

EXP NO: 1

AZURE DEVOPS ENVIRONMENT SETUP

Aim:

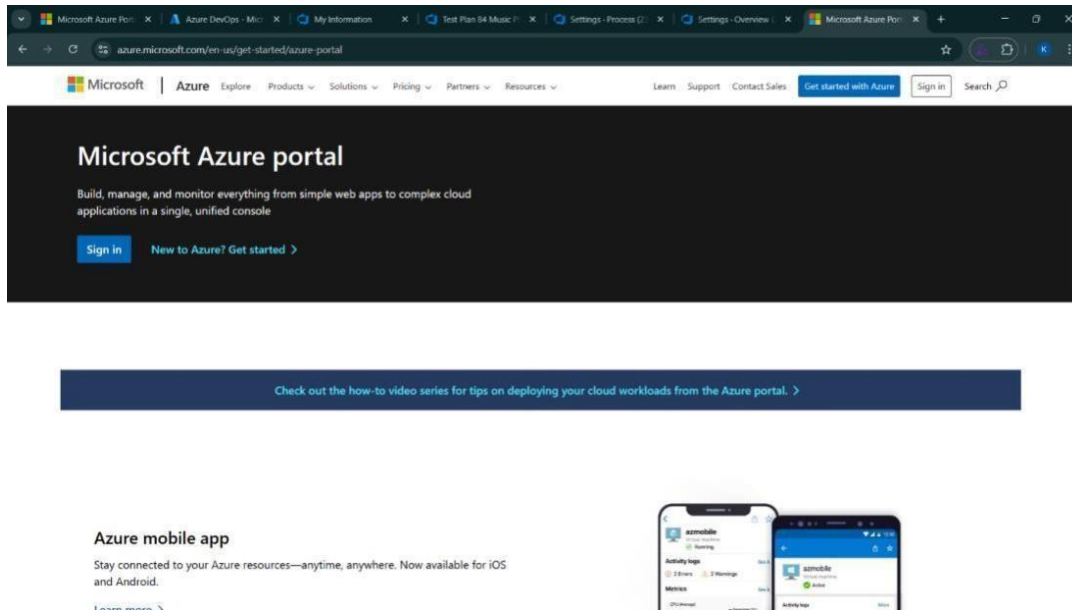
To set up and access the Azure DevOps environment by creating an organization through the Azure portal.

INSTALLATION

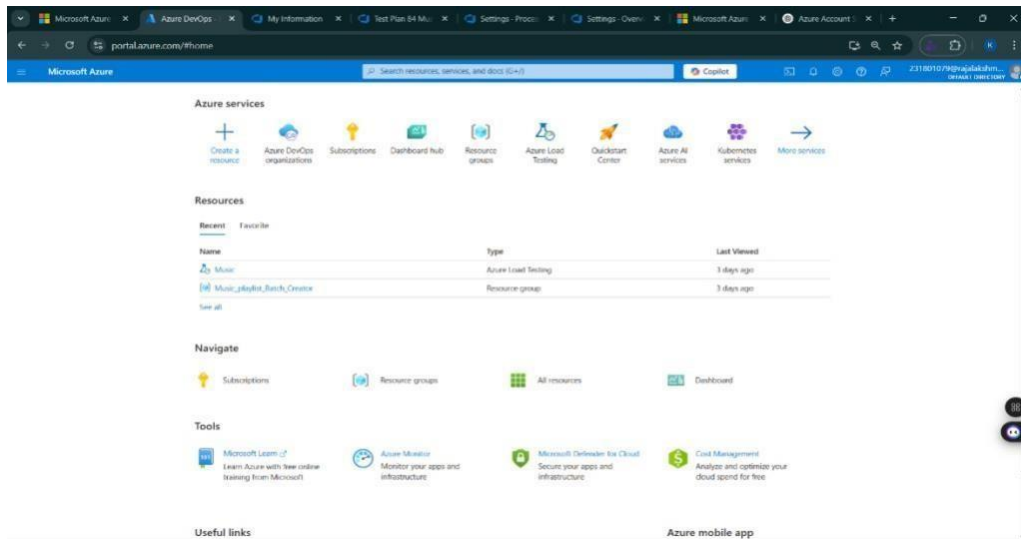
1. Open your web browser and go to the Azure website: <https://azure.microsoft.com/en-us/get-started/azure-portal>.

Sign in using your Microsoft account credentials.

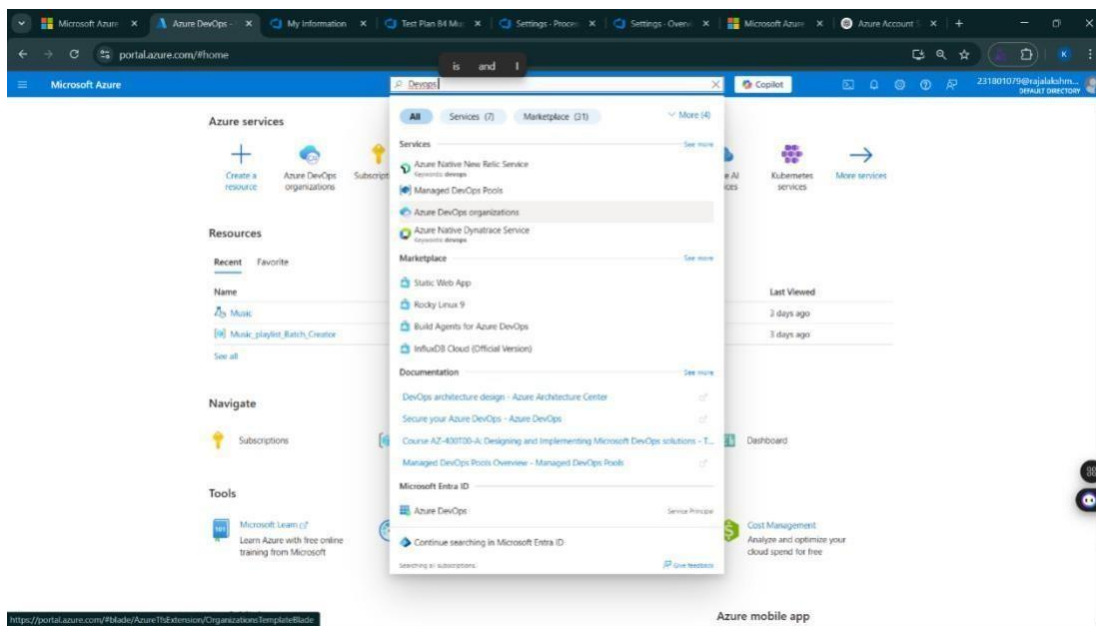
If you don't have a Microsoft account, you can create one here: <https://signup.live.com/?lic=1>



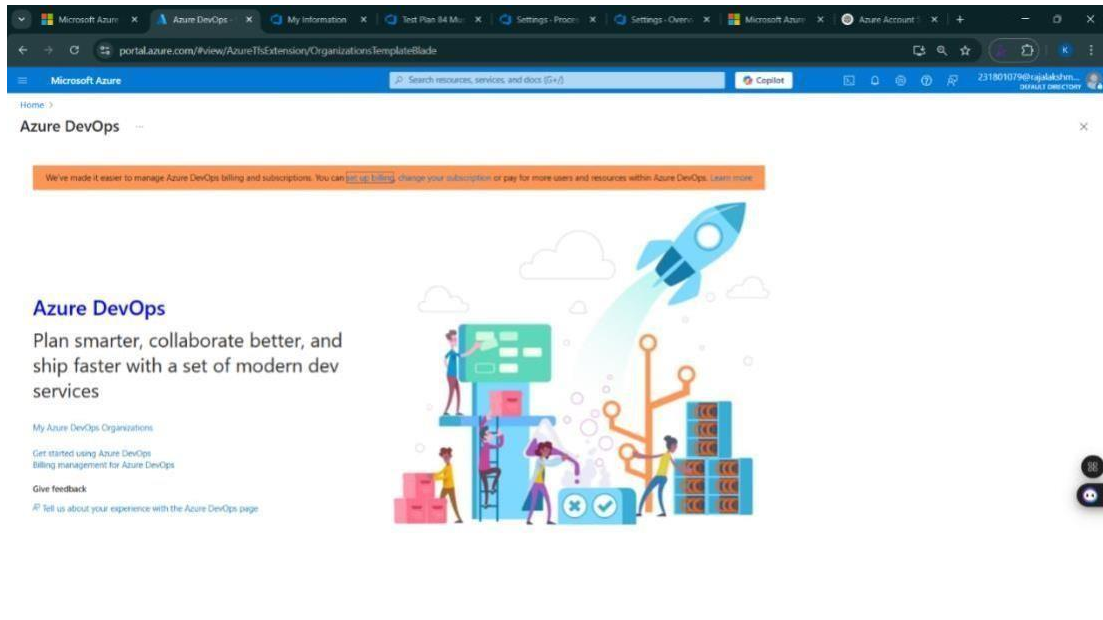
2. Azure home page



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.

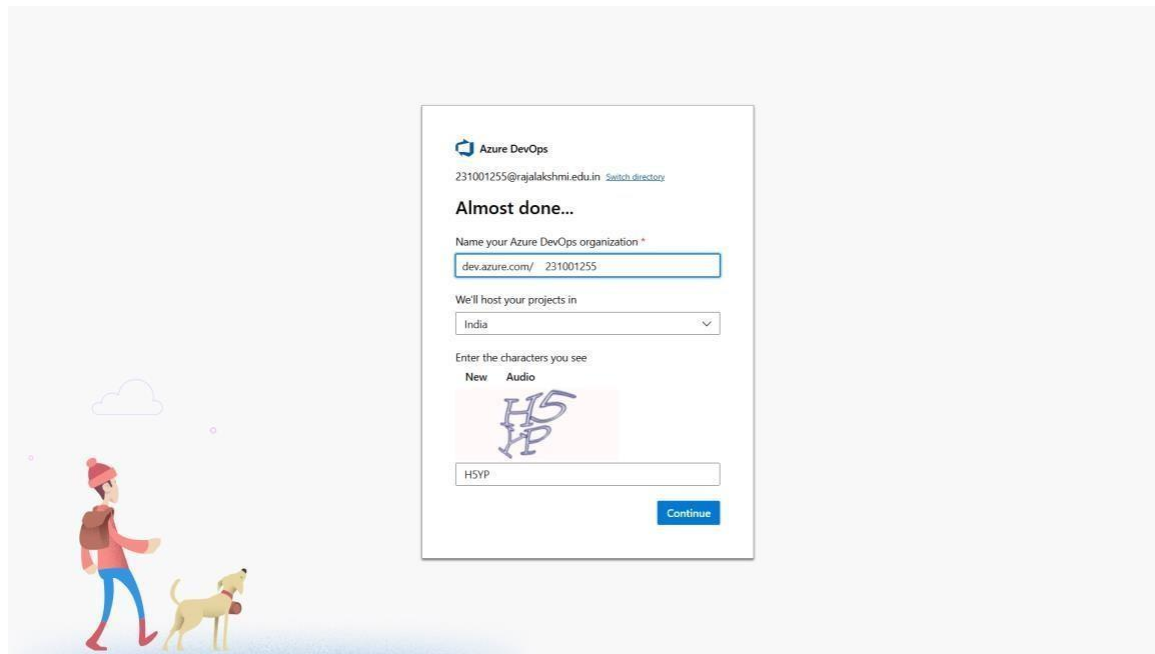
EXP NO: 2

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.

