



# RAJALAKSHMI ENGINEERING COLLEGE

## SOFTWARE CONSTRUCTION

### Laboratory Record Note Book

|                           |                        |
|---------------------------|------------------------|
| Name :                    | HARISH S               |
| Year / Branch / Section : | 2 <sup>nd</sup> /IT/FA |
| Register No. :            | 231001057              |
| Semester :                | 4                      |
| Academic Year :           | 2024 - 2025            |



**RAJALAKSHMI ENGINEERING COLLEGE  
(AUTONOMOUS)**

**RAJALAKSHMI NAGAR, THANDALAM – 602 105**

**BONAFIDE CERTIFICATE**

NAME HARISH S REGISTER NO 231001057

ACADEMIC YEAR 2024-25 **SEMESTER- IV** **BRANCH:** B. Tech Information  
Technology FA. This Certification is the Bonafide record of work done by the  
above student in the **CS23432- Software Construction** Laboratory during the year  
2024-2025.

Signature of Faculty -in \_ Charge

Submitted for the Practical Examination held on \_\_\_\_\_

Internal Examiner  
2116231001057  
CS23432

External Examiner

**LAB PLAN**  
**CS23432-SOFTWARE CONSTRUCTION LAB**

| <b>Ex No</b> | <b>Date</b> | <b>Topic</b>  | <b>Page No</b> | <b>Sign</b> |
|--------------|-------------|---|----------------|-------------|
| 1            | 21/01/2025  | Study of Azure DevOps   |                |             |
| 2            | 28/01/2025  | Problem Statement   |                |             |
| 3            | 04/02/2025  | Agile Planning  |                |             |
| 4            | 18/02/2025  | Create User stories with Acceptance Criteria                  |                |             |
| 5            | 25/02/2025  | Designing Sequence Diagrams using Azure DevOps-WIKI           |                |             |
| 6            | 04/03/2025  | Designing Class Diagram using Azure DevOps-WIKI               |                |             |
| 7            | 11/03/2025  | Designing Use case Diagram using Azure DevOps-WIKI            |                |             |
| 8            | 18/03/2025  | Designing Activity Diagrams using Azure DevOps-WIKI           |                |             |
| 9            | 25/03/2025  | Designing Architecture Diagram Using Star UML                 |                |             |
| 10           | 01/04/2025  | Design User Interface   |                |             |
| 11           | 08/04/2025  | Implementation – Design a Web Page based on Scrum Methodology |                |             |
| 12           | 15/04/2025  | Testing-Test Plan, Test Case and Load Testing                 |                |             |

|                  |                                       |
|------------------|---------------------------------------|
| <b>EXP NO: 1</b> | <b>AZURE DEVOPS ENVIRONMENT SETUP</b> |
|------------------|---------------------------------------|

**Aim:**

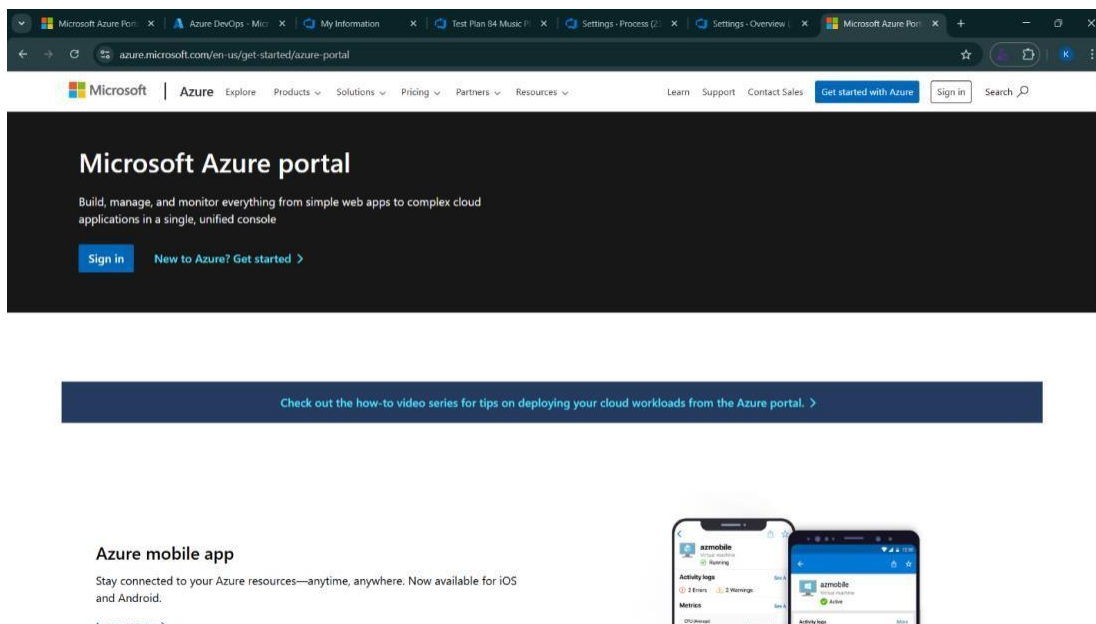
To set up and access the Azure DevOps environment by creating an organization through the Azure portal.

**INSTALLATION**

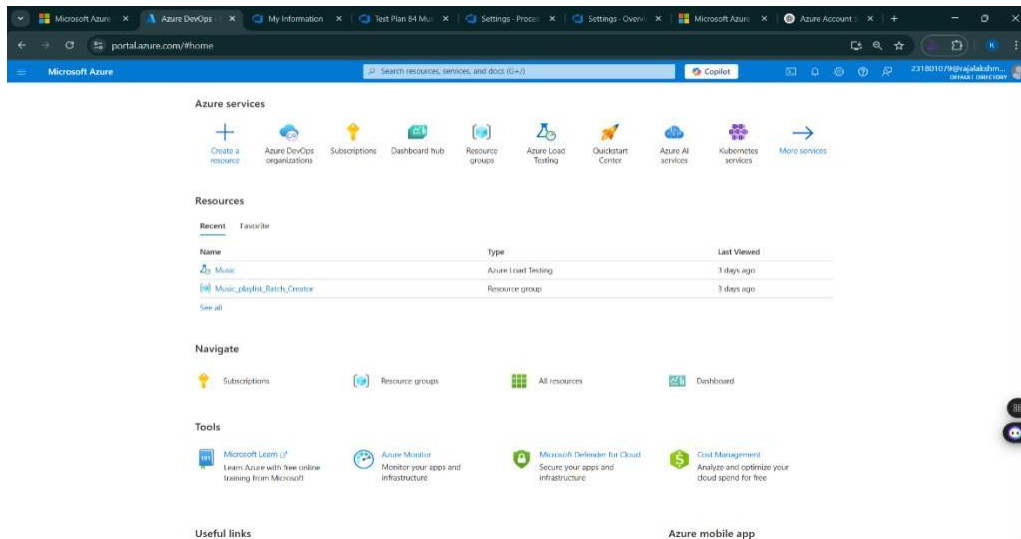
1. Open your web browser and go to the Azure website: <https://azure.microsoft.com/en-us/get-started/azure-portal>.

Sign in using your Microsoft account credentials.

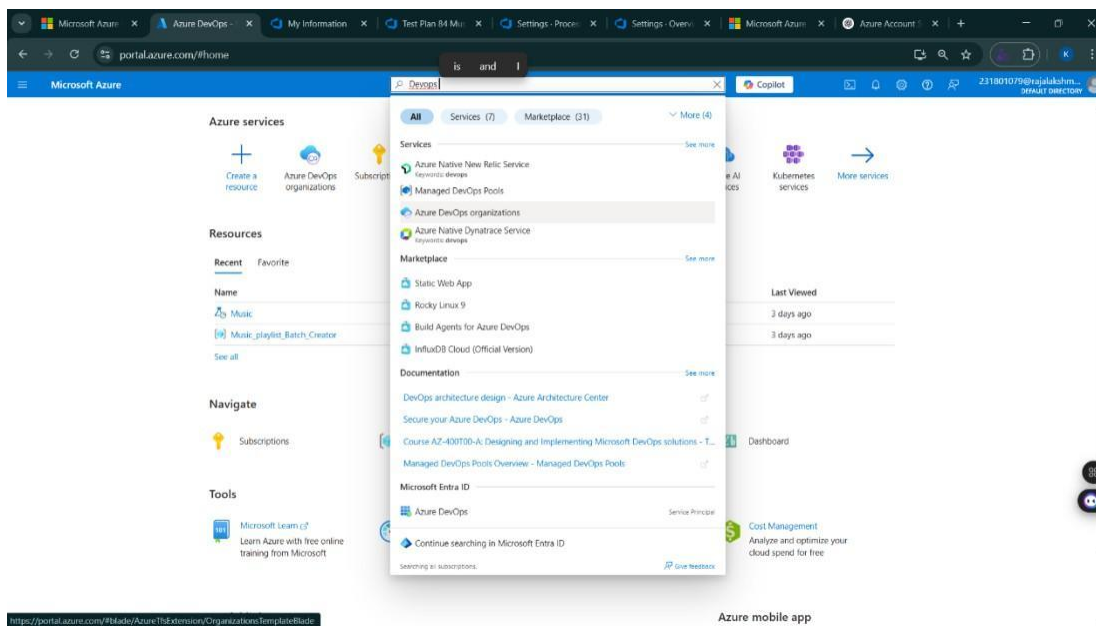
If you don't have a Microsoft account, you can create one here: <https://signup.live.com/?lic=1>



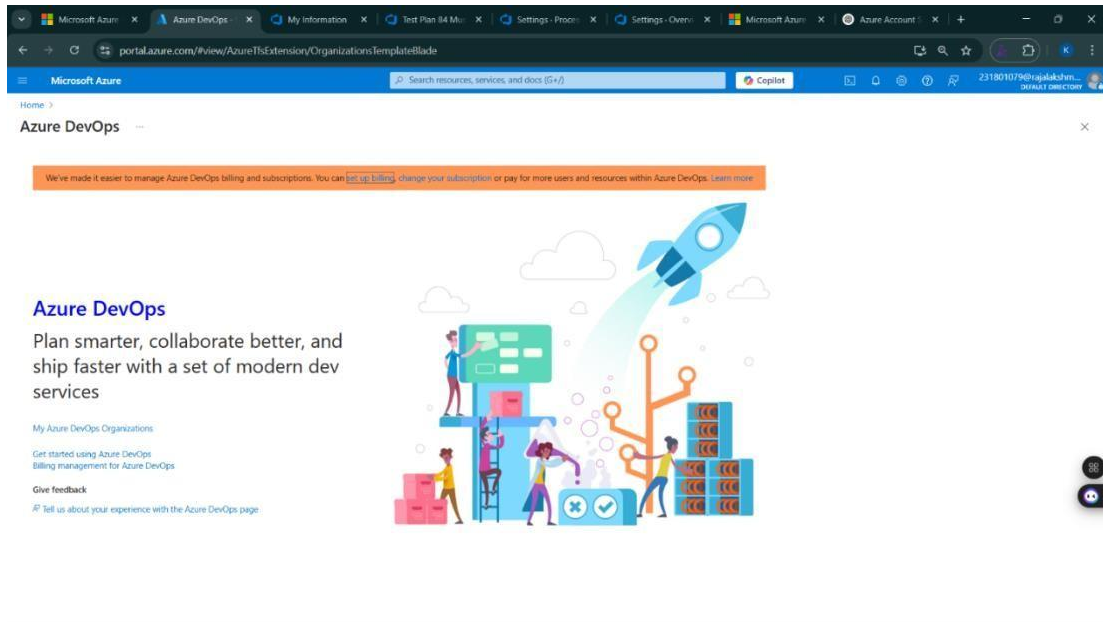
## 2. Azure home page



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.

