

EXP NO: 1

AZURE DEVOPS ENVIRONMENT SETUP

Aim:

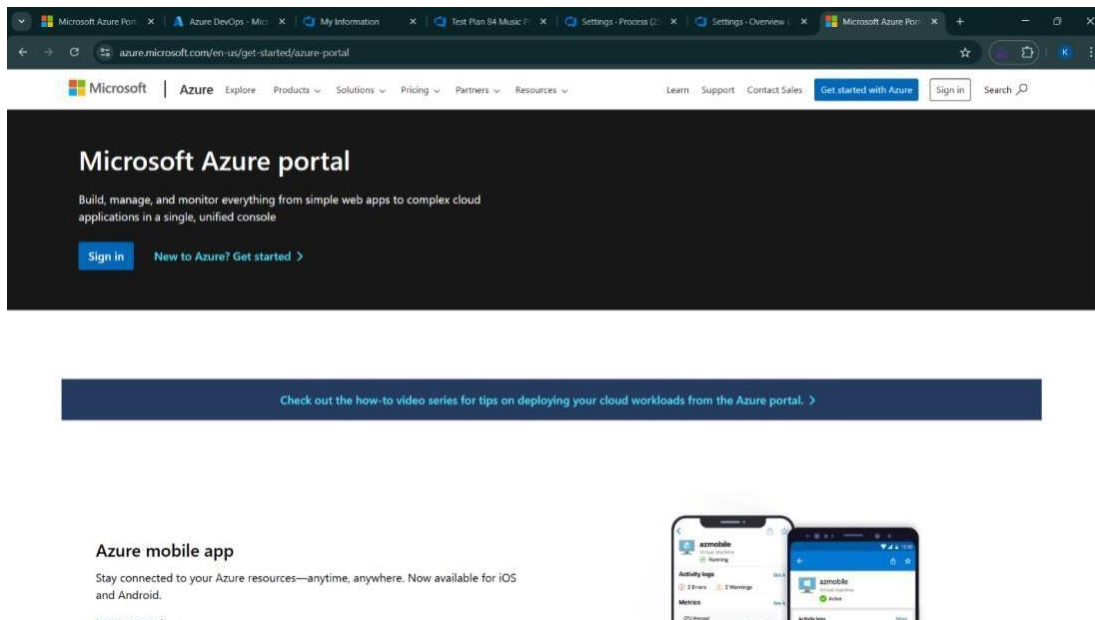
To set up and access the Azure DevOps environment by creating an organization through the Azure portal.

INSTALLATION

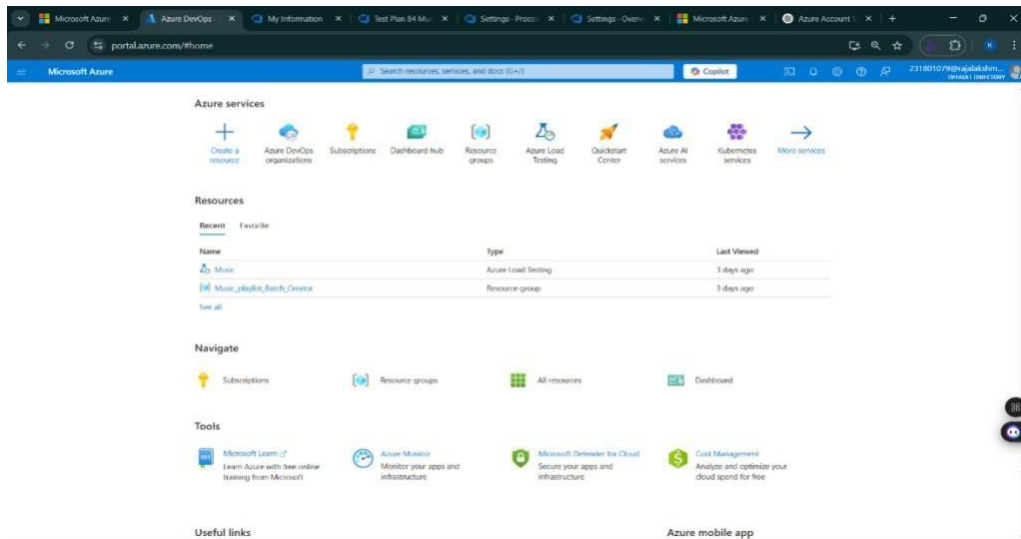
1. Open your web browser and go to the Azure website: <https://azure.microsoft.com/en-us/get-started/azure-portal>.

Sign in using your Microsoft account credentials.

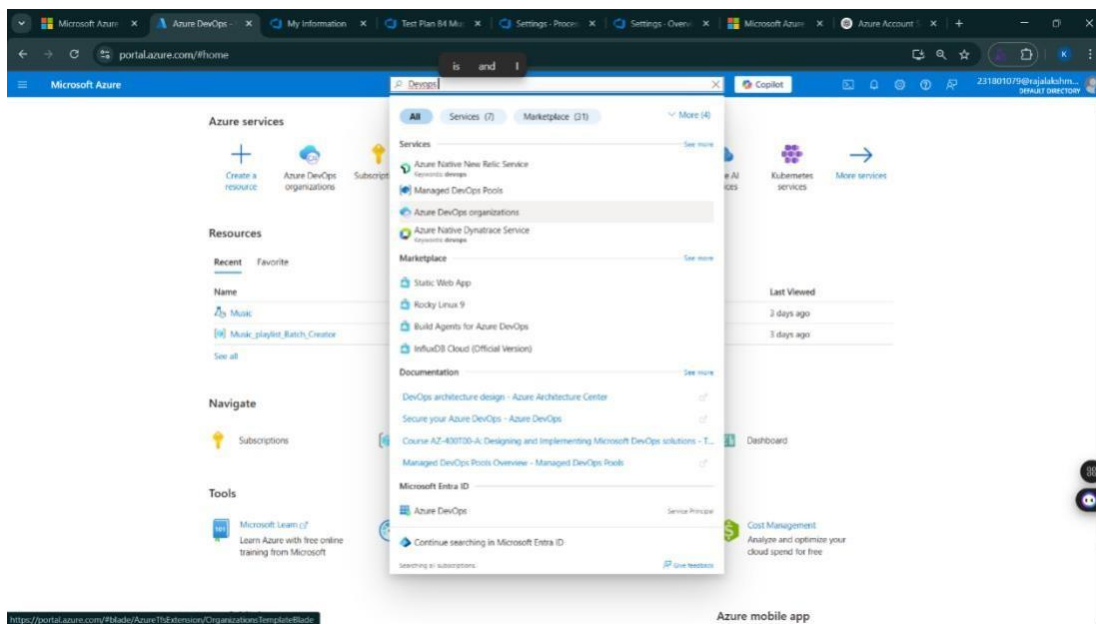
If you don't have a Microsoft account, you can create one here: <https://signup.live.com/?lic=1>



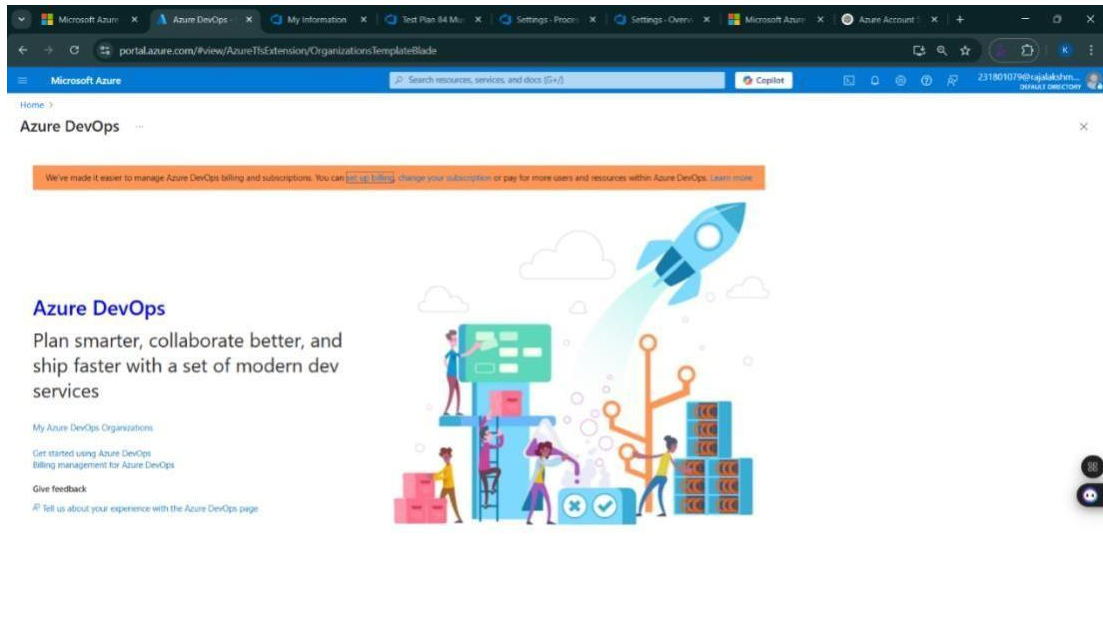
2. Azure home page



3. Open DevOps environment in the Azure platform by typing *Azure DevOps Organizations* in the search bar.



4. Click on the *My Azure DevOps Organization* link and create an organization and you should be taken to the Azure DevOps Organization Home page.



Result:

Successfully accessed the Azure DevOps environment and created a new organization through the Azure portal.

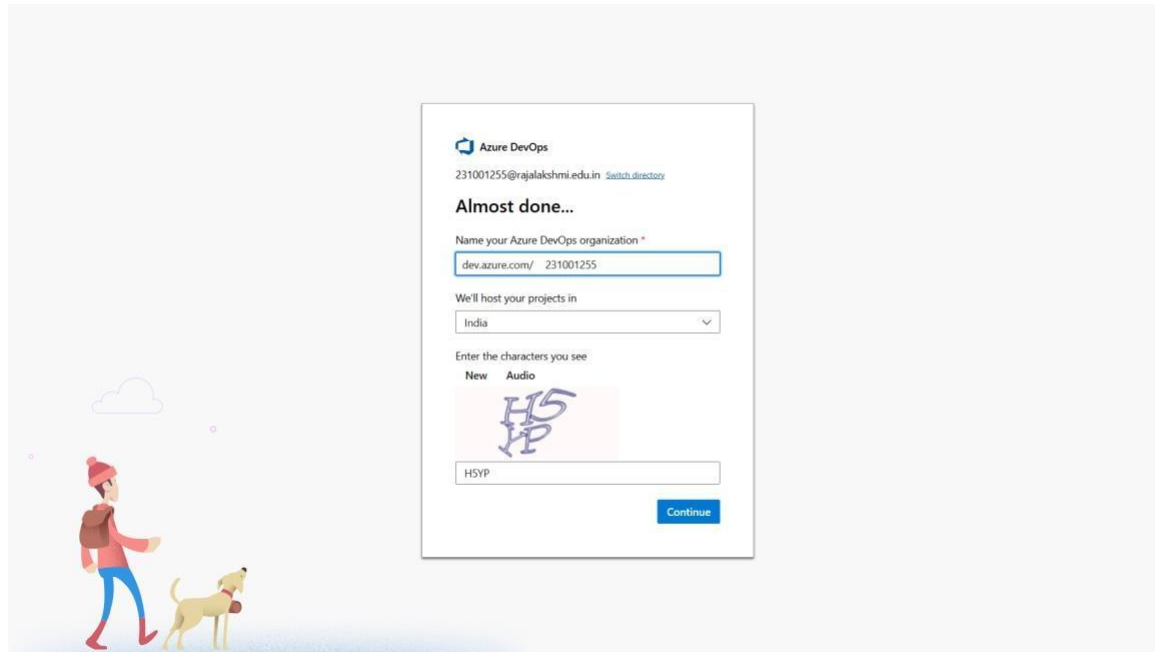
EXP NO: 2

AZURE DEVOPS PROJECT SETUP AND USER STORY MANAGEMENT

Aim:

To set up an Azure DevOps project for efficient collaboration and agile work management.

1. Create An Azure Account



2. Create the First Project in Your Organization

- After the organization is set up, you'll need to create your first **project**. This is where you'll begin to manage code, pipelines, work items, and more.
- On the organization's **Home page**, click on the **New Project** button.
- Enter the project name, description, and visibility options:
 - Name:** Choose a name for the project (e.g., **LMS**).
 - Description:** Optionally, add a description to provide more context about the project.
 - Visibility:** Choose whether you want the project to be **Private** (accessible only to those invited) or **Public** (accessible to anyone).
- Once you've filled out the details, click **Create** to set up your first project.

Create a project to get started

Project name ^{*}

Fitness Application

Description

Visibility

☐
Public
Anyone on the internet can view the project. Certain features like TFVC are not supported.

☒
Private
Only people you give access to will be able to view this project.

Public projects are disabled for your organization. You can turn on public visibility with [organization policies](#).

