



RAJALAKSHMI
ENGINEERING COLLEGE
An AUTONOMOUS Institution
Affiliated to ANNA UNIVERSITY, Chennai

DEPARTMENT OF INFORMATION TECHNOLOGY
LAB MANUAL

CS23432 – Software Construction

(REGULATION 2023)

RAJALAKSHMI ENGINEERING COLLEGE
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Year / Branch / Section: 2nd/IT/ FB Semester: IV

Academic Year: 2024 - 2025

EXP NO: 1

AZURE DEVOPS ENVIRONMENT SETUP

Aim:

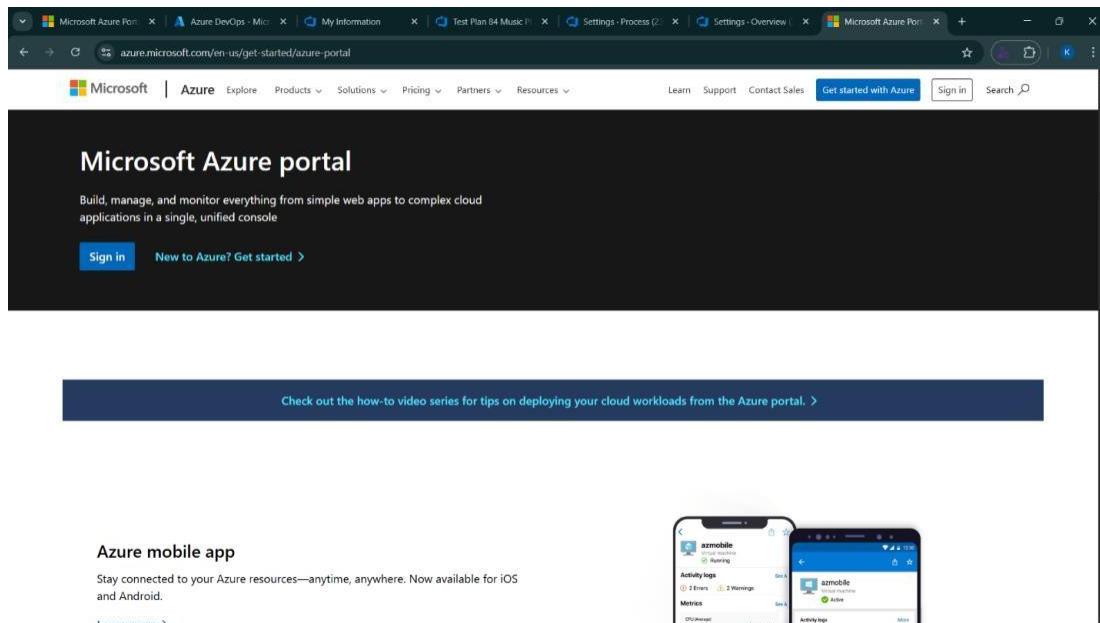
To set up and access the Azure DevOps environment by creating an organization through the Azure portal.

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

Welcome to Azure!

Don't have a subscription? Check out the following options.

Start with an Azure free trial
Get \$200 free credit toward Azure products and services, plus 12 months of popular free services.
[Start](#)

Manage Microsoft Entra ID
Manage access, set smart policies, and enhance security with Microsoft Entra ID.
[View](#) [Learn more](#)

Azure for Students
Get free software, Azure credit, or access Azure Dev Tools for Teaching after you verify your academic status.
[Start](#)

Azure services

[Create a resource](#) [Azure DevOps organizations](#) [Quickstart Center](#) [Azure AI foundry](#) [Kubernetes services](#) [Virtual machines](#) [App Services](#) [Storage accounts](#) [SQL databases](#) [More services](#)

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

4.

Home > Azure DevOps

Azure DevOps

We've made it easier to manage Azure DevOps billing and subsidies

Azure DevOps

Plan smarter, collaborate better, ship faster with a set of modern services

My Azure DevOps Organizations

Get started using Azure DevOps
Billing management for Azure DevOps

Give feedback

Tell us about your experience with the Azure DevOps page

https://portal.azure.com/#blade/HubsExtension/BrowseResourceBlade/resourceType/Dynatrace.Observability%2fmonitors

Search bar: Devops

Results:

- All (7)
- Services (7)
- Resources (4)

Services

- Azure Native New Relic Service (Keywords: devops)
- Managed DevOps Pools
- Azure DevOps organizations
- Azure Native Dynatrace Service (Keywords: devops)