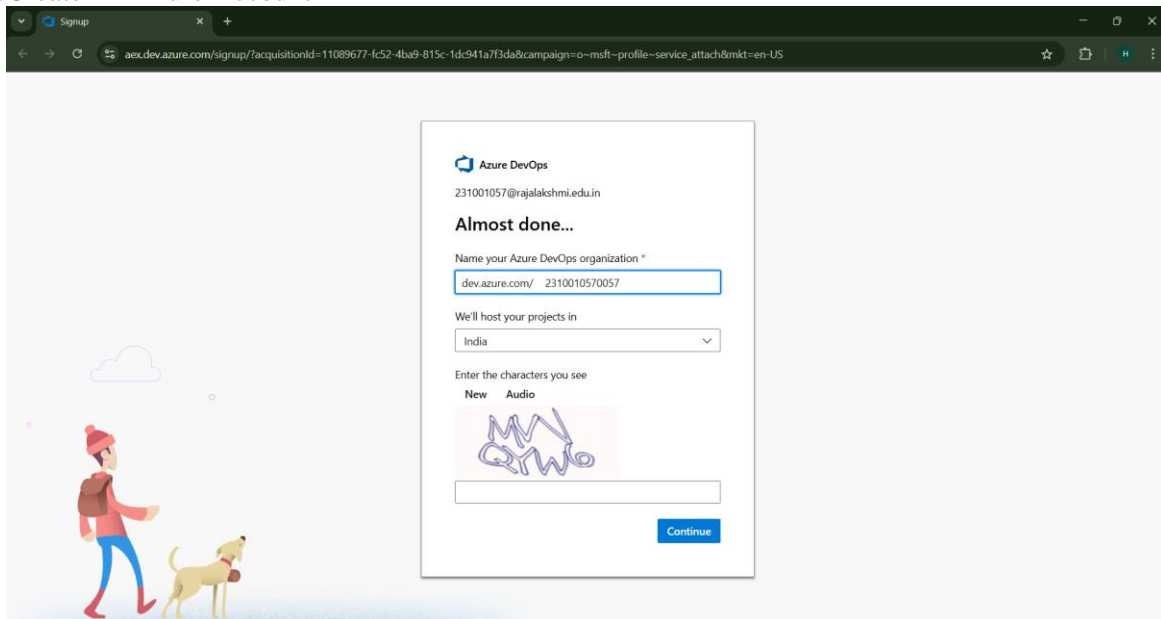
EXP NO: 2

## 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 \*

E LEARNING PLATFORM

### 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.

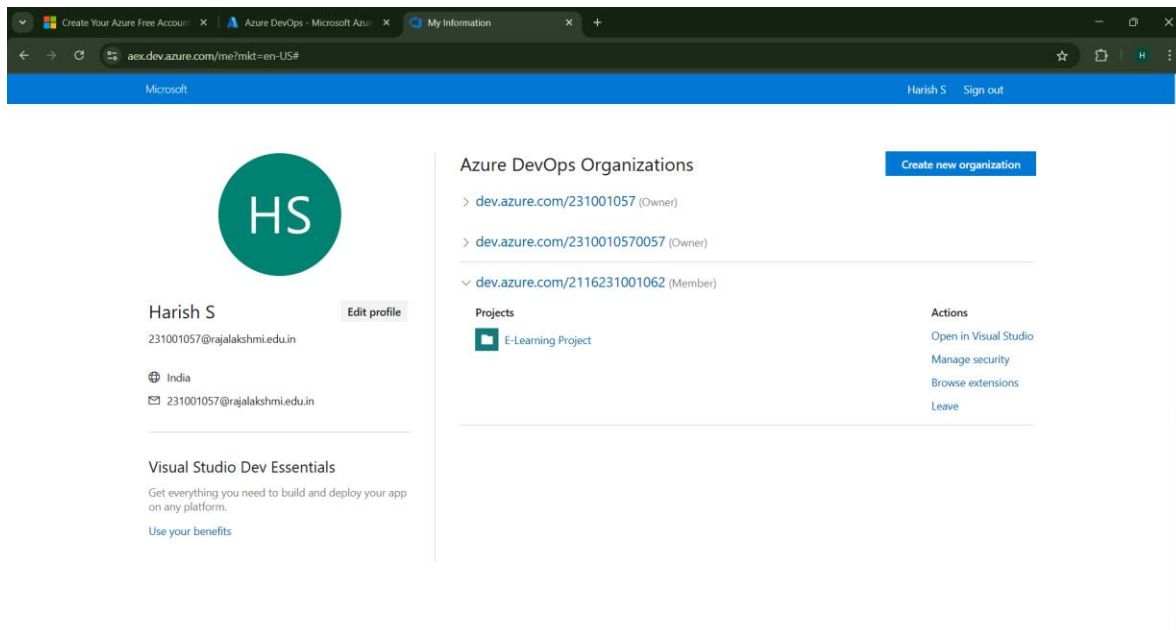


Public projects are disabled for your organization. You can turn on public visibility with [organization policies](#).

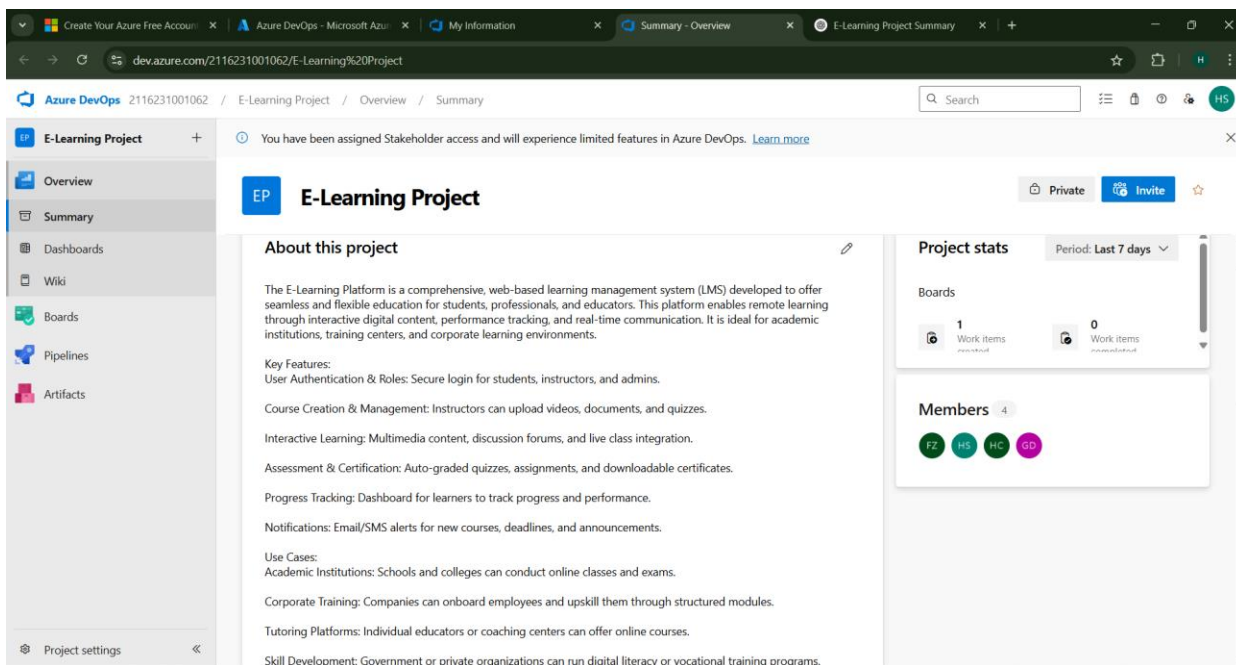
+ Create project

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.

The screenshot shows the Azure DevOps interface for the 'E-Learning Project' team. The left-hand navigation menu is visible, with 'Boards' selected. The main area displays the 'Backlog' view for the 'E-Learning Project Team'. A table lists work items, all of which are 'Epic' type and 'New' state. The right-hand pane shows the 'Planning' view, which includes a timeline for the 'E-Learning Project Team backlog' and details for 'Iteration 1' and 'Iteration 2'.

| Order | Work Item Type | Title   | State | Effort | Busin... | Value |
|-------|----------------|---|-------|--------|----------|-------|
| 1     | Epic           | > Course Content Enhancement and Multimedia Integration | New   |        | Busin... |       |
| 2     | Epic           | > Course Discovery and Enrollment                       | New   |        | Busin... |       |
| 3     | Epic           | > Learning Material Access and Engagement               | New   |        | Busin... |       |
| 4     | Epic           | > Assignments and Grading                               | New   |        | Busin... |       |
| 5     | Epic           | > Communication and Collaboration                       | New   |        | Busin... |       |
| 6     | Epic           | > Course Management for Instructors                     | New   |        | Busin... |       |
| 7     | Epic           | > Student Engagement and Communication                  | New   |        | Busin... |       |
| 8     | Epic           | > Platform Personalization and Accessibility            | New   |        | Busin... |       |

This screenshot shows a Microsoft sign-in overlay on top of the Azure DevOps interface. The overlay displays the user's name 'Harish S' and email address '231001057@rajalakshmi.edu.in'. It includes links for 'My Microsoft account' and 'Switch directory'. A 'Sign in with a different account' button is also visible. The background shows the 'E-Learning Project Team backlog' view from the previous screenshot.

**Result:**

Successfully created an Azure DevOps project with user story management and an 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 the 'E-Learning Project Team'. The left sidebar contains navigation options: Overview, Boards, Work items, Boards, Backlogs (selected), Sprints, Queries, Delivery Plans, Pipelines, and Artifacts. The main area displays a backlog table with columns: Order, Work Item Type, Title, State, Effort, Business Value, Value Area, and Tags. The table lists 8 items, including Epics like 'Course Content Enhancement and Multimedia Integration' and 'Course Discovery and Enrollment', and User Stories like 'YouTube Videos in Lessons' and 'Attach PDF Study Materials'. All items are in the 'New' state.

| Order | Work Item Type | Title   | State | Effort | Business Value | Value Area | Tags |
|-------|----------------|---|-------|--------|----------------|------------|------|
| 1     | Epic           | Course Content Enhancement and Multimedia Integration | New   |        |                | Business   |      |
|       | Feature        | Multimedia Lesson Integration                         | New   |        |                | Business   |      |
|       | User Story     | YouTube Videos in Lessons                             | New   |        |                | Business   |      |
|       | User Story     | Attach PDF Study Materials                            | New   |        |                | Business   |      |
|       | User Story     | Add Interactive Elements in Lessons                   | New   |        |                | Business   |      |
|       | Feature        | Supplementary Resource Management                     | New   |        |                | Business   |      |
| 2     | Epic           | Course Discovery and Enrollment                       | New   |        |                | Business   |      |
| 3     | Epic           | Learning Material Access and Engagement               | New   |        |                | Business   |      |
| 4     | Epic           | Assignments and Grading                               | New   |        |                | Business   |      |
| 5     | Epic           | Communication and Collaboration                       | New   |        |                | Business   |      |
| 6     | Epic           | Course Management for Instructors                     | New   |        |                | Business   |      |
| 7     | Epic           | Student Engagement and Communication                  | New   |        |                | Business   |      |
| 8     | Epic           | Platform Personalization and Accessibility            | New   |        |                | Business   |      |

## 1.Fill in Epics

The screenshot shows the detail view for 'Epic 58: Course Content Enhancement and Multimedia Integration'. The top section includes the title, state (New), area (E-Learning Project), and iteration (E-Learning Project/Iteration 1). The main content area is divided into three columns: Description, Planning, and Deployment. The Description column has a text input field for adding a description. The Planning column includes fields for Priority (2), Risk, Effort, Business Value, Time Criticality, Start Date, and Target Date. The Deployment column includes a section for 'Add link' with instructions on how to link an Azure Repos commit, pull request, or branch. The bottom section is labeled 'Related Work' and includes a link to 'Add an existing work item as a parent'.