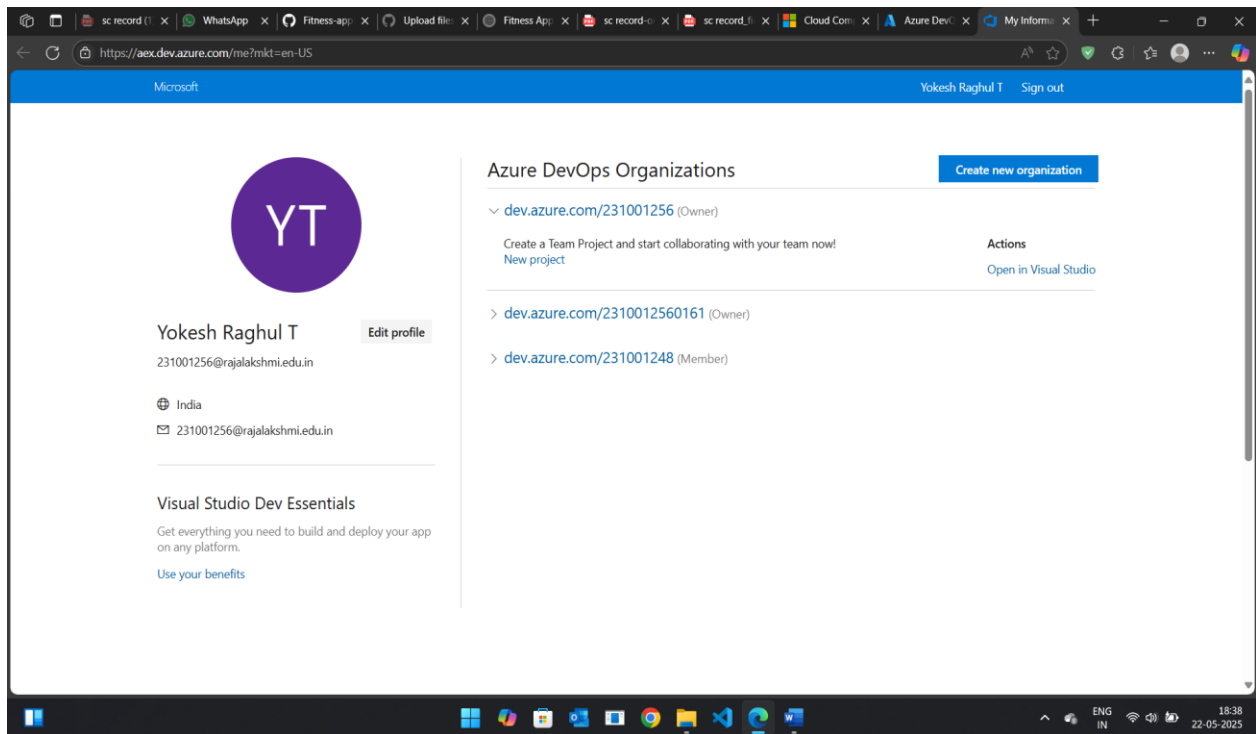
^ Advanced

Version control [?]
Git

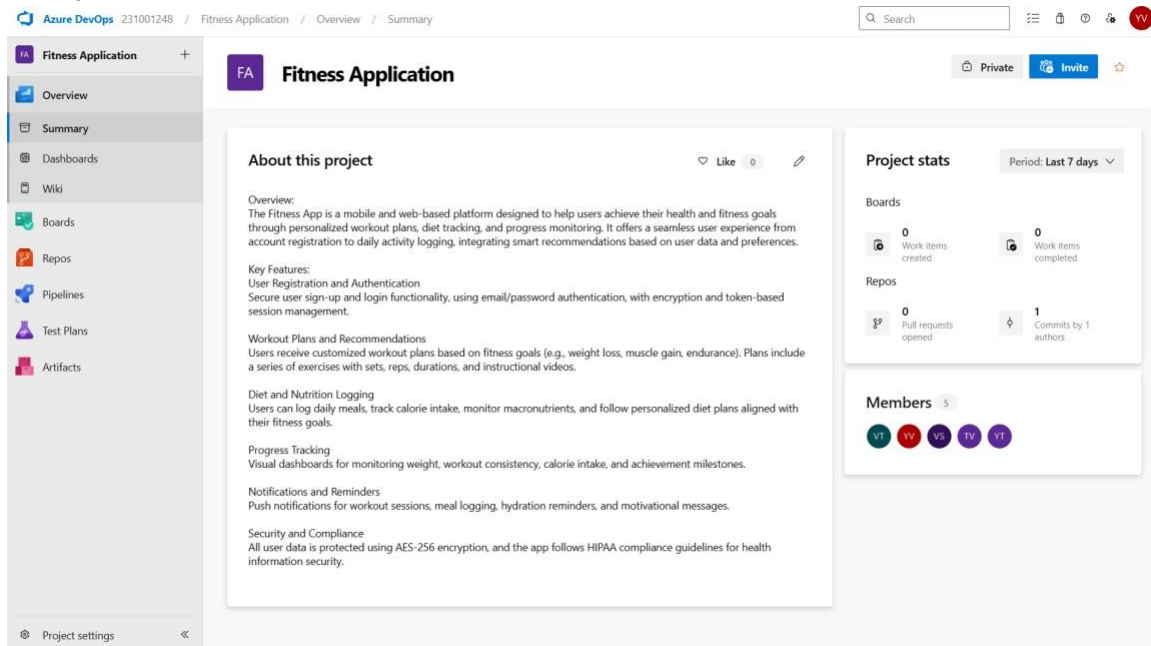
Work item process [?]
Agile

+ Create project

3. Once logged in, ensure you are in the correct organization. If you're part of multiple organizations, you can switch between them from the top left corner (next to your user profile). Click on the Organization name, and you should be taken to the Azure DevOps Organization Home page.



4. Project dashboard



5. To manage user stories:

a. From the **left-hand navigation menu**, click on **Boards**. This will take you to the main **Boards** page, where you can manage work items, backlogs, and sprints.

b. On the **work items** page, you'll see the option to **Add a work item** at the top. Alternatively, you can find a + button or **Add New Work Item** depending on the view you're in. From the **Add a work item** dropdown, select **User Story**. This will open a form to enter details for the new User Story.

Order	Work Item Type	Title	State	Story...	Value Area
1	User Story	Food Logging from Database	New	3	Business
2	User Story	Personalized Workout Plan Generation	New	8	Business
3	User Story	AI-Based Workout Recommendations	New	13	Business
4	User Story	Video Demonstrations for Exercises	New	13	Business
5	User Story	Rest Timer and Workout Tracking	New	3	Business
6	User Story	Workout Plan Sharing	New	5	Business
7	User Story	Integration with Wearable Devices	New	8	Business
8	User Story	Adaptive Workout Plan Based on Availability	New	5	Business
9	User Story	Manual Food Entry	New	3	Business
10	User Story	Water Intake Tracking	New	3	Business
11	User Story	Daily Calorie Goal Setting	New	5	Business
12	User Story	Meal Time Reminders	New	3	Business
13	User Story	Macronutrient Breakdown Visualization	New	13	Business
14	User Story	AI-Based Meal Recommendations	New	8	Business
15	User Story	code	New		Business
16	User Story	Email Verification	New		Business

Microsoft Sign out

YT

Yokesh Raghu T
231001256@rajalakshmi.edu.in
[My Microsoft account](#)
[Switch directory](#)

Sign in with a different account

Result:

Successfully created an Azure DevOps project with user story management and agile workflow setup.

EXP NO: 3

SETTING UP EPICS, FEATURES, AND USER STORIES FOR PROJECT PLANNING

Aim:

To learn about how to create epics, user story, features, backlogs for your assigned project.

Create Epic, Features, User Stories, Task

Azure DevOps 231001248 / Fitness Application / Boards / Work items

Work items

Recently updated | + New Work Item | Open in Queries | Column Options | Import Work Items | Recycle Bin

Filter by keyword | Types | Assigned to | States | Area | Tags

ID	Title	Assigned To	State	Area Path	Tags
16	Video Demonstrations for Exercises	Unassigned	New	Fitness Application	
15	AI-Based Workout Recommendations	Unassigned	New	Fitness Application	
41	Email Notification for Account Changes	Unassigned	New	Fitness Application	
9	Two-Factor Authentication (2FA)	Unassigned	New	Fitness Application	
8	Forgot Password	Unassigned	New	Fitness Application	
7	User Login with Credentials	Unassigned	New	Fitness Application	
6	User Registration with Email	Unassigned	New	Fitness Application	
40	Email Verification	Unassigned	New	Fitness Application	
39	code	Unassigned	New	Fitness Application	
38	Personalization and Smart Adaptation	Unassigned	New	Fitness Application	
36	User Customization and Adaptability	Unassigned	New	Fitness Application	
34	Email-Based User Registration & Account Setup	Unassigned	New	Fitness Application	
5	User Registration and Authentication	Unassigned	New	Fitness Application	
21	Diet and Nutrition Logging	Unassigned	New	Fitness Application	
13	Workout Plans and Recommendations	Unassigned	New	Fitness Application	

https://dev.azure.com/231001248/Fitness%20Application/_workitems/edit/7/

1. Fill in Epics

Azure DevOps 231001248 / Fitness Application / Boards / Work items

Recently updated | Back to Work Items | 28 of 30

5 User Registration and Authentication

No one selected | 0 Comments | Add Tag

Save | Follow | Details | 2 | 0

Updated by Vishal Sivashanmugam: Mar 27

State: New | Area: Fitness Application | Reason: New | Iteration: Fitness Application/Iteration 1

Description: Click to add Description.

Discussion: Add a comment. Use # to link a work item, @ to mention a person, or ! to link a pull request. [Switch to Markdown editor](#)

Planning: Priority: 2, Risk, Effort, Business Value, Time Criticality, Start Date, Target Date

Deployment: To track releases associated with this work item, go to Releases and turn on deployment status reporting for Boards in your pipeline's Options menu. [Learn more about deployment status reporting](#)

Development: Add link: Link an Azure Repos commit, pull request or branch to see the status of your development. You can also create a branch to get started.

Related Work: Add link: Parent: 40 Email Verification, Updated Apr 12, New

2116231001256

CS23432

2.Fill in Features

Fitness Application

Overview

Boards

Work items

Boards

Backlogs

Sprints

Queries

Delivery Plans

Analytics views

Repos

Pipelines

Test Plans

Artifacts

Project settings

Recently updated

Back to Work Items

25 of 30

FEATURE 38

38 Personalization and Smart Adaptation

No one selected

0 Comments

Add Tag

Save

Follow

Details

State: New

Area: Fitness Application

Reason: New

Iteration: Fitness Application\Iteration 1

Description

1. Food Diary & Meal Logging

2. AI-Powered Meal Suggestions

3. Calorie & Macronutrient Tracking

4. Integration with Wearables & Health Apps

5. Water Intake Tracking

6. Meal Planning & Scheduling

7. Food Insights & Analytics

8. Diet Compatibility & Restrictions

9. Community & Social Features

10. AI-Powered Chatbot for Nutrition Guidance

Planning

Priority: 2

Risk

Effort

Business Value

Time Criticality

Start Date

Target Date

Deployment

To track releases associated with this work item, go to Releases and turn on deployment status reporting for Boards in your pipeline's Options menu. Learn more about deployment status reporting

Development

Add link

Link an Azure Repos commit, pull request or branch to see the status of your development. You can also create a branch to get started.

Related Work

Add link

Parent

21 Diet and Nutrition Logging

Updated Mar 24

3.Fill in User Story Details

Fitness Application

Overview

Boards

Work items

Boards

Backlogs

Sprints

Queries

Delivery Plans

Analytics views

Repos

Pipelines

Test Plans

Artifacts

Project settings

Recently updated

Back to Work Items

23 of 30

USER STORY 40

40 Email Verification

No one selected

0 Comments

Add Tag

Save

Follow

Details

State: New

Area: Fitness Application

Reason: New

Iteration: Fitness Application\Iteration 1

Description

As a newly registered user, I want to verify my email address after registration, so that my account is activated and I can begin using the platform.

Acceptance Criteria

1. A verification email with a unique link is sent to the registered email.

2. Clicking the verification link activates the user's account.

Discussion

Add a comment. Use # to link a work item, @ to mention a person, or ! to link a pull request.

switch to Markdown editor

Planning

Story Points

Priority: 2

Risk

Classification

Value area

Business

Deployment

To track releases associated with this work item, go to Releases and turn on deployment status reporting for Boards in your pipeline's Options menu. Learn more about deployment status reporting

Development

Add link

Link an Azure Repos commit, pull request or branch to see the status of your development. You can also create a branch to get started.

Related Work

Add link

Add an existing work item as a parent

Child

11 User Registration and Authentication

Result:

Thus, the creation of epics, features, user story and task has been created successfully.