Marketplace

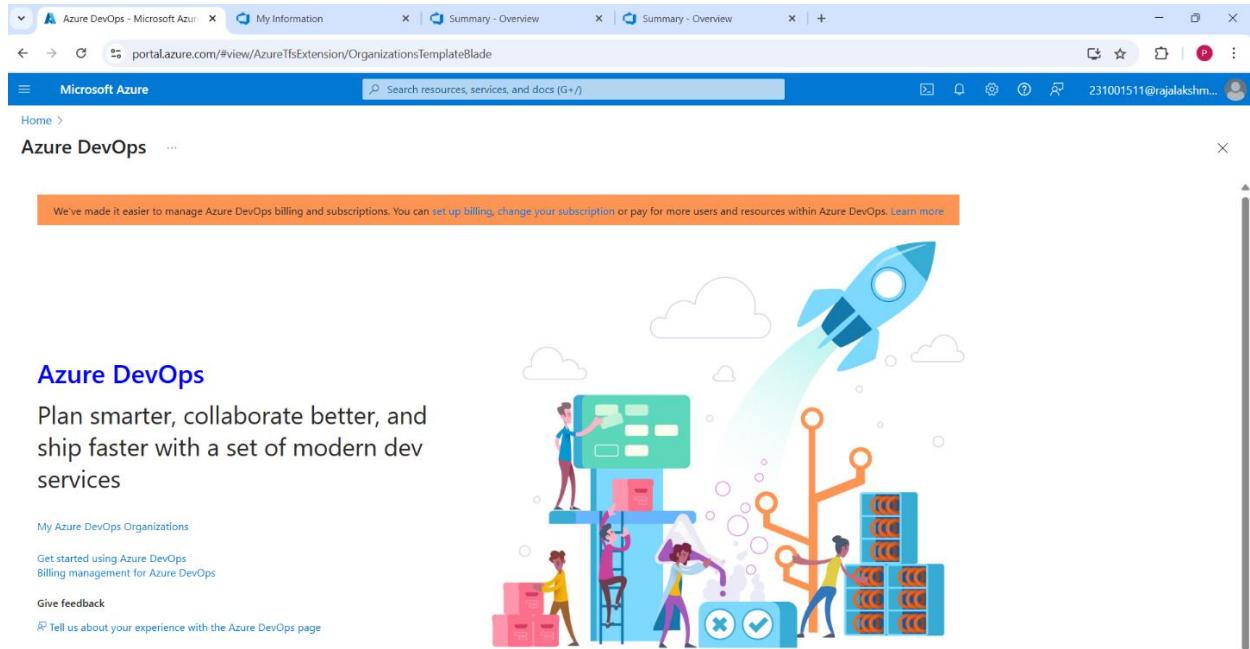
- Static Web App
- Rocky Linux 9
- Build Agents for Azure DevOps
- Azure Native New Relic Service : New Relic Azure Cloud Monitoring - Start f...

Documentation

- Introduction to DevOps - Training
- Course AZ-400T00-A: Designing and Implementing Microsoft DevOps solutions...
- Deploy applications with Azure DevOps learning path - Training

Continue searching in Microsoft Entra ID

5. 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.

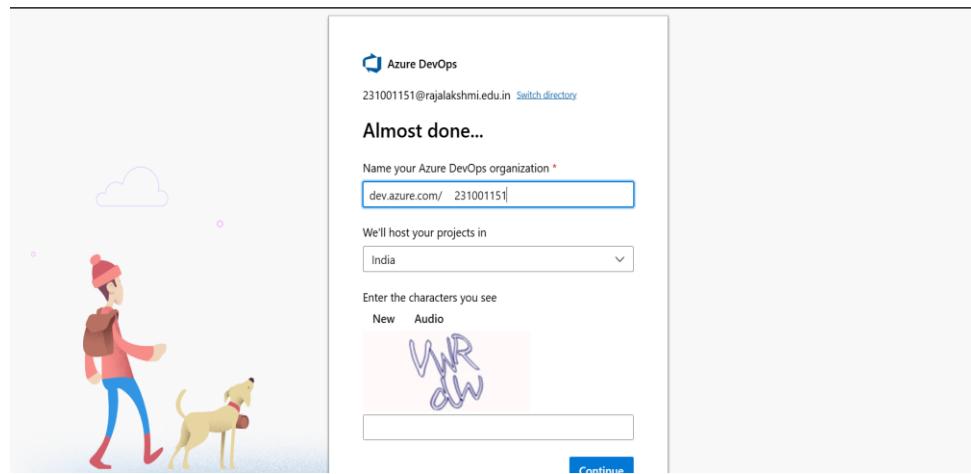
EXP NO: 2

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

a. 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.

b. On the organization's **Home page**, click on the **New Project** button.

c. 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).

d. Once you've filled out the details, click **Create** to set up your first project.

Create new project

X

Project name *

TaskManagement System

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.

Advanced

Version control

Git

Work item process

Agile

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 PRASHAANT V Sