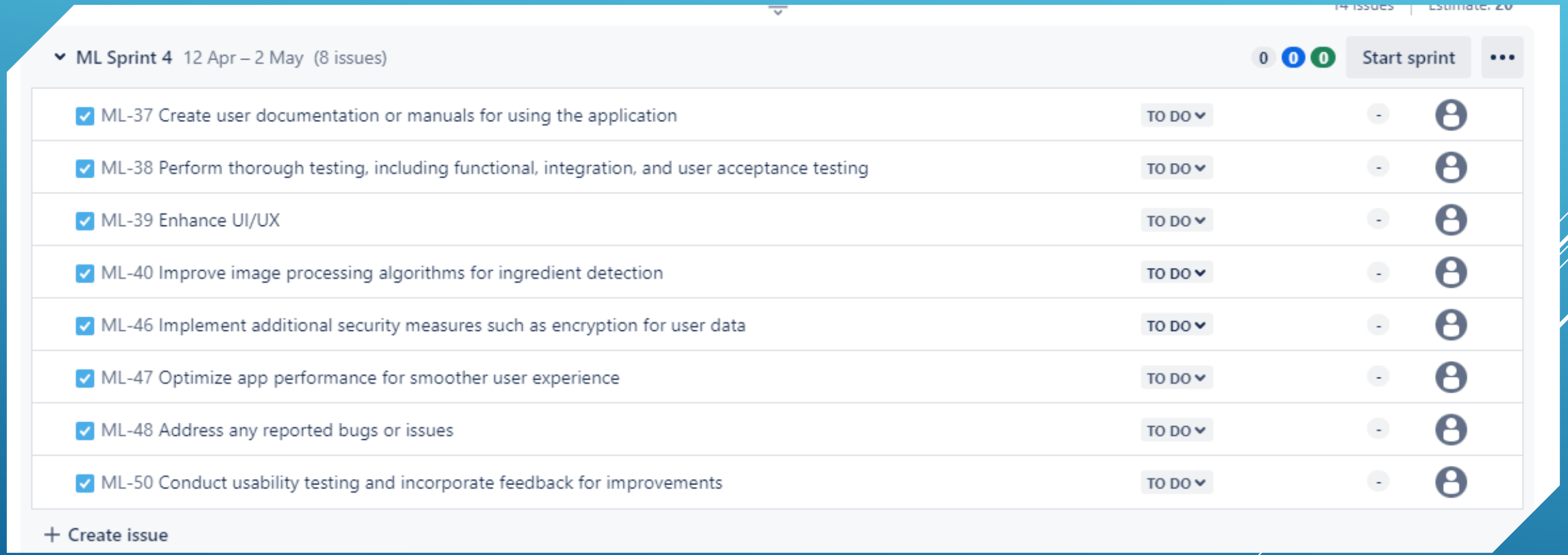
WHAT NEED IMPROVEMENTS

- Meeting schedules have to be planned carefully.
- Team participation requires a slight improvement.
- Regular updating of JIRA tasks should be done by the team

NEXT STEPS

- Proper availability of time needs to be discussed.
- Get a clear idea of deadlines to finish the tasks as per schedule.
- Start working on the activities assigned.

SPRINT 4 TASKS



PROJECT DEMO
SPRINT 2

MealMate

Scan and get recipe

Sign in

Sign up

2:41

MealMate

Scan and get recipe

Username

Password

Log in

Sign Up

Username

Email

Password

Confirm Password

Age

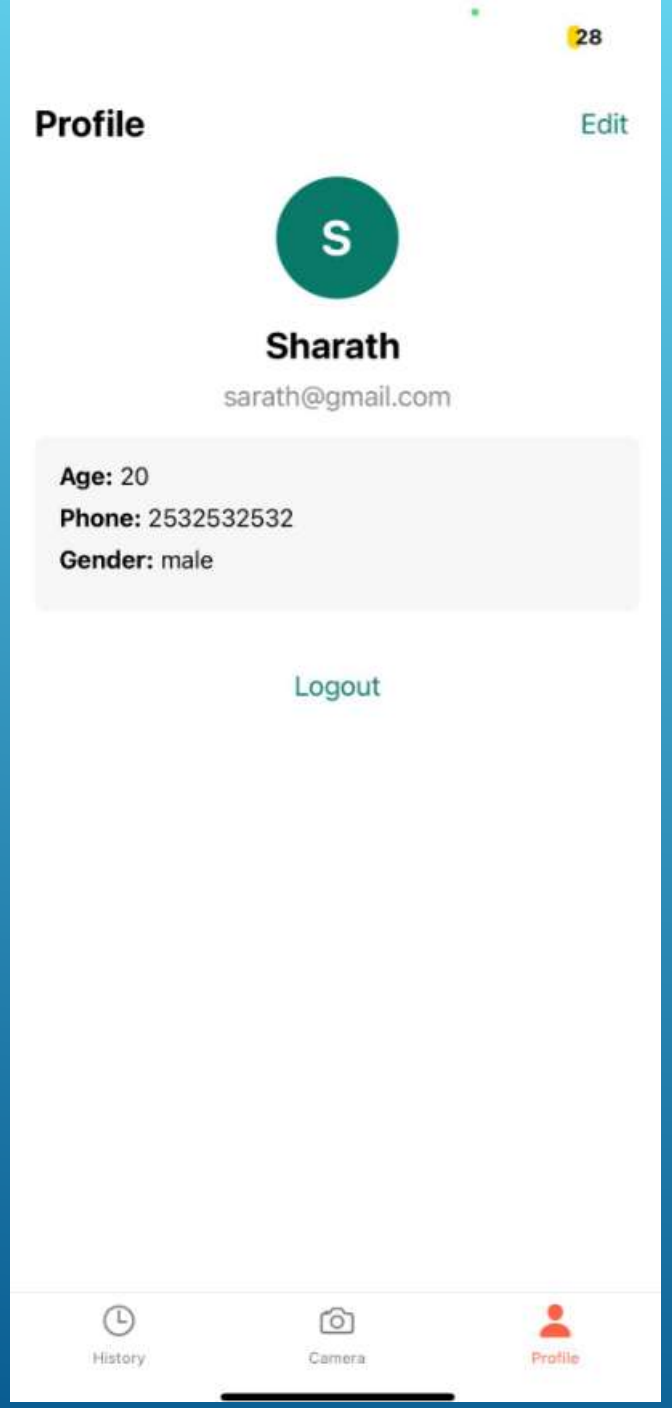
Phone Number

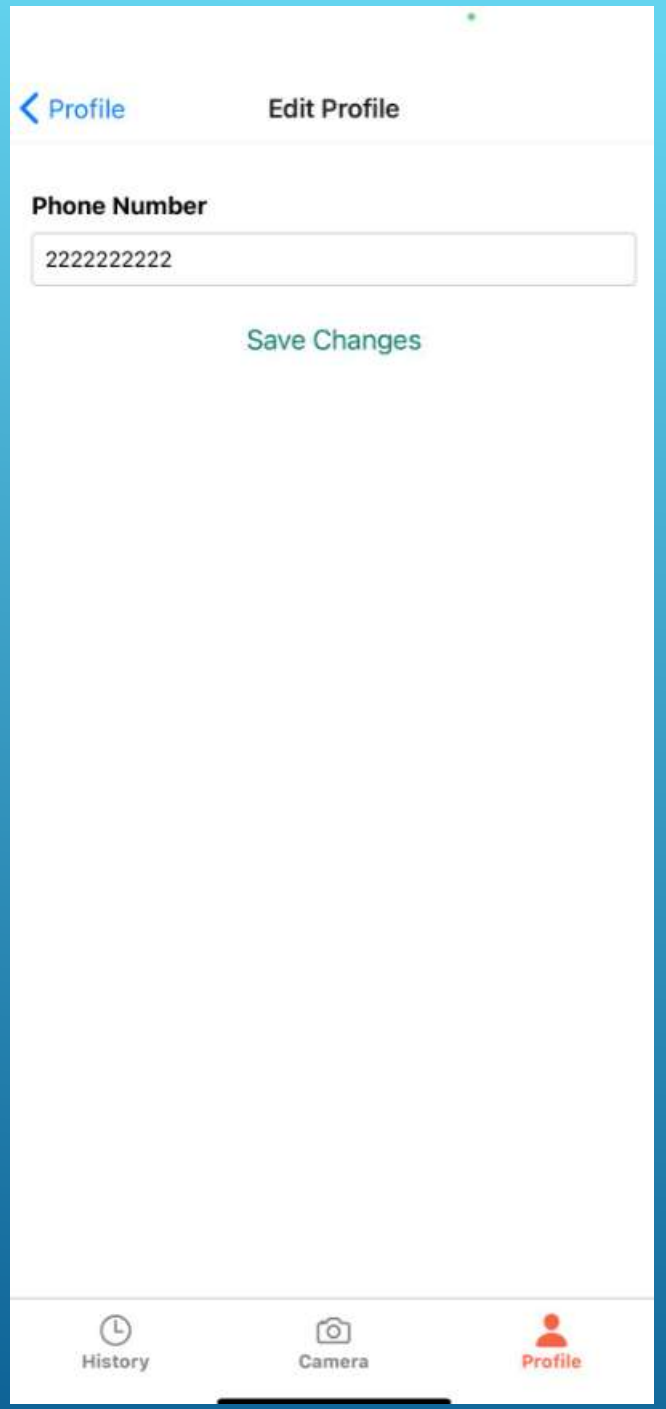
Select Gender

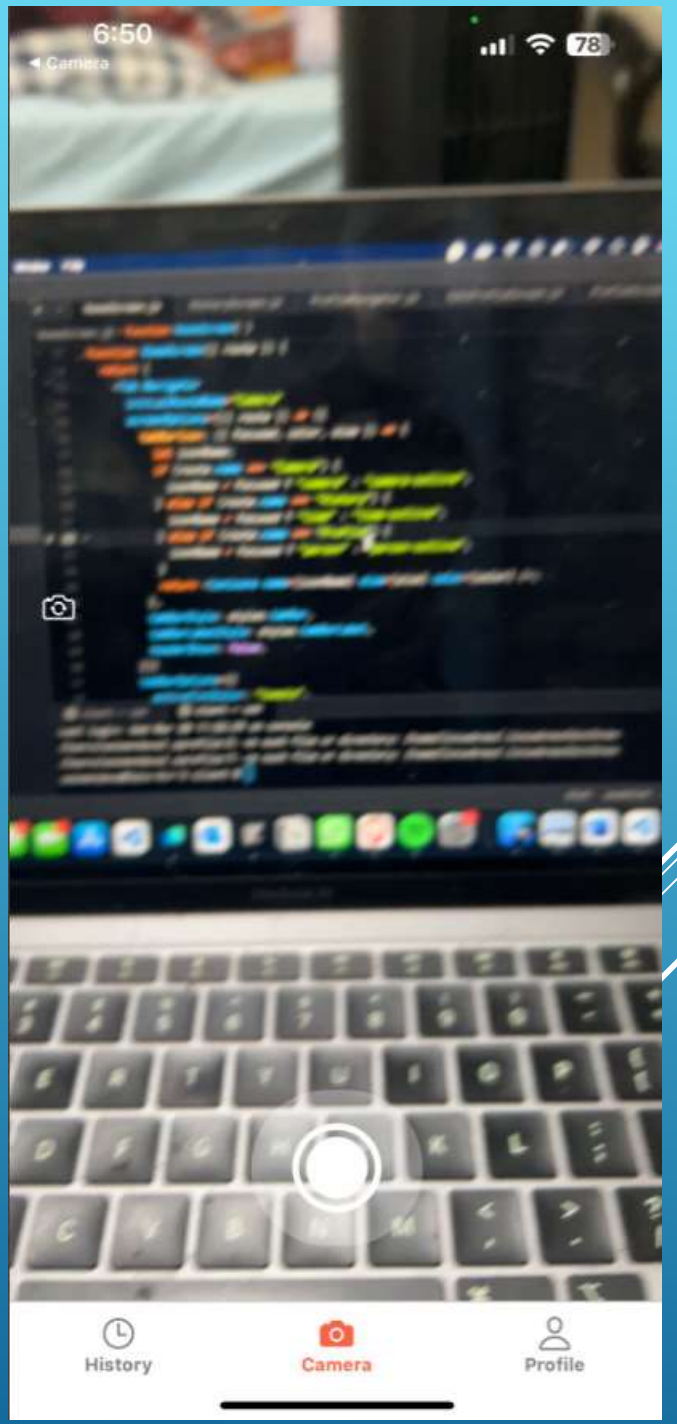
Male

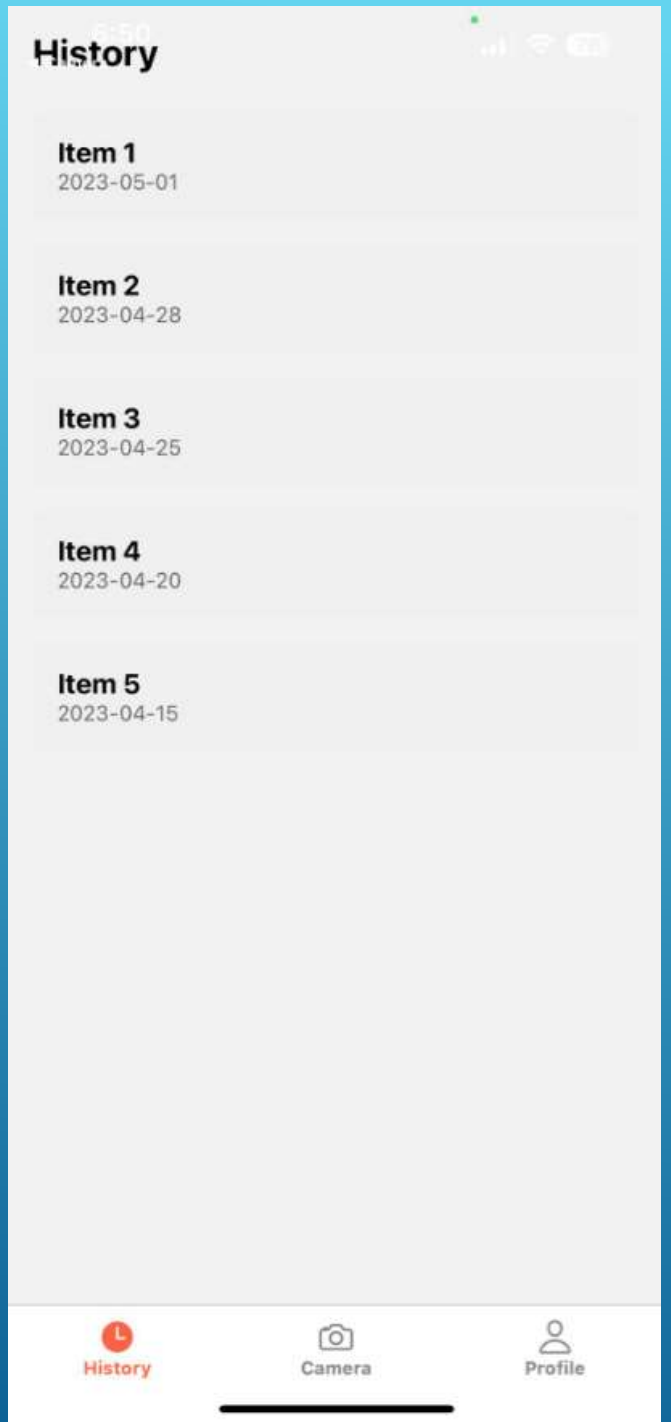
Female

Sign Up


28
Profile
Edit
S
Sharath
sarath@gmail.com
Age: 20
Phone: 2532532532
Gender: male
Logout
History
Camera
Profile


Profile
Edit Profile
Phone Number
2222222222
Save Changes
History
Camera
Profile


6:50
Camera
78
History
Camera
Profile


History
Item 1
2023-05-01
Item 2
2023-04-28
Item 3
2023-04-25
Item 4
2023-04-20
Item 5
2023-04-15
History
Camera
Profile

WIKI PAGE LINK

https://github.com/upadristasarath/CS691_CapstoneProject_MealMate/wiki

THANK YOU