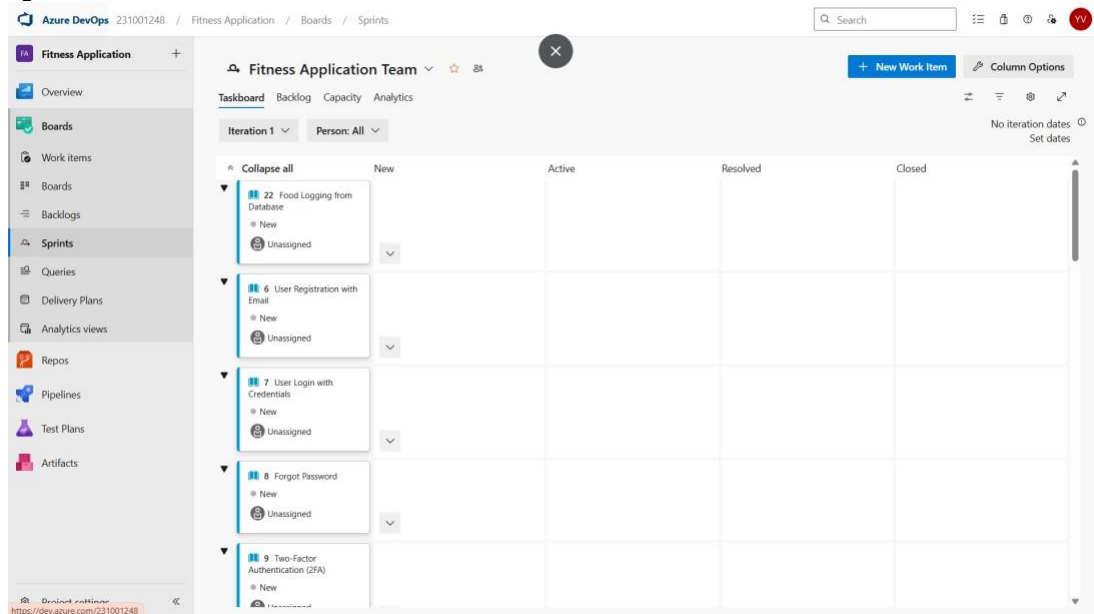
EXP NO: 4

SPRINT PLANNING

Aim:

To assign user story to specific sprint for the Fitness Application Project.

Sprint Planning Sprint 1

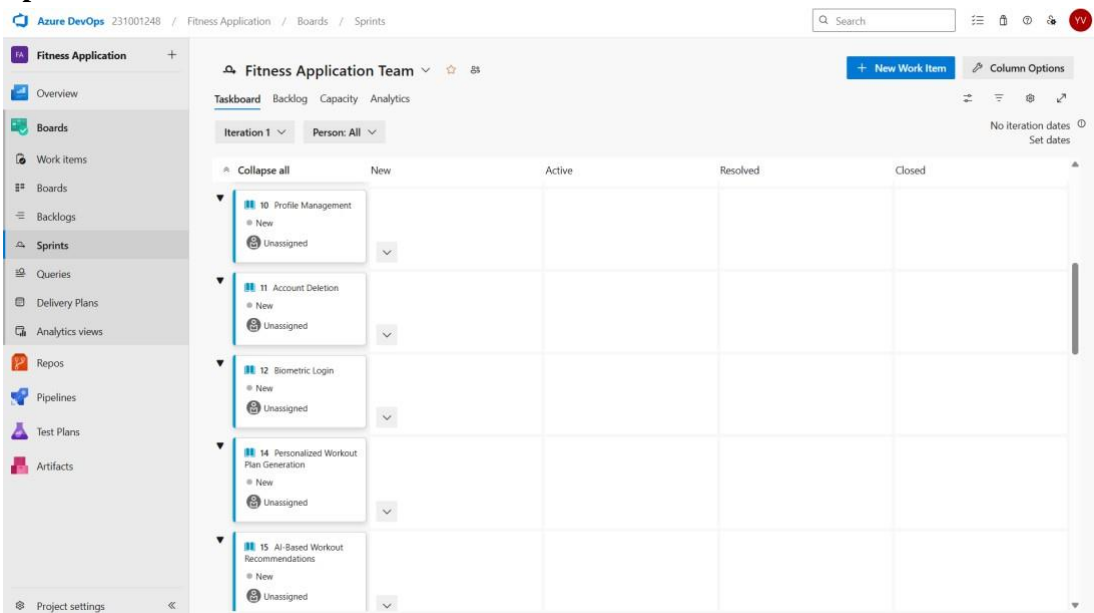


The screenshot shows the Azure DevOps Sprints board for the 'Fitness Application Team'. The board is set to 'Iteration 1' and 'Person: All'. It displays a Kanban board with columns: New, Active, Resolved, and Closed. The 'New' column contains five user stories, all marked as 'New' and 'Unassigned':

- 22 Food Logging from Database
- 6 User Registration with Email
- 7 User Login with Credentials
- 8 Forget Password
- 9 Two-Factor Authentication (2FA)

The left sidebar shows the project navigation menu, and the top bar includes a search bar and various icons.

Sprint 2



The screenshot shows the Azure DevOps Sprints board for the 'Fitness Application Team'. The board is set to 'Iteration 1' and 'Person: All'. It displays a Kanban board with columns: New, Active, Resolved, and Closed. The 'New' column contains five user stories, all marked as 'New' and 'Unassigned':

- 10 Profile Management
- 11 Account Deletion
- 12 Biometric Login
- 14 Personalized Workout Plan Generation
- 15 AI-Based Workout Recommendations

The left sidebar shows the project navigation menu, and the top bar includes a search bar and various icons.

Sprint 3

Azure DevOps 231001248 / Fitness Application / Boards / Sprints

Search

Fitness Application Team

+ New Work Item Column Options

Taskboard Backlog Capacity Analytics

Iteration 1 Person: All

No iteration dates Set dates

Collapse all New Active Resolved Closed

- 16 Video Demonstrations for Exercises
New
Unassigned
- 17 Rest Timer and Workout Tracking
New
Unassigned
- 18 Workout Plan Sharing
New
Unassigned
- 19 Integration with Wearable Devices
New
Unassigned
- 20 Adaptive Workout Plan Based on Availability
New

Sprint 4

Azure DevOps 231001248 / Fitness Application / Boards / Sprints

Search

Fitness Application Team

+ New Work Item Column Options

Taskboard Backlog Capacity Analytics

Iteration 1 Person: All

No iteration dates Set dates

Collapse all New Active Resolved Closed

- 23 Manual Food Entry
New
Unassigned
- 24 Water Intake Tracking
New
Unassigned
- 25 Daily Calorie Goal Setting
New
Unassigned
- 26 Meal Time Reminders
New
Unassigned
- 27 Macronutrient Breakdown Visualization
New
Unassigned

Result:

The Sprints are created for the Fitness Application Project.

EXP NO: 5

POKER ESTIMATION

Aim:

Create Poker Estimation for the user stories - Music Playlist Batch Creator Project.

Poker Estimation

The screenshot shows a Jira User Story card titled "22 Food Logging from Database". The card is in the "New" state and is part of the "Fitness Application" area. It includes a description, acceptance criteria, and a discussion section. The right sidebar contains sections for Planning, Classification, Deployment, Development, and Related Work.

User Story 22: Food Logging from Database

Description: As a user, I want to log my daily meals from a food database, so that I can track my calorie intake easily.

Acceptance Criteria:

1. Users can search for food items from a preloaded database.
2. Users can add multiple food items to a meal.
3. The system automatically calculates calories, protein, carbs, and fat.

Planning:

- Story Points: 3
- Priority: 2
- Risk:

Classification:

- Value area: Business

Deployment:

To track releases associated with this work item, go to [Releases](#) and turn on deployment status reporting for Boards in your pipeline's Options menu. [Learn more about deployment status reporting](#)

Development:

Add link

Link an Azure Repos [commit](#), [pull request](#) or [branch](#) to see the status of your development. You can also [create a branch](#) to get started.

Related Work:

Add link

Parent

38 Personalization and Smart Adaptation
Updated Mar 27 @ New

Result:

The Estimation/Story Points is created for the project using Poker Estimation.

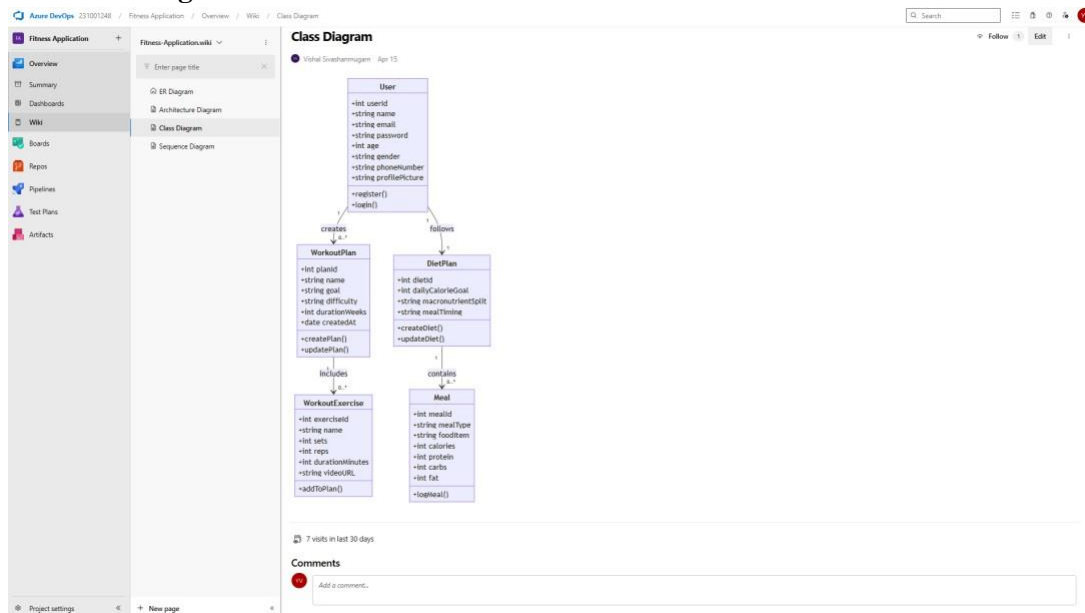
EXP NO: 6

DESIGNING CLASS AND SEQUENCE DIAGRAMS FOR PROJECT ARCHITECTURE

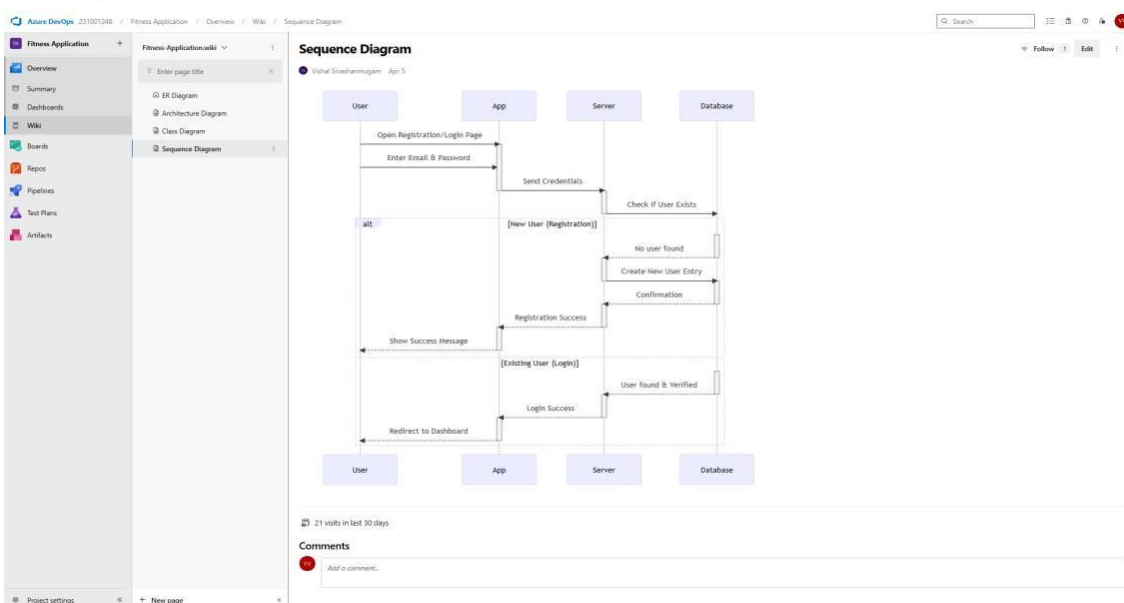
Aim:

To Design a Class Diagram and Sequence Diagram for the given Project.

6A. Class Diagram



6B. Sequence Diagram



Result:

The Class Diagram and Sequence Diagram is designed Successfully for the Fitness Application.