Microsoft

vishal T Sign out

VT

vishal T

231001249@rajalakshmi.edu.in

Microsoft account

India

231001249@rajalakshmi.edu.in

Visual Studio Dev Essentials

Get everything you need to build and deploy your app on any platform.

Use your benefits

Azure DevOps Organizations

Create new organization

dev.azure.com/231001249 (Owner)

Create a Team Project and start collaborating with your team now!
New project

Actions

Open in Visual Studio

dev.azure.com/231001248 (Member)

4. Project dashboard

Azure DevOps 231001248 / Fitness Application / Overview / Summary

Search

Fitness Application

Overview

Summary

Dashboards

Wiki

Boards

Repos

Pipelines

Test Plans

Artifacts

FA Fitness Application

Private Invite

About this project

Like 0

Overview:

The Fitness App is a mobile and web-based platform designed to help users achieve their health and fitness goals through personalized workout plans, diet tracking, and progress monitoring. It offers a seamless user experience from account registration to daily activity logging, integrating smart recommendations based on user data and preferences.

Key Features:

User Registration and Authentication

Secure user sign-up and login functionality, using email/password authentication, with encryption and token-based session management.

Workout Plans and Recommendations

Users receive customized workout plans based on fitness goals (e.g., weight loss, muscle gain, endurance). Plans include a series of exercises with sets, reps, durations, and instructional videos.

Diet and Nutrition Logging

Users can log daily meals, track calorie intake, monitor macronutrients, and follow personalized diet plans aligned with their fitness goals.

Progress Tracking

Visual dashboards for monitoring weight, workout consistency, calorie intake, and achievement milestones.

Notifications and Reminders

Push notifications for workout sessions, meal logging, hydration reminders, and motivational messages.

Security and Compliance

All user data is protected using AES-256 encryption, and the app follows HIPAA compliance guidelines for health information security.

Project stats

Period: Last 7 days

Boards

0 Work items created

0 Work items completed

Repos

0 Pull requests opened

1 Commits by 1 authors

Members 5

VT YV VS TV YT

2116231001249

CS23432

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

Change Security

VT

vishal T

231001249@rajalakshmi.edu.in

[My Microsoft account](#)

[My profile](#)

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

The screenshot shows the Azure DevOps interface for a project named 'Fitness Application'. The left sidebar contains navigation options: Overview, Boards, Work items (selected), Backlogs, Sprints, Queries, Delivery Plans, Analytics views, Repos, Pipelines, Test Plans, and Artifacts. The main area displays a list of work items under the 'Work items' tab. The list is filtered by keyword and shows columns for ID, Title, Assigned To, State, Area Path, and Tags. The work items are listed in descending order of ID.

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	

1. Fill in Epics

The screenshot shows the details of a work item titled 'User Registration and Authentication' in the 'Fitness Application' project. The work item is an Epic (type 5) and is currently in the 'New' state. The left sidebar shows the navigation menu. The main area is divided into several sections: Description, Discussion, Planning, Deployment, Development, and Related Work. The Description section is currently empty, with a prompt to 'Click to add Description'. The Discussion section shows a comment box with a placeholder text: 'Add a comment. Use # to link a work item, @ to mention a person, or ! to link a pull request.' The Planning section shows fields for Priority (2), Risk, Effort, Business Value, Time Criticality, Start Date, and Target Date. The Deployment section shows a link to '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.' The Development section shows a link to 'Add link' and a description of how to link an Azure Repos commit, pull request, or branch to see the status of your development. The Related Work section shows a link to 'Add link' and a list of related work items, including '40 Email Verification' updated on Apr 12.

2. Fill in Features

Azure DevOps 231001248 / Fitness Application / Boards / Work Items

Search []

Fitness Application +

- Overview
- Boards
- Work items**
- Boards
- Backlogs
- Sprints
- Queries
- Delivery Plans
- Analytics views
- Repos
- Pipelines
- Test Plans
- Artifacts

Recently updated | Back to Work Items

25 of 30 ↑ ↓

FEATURE 38

38 Personalization and Smart Adaptation

No one selected | 0 Comments Add Tag

State	New	Area	Fitness Application
Reason	New	Iteration	Fitness Application\Iteration 1

Updated by Tharun V: Mar 27

Details [] [] [] [] []

Description

- Food Diary & Meal Logging
- AI-Powered Meal Suggestions
- Calorie & Macronutrient Tracking
- Integration with Wearables & Health Apps
- Water Intake Tracking
- Meal Planning & Scheduling
- Food Insights & Analytics
- Diet Compatibility & Restrictions
- Community & Social Features
- AI-Powered Chatbot for Nutrition Guidance

Planning

Priority
2

Risk

Effort

Business Value

Time Criticality

Start Date
Select a date...

Target Date
Select a 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 • New

Classification

Value area
Business

Discussion

3.Fill in User Story Details

Azure DevOps 231001248 / Fitness Application / Boards / Work items

Search

Fitness Application +

Recently updated Back to Work Items

23 of 30 ↑ ↓

USER STORY 40

40 Email Verification

No one selected 0 Comments Add Tag

Status	New	Area	Fitness Application
Reason	New	Iteration	Fitness Application/Iteration 1

Updated by Tharun V: Apr 12

Details ⌚ ↺ 1 ✎ 0

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

Project settings <<

Result:

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

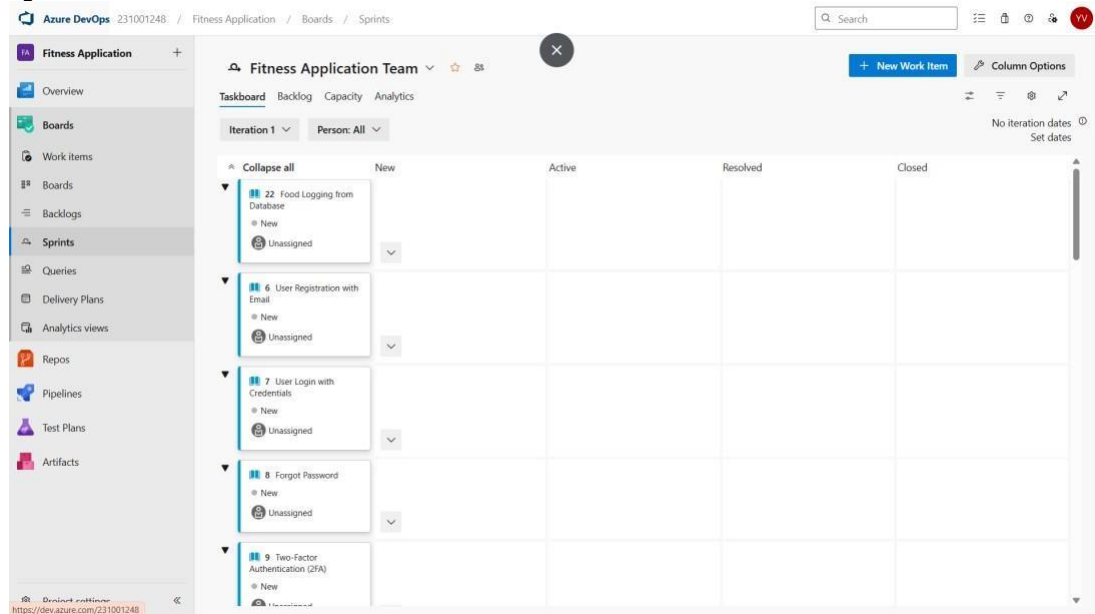
EXP NO: 4

SPRINT PLANNING

Aim:

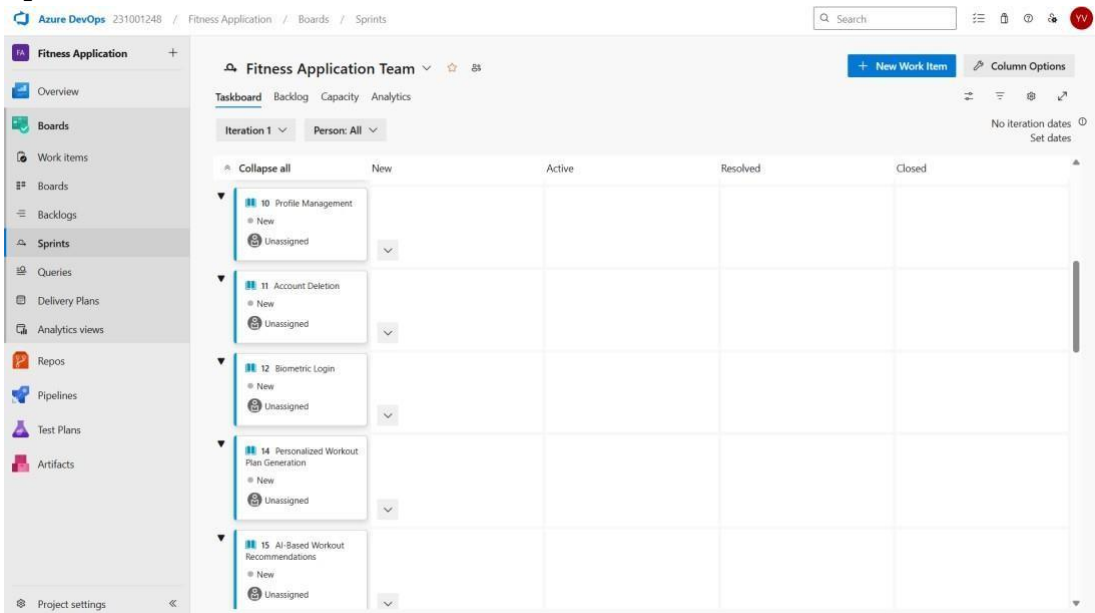
To assign user story to specific sprint for the Fitness Application Project.

Sprint Planning Sprint 1



The screenshot shows the Azure DevOps Sprints board for the 'Fitness Application Team'. The board is titled 'Sprint 1' and is currently in 'Iteration 1'. The left sidebar shows the project structure with 'Sprints' selected. The main area displays a Kanban board with columns: New, Active, Resolved, and Closed. There are five work items in the 'New' column, all marked as 'Unassigned'. The work items are: 22 Food Logging from Database, 6 User Registration with Email, 7 User Login with Credentials, 8 Forgot Password, and 9 Two-Factor Authentication (2FA). Each work item has a 'New' status and an 'Unassigned' assignee. The board also includes a search bar, a 'New Work Item' button, and a 'Column Options' menu.