## 2.Fill in Features

FEATURE 59

59 Multimedia Lesson Integration

No one selected0 CommentsAdd Tag

Save and CloseFollow

Updated by Harish S: Apr 25

Details

StateNew

AreaE-Learning Project

ReasonNew

IterationE-Learning Project/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.

Planning

Priority2

Risk

Effort

Business Value

Time Criticality

Start Date

Target Date

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

58 Course Content Enhancement and Multimedia L...

Updated Apr 25 @ New

## 3.Fill in User Story Details

USER STORY 60

60 YouTube Videos in Lessons

No one selected0 CommentsAdd Tag

Save and CloseFollow

Updated by Harish S: Apr 25

Details

StateNew

AreaE-Learning Project

ReasonNew

IterationE-Learning Project/Iteration 1

Description

As an **instructor**, I want to embed YouTube videos into my lessons, so that students can benefit from external visual resources.

Acceptance Criteria

- Acceptance Criteria 1:** Instructors can embed YouTube links into lesson content using a video block.
- Acceptance Criteria 2:** Students can play the video directly without being redirected from the platform.

Discussion

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

Planning

Story Points

Priority2

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

59 Multimedia Lesson Integration

Updated Apr 25 @ New

**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 Music Playlist Batch Creator Project.

## Sprint Planning Sprint 1

The screenshot shows the Azure DevOps interface for the 'E-Learning Project' team. The left sidebar contains navigation options: Overview, Boards, Work items, Boards, Backlogs, Sprints (selected), Queries, Delivery Plans, Pipelines, Artifacts, and Project settings. The main area displays the 'Taskboard' for 'Iteration 1' with columns for 'New', 'Active', 'Resolved', and 'Closed'. Three work items are listed in the 'New' column:

- 61 Attach PDF Study Materials (New, Unassigned)
- 62 Add Interactive Elements in Lessons (New, Unassigned)
- 64 Add Recommended Reading Links (New, Unassigned)

Each work item has a dropdown arrow to its right. The interface also includes a search bar, a 'New Work Item' button, and a 'Column Options' button.

## Sprint-2

dev.azure.com/2116231001062/E-Learning%20Project/\_sprints/taskboard/E-Learning%20Project%20Team/E-Learning%20Project/iteration%202

Azure DevOps 2116231001062 / E-Learning Project / Boards / Sprints

Did you notice Azure Boards has a new look and awesome new features? [Learn more.](#)

### E-Learning Project Team

+ New Work Item Column Options

Taskboard Backlog Analytics

Iteration 2 Person: All No iteration dates

| Collapse all   | New | Active | Resolved | Closed |
|--|-----|--------|----------|--------|
| 6 One-Click Course Enrollment<br>New<br>Hemanth C              |     |        |          |        |
| 7 Access Welcome and Orientation Material<br>New<br>Unassigned |     |        |          |        |
| 35 Send Private Messages<br>New                                |     |        |          |        |



## Sprint 3

dev.azure.com/2116231001062/E-Learning%20Project/\_sprints/taskboard/E-Learning%20Project%20Team/E-Learning%20Project/iteration%203

Azure DevOps 2116231001062 / E-Learning Project / Boards / Sprints

Search

E-Learning Project

Overview

Boards

Work items

Boards

Backlogs

Sprints

Queries

Delivery Plans

Pipelines

Artifacts

Project settings

Did you notice Azure Boards has a new look and awesome new features? [Learn more.](#)

E-Learning Project Team

+ New Work Item

Column Options

Taskboard Backlog Analytics

Iteration 3 Person: All

No iteration dates

| Collapse all   | New | Active | Resolved | Closed |
|--|-----|--------|----------|--------|
| <div>22 Lesson Assignments and Lesson Completion</div> <div>New</div> <div>Unassigned</div>  |     |        |          |        |
| <div>70 Pin Favorite Course</div> <div>New</div> <div>Unassigned</div>                       |     |        |          |        |
| <div>73 Support Screen Readers for Course Content</div> <div>New</div> <div>Unassigned</div> |     |        |          |        |

## Sprint 4

dev.azure.com/2116231001062/E-Learning%20Project/\_sprints/taskboard/E-Learning%20Project%20Team/E-Learning%20Project/iteration-4

Azure DevOps 2116231001062 / E-Learning Project / Boards / Sprints

Search

E-Learning Project

Overview

Boards

Work items

Boards

Backlogs

Sprints

Queries

Delivery Plans

Pipelines

Artifacts

Project settings

Did you notice Azure Boards has a new look and awesome new features? [Learn more.](#)

E-Learning Project Team

+ New Work Item

Column Options

Taskboard Backlog Analytics

Iteration-4 Person: All

May 31 - June 30  
21 work days

| Collapse all   | New | Active | Resolved | Closed |
|--|-----|--------|----------|--------|
| <div>New</div> <div>Unassigned</div>   |     |        |          |        |
| <div>28 Upload Assignments Online</div> <div>New</div> <div>Unassigned</div> |     |        |          |        |
| <div>29 View Submission History</div> <div>New</div> <div>Unassigned</div>   |     |        |          |        |

**Result:**

The Sprints are created for the E-Learning Project.

|                  |                         |
|------------------|-------------------------|
| <b>EXP NO: 5</b> | <b>POKER ESTIMATION</b> |
|------------------|-------------------------|

**Aim:**

Create Poker Estimation for the user stories - E-Learning Project.

**Poker Estimation**

The screenshot shows the Azure DevOps interface for a User Story titled "10 Track Course Progress". The story is assigned to "Fagrudeen Faizan Z" and is in the "Active" state. It is part of the "E-Learning Project" area and has a reason of "Implementation started". The story is currently in the "Planning" phase.

**Description:**

**Acceptance Criteria**

- A progress bar shows percentage of course completed.
- Completed modules, watched videos, and submitted assignments are logged.
- Students receive alerts for pending tasks and upcoming deadlines.

**Discussion**

**Planning**

- Story Points: 10
- Priority: 2
- Risk: 2 - Medium

**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**

**Result:**

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

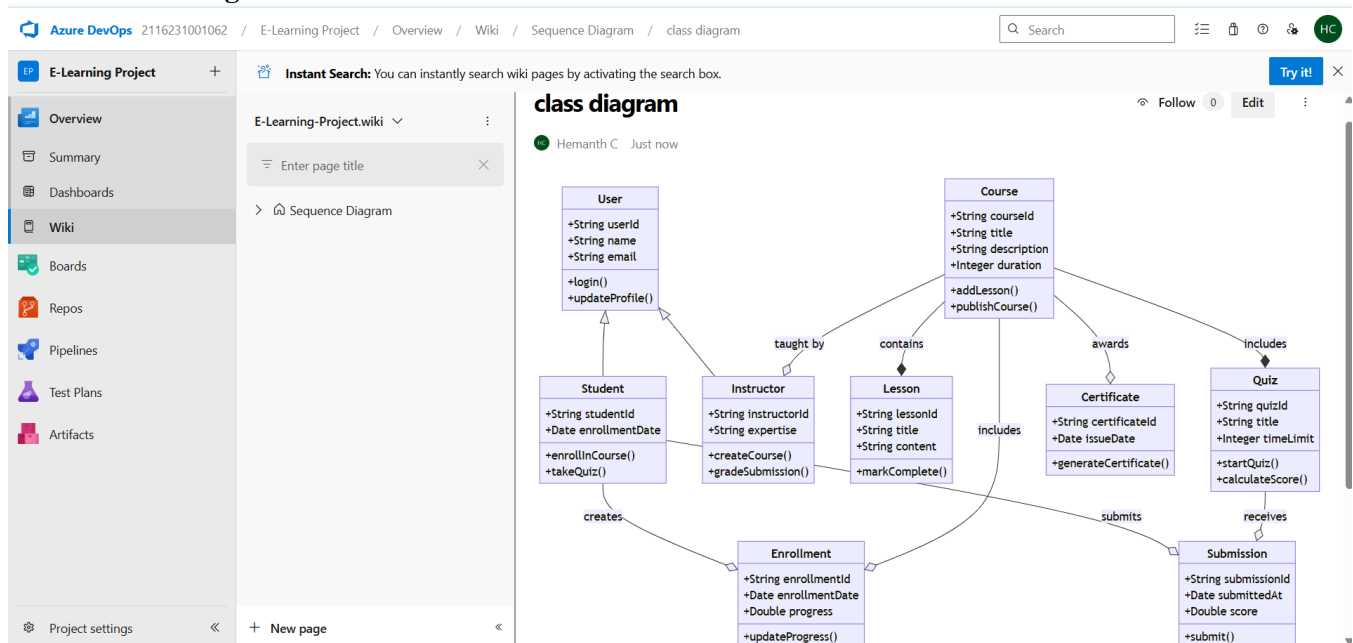
EXP NO: 6

# DESIGNING CLASS AND SEQUENCE DIAGRAMS FOR PROJECT ARCHITECTURE

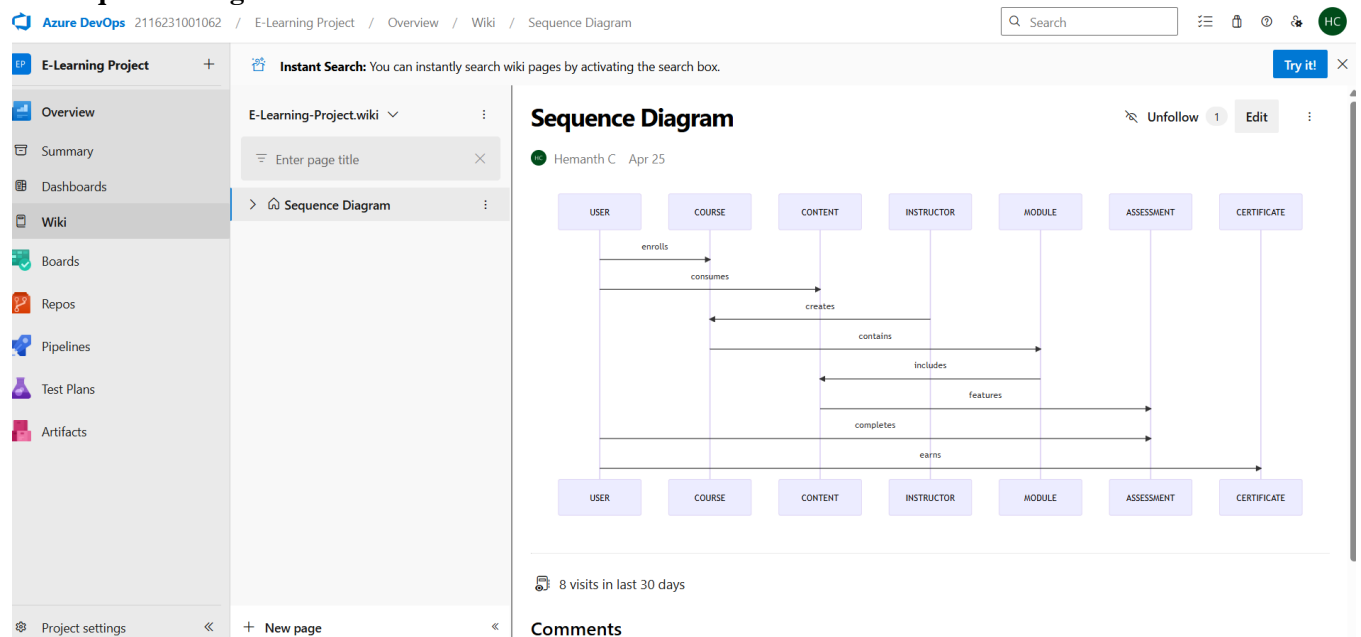
## Aim:

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 E-learning platform project.

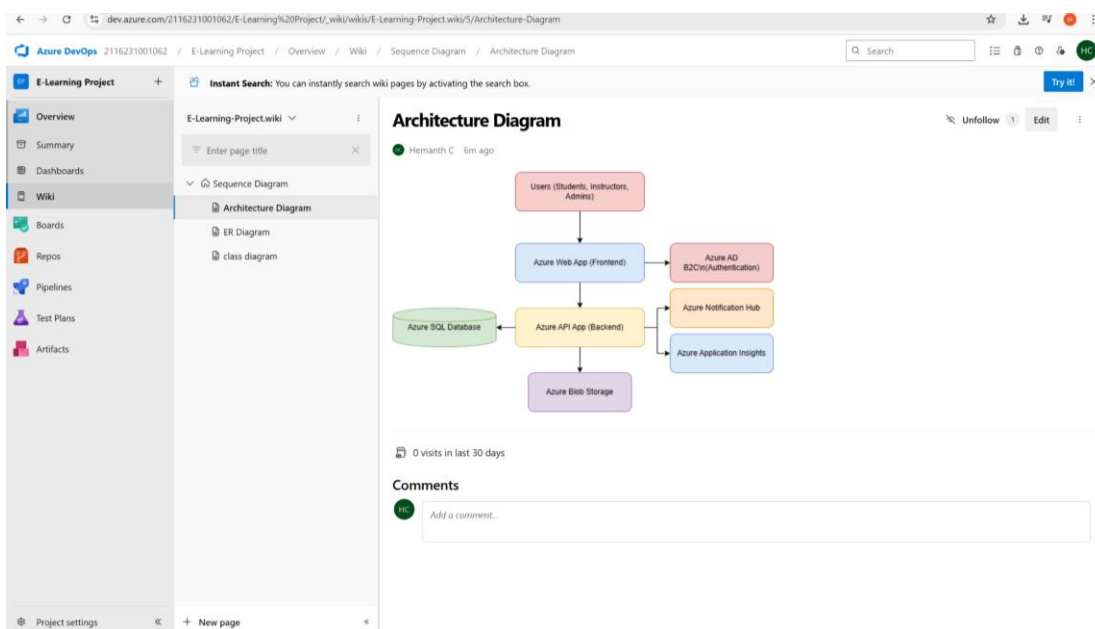
**EXP NO: 7**

## **DESIGNING ARCHITECTURAL AND ER DIAGRAMS FOR PROJECT STRUCTURE**

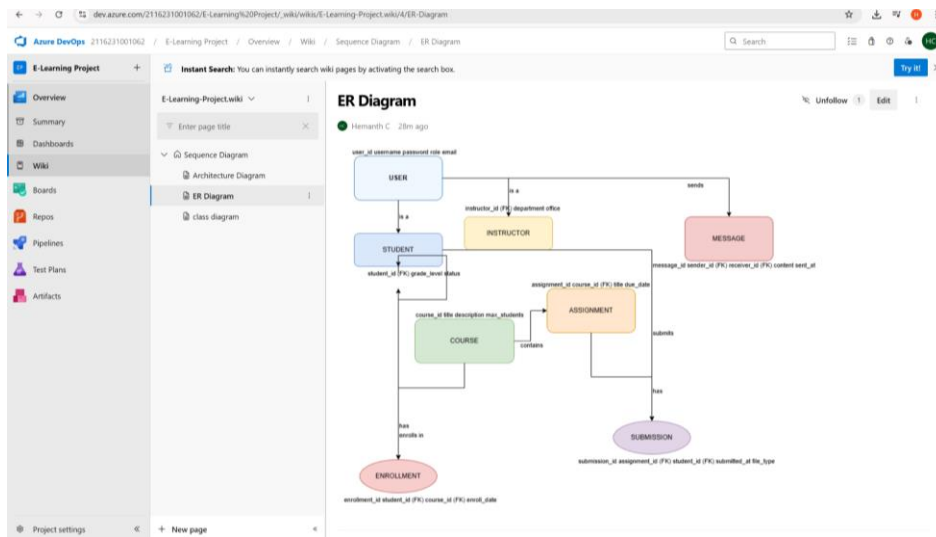
**Aim:**

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 E-Learning platform project.



|                  |  |
|------------------|--|
| <b>EXP NO: 8</b> | <b>TESTING – TEST PLANS AND TEST CASES</b> |
|------------------|--|

**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. Understand Core Features of the Application**

- User Signup & Login
- Viewing and Managing course
- Fetching Real-time Metadata
- Editing course (rename, reorder, record)
- Creating smart course playlists based on categories

**2. Define User Interactions**

- Each test case simulates a real user behaviour (e.g., logging in , adding a course).

**3. Design Happy Path Test Cases**

- Focused on validating that all features function as expected under normal conditions.
- Example: User logs in successfully, adds item , or creates a category-based .

**4. Design Error Path Test Cases**

- Simulate negative or unexpected scenarios to test robustness and error handling.
- Example: Login fails with invalid credentials, save fails when offline, no recommendations found.

**5. Break Down Steps and Expected Results**

- Each test case contains step-by-step actions and a corresponding expected outcome.
- Ensures clarity for both testers and automation scripts.

**6. Use Clear Naming and IDs**

- Test cases are named clearly (e.g., TC01 – Successful Login, TC10 – Save Fails).
- Helps in quick identification and linking to user stories or features.

**7. Separate Test Suites**

- Grouped test cases based on functionality (e.g., Login, Editing, Recommendation System).

- Improves organization and test execution flow in Azure DevOps.

## 8. Prioritize and Review

- Critical user actions are marked high-priority.
- Reviewed for completeness and traceability against feature requirements.

## 1.New test plan

**New Test Plan**

Name \*  
Music Playlist Batch Creator - Test Plan

Area Path \*  
Music Playlist Batch Creator

Iteration \*  
Music Playlist Batch Creator\Integration

Create Cancel

## 2.Test suite

**TS01 - User Login (ID: 86)**

Define Execute Chart

Test Cases (4 items)

| Title                     | Order | Test Case ID | Assigned To       | State  |
|---------------------------|-------|--------------|-------------------|--------|
| TC01 - Successful Sign Up | 1     | 78           | Karthikayen Se... | Design |
|                           | 2     | 80           | Karthikayen Se... | Design |
|                           | 3     | 81           | Karthikayen Se... | Design |
|                           | 4     | 82           | Karthikayen Se... | Design |

Static suite  
Requirement based suite  
Query based suite

### **3. Test case**

#### **TC01 – Successful Sign Up**

**Action:**

- Go to the Sign-Up page.
- Enter a valid name, email, and password.
- Click "Sign Up".

**Expected Results:**

- Form is displayed properly.
- Fields accept valid input.
- Account is created, and the user is redirected to the dashboard.

**Type:** Happy Path

#### **TC02 – Sign Up with Existing Email**

**Action:**

- Go to the Sign-Up page.
- Enter a name and an already registered email.
- Click "Sign Up".

**Expected Results:**

- Fields accept input.
- Error message "Email already registered" is shown.

**Type:** Error Path

### **Test Suite: TS02 - Course Dashboard (ID: 202)**

#### **TC03 – View Enrolled Courses**

**Action:**

- Login successfully.
- Navigate to "My Courses".

**Expected Results:**

- All enrolled courses are listed with thumbnails and progress indicators.

**Type:** Happy Path

### **TC04 – Courses Not Loading**

**Action:**

- Disconnect internet.
- Navigate to "My Courses".

**Expected Results:**

- Page loads with placeholder.
- Error message "Unable to load courses. Please check your connection." is shown.

**Type:** Error Path

## **Test Suite: TS03 - Course Enrollment (ID: 203)**

### **TC05 – Successful Course Enrollment**

**Action:**

- Login successfully.
- Navigate to "Course Catalog".
- Select a course and click "Enroll".

**Expected Results:**

- Course is added to "My Courses" list.

- Confirmation message "Successfully enrolled" is shown.

**Type:** Happy Path

### **TC06 – Enrollment Failure Due to Server Issue**

**Action:**

- Login successfully.
- Select a course and click "Enroll".
- Simulate backend server error.

**Expected Results:**

- Enrollment fails.
- Error message: "Unable to enroll at this moment. Try again later."

**Type:** Error Path

## **Test Suite: TS04 - Quiz System (ID: 204)**

### **TC07 – Take and Submit Quiz Successfully**

**Action:**

- Navigate to an enrolled course.
- Click on "Start Quiz".
- Answer all questions.
- Click "Submit".

**Expected Results:**

- Quiz is submitted.
- Immediate feedback and score are displayed.

**Type:** Happy Path

### **TC08 – Quiz Submission Timeout**

**Action:**

- Start a quiz.
- Wait until the session times out without submitting.

**Expected Results:**

- Quiz auto-submits.
- Message: "Session expired. Auto-submitted."
- Partial feedback shown if applicable.

**Type:** Error Path

## **Test Suite: TS05 - Progress Tracking (ID: 205)**

### **TC09 – Real-Time Progress Updates**

**Action:**

- Start watching a lesson video.
- Mark lesson as completed.

**Expected Results:**

- Progress bar updates instantly.
- Course dashboard reflects updated status.

**Type:** Happy Path

## TC10 – Progress Not Updating Due to Session Expiry

### Action:

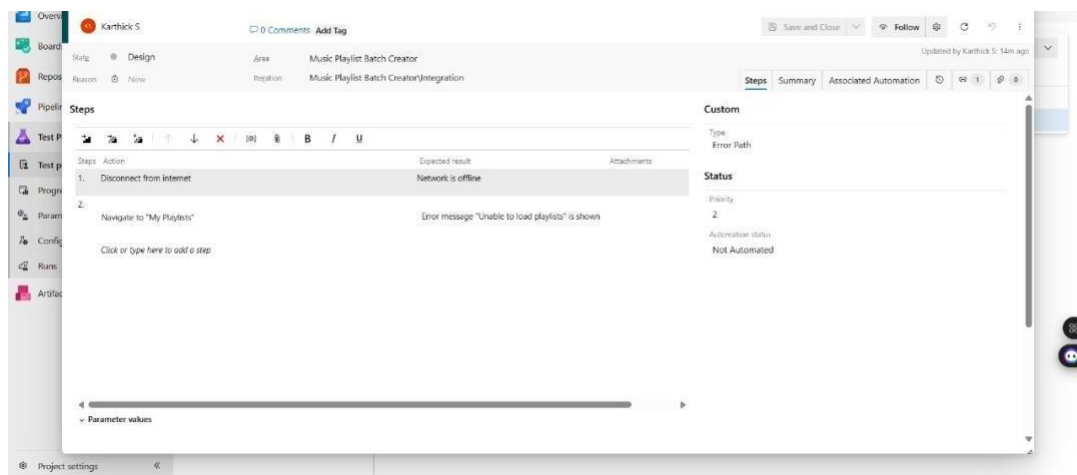
- Start a lesson.
- Stay idle until session expires.
- Try to mark lesson as completed.

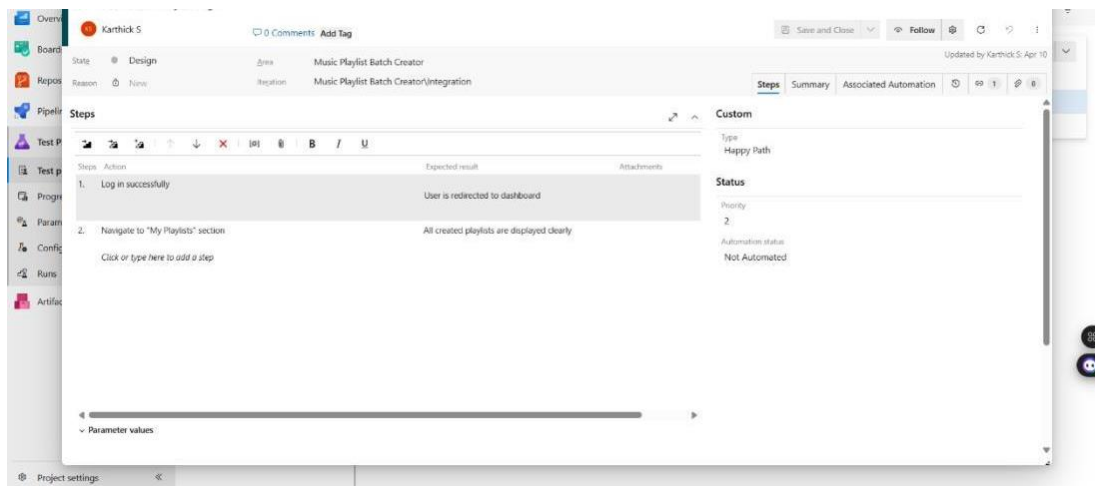
### Expected Results:

- Action fails.
- Message: "Session expired. Please log in again to continue."

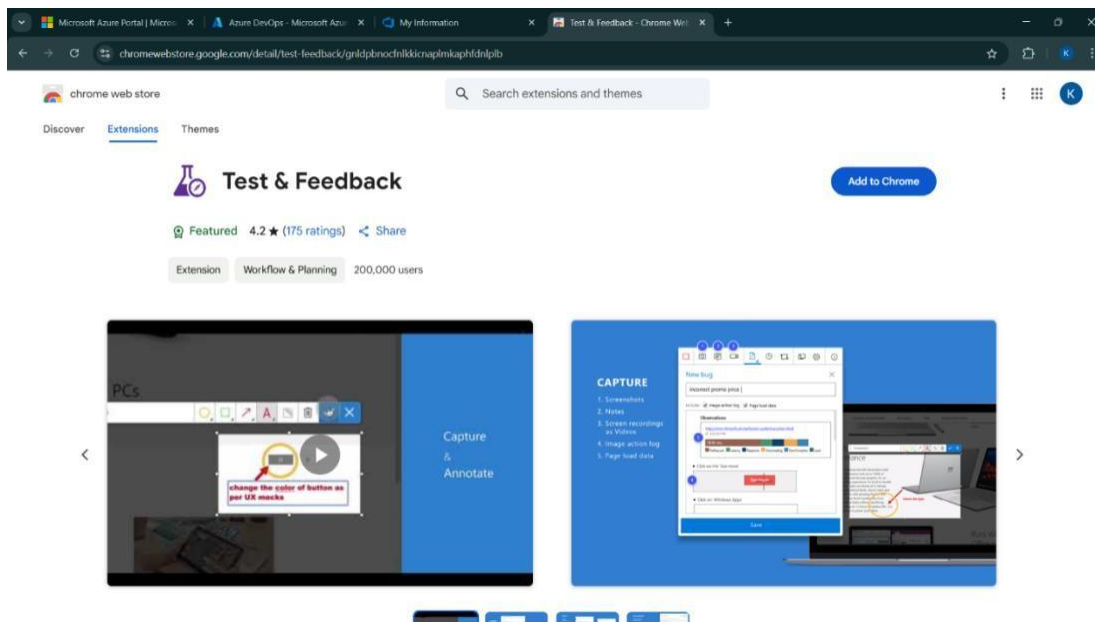
### Type: Error Path

### Test Cases

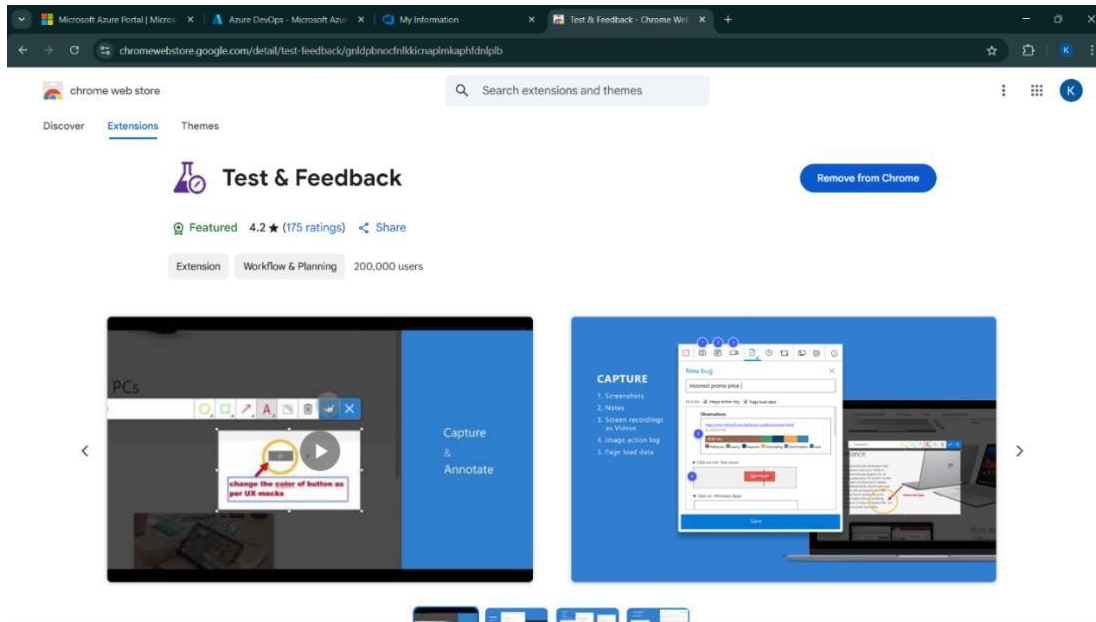




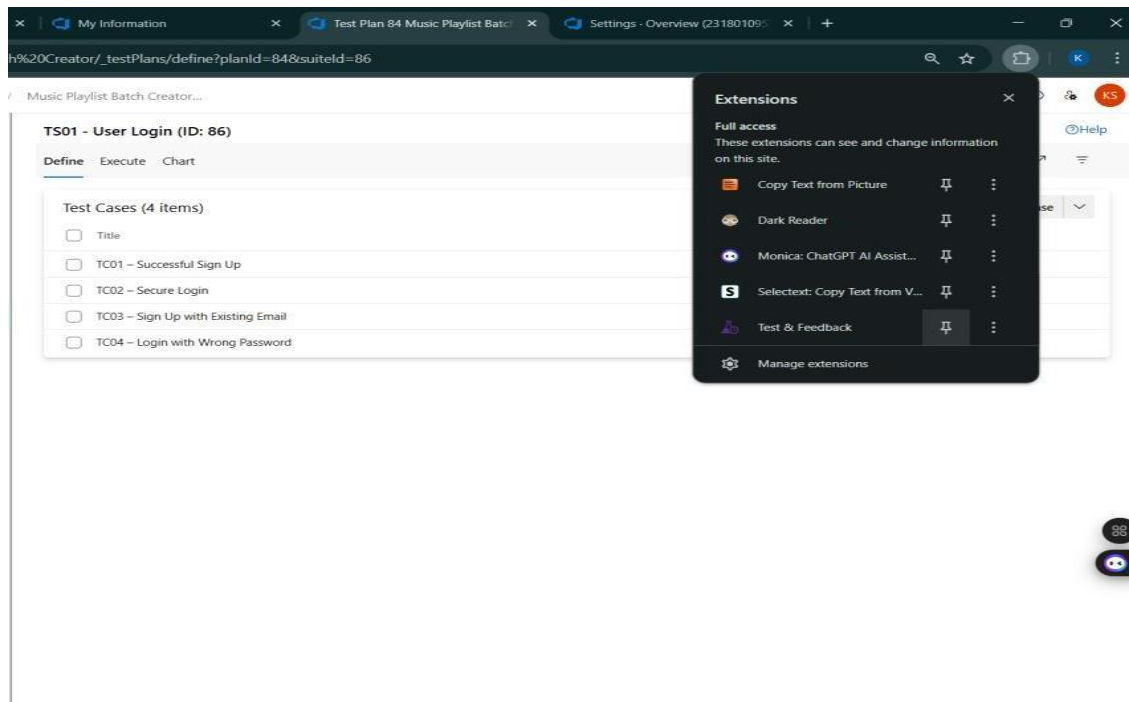
#### 4.Installation of test







Test and feedback  
Showing it as an extension



## 5. Running the test cases

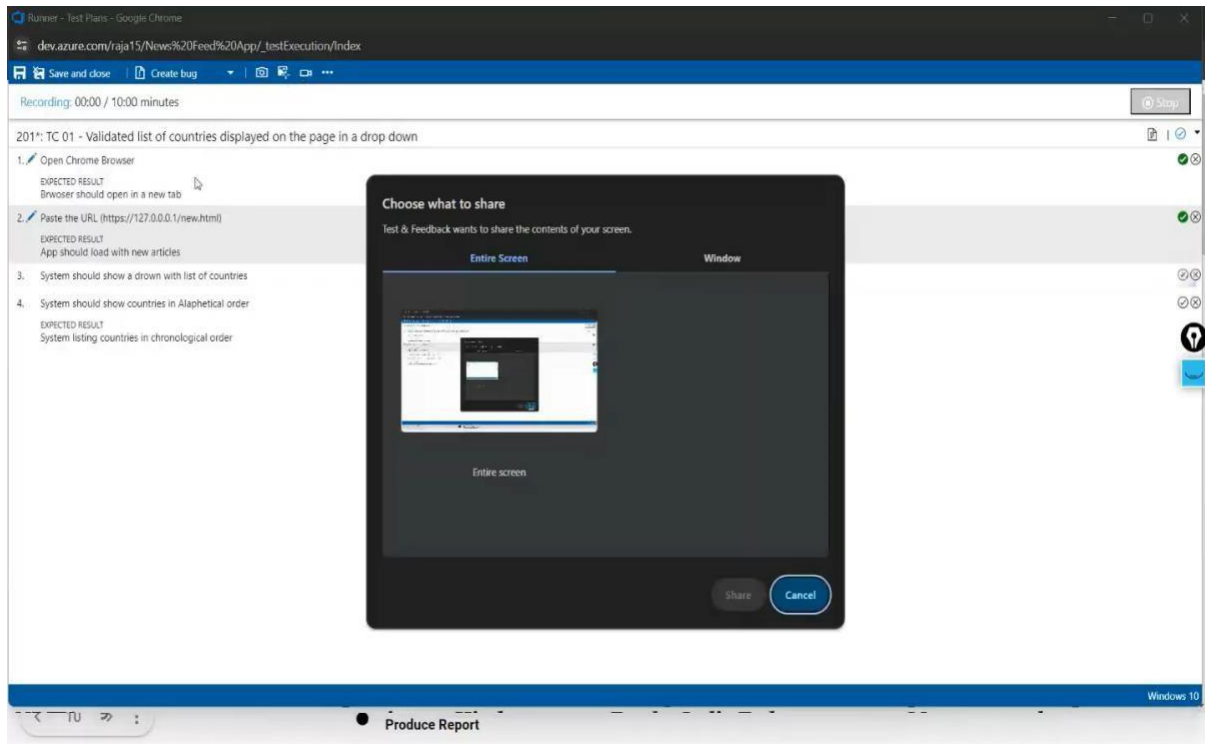
The screenshot displays a software interface for managing test cases. At the top, there are tabs for 'Define', 'Execute', and 'Chart'. Below these, a section titled 'Test Points (2 items)' contains a list of test cases. The first test case, 'TC05 - View Playlist Page', is selected and highlighted in blue. A context menu is open over this test case, offering several actions: 'View execution history', 'Mark Outcome', 'Run', 'Reset test to active', 'Edit test case', 'Assign tester', and 'View test result'. The 'Run' option is further expanded, showing sub-options: 'Run for web application', 'Run for desktop application', and 'Run with options'. To the right of the test case list, a table shows the execution results for two test cases. The first row shows 'TC05 - View Playlist Page' with a 'Passed' outcome, order 1, test case ID 75, configuration 'Windows 10', and tester 'Mallu karthick B...'. The second row shows 'TC06 - Playlist Loading Failure' with a 'Passed' outcome, order 2, test case ID 77, configuration 'Windows 10', and tester 'Mallu karthick B...'. In the bottom right corner, there are two circular icons: one with 'BB' and another with a robot face.

| Title                           | Outcome | Order | Test Case Id | Configuration | Tester              |
|---------------------------------|---------|-------|--------------|---------------|---------------------|
| TC05 - View Playlist Page       | Passed  | 1     | 75           | Windows 10    | Mallu karthick B... |
| TC06 - Playlist Loading Failure | Passed  | 2     | 77           | Windows 10    | Mallu karthick B... |

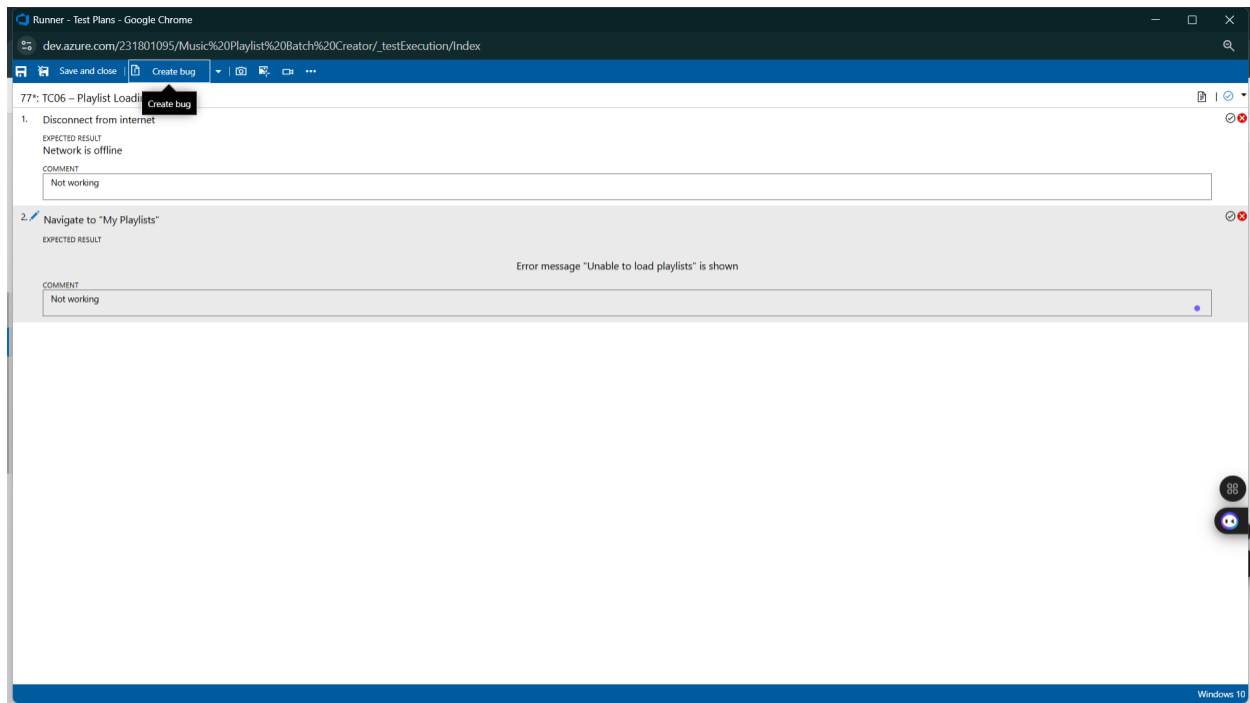
|                                       |  |   |
|---------------------------------------|--|---|
| 1. Log in successfully                | EXPECTED RESULT<br>User is redirected to dashboard             | ✔ |
| 2. Navigate to "My Playlists" section | EXPECTED RESULT<br>All created playlists are displayed clearly | ✔ |

Windows 10

## 6. Recording the test case



## 7. Creating the bug



Page 1

Unassigned0 commentsAdd tag

Save & Close

TB01 - Playlist loading spinner keeps spinning indefinitely on poor network

2. Naviga

Statg

Reason

New

Area

Music Playlist Batch Creator

Iteration

Music Playlist Batch Creator

COMME

Details

Repro Steps

18-04-2025 03:23Bug filed on "TC06 - Playlist Loading Failure"

| Step no. | Result | Title                      |
|----------|--------|----------------------------|
| 1.       | Failed | Disconnect from internet   |
|          |        | Expected Result            |
|          |        | Network is offline         |
| 2.       | Failed | Comments: Page Not loading |
|          |        | Navigate to "My Playlists" |
|          |        | Expected Result            |

Error message "Unable to load playlists" is shown

Test Configuration:Windows 10

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

77 TC06 - Playlist Loading Failure

Updated 10-04-2025. @ Design

System Info

Found in Build

Boards

Unassigned0 commentsAdd tag

Save & Close

Follow

Updated by Karthick S: 8m ago

Repos

Statg

Reason

New

Area

Music Playlist Batch Creator

Iteration

Music Playlist Batch Creator

COMME

Details

System Info

|   |   |
|---|---|
| Browser - Name                          | Google Chrome 135   |
| Browser - Language                      | en-IN   |
| Browser - Height                        | 864   |
| Browser - Width                         | 1536  |
| Browser - User agent                    | Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/135.0.0.0 Safari/537.36 |
| Operating system - Name                 | Windows NT 10.0; Win64; x64   |
| Operating system - Architecture         | x86_64  |
| Operating system - Processor model      | 11th Gen Intel(R) Core(TM) i3-1115G4 @ 3.00GHz  |
| Operating system - Number of processors | 4   |
| Memory - Available                      | 814784512   |
| Memory - Capacity                       | 8216240128  |
| Display - Pixels per inch (X axis)      | 120   |
| Display - Pixels per inch (Y axis)      | 120   |
| Display - Device pixel ratio            | 1.25  |

Discussion

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

System Info

Found in Build

Integrated in Build

Project settings

Name

Size

SystemInformation-2025-04-18T03-23-58.168Z.json

1K

## 8. Test case results

The screenshot shows a web application interface for 'Music Playlist Batch Creator'. The main window is titled 'TS02 - View Playlists (ID: 87)' and has tabs for 'Define', 'Execute', and 'Chart'. The 'Execute' tab is active, showing a list of 'Test Points (2 items)'. The first item, 'TC05 - View Playlist Page', is selected. To the right, a 'Test Case Results' window is open, displaying a table of test results for TC05.

| Outcome        | TimeStamp | Configuration | Run by                   | Tester                   |
|----------------|-----------|---------------|--------------------------|--------------------------|
| Passed         | 4m ago    | Windows 10    | Karthick S               | Mallu karthick Balaji .. |
| Passed         | 12m ago   | Windows 10    | Karthick S               | Mallu karthick Balaji .. |
| Not Applicable | 12m ago   | Windows 10    | Karthick S               | Mallu karthick Balaji .. |
| Passed         | 14m ago   | Windows 10    | Karthick S               | Mallu karthick Balaji .. |
| Passed         | Tuesday   | Windows 10    | Karthikeyan Senthil      | Mallu karthick Balaji .. |
| Passed         | Saturday  | Windows 10    | Mallu karthick Balaji .. | Mallu karthick Balaji .. |
| Failed         | Saturday  | Windows 10    | Mallu karthick Balaji .. | Mallu karthick Balaji .. |
| Passed         | Apr 11    | Windows 10    | Karthick S               | Mallu karthick Balaji .. |
| Passed         | Apr 11    | Windows 10    | Karthick S               | Mallu karthick Balaji .. |

Below the table, there is a link: [Open execution history for current test point](#).

## 9. Test report summary

- Assigning bug to the developer and changing state

The screenshot shows a bug report interface for 'BUG 203: BG 01 - Countries Drop down Not Available on the page'. The bug is assigned to 'rajesh prabhu' and has a state of 'New'. The 'Repro Step' section shows a list of steps with results: 1. Open Chrome Browser (Passed), 2. Paste the URL (Passed), 3. Section should show a dropdown with list of countries (Failed). The 'Planning' section shows 'Resolved Reason', 'Story Points', 'Priority 2', 'Severity 3 - Medium', and 'Activity'. The 'Effort (Hours)' section shows 'Original Estimate'. The 'Deployment' section has a link to 'Add link'. The 'Development' section has a link to 'Add link'. The 'Related Work' section is empty.

Board

Karthick S

0 comments

Add tag

Save & Close

Follow

Refresh

More

State

New

Area

Music Playlist Batch Creator

Reason

New

Iteration

Music Playlist Batch Creator

Updated by Karthick S 33m ago

Details

History

Comments

Repro Steps

18-04-2025 03:23

Bug filed on "TC06 - Playlist Loading Failure"

Step no.

Result

Title

1.

Failed

Disconnect from internet

Expected Result

Network is offline

2.