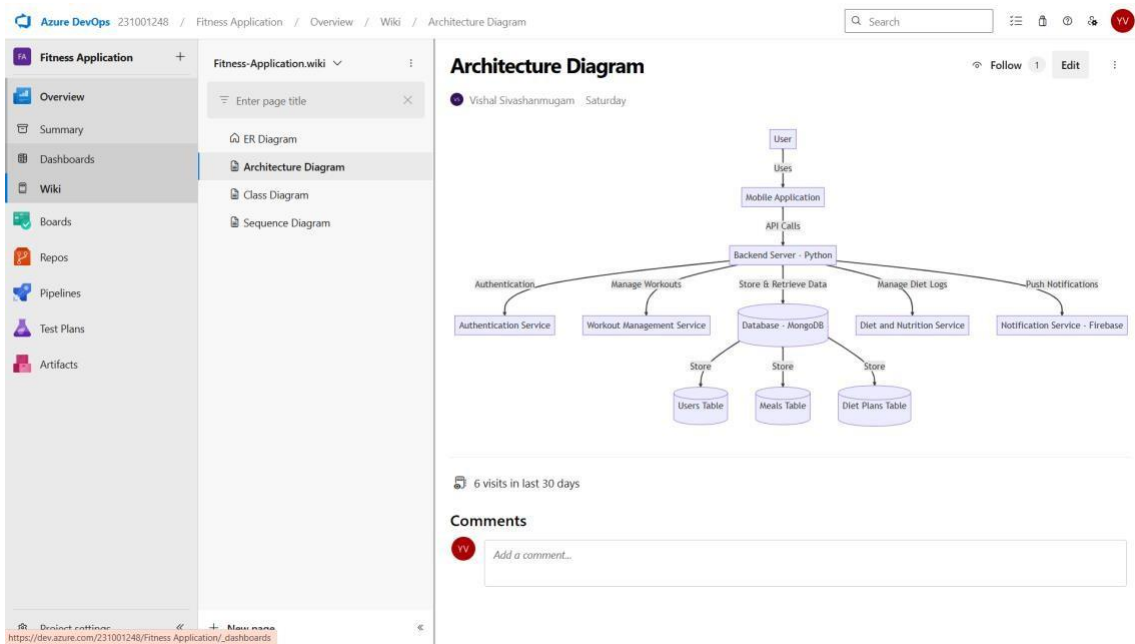
EXP NO: 7

DESIGNING ARCHITECTURAL AND ER DIAGRAMS FOR PROJECT STRUCTURE

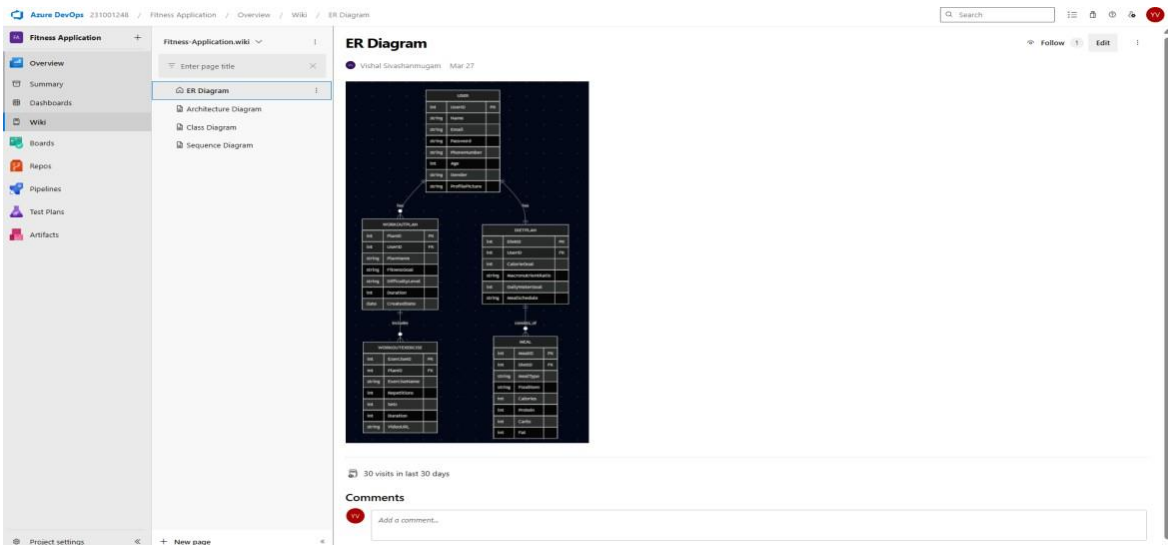
Aim:

To Design an Architectural Diagram and ER Diagram for the given Project.

7A. Architectural Diagram



7B.ER Diagram



Result:

The Architecture Diagram and ER Diagram is designed Successfully for the Fitness Application.

EXP NO: 8

TESTING – TEST PLANS AND TEST CASES

Aim:

Test Plans and Test Case and write two test cases for at least five user stories showcasing the happy path and error scenarios in azure DevOps platform.

Test Planning and Test Case

Test Case Design Procedure

1. Identify Core Features

- o Include modules like Signup/Login, Workout Tracking, and Goal Setting.
- o Cover health data monitoring, progress reports, and recommendations.

2. Define User Actions

- o Simulate real user behaviour (e.g., logging in, starting a workout).
- o Ensure actions align with functional and UI expectations.

3. Happy Path Testing

- o Validate normal workflows like successful login or workout completion.
- o Confirm system responds correctly to expected inputs.

4. Error Path Testing

- o Test invalid scenarios like incorrect login or missing health data.
- o Validate proper error messages and system stability.

5. Step-wise Detailing

- o Break test cases into clear action-result pairs.
- o Make each step easy to automate and verify.

6. Clear Naming & IDs

- o Use readable, unique IDs (e.g., TC01 – Successful Goal Set).
- o Helps in mapping tests to user stories and debugging.

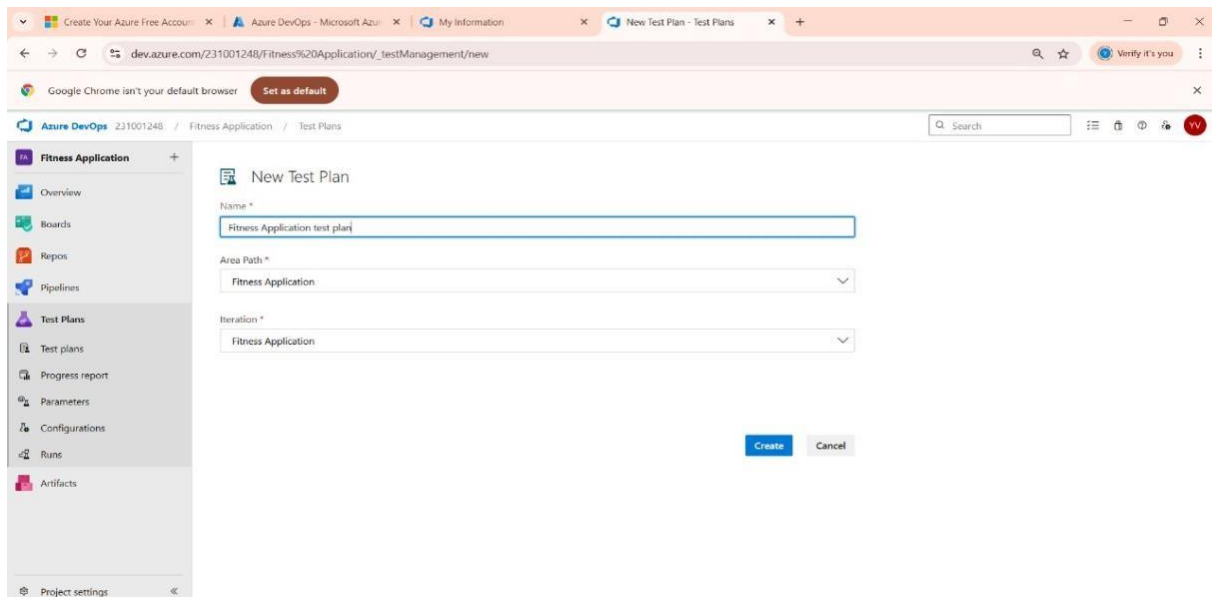
7. Organize Test Suites

- o Group by modules: Login, Workouts, Goals, Reports, etc.
- o Improves structure and test execution flow in Azure DevOps.

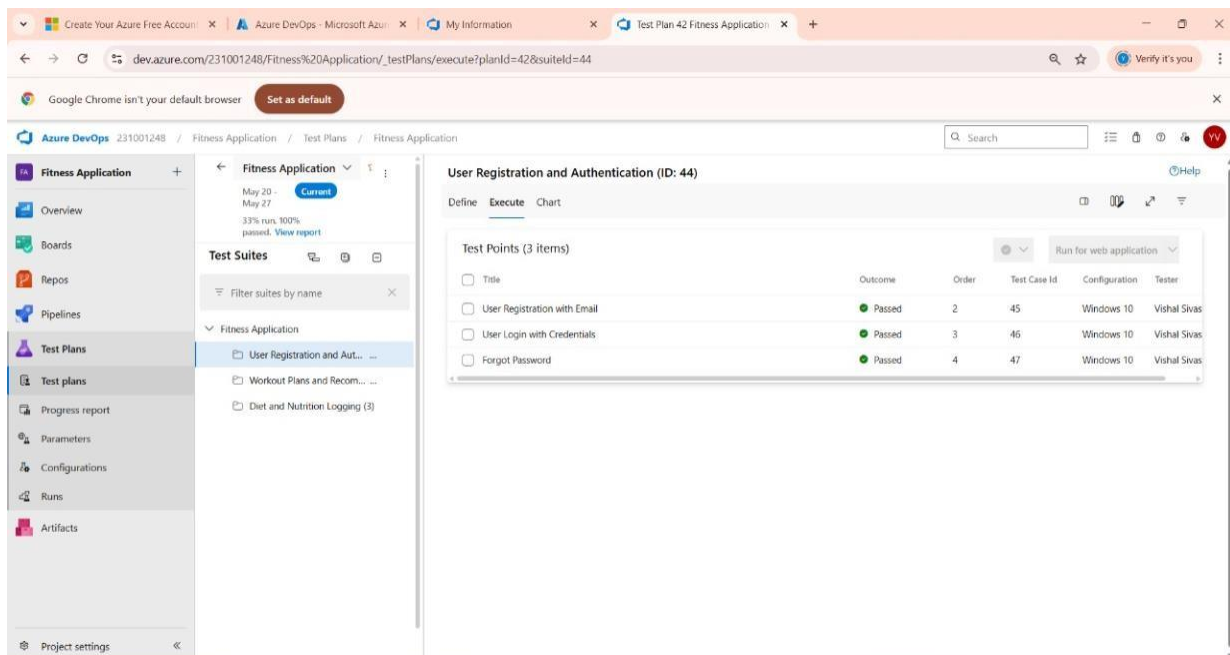
8. Prioritize & Review

- o Mark key features like health tracking as high-priority.
- o Review all test cases for completeness and traceability.

1. New test plan



2. Test suite



3. Test case

Give two test cases for at least five user stories showcasing the happy path and error scenarios in azure DevOps platform.

Fitness Application – Test Plans

USER STORIES

- As a user, I want to sign up and log in securely so that I can track my fitness progress. (ID: 101)
- As a user, I need to view my daily workout summary in one place. (ID: 102)
- As a user, I should be able to start and stop a workout session easily. (ID: 103).
- As a user, I should be able to set and update fitness goals like steps or calories. (ID: 104).
- As a user, I need to receive real-time health stats like heart rate and calories burned. (ID: 105).

Test Suites

Test Suit: TS01 - User Login & Access (ID: 101)

1. TC01 – Successful Sign Up

- **Action:**
 - Go to the Sign-Up page.
 - Enter valid name, email, and password.
 - Click "Sign Up".
- **Expected Results:**
 - Sign-Up form is displayed.
 - Fields accept values without error.
 - Account is created, and the user is redirected to the dashboard.
- **Type:** Happy Path

2. TC02 – Secure Login

- **Action:**
 - Go to the Login page.
 - Enter valid email and password.
 - Click on "Login".
- **Expected Results:**
 - Login form is displayed.
 - Fields accept data without error.
 - User is logged in and redirected to the dashboard.
- **Type:** Happy Path

3. TC03 – Sign Up with Existing Email

- **Action:**
 - Go to the Sign-Up page.
 - Enter a name and an already registered email.
 - Click on "Sign Up".
- **Expected Results:**

- Fields accept data.
- Error message "Email already registered" is displayed.
- **Type:** Error Path

4. TC04 – Login with Wrong Password

- **Action:**
 - Go to the Login page.
 - Enter valid email and incorrect password.
 - Click on "Login".
- **Expected Results:**
 - Input is accepted.
 - Error message "Invalid username or password" is shown.
- **Type:** Error Path

Test Suit: TS02 – Workout Session (ID: 103)

1. TC05 – Start Workout Session

- **Action:**
 - Log in successfully.
 - Navigate to "Workout" section.
- **Expected Results:**
 - Workout session begins, timer starts, and tracking UI is displayed.
- **Type:** Happy Path

2. TC06 – Workout Session without Internet

- **Action:**
 - Disconnect from the internet.
 - Attempt to start a workout session.
- **Expected Results:**
 - Network is offline.
 - Warning message "Cannot sync data. Workout will be saved offline." is shown.
- **Type:** Error Path

Test Suit: TS03 - Real-Time Fitness Data (ID: 102)

1. TC07 – Display Live Heart Rate

- **Action:**
 - Connect fitness band.
 - Observe heart rate panel.
- **Expected Results:**
 - Real-time heart rate is displayed and updates continuously.
- **Type:** Happy Path

2. TC08 – No Heart Rate Data

- **Action:**

- Start a workout session without connecting a fitness band.
 - Observe the heart rate panel.
- **Expected Results:**
 - Heart rate panel shows "No device connected" or fallback message.
- **Type:** Error Path

Test Suit: TS04 - Workout Editing (ID: 103)

1. TC09 – Rename Workout Successfully

- **Action:**
 - Navigate to "My Workout".
 - Click "Rename" next to a workout.
 - Enter a new name and click "Save".
- **Expected Results:**
 - Workout name updates successfully.
- **Type:** Happy Path

2. TC10 – Rename with Blank Name

- **Action:**
 - Click "Rename" on a workout.
 - Leave the field blank.
 - Click "Save".
- **Expected Results:**
 - Error message "Workout name cannot be empty" is shown.
- **Type:** Error Path

3. TC11 – Change Exercise Order in Workout

- **Action:**
 - Open a workout.
 - Drag and drop exercises to reorder.
 - Click "Save".
- **Expected Results:**
 - Workout order is updated and saved.
- **Type:** Happy Path

4. TC12 – Change Exercise Order Fails Due to Network Error

- **Action:**
 - Login and go to "My Workouts".
 - Select a workout.
 - Go offline or simulate server error.
 - Reorder exercise and click "Save Order".
- **Expected Results:**
 - Error message: "Failed to update order. Please check your connection".
- **Type:** Error Path

Test Suit: TS05 - Smart Workout Plan Creation (ID: 104)

1. TC13 – Generate Workout Plan Based on User Goals

○ Action:

- Login with valid credentials.
- Click on "Generate Workout plan".
- Select categories.
- Click "Generate plan".

○ Expected Results:

- Workout is generated based on selected goal and user profile.

○ Type: Happy Path

2. TC14 – Fail to Generate Plan Due to Missing Goal Selection or Invalid Input

○ Action:

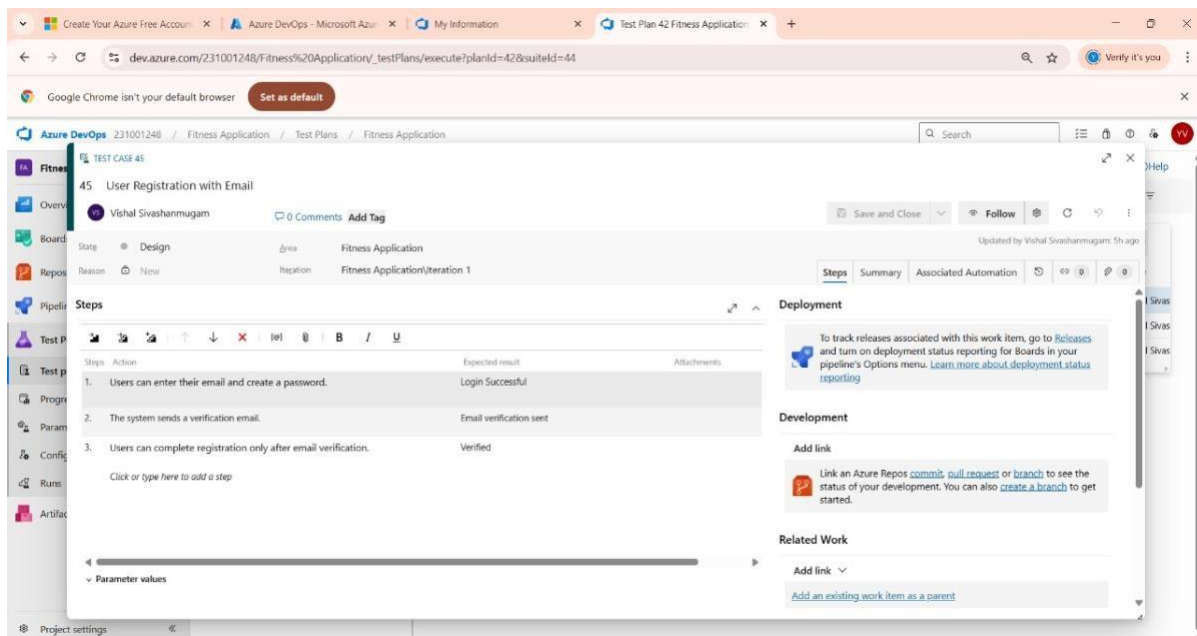
- Login with valid credentials.
- Click on "Generate Workout plan".
- Select categories.
- Click "Generate plan".

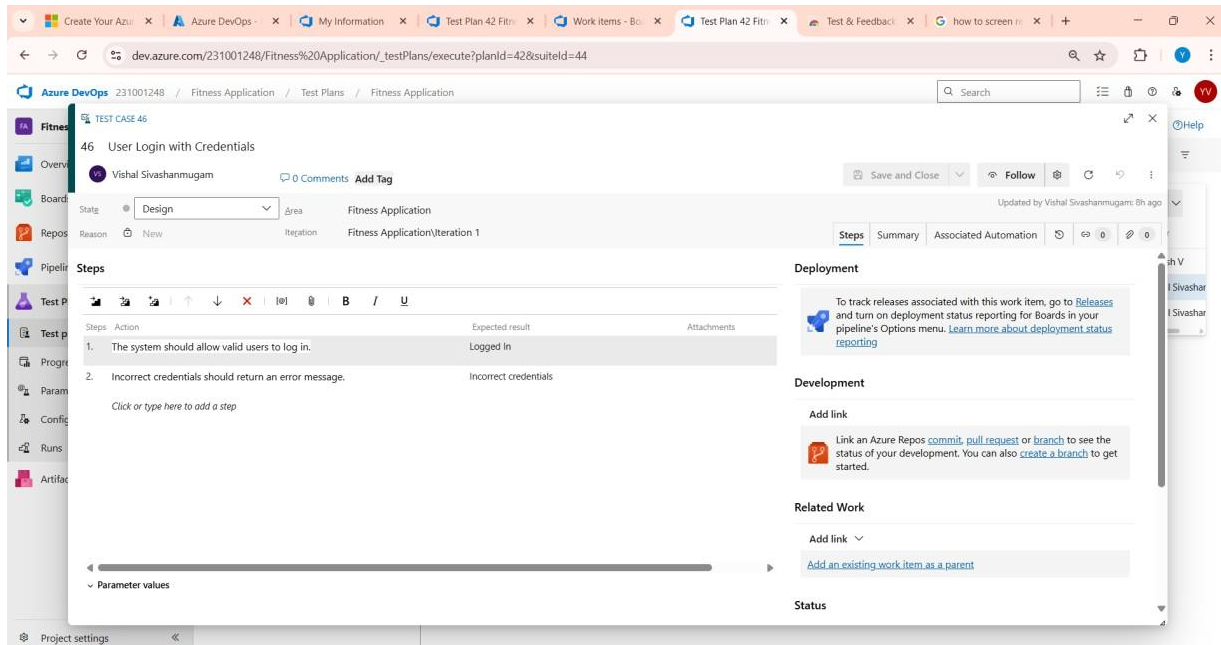
○ Expected Results:

- Error message: "Please select a fitness goal" or "Unable to generate plan with the given input" is shown.

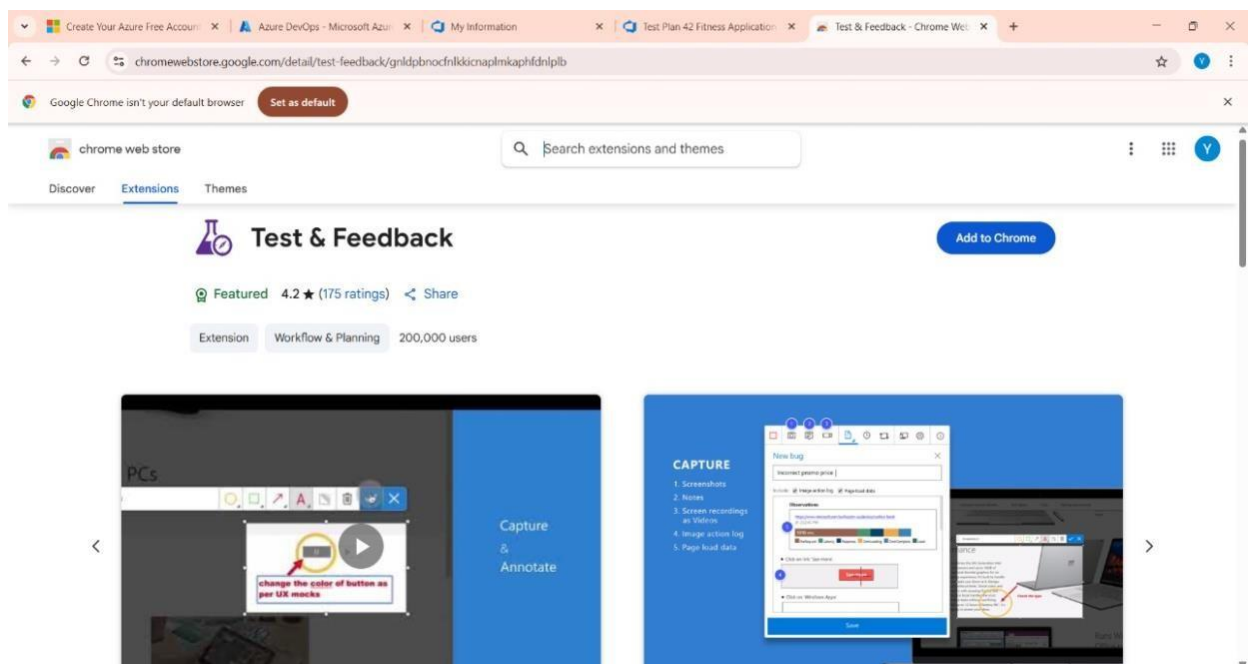
○ Type: Error Path

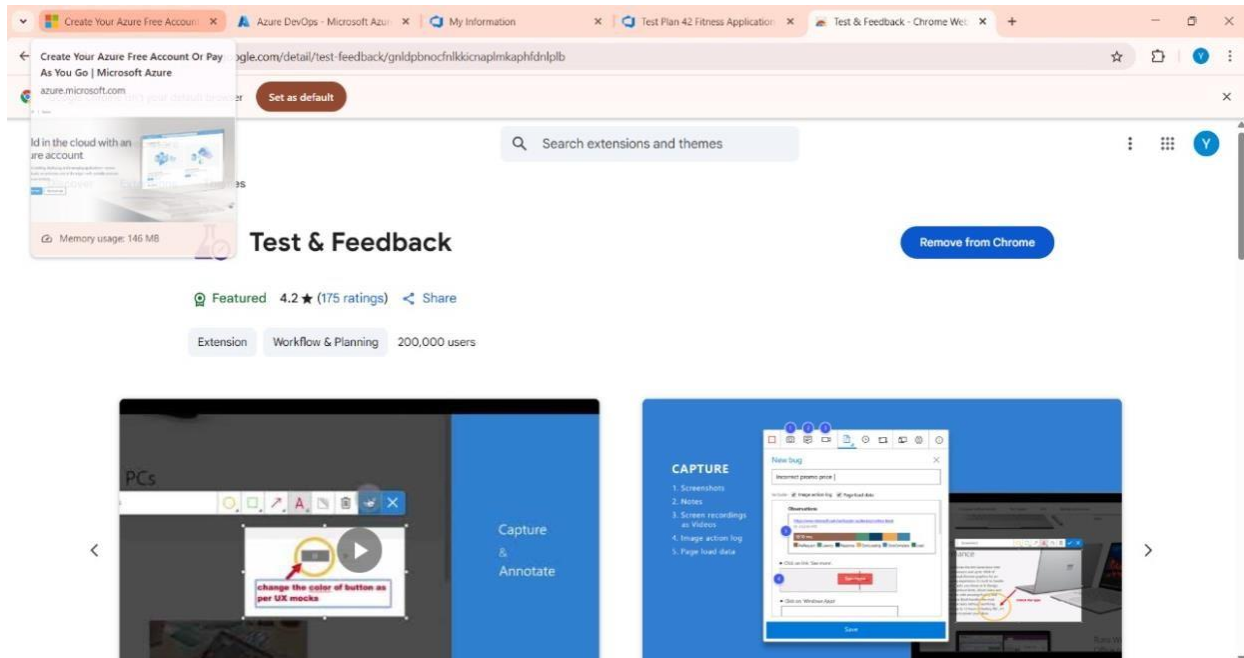
Test Cases





4. Installation of test





Test and feedback
Showing it as an extension

Title	Outcome	Order	Test Case Id	Configuration	Tester
<input type="checkbox"/> User Registration with Email	Passed	2	45	Windows 10	Vishal Sivas
<input type="checkbox"/> User Login with Credentials	Passed	3	46	Windows 10	Vishal Sivas
<input type="checkbox"/> Forgot Password	Passed	4	47	Windows 10	Vishal Sivas

5. Running the test cases

The screenshot shows the Azure DevOps Test Plans interface for a project named 'Fitness Application'. The left sidebar contains navigation links: Overview, Boards, Repos, Pipelines, Test Plans, Test plans, Progress report, Parameters, Configurations, Runs, and Artifacts. The main area displays the 'User Registration and Authentication (ID: 44)' test suite. A table of test points is shown, with columns for Title, Outcome, Order, Test Case Id, Configuration, and Tester. The test points are:

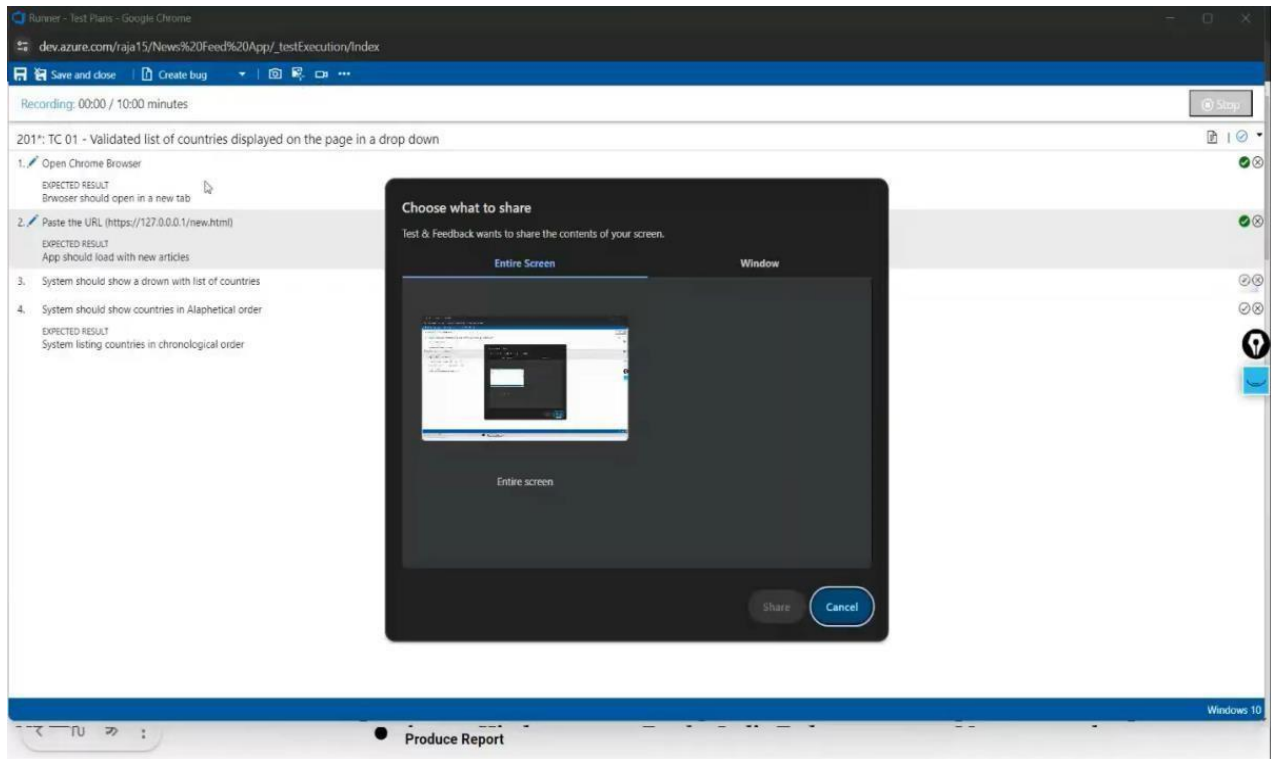
Title	Outcome	Order	Test Case Id	Configuration	Tester
User Registration with Email	Passed	2	45	Windows 10	Vishal Shivas
User Login with Credentials	Passed	3	46	Windows 10	Vishal Shivas
Forgot Password	Failed	4	47	Windows 10	Vishal Shivas

A context menu is open over the 'User Registration with Email' test point, showing options: View execution history, Mark Outcome, Run, Reset test to active, Edit test case, Assign tester, and View test result. The 'Run' option is selected, and a sub-menu is visible with options: Run for web application, Run for desktop application, and Run with options.

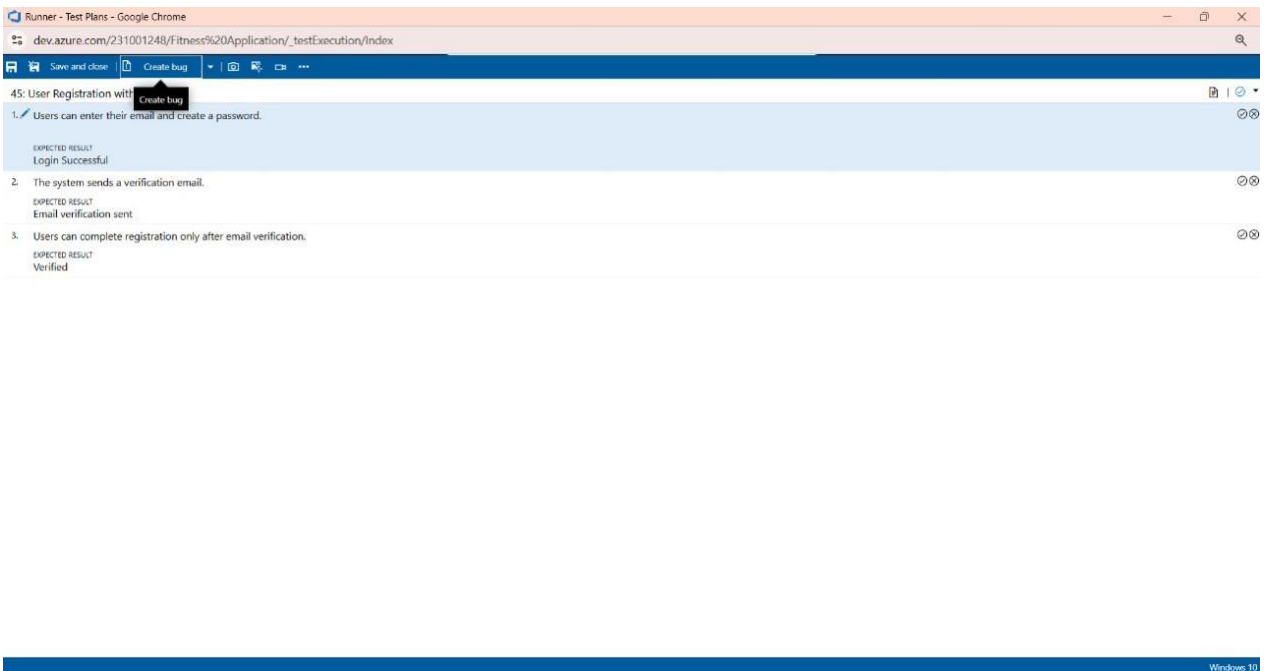
The screenshot shows the 'Runner - Test Plans - Google Chrome' window displaying the execution details of the 'User Registration with Email' test case. The window title is 'Runner - Test Plans - Google Chrome' and the URL is 'dev.azure.com/231001248/Fitness%20Application/_testExecution/Index'. The test case is titled '45: User Registration with Email'. The steps and expected results are:

- Users can enter their email and create a password.
EXPECTED RESULT: Login Successful
- The system sends a verification email.
EXPECTED RESULT: Email verification sent
- Users can complete registration only after email verification.
EXPECTED RESULT: Verified

6. Recording the test case



7. Creating the bug



Runner - Test Plans - Google Chrome

dev.azure.com/231001248/Fitness%20Application/_testExecution/index

45: User Registration with Email

1. Users can enter their email and create a password

NEW BUG

Make sure the entered Email and Password is correct

Unassigned 0 comments Add tag Save & Close

Stat: New Area: Fitness Application Reason: New Iteration: Fitness Application/Iteration 1 Details

Repro Steps

5/20/2025 6:52 PM Bug filed on "User Registration with Email"

Step no.	Result	Title
1.	None	Users can enter their email and create a password.
		Expected Result
		Login Successful
2.	None	The system sends a verification email.
		Expected Result
		Email verification sent
3.	None	Users can complete registration only after email verification.
		Expected Result

Planning

Resolved Reason

Story Points

Priority: 2

Severity: 3 - Medium

Activity

Effort (Hours)

Original Estimate

Remaining

Completed

Deployment

To track releases associated with this work item, go to Releases and turn on deployment status reporting for Boards in your pipeline's Options menu. Learn more about deployment status reporting

Development

+ Add link

Link an Azure Repos commit, pull request or branch to see the status of your development. You can also create a branch to get started.

Related Work

+ Add link

Add an existing work item as a parent

Tested By

45 User Registration with Email Updated 6 hours ago Design

System Info

Create Your Azure Free Account Azure DevOps - Microsoft My Information Runs - Test Plans Test & Feedback - Chrome how to screen record in v...

dev.azure.com/231001248/Fitness%20Application/_testManagement/runs?_a=runCharts&runId=2

Google Chrome isn't your default browser Set as default

Azure DevOps 231001248 / Fitness Application / Test Plans / Runs

Run 2 - User Registration and Authentication (Manual)

Run summary Test results Filter

Update comment Add attachment

Summary

Completed 6 hours ago. Ran for 01 minutes 50 seconds

Run type:	Manual
Owner	Vishal Sivashanmugam
Tested build	not available
Release	not available
Release Stage	not available
Build platform	not available
Build flavor	not available
Test settings	Run time settings
MTM lab environment	not available

Comments

No comments

Error message

No error message

Attachments ()

Outcome

1

Passed

Outcome by priority

2

8. Test case results

The screenshot displays the Azure DevOps Test Plans interface. On the left, a sidebar shows the project structure with 'Test Plans' selected. The main area shows a test suite named 'User Registration and Authentication' (ID: 44) with a 'Current' status. Below the suite name, there are three test points: 'User Registration with Email', 'User Login with Credentials' (which is selected and highlighted in blue), and 'Forgot Password'. A modal window titled 'User Login with Credentials' is open, showing the 'Test Case Results' for the selected test point. The results table indicates a 'Passed' outcome, with details such as '6h ago', 'Windows 10', and 'Vishal Sivashan...' for the configuration, run by, and tester respectively. At the bottom of the modal, there is a link to 'Open execution history for current test point'.

9. Test report summary

The screenshot displays the Azure DevOps web interface. The top navigation bar shows the 'Fitness Application' board. The left sidebar contains a menu with options like Overview, Boards, Work Items, Backlogs, Sprints, Queries, Delivery Plans, Analytics views, Repos, Pipelines, Test Plans, and Artifacts. The main content area shows a 'Recently updated' work item titled '45 User Registration with Email' by Vishal Sivashanmugam. The work item details include a description, a table of steps, and a deployment section. The steps table lists three steps: 'Users can enter their email and create a password.', 'The system sends a verification email.', and 'Users can complete registration only after email verification.' The deployment section includes a 'Deployment' button and a 'Development' section with a 'Link an Azure Repos commit, pull request or branch' option. The bottom of the interface shows a 'Parameter values' section.

Work Item Details:

- Title:** 45 User Registration with Email
- Author:** Vishal Sivashanmugam
- Comments:** 0 Comments
- Tags:** Add Tag
- Status:** Design
- Area:** Fitness Application
- Reason:** New
- Iteration:** Fitness Application/Iteration 1

Steps:

Step	Action	Expected result	Attachments
1.	Users can enter their email and create a password.	Login Successful	
2.	The system sends a verification email.	Email verification sent	
3.	Users can complete registration only after email verification.	Verified	

Click or type here to add a step

Deployment:

To track releases associated with this work item, go to [Releases](#) and turn on deployment status reporting for Boards in your pipeline's Options menu. [Learn more about deployment status reporting](#)

Development:

Add link

Link an Azure Repos [commit](#), [pull request](#) or [branch](#) to see the status of your development. You can also [create a branch](#) to get started.

Related Work:

Add link ▾

[Add an existing work item as a parent](#)

Parameter values

- Assigning bug to the developer and changing state

dev.azure.com/231001248/Fitness%20Application/_workitems/edit/57

Fitness Application 231001248 / Fitness Application / Boards / Work items

Recently updated | Back to Work Items | 1 of 41

BUG 57 Make sure the entered Email and Password is correct

No one selected | 0 Comments | Add Tag

Save | Follow | Details | Updated by Yogesh V. Just now

Stat: New | Area: Fitness Application | Reason: New | Iteration: Fitness Application/Iteration 1

Repro Steps

5/20/2025 6:52 PM Bug filed on "User Registration with Email"

Step no.	Result	Title
1.	None	Users can enter their email and create a password.
		Expected Result Login Successful
2.	None	The system sends a verification email.
		Expected Result Email verification sent
3.	None	Users can complete registration only after email verification.
		Expected Result

Planning

Resolved Reason

Story Points

Priority: 2

Severity: 3 - Medium

Activity

Effort (Hours)

Original Estimate

Remaining

Completed

Deployment

To track releases associated with this work item, go to [Releases](#) and turn on deployment status reporting for Boards in your pipeline's Options menu. [Learn more about deployment status reporting](#)

Development

Add link

Link an Azure Repos [commit](#), [pull request](#) or [branch](#) to see the status of your development. You can also [create a branch](#) to get started.

Related Work

Add link

Add an existing work item as a parent

Tested By

10. Progress report

dev.azure.com/231001248/Fitness%20Application/_testManagement/analytics/progressreport

Fitness Application 231001248 / Fitness Application / Test Plans / Progress report

Progress report

Fitness Application | Test Suites | Outcome | Configuration | Tester | Priority | Assigned To

Summary

1 Test plans | 9 Test points

2 (2 / 9) Test points run | 22% Run

100% (2 / 2) Pass rate | 2 Passed

Outcome trend Last 14 Days

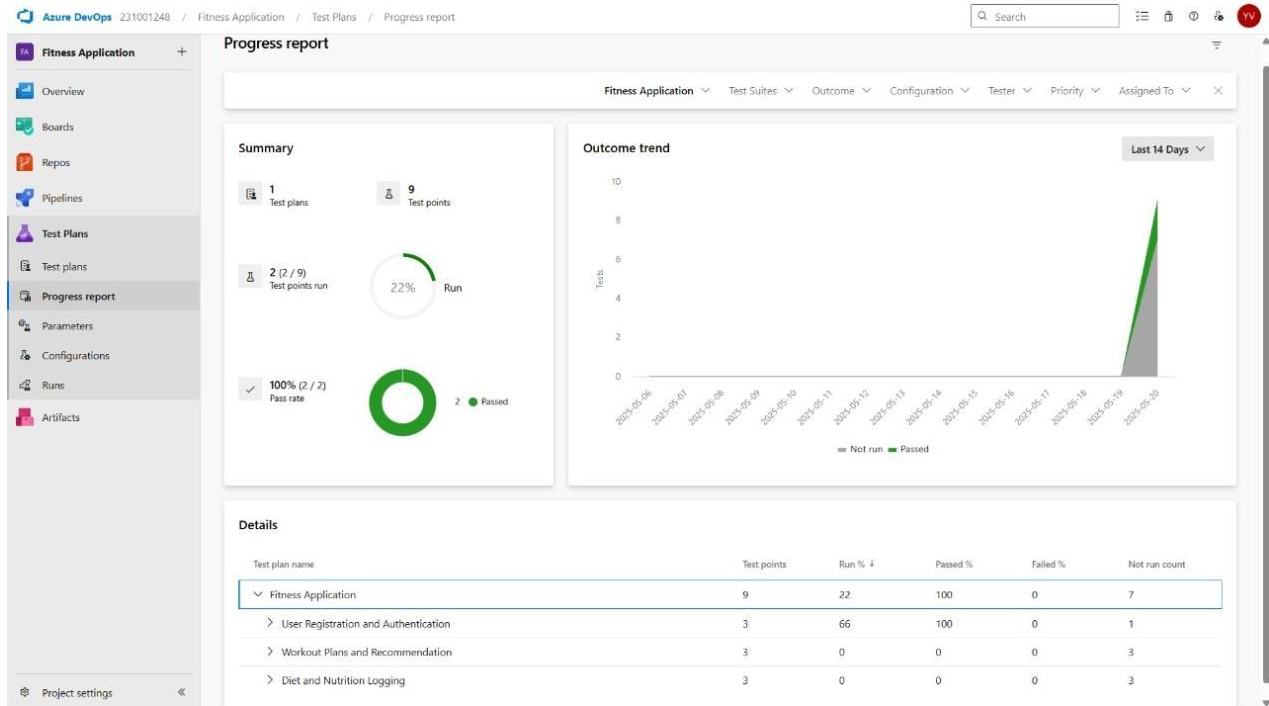
Tests

2025-05-06 2025-05-07 2025-05-08 2025-05-09 2025-05-10 2025-05-11 2025-05-12 2025-05-13 2025-05-14 2025-05-15 2025-05-16 2025-05-17 2025-05-18 2025-05-19 2025-05-20

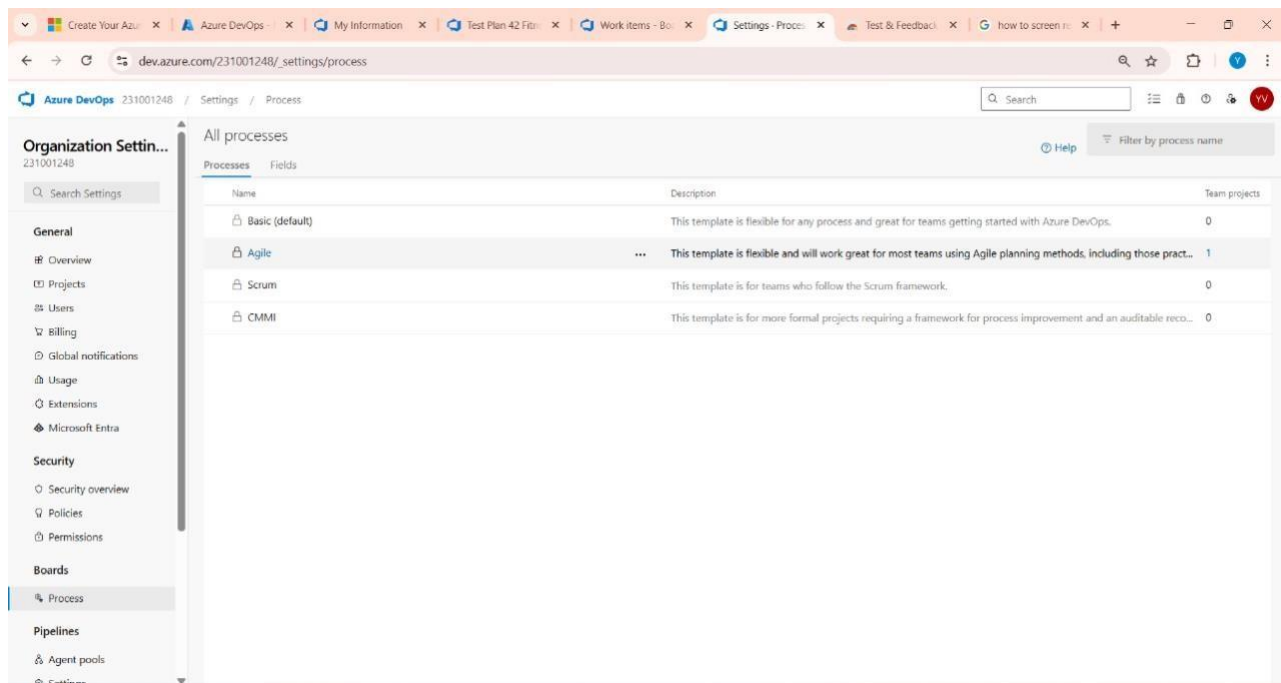
Not run Passed

Details

Test plan name	Test points	Run %	Passed %	Failed %	Not run count



11. Changing the test template



dev.azure.com/231001248/_settings/process

Azure DevOps 231001248 / Settings / Process

Organization Settings
231001248

Search Settings

General

- Overview
- Projects
- Users
- Billing
- Global notifications
- Usage
- Extensions
- Microsoft Entra

Security

- Security overview
- Policies
- Permissions

Boards

- Process

Pipelines

- Agent pools
- Settings

All processes

Processes Fields

Filter by process name

Name	Description	Team projects
Basic (default)	This template is flexible for any process and great for teams getting started with Azure DevOps.	0
Agile	... This template is flexible and will work great for most teams using Agile planning methods, including those practicing...	1
Scrum	This template is for teams who follow the Scrum framework.	0
CMMI	... This template is for more formal projects requiring a framework for process improvement and an auditable record...	0

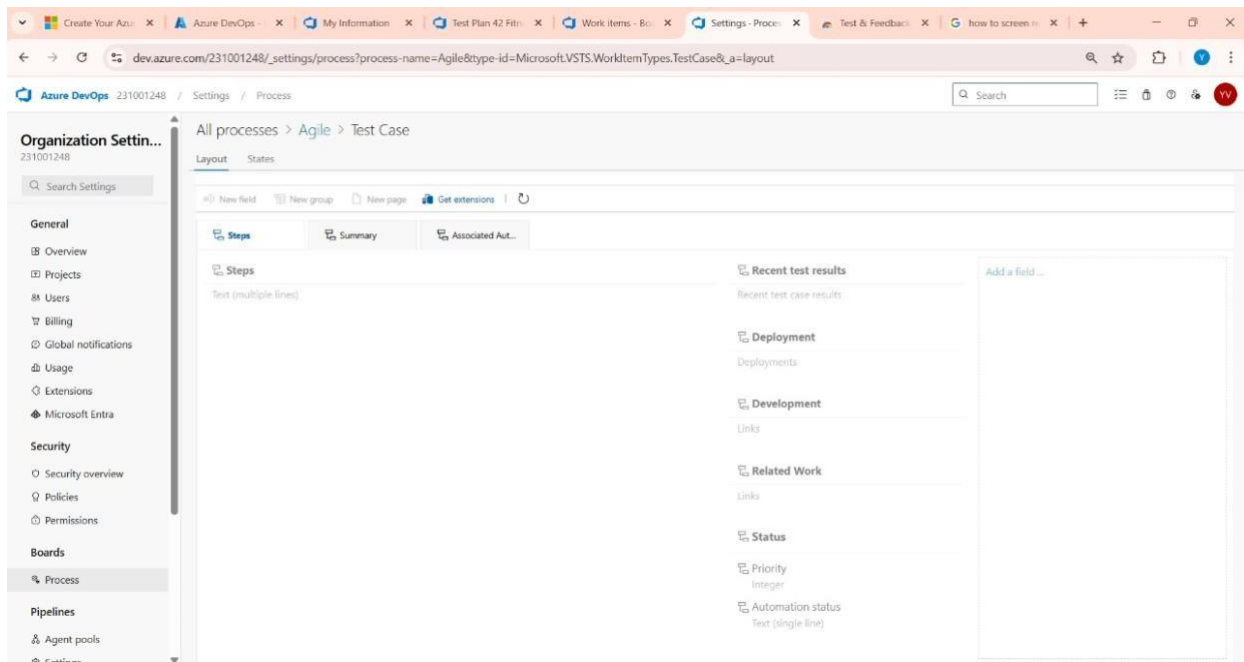
12. View the new test case template

This screenshot shows the 'All processes > Agile' page in Azure DevOps, specifically the 'Work item types' tab. The left sidebar contains the 'Organization Settings' menu with sections for General, Security, and Boards. The 'Process' option under Boards is selected. The main content area displays a table of work item types for the Agile process. A message at the top states: 'System processes cannot be customized. To add customization create an inherited process.'

Name	Description
Bug	Describes a divergence between required and actual behavior, and tracks the work done to correct the defect and verify the correction.
Epic	Epics help teams effectively manage and groom their product backlog
Feature	Tracks a feature that will be released with the product
Issue	Tracks an obstacle to progress.
Task	Tracks work that needs to be done.
Test Case	Server-side data for a set of steps to be tested.
Test Plan	Tracks test activities for a specific milestone or release.
Test Suite	Tracks test activities for a specific feature, requirement, or user story.
User Story	Tracks an activity the user will be able to perform with the product

This screenshot shows the 'All processes > Agile' page in Azure DevOps, specifically the 'Projects' tab. The left sidebar is identical to the previous screenshot, with 'Process' selected under 'Boards'. The main content area displays a table of projects for the Agile process. A message at the top states: 'System processes cannot be customized. To add customization create an inherited process.'

Name	Description
Fitness Application	Overview: The Fitness App is a mobile and web-based platform designed to help users achieve their health and fitness goals through personalized workout pla...



Result:

The test plans and test cases for the user stories is created in Azure DevOps with Happy Path and Error Path

EXP NO: 9

LOAD TESTING AND PERFORMANCE TESTING

Aim:

To develop a fitness application that helps users track workouts, set goals, and monitor their health.

Load Testing

Steps to Create an Azure Load Testing Resource:

Before you run your first test, you need to create the Azure Load Testing resource:

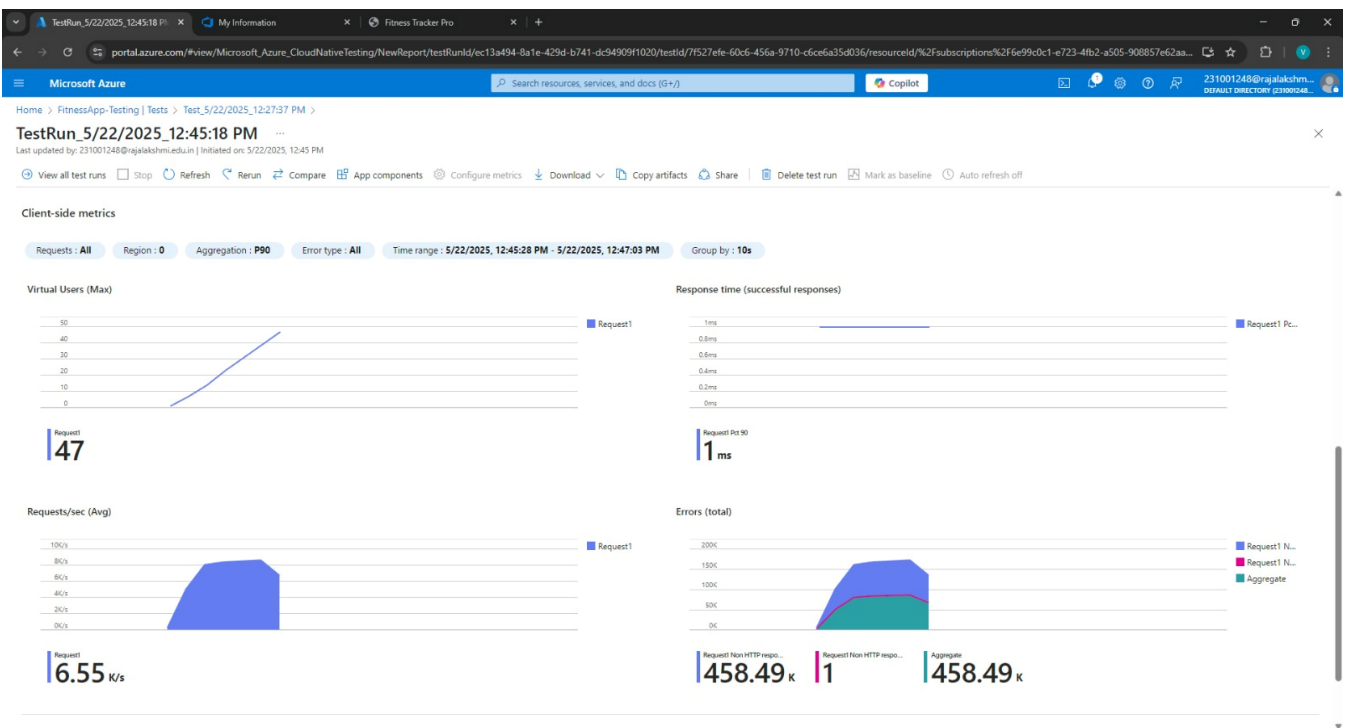
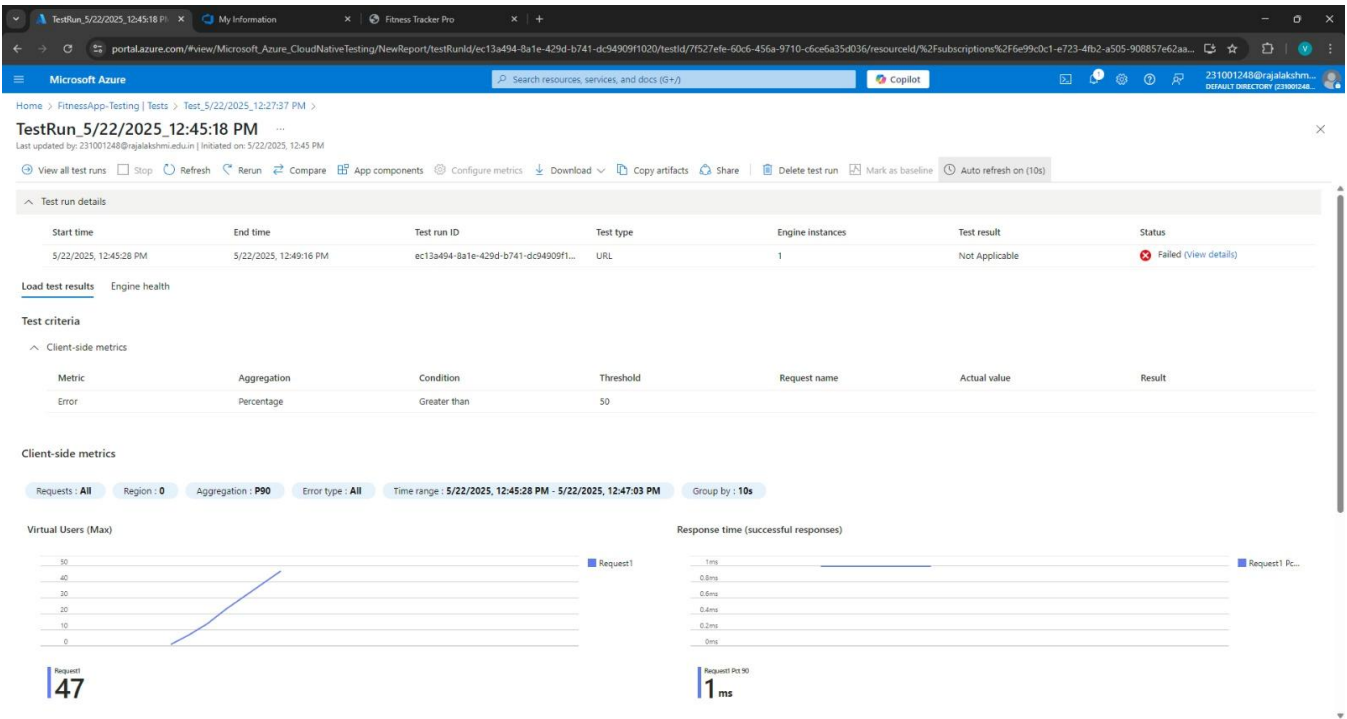
1. Sign in to Azure Portal
Go to <https://portal.azure.com> and log in.
2. Create the Resource
 - Go to *Create a resource* → Search for “Azure Load Testing”.
 - Select Azure Load Testing and click Create.
3. Fill in the Configuration Details
 - *Subscription*: Choose your Azure subscription.
 - *Resource Group*: Create new or select an existing one.
 - *Name*: Provide a unique name (no special characters).
 - *Location*: Choose the region for hosting the resource.
4. (Optional) Configure tags for categorization and billing.
5. Click Review + Create, then Create.
6. Once deployment is complete, click Go to resource.

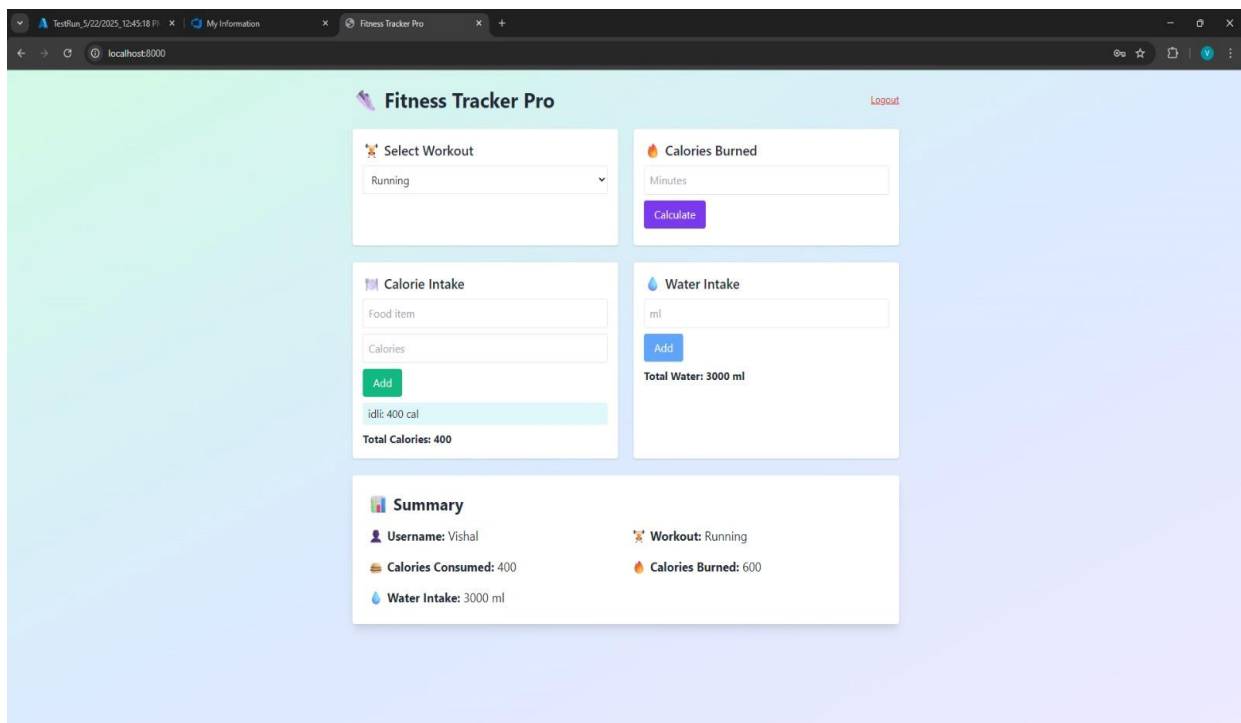
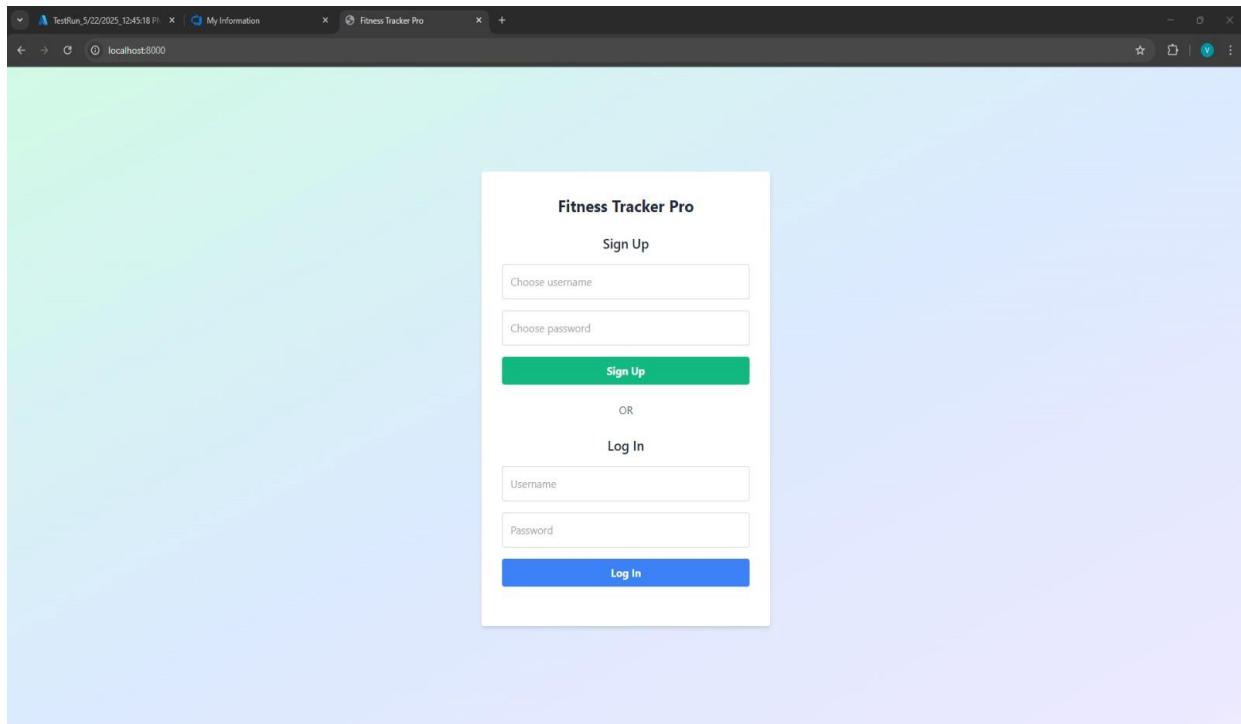
Steps to Create and Run a Load Test:

Once your resource is ready:

1. Go to your Azure Load Testing resource and click Add HTTP requests > Create.
2. Basics Tab
 - *Test Name*: Provide a unique name.
 - *Description*: (Optional) Add test purpose.
 - *Run After Creation*: Keep checked.
3. Load Settings
 - *Test URL*: Enter the target endpoint (e.g., <https://yourapi.com/products>).
4. Click Review + Create → Create to start the test.

Load Testing





Result:

Successfully designed and developed a fitness application that enables users to track workouts, set fitness goals, and monitor health metrics to support a healthier lifestyle.

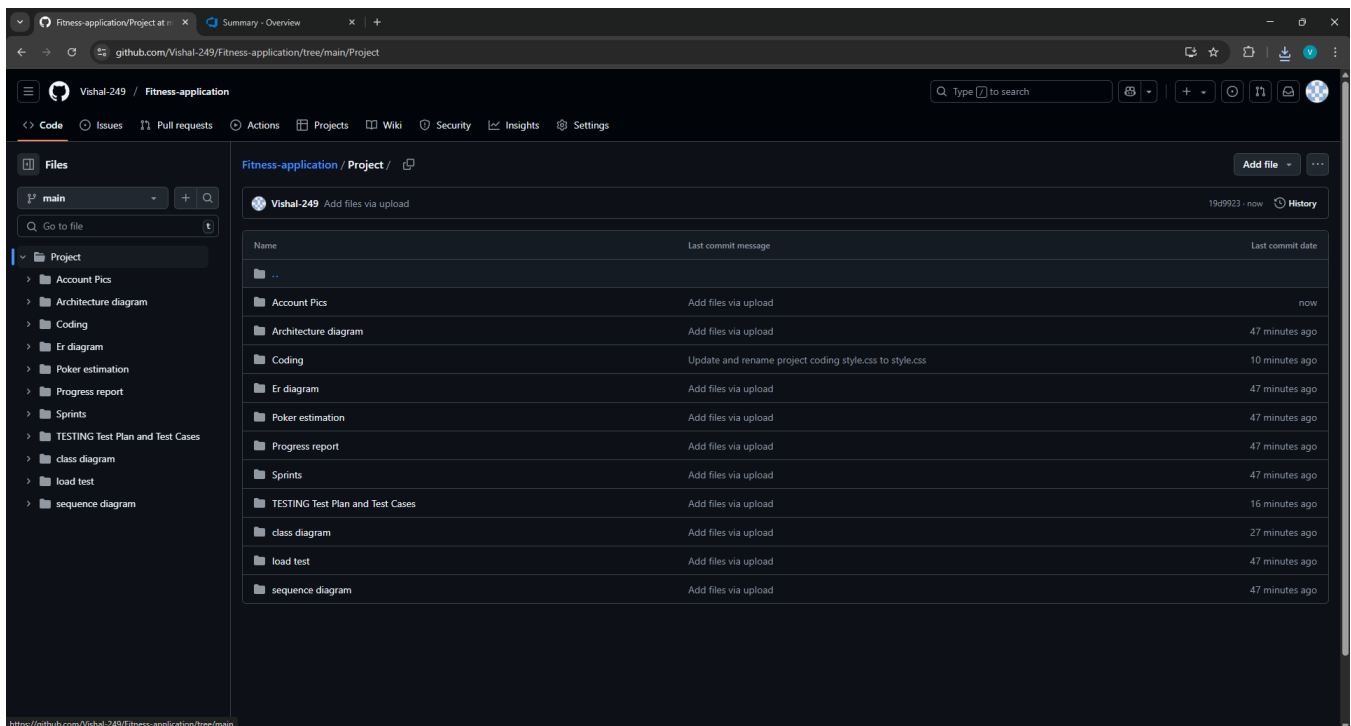
EXP NO: 10

GITHUB: PROJECT STRUCTURE & NAMING CONVENTIONS

Aim:

To provide a clear and organized view of the project's folder structure and file naming conventions, helping contributors and users easily understand, navigate, and extend the Fitness Application project.

GitHub Project Structure



Result:

The GitHub repository clearly displays the organized project structure and consistent naming conventions, making it easy for users and contributors to understand, navigate, and extend the Fitness Application codebase.