Sprint 2



The screenshot shows the Azure DevOps Sprints board for the 'Fitness Application Team'. The board is titled 'Sprint 2' and is currently in 'Iteration 1'. The left sidebar shows the project structure with 'Sprints' selected. The main area displays a Kanban board with columns: New, Active, Resolved, and Closed. There are five work items in the 'New' column, all marked as 'Unassigned'. The work items are: 10 Profile Management, 11 Account Deletion, 12 Biometric Login, 14 Personalized Workout Plan Generation, and 15 AI-Based Workout Recommendations. Each work item has a 'New' status and an 'Unassigned' assignee. The board also includes a search bar, a 'New Work Item' button, and a 'Column Options' menu.

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

USER STORY 22

22 Food Logging from Database

No one selected0 CommentsAdd Tag

Save and CloseFollow

Updated by Tharun V: Yesterday

StateNewAreaFitness ApplicationReasonNewIterationFitness Application\Iteration 1Details

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.

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 Points3Priority2Risk

Classification

Value areaBusiness

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 AdaptationUpdated Mar 27 • New

Result:

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

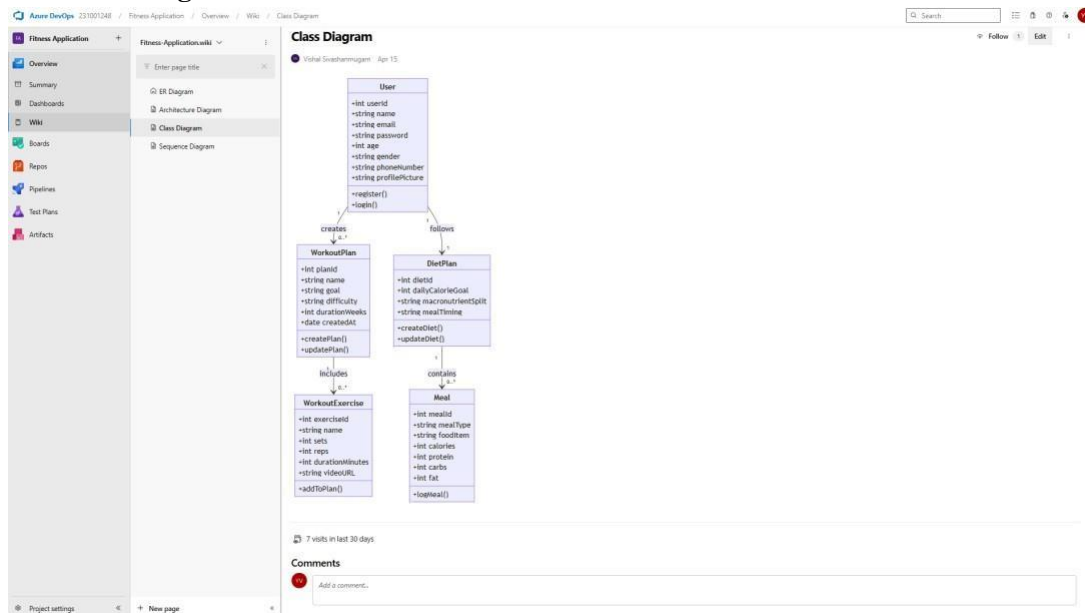
EXP NO: 6

DESIGNING CLASS AND SEQUENCE DIAGRAMS FOR PROJECT ARCHITECTURE

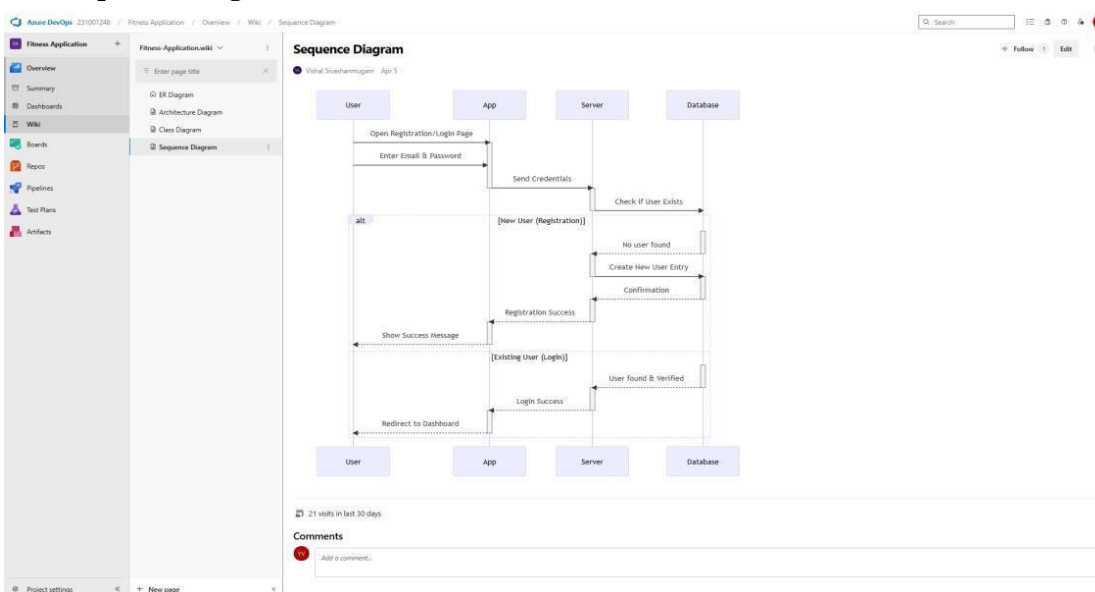
Aim:

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.

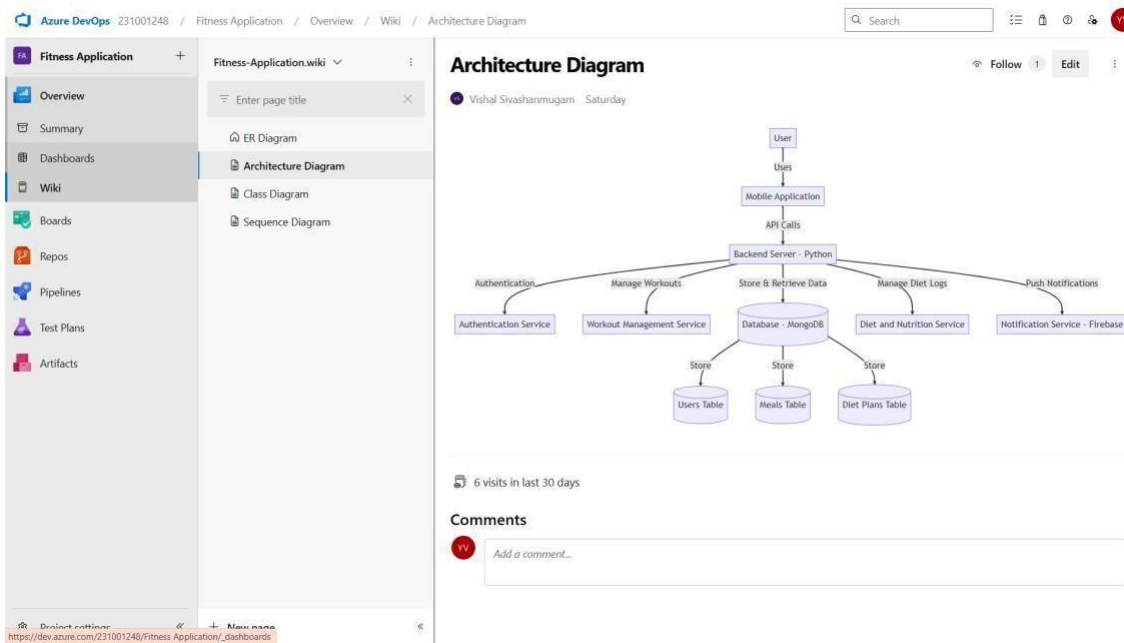
EXP NO: 7

DESIGNING ARCHITECTURAL AND ER DIAGRAMS FOR PROJECT STRUCTURE

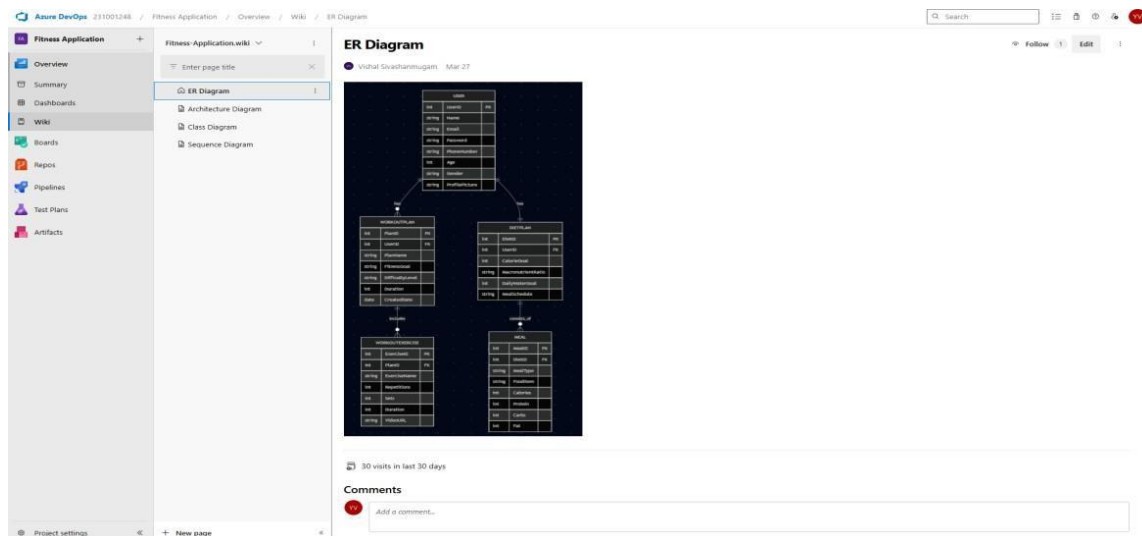
Aim:

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.

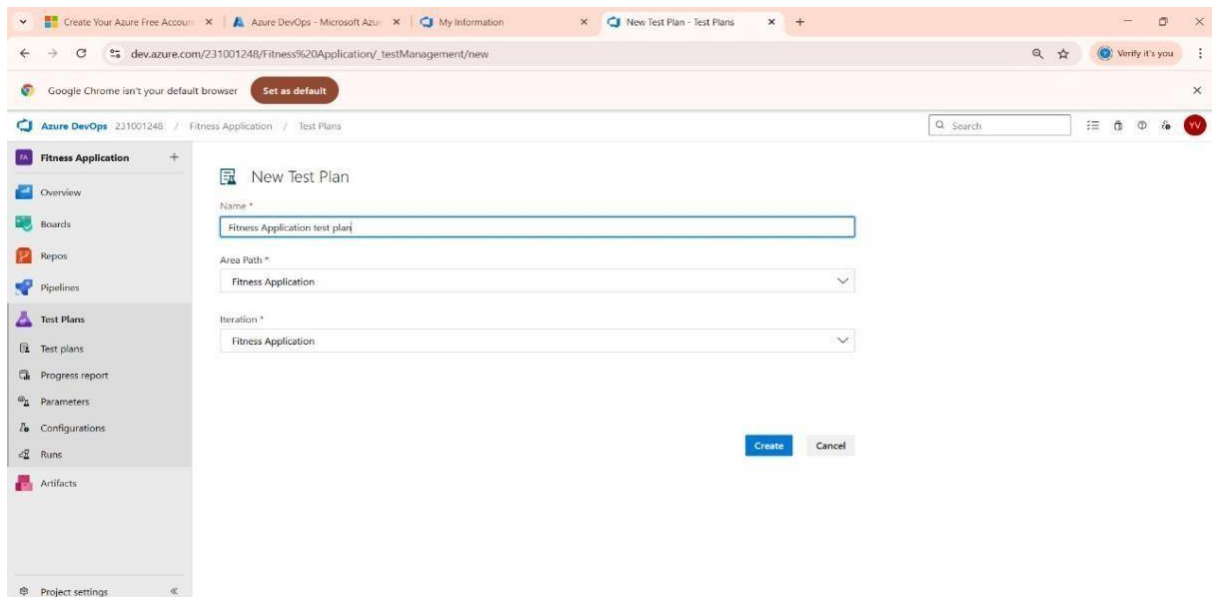
7. Organize Test Suites

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

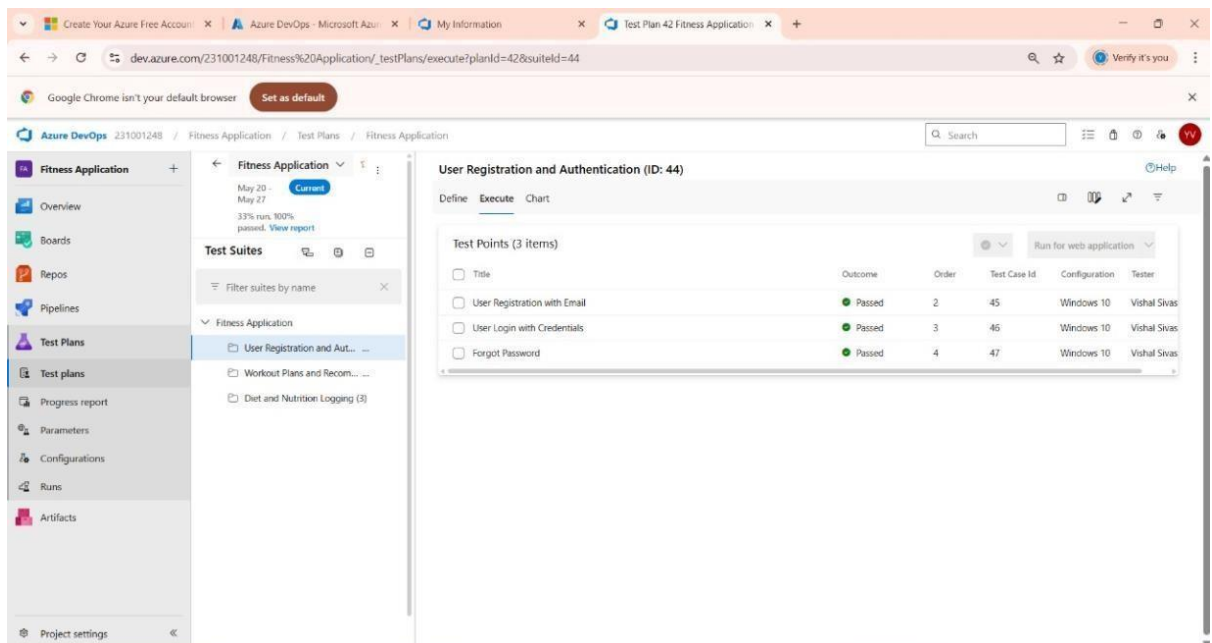
8. Prioritize & Review

- 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)

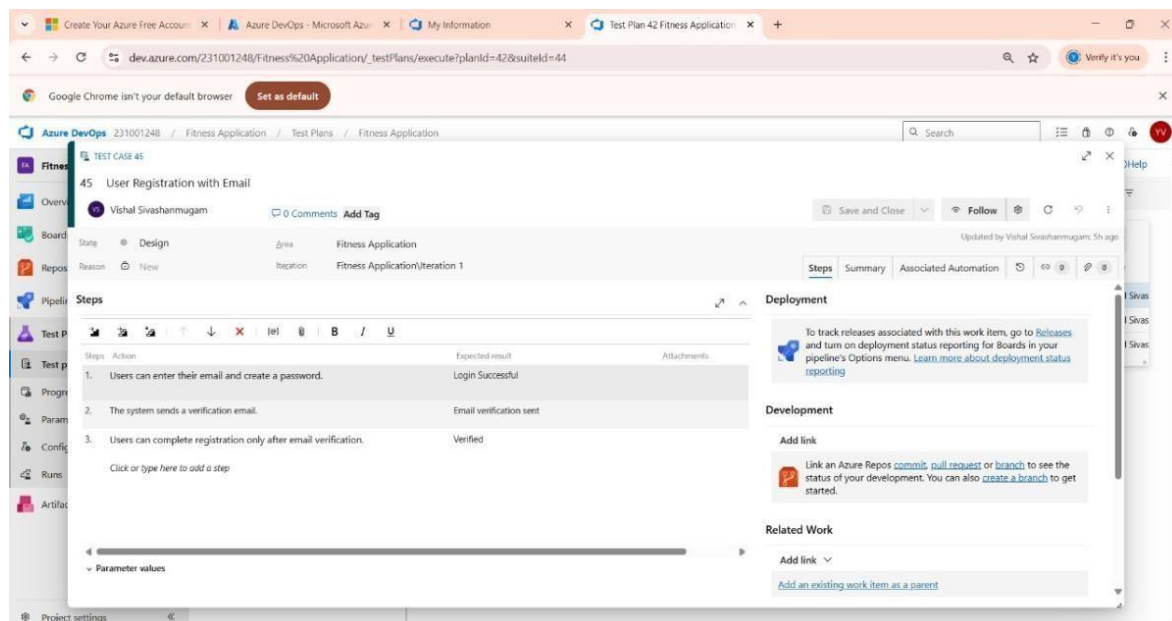
1. TC13 – Generate Workout Plan Based on User Goals

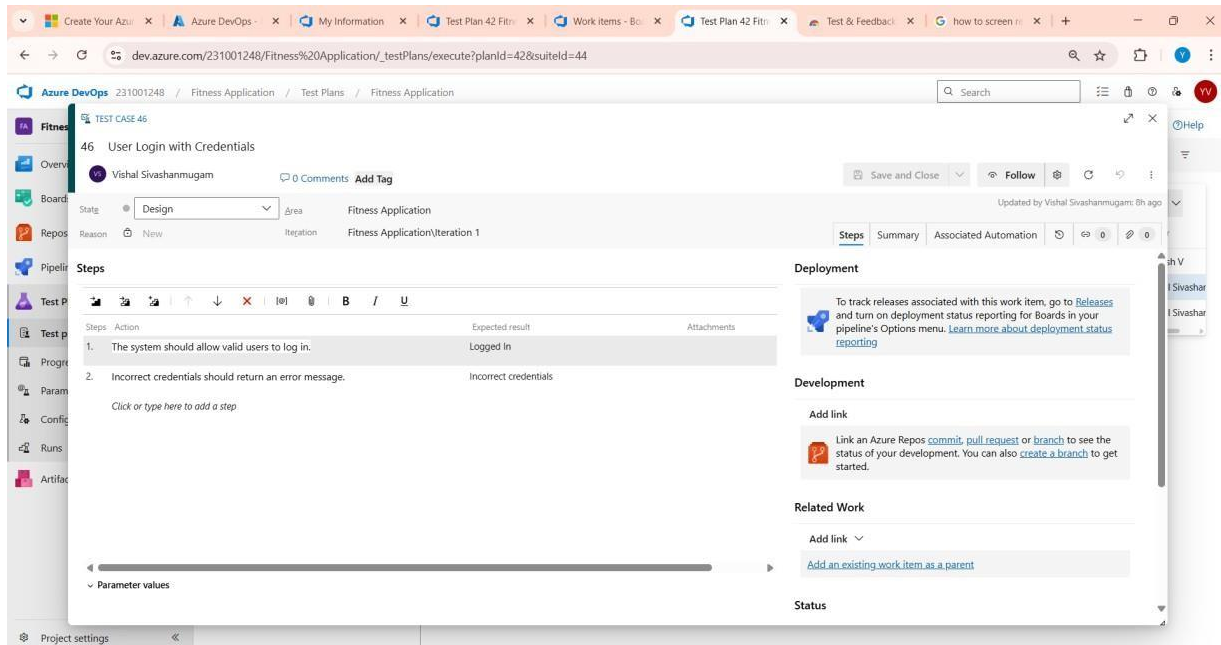
- **Action:**
 - Login with valid credentials.
 - Click on "Generate Workout plan".
 - Select categories.
 - Click "Generate plan".
- **Expected Results:**
 - Workout is generated based on selected goal and user profile.
- **Type:** Happy Path

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

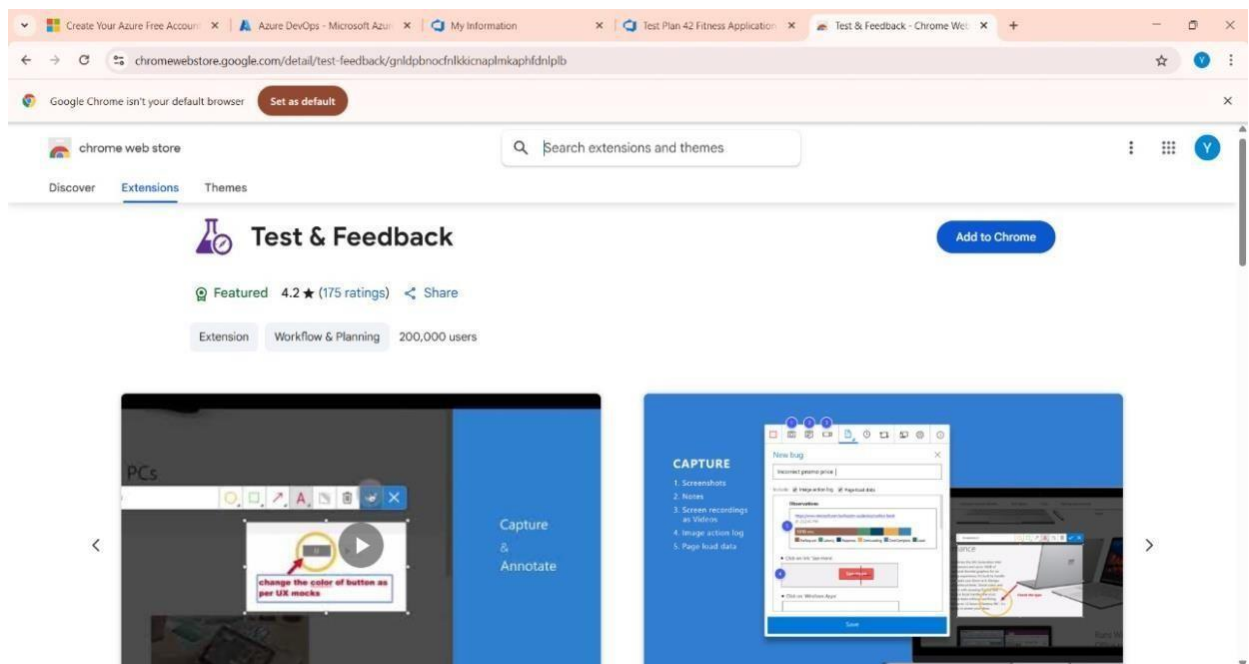
- **Action:**
 - Login with valid credentials.
 - Click on "Generate Workout plan".
 - Select categories.
 - Click "Generate plan".
- **Expected Results:**
 - Error message: "Please select a fitness goal" or "Unable to generate plan with the given input" is shown.
- **Type:** Error Path

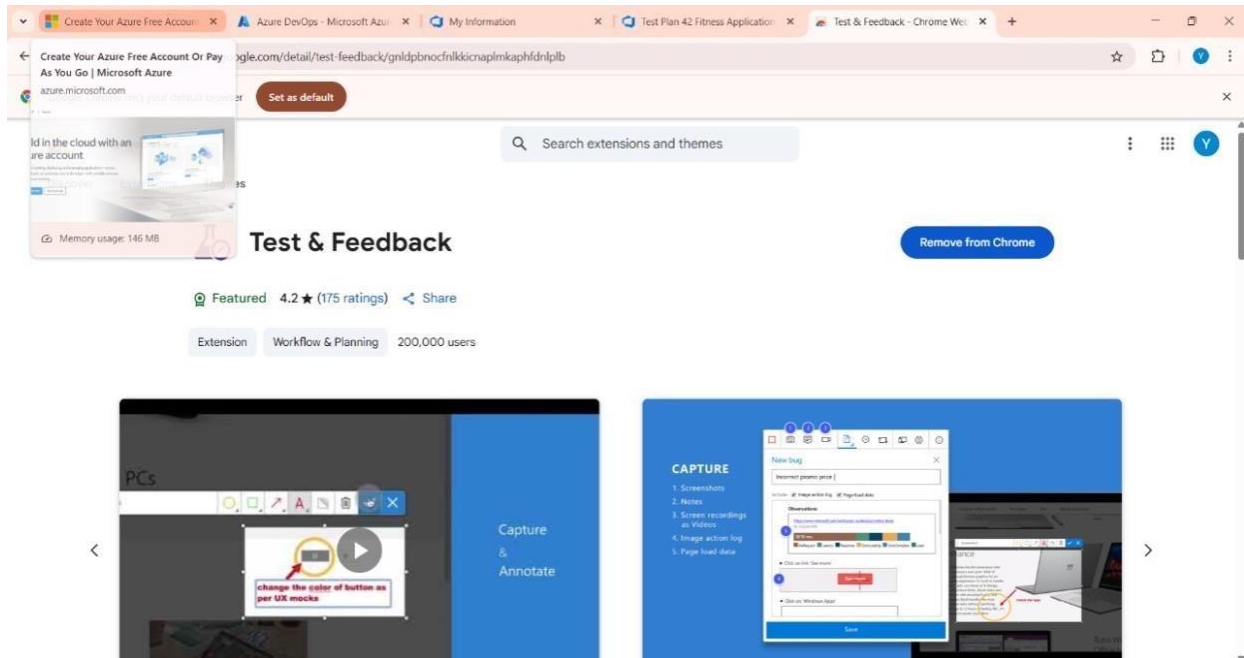
Test Cases



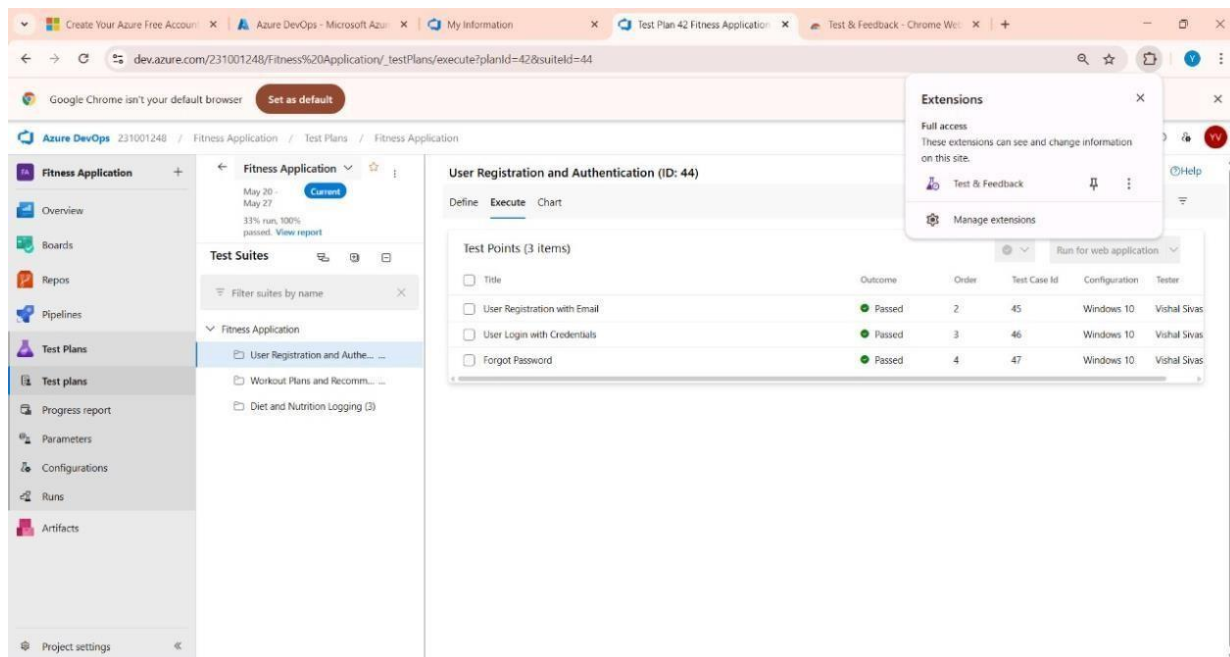


4. Installation of test





Test and feedback
Showing it as an extension



5. Running the test cases

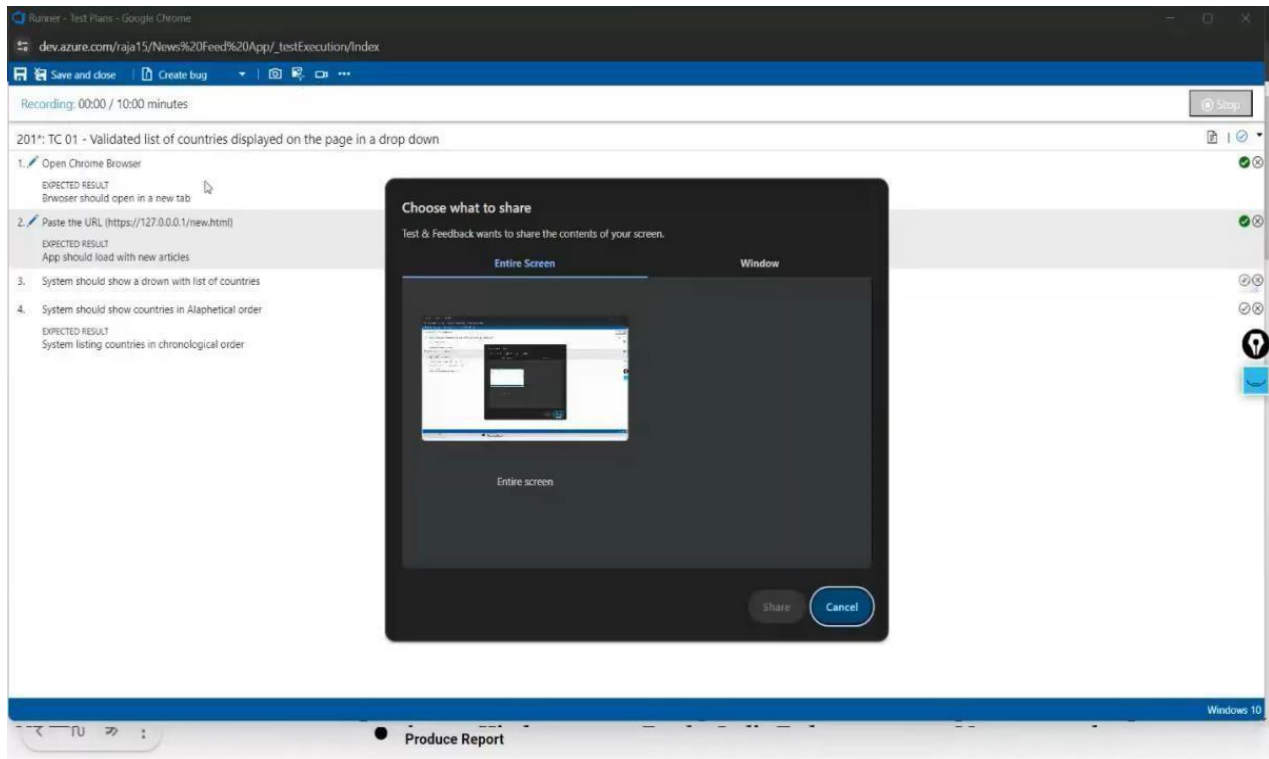
The screenshot shows the Azure DevOps Test Plans interface for a project named 'Fitness Application'. The left sidebar contains navigation options: Overview, Boards, Repos, Pipelines, Test Plans, Test plans, Progress report, Parameters, Configurations, Runs, and Artifacts. The 'Test Plans' section is selected, showing a list of test suites under 'Fitness Application'. The 'User Registration and Authentication' test suite is selected, showing a status of '33% run, 100% passed'. The main area displays the 'User Registration and Authentication (ID: 44)' test suite with tabs for 'Define', 'Execute', and 'Chart'. The 'Execute' tab is active, showing a table of test points. A context menu is open over the first test point, 'User Registration with Email', with 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 open with options: Run for web application, Run for desktop application, and Run with options.