Failed

Comments: Page Not loading

Navigate to "My Playlists"

Expected Result

Error message "Unable to load playlists" is shown

Test Configuration:

Windows 10

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

77 TC06 - Playlist Loading Failure

Updated 10-04-2025

Design

System Info

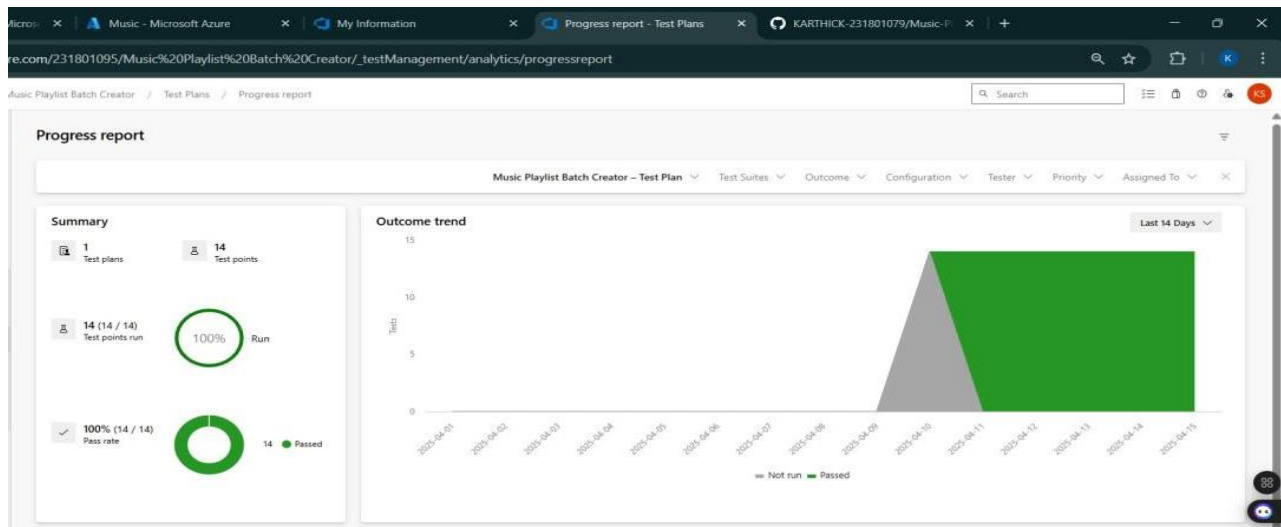
Comment

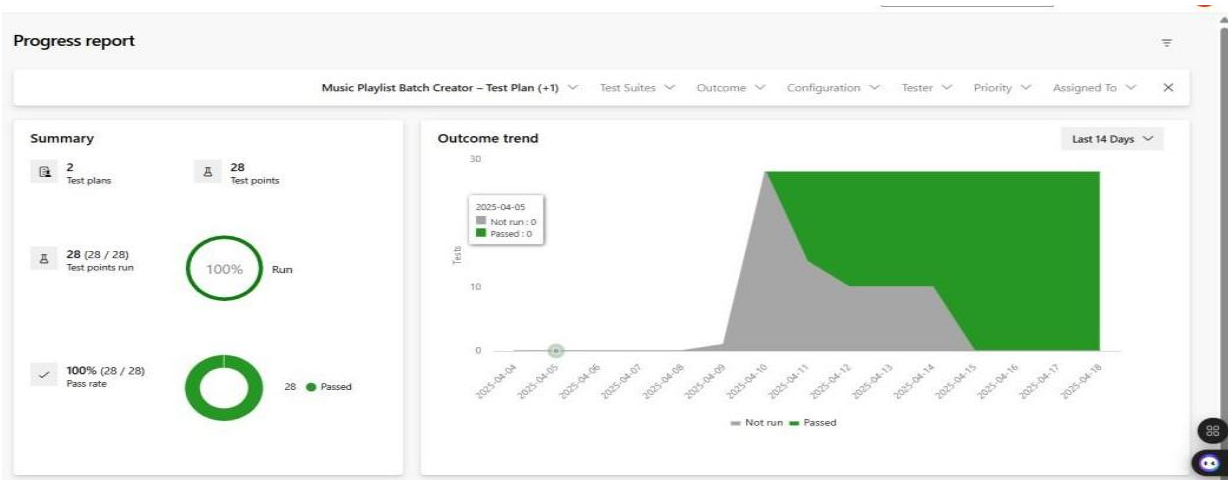
Page Not loading

Project settings

2. Navigate to "My Playlists"

## 10.Progress report





## 11. Changing the test template

Microsoft Azure Portal | Azure DevOps - Microsoft | My Information | Test Plan 04 Music Playlist | Settings - Process (231801095) | Settings - Overview (231801095) | X

dev.azure.com/231801095/\_settings/process

Azure DevOps 231801095 / Settings / Process

Organization Settings 231801095

Search Settings

**General**

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

**Security**

- Security overview
- Policies
- Permissions

**Boards**

- Process

**Pipelines**

- Agent pools
- Settings
- Deployment pools

**All processes**

Processes | Fields

Filter by process name

| Name  | Description  | Team projects |
|-------|--|---------------|
| Basic | 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 or Kanban. | 0             |
| 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 of compliance.         | 0             |

Microsoft Azure Portal | M x Azure DevOps - Microsoft x My Information x Test Plan 84 Music Playlist x Settings - Process (231801095) x Settings - Overview (231801095) x +

dev.azure.com/231801095/\_settings/process

Azure DevOps 231801095 / Settings / Process

Organization Settings 231801095

Search Settings

General

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

Security

- Security overview
- Policies
- Permissions

Boards

- Process

Pipelines

- Agent pools
- Settings
- Deployment pools

All processes

Processes Fields

Help Filter by process name

| Name  | Description  | Team projects |
|-------|--|---------------|
| Basic | 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. | 0             |
| 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 of process.  | 0             |

Microsoft Azure Portal | M x Azure DevOps - Microsoft x My Information x Test Plan 84 Music Playlist x Settings - Process (231801095) x Settings - Overview (231801095) x +

dev.azure.com/231801095/\_settings/process

Azure DevOps 231801095 / Settings / Process

Organization Settings 231801095

Search Settings

General

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

Security

- Security overview
- Policies
- Permissions

Boards

- Process

Pipelines

- Agent pools
- Settings
- Deployment pools

All processes

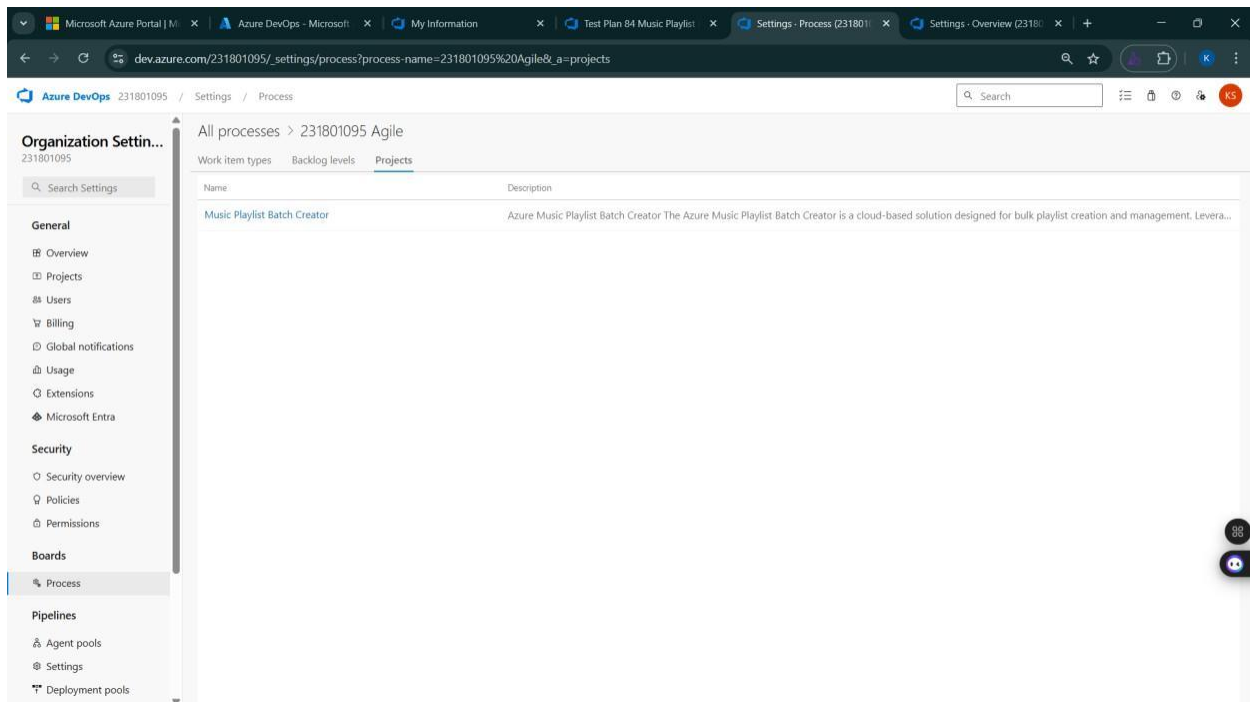
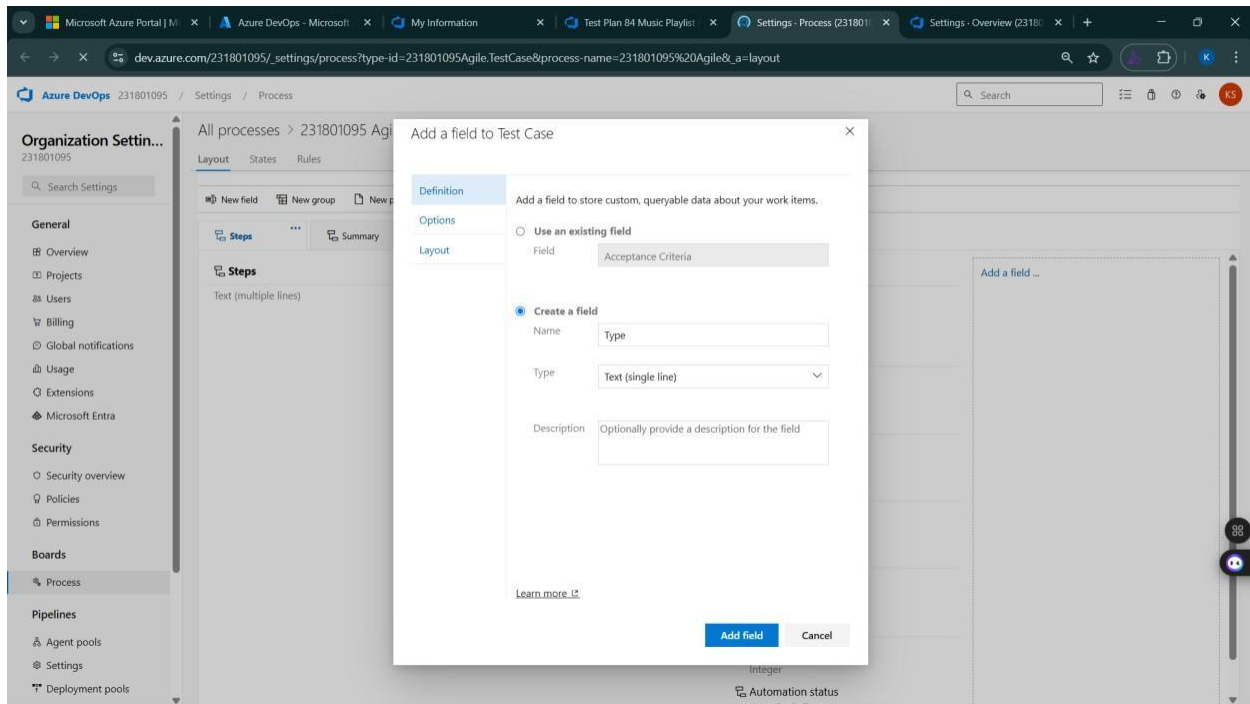
Processes Fields

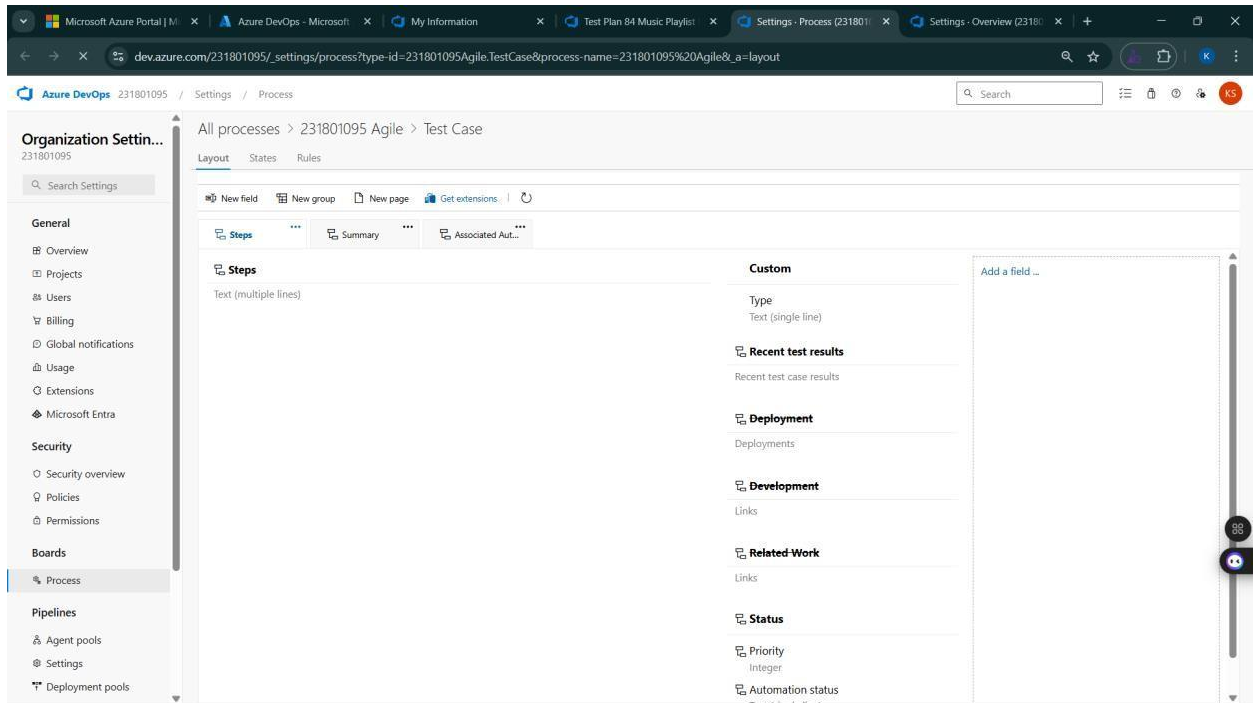
Help Filter by process name

| Name                      | Description  | Team projects |
|---------------------------|--|---------------|
| Basic                     | 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. | 0             |
| 231801095 Agile (default) |  | 1             |
| Agile Plus                |  | 0             |
| 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 of process.  | 0             |



## 12. View the new test case template





## Result:

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

|                  |   |
|------------------|---|
| <b>EXP NO: 9</b> | <b>LOAD TESTING AND PERFORMANCE TESTING</b> |
|------------------|---|

**Aim:**

To create an Azure Load Testing resource and run a load test to evaluate the performance of a target endpoint.

**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:

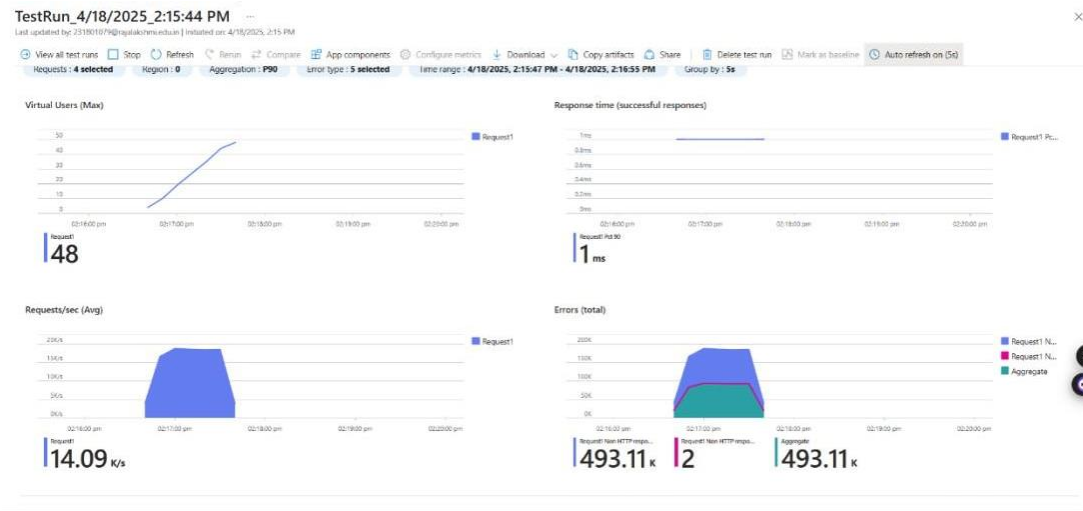
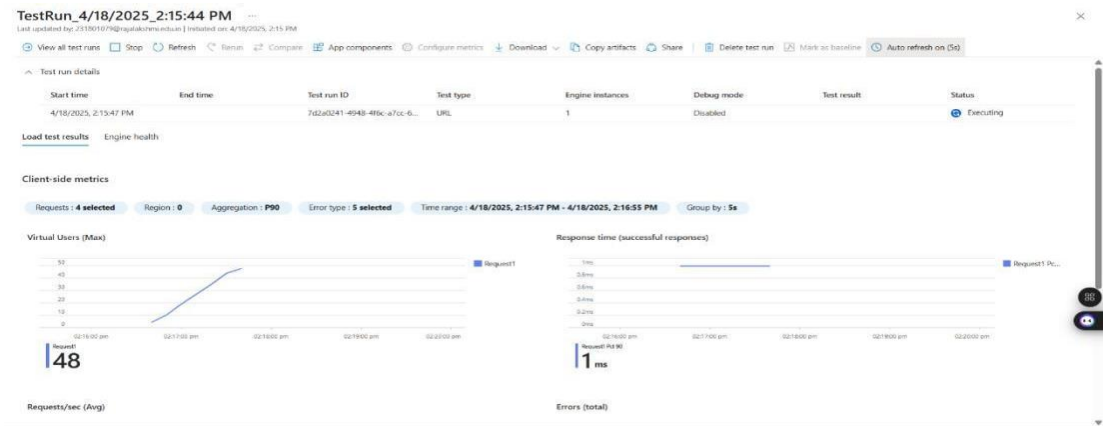
1. Sign in to Azure Portal  
Go to <https://portal.azure.com> and log in.
2. Create the Resource
  - Go to *Create a resource* → Search for “Azure Load Testing”.
  - Select Azure Load Testing and click Create.
3. Fill in the Configuration Details
  - *Subscription*: Choose your Azure subscription.
 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

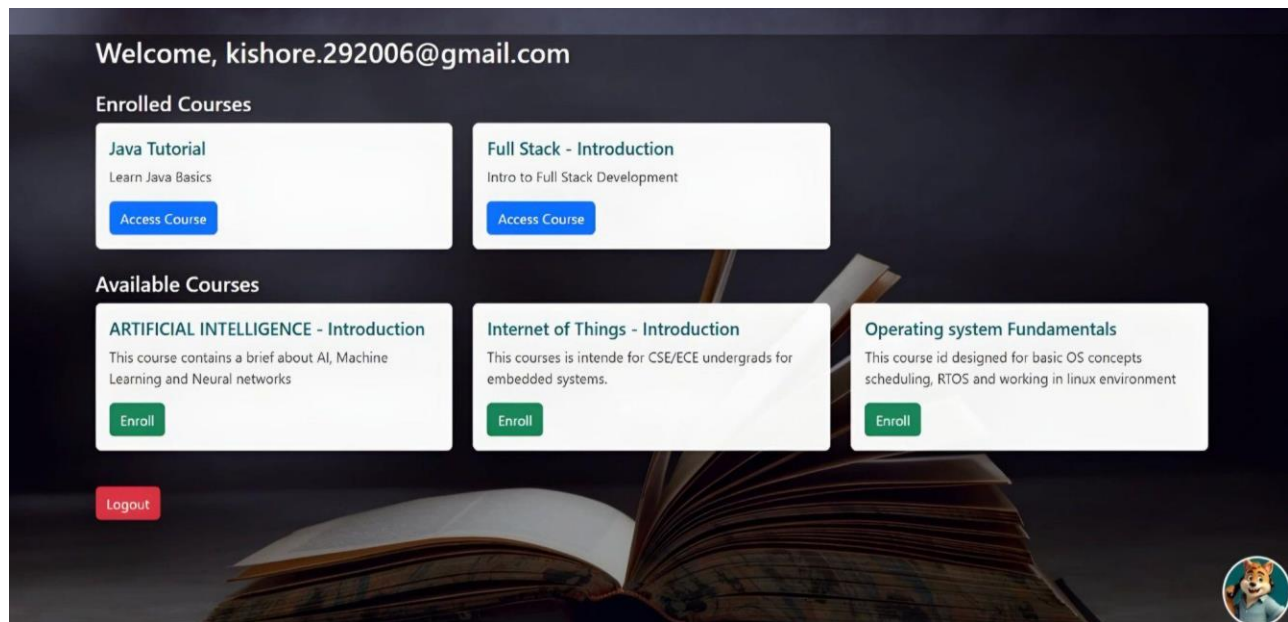
**Steps to Create and Run a Load Test:**

Once your resource is ready:

1. Go to your Azure Load Testing resource and click Add HTTP requests > Create. In
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 created the Azure Load Testing resource and executed a load test to assess the performance of the specified endpoint.

**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 E-learning platform project.

### **GitHub Project Structure**

The screenshot shows the GitHub interface for a repository named 'Education-platform' by user 'Giridharan-D29'. The repository is public and has 7 commits. The file structure is as follows:

| File/Folder      | Category        | Last Commit |
|------------------|-----------------|-------------|
| static/images    | frontend-design | 1 hour ago  |
| templates        | frontend        | 1 hour ago  |
| Profile          | backend         | 1 hour ago  |
| README.md        | Initial commit  | 8 hours ago |
| app.py           | backend         | 1 hour ago  |
| requirements.txt | backend         | 1 hour ago  |
| vercel.json      | backend         | 1 hour ago  |

The README section is titled 'Education-platform'. The right sidebar shows repository statistics: 0 stars, 1 watching, 0 forks, and 0 releases. The 'Languages' section shows a bar chart with Python and JavaScript as the primary languages.

### **Result:**

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