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

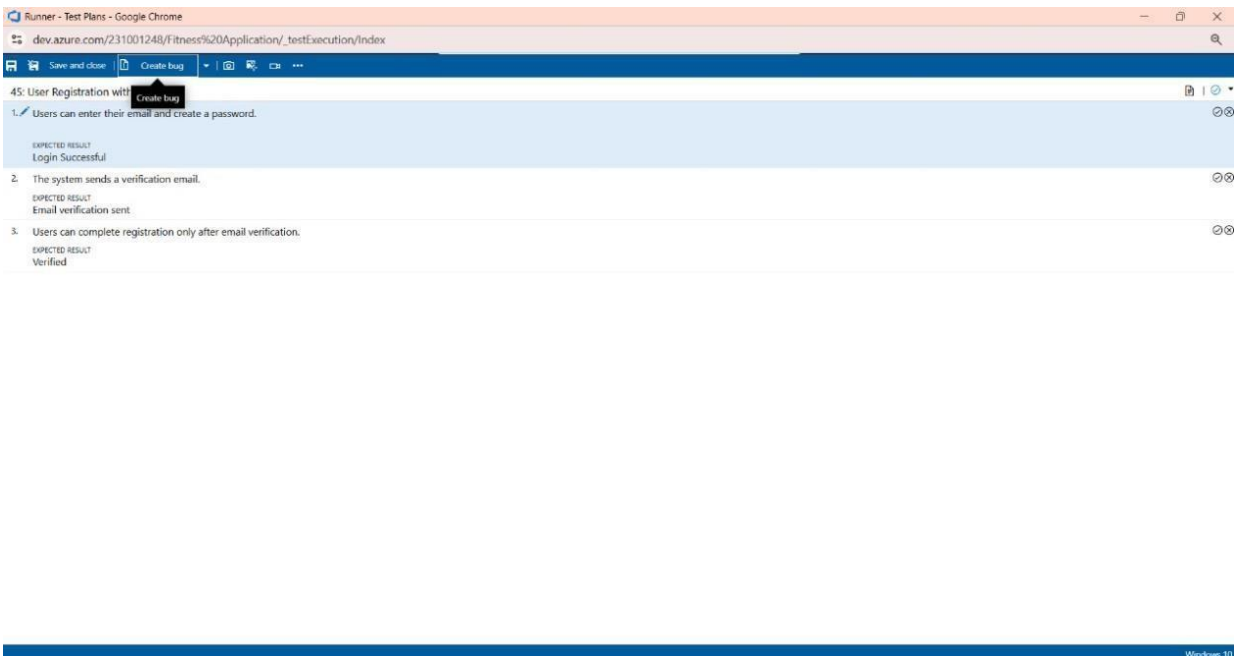
The screenshot shows the 'Runner - Test Plans - Google Chrome' window displaying the execution details of the 'User Registration with Email' test case. The test case is titled '45: User Registration with Email' and has a status of 'Passed'. The test steps are listed below the title, each with an 'EXPECTED RESULT' and an 'ACTUAL RESULT'.

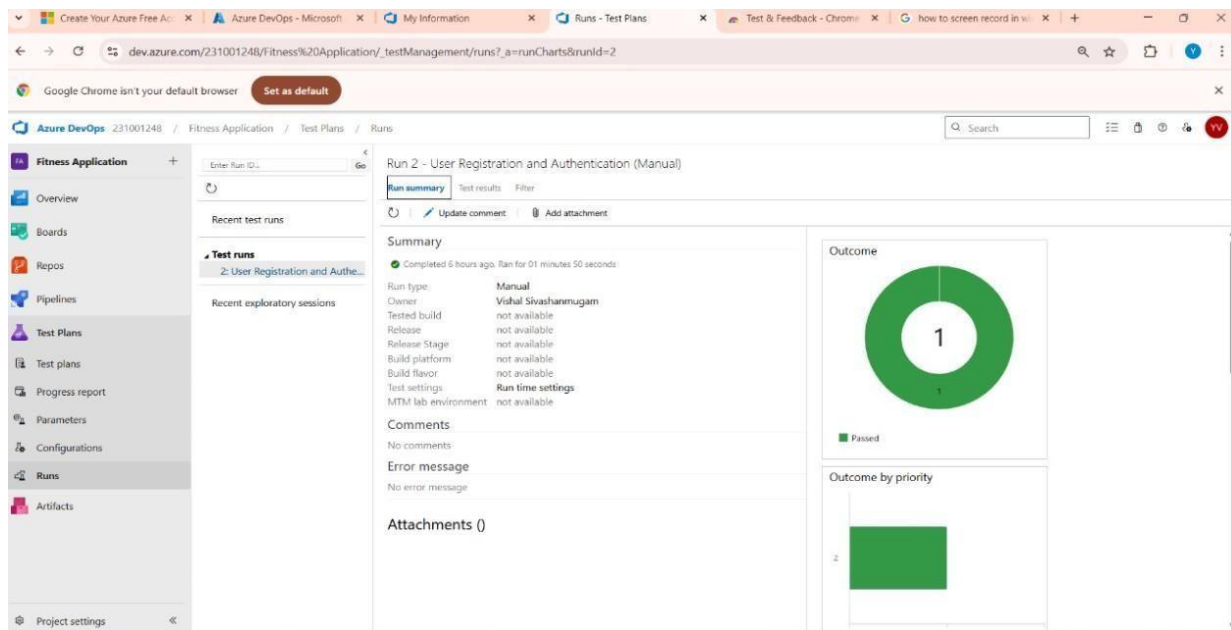
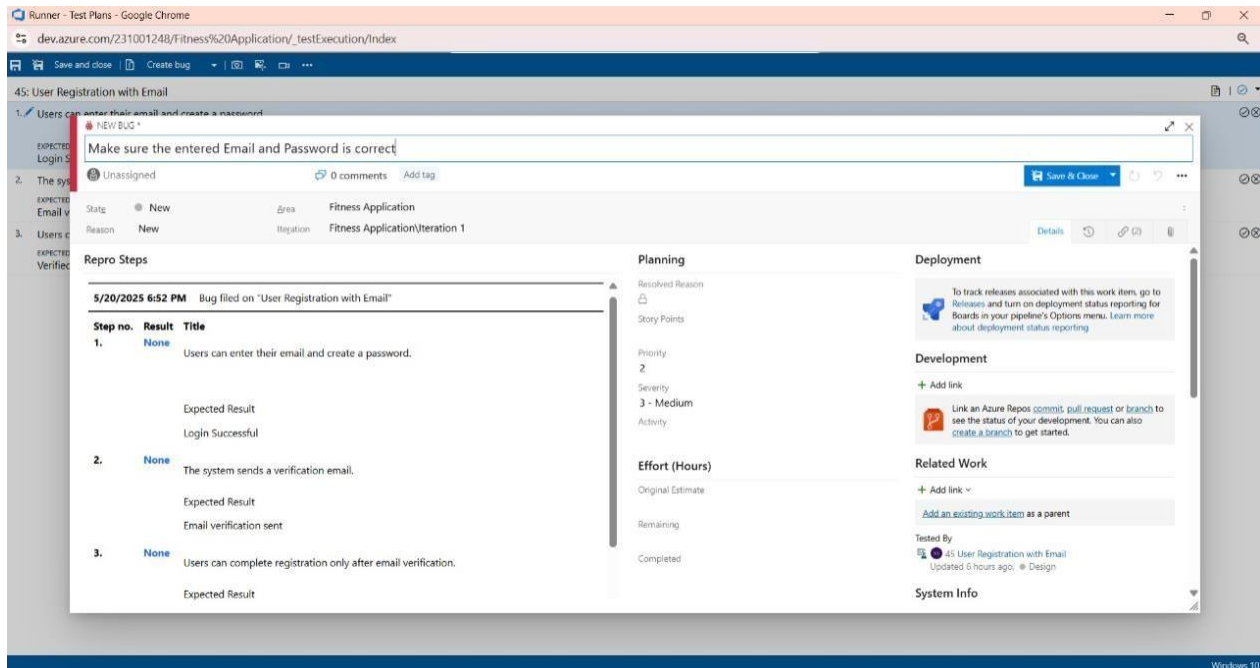
Step	Expected Result	Actual Result
1. Users can enter their email and create a password.	Login Successful	Passed
2. The system sends a verification email.	Email verification sent	Passed
3. Users can complete registration only after email verification.	Verified	Passed

6. Recording the test case



7. Creating the bug





8. Test case results

The screenshot shows the Azure DevOps interface for a test case. The left sidebar contains navigation options like Overview, Boards, Repos, Pipelines, Test Plans, and Artifacts. The main area displays the 'User Registration and Authentication (ID: 44)' test suite. A modal window titled 'User Login with Credentials' is open, showing the 'Test Case Results' for a specific test point. The results table shows a 'Passed' outcome, executed 6 hours ago on Windows 10 by Vishal Sivashanmugam. Below the table is a link to 'Open execution history for current test point'.

Outcome	TimeSta...	Configuration	Run by	Tester	Test
Passed	6h ago	Windows 10	Vishal Sivashan...	Vishal Sivashan...	Fitv

9. Test report summary

The screenshot shows the Azure DevOps interface for a work item. The left sidebar contains navigation options like Overview, Boards, Work Items, Backlogs, Sprints, Queries, Delivery Plans, Analytics views, Repos, Pipelines, Test Plans, and Artifacts. The main area displays the 'User Registration with Email' work item (ID: 45) in the 'Design' state. The 'Steps' section lists three steps: 1. Users can enter their email and create a password. (Expected result: Login Successful), 2. The system sends a verification email. (Expected result: Email verification sent), and 3. Users can complete registration only after email verification. (Expected result: Verified). The right sidebar contains sections for Deployment, Development, and Related Work.

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	

- Assigning bug to the developer and changing state

The screenshot shows the Azure DevOps interface for a bug in the 'Fitness Application'. The bug is titled '57 Make sure the entered Email and Password is correct' and is in the 'New' state. It is located in the 'Fitness Application' area, specifically in 'Iteration 1'. The bug description states: 'Bug filed on "User Registration with Email"'. The 'Repro Steps' section lists three steps:

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

The right sidebar contains sections for 'Planning' (Story Points, Priority, Severity, 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.), and 'Related Work' (Add link, Add an existing work item as a parent, Tested By).

10. Progress report

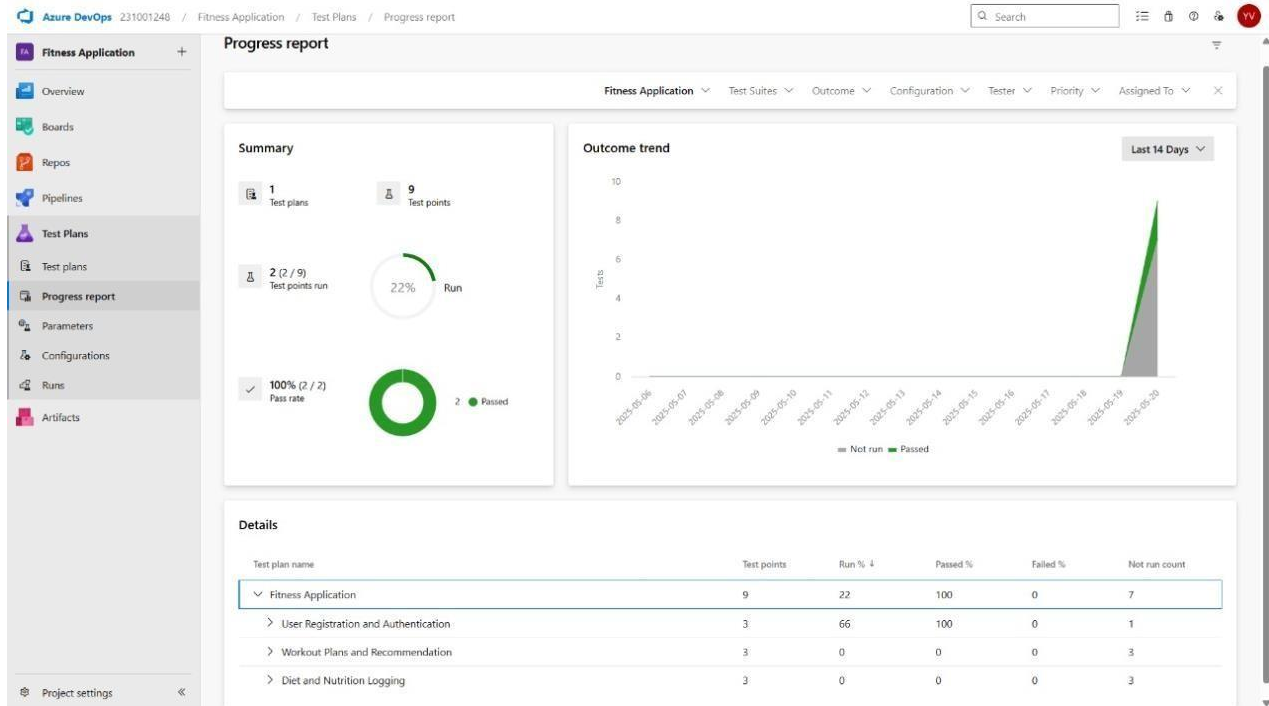
The screenshot shows the Azure DevOps 'Progress report' page for the 'Fitness Application'. The page displays a summary of test results and an outcome trend graph.

Summary:

- 1 Test plan
- 9 Test points
- 2 (2 / 9) Test points run
- 22% Run
- 100% (2 / 2) Pass rate
- 2 Passed

Outcome trend: A line graph showing the number of tests run over time. The x-axis represents dates from 2023-05-06 to 2023-05-30. The y-axis represents the number of tests (0 to 10). The graph shows a sharp increase in tests run starting around 2023-05-28, reaching a peak of 9 tests by 2023-05-30. The legend indicates 'Not run' (grey) and 'Passed' (green).

Details: A table with columns: Test plan name, Test points, Run %, Passed %, Failed %, and Not run count.



11. Changing the test template

Create Your Azure DevOps x Azure DevOps x My Information x Test Plan 42 F... x Work items - Bo... x Settings - Process x Test & Feedback x how to screen... x

dev.azure.com/231001248/_settings/process

Azure DevOps 231001248 / Settings / Process

Search

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

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 Scrum.	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

Browser tabs: Create Your Azu, Azure DevOps, My Information, Test Plan 42 Fil, Work items - B, Settings - Proce, Test & Feedback, how to screen

Address bar: dev.azure.com/231001248/_settings/process

Azure DevOps 231001248 / Settings / Process

Organization Settin... 231001248

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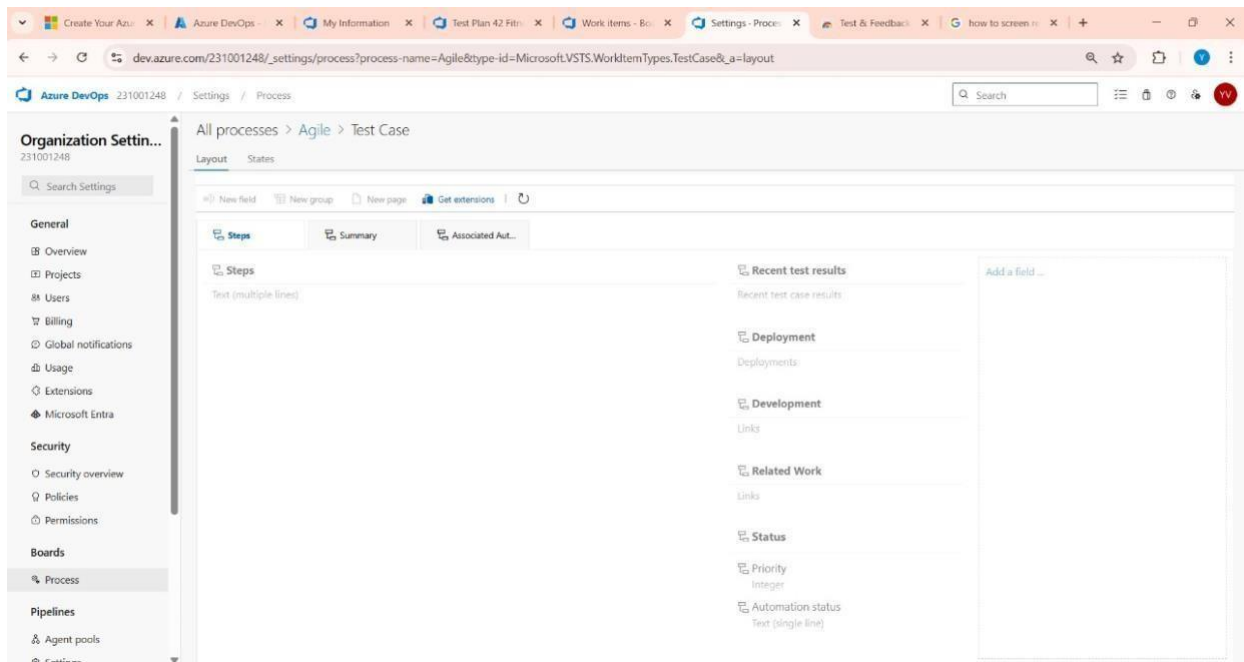
12. View the new test case template

This screenshot shows the 'Work item types' page in the Azure DevOps 'Settings - Process' section. The left sidebar contains the 'Organization Settings' menu with categories like General, Security, and Boards. The 'Process' option under 'Boards' is selected. The main content area is titled 'All processes > Agile' and has tabs for 'Work item types', 'Backlog levels', and 'Projects'. The 'Work item types' tab is active, displaying 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 'Projects' page in the Azure DevOps 'Settings - Process' section. The left sidebar is identical to the previous screenshot. The main content area is titled 'All processes > Agile' and has tabs for 'Work item types', 'Backlog levels', and 'Projects'. The 'Projects' tab is active, displaying 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

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:

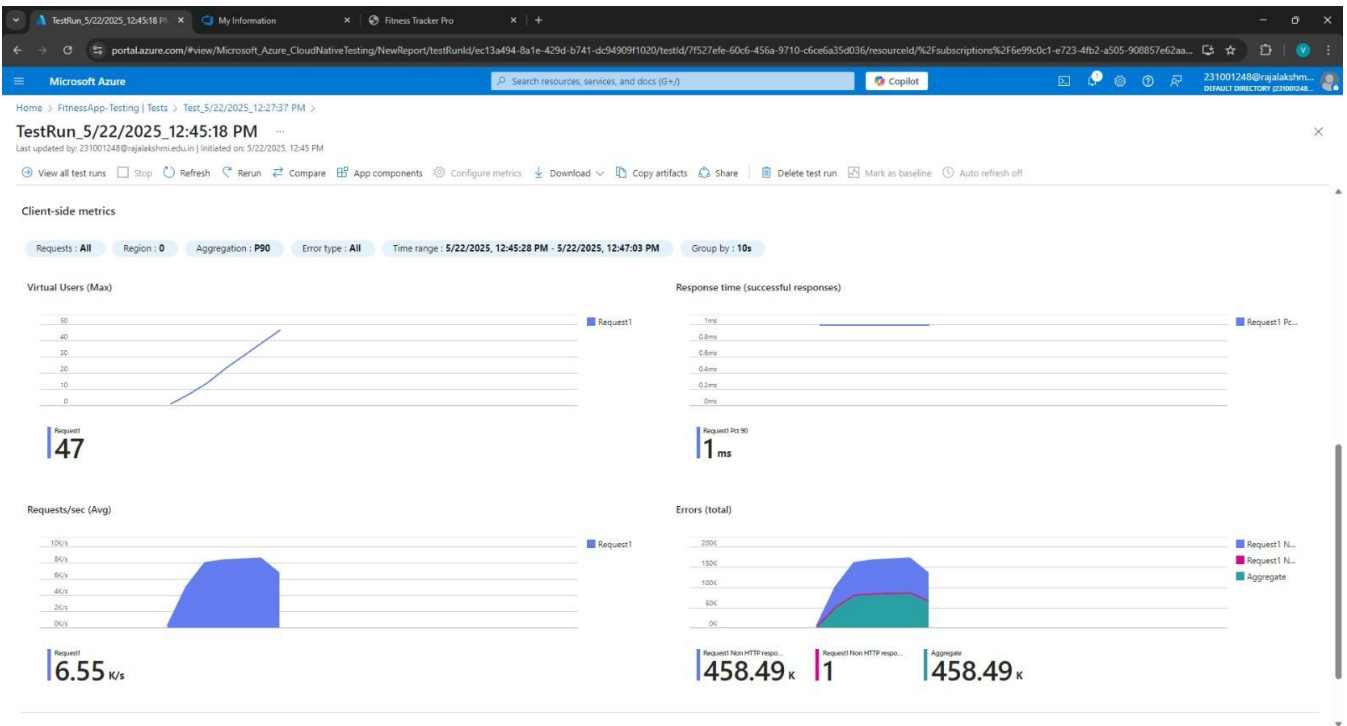
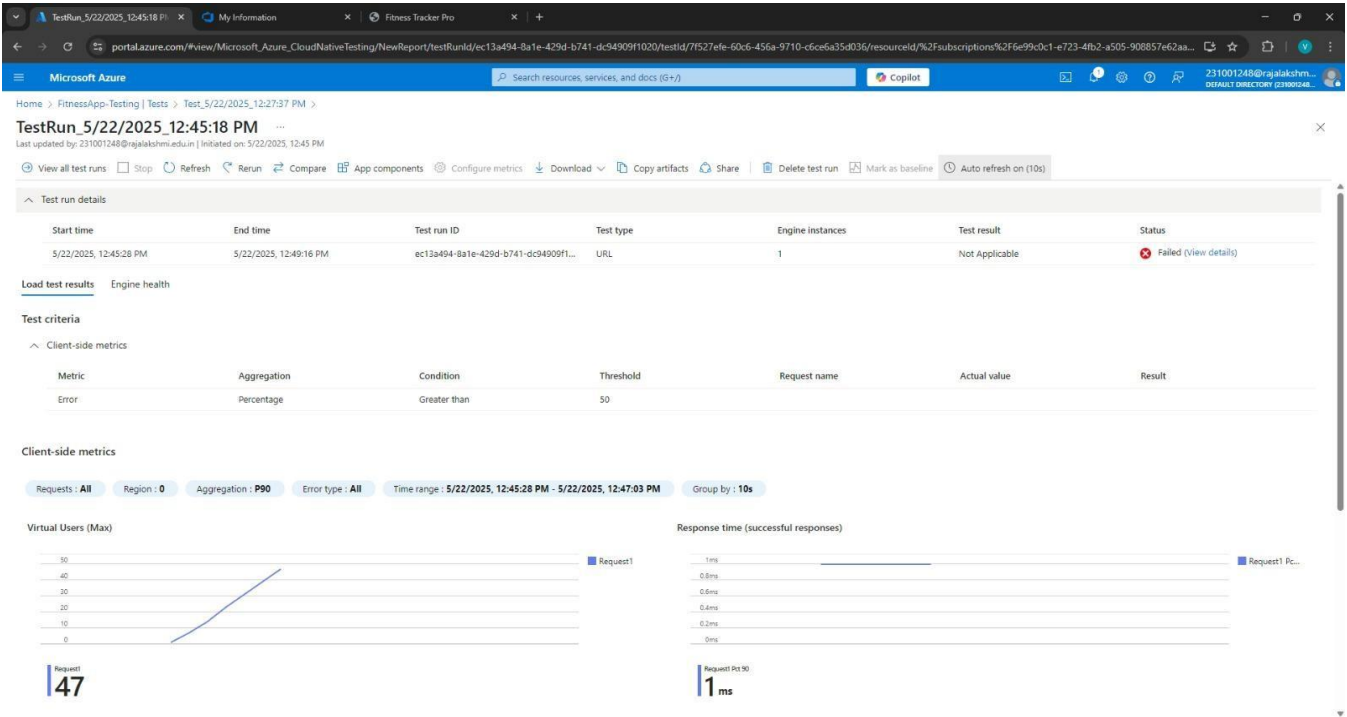
1. Sign in to Azure Portal
Go to <https://portal.azure.com> and log in.
2. Create the Resource
 - Go to *Create a resource* → Search for “Azure Load Testing”.
 - Select Azure Load Testing and click Create.
3. Fill in the Configuration Details
 - *Subscription*: Choose your Azure subscription.
 - *Resource 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.

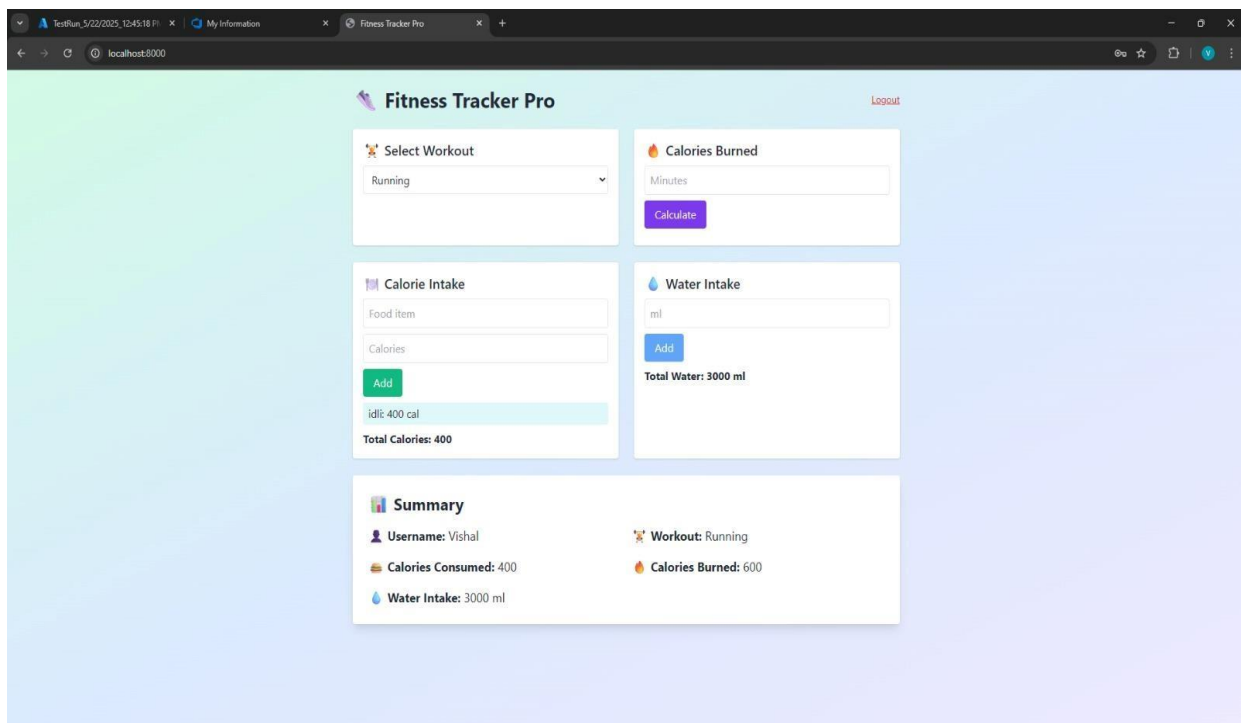
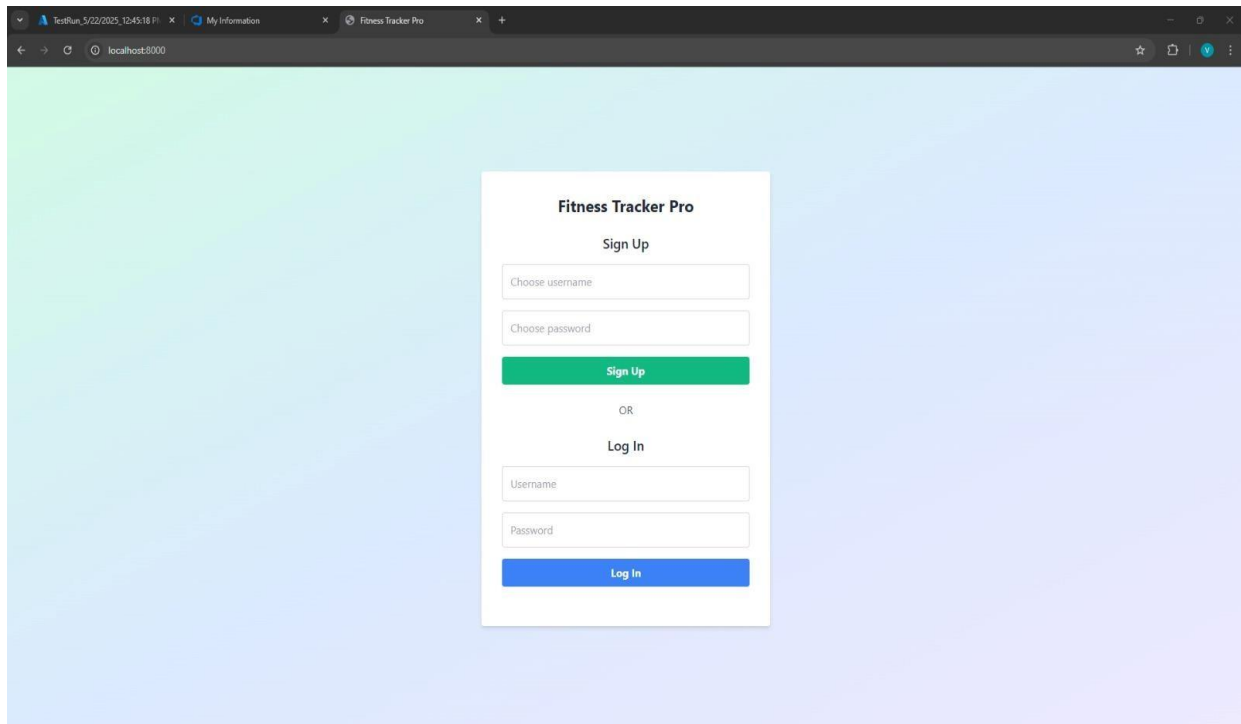
Steps to Create and Run a Load Test:

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.

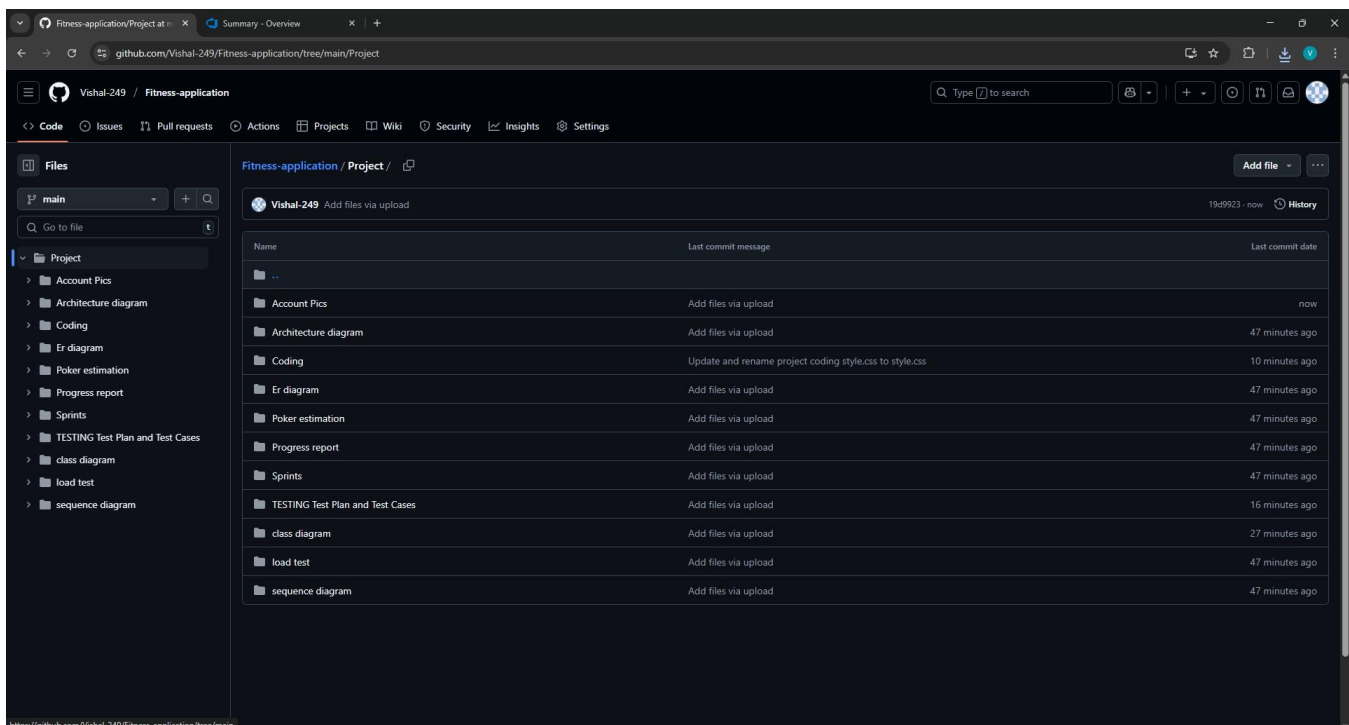
EXP NO: 10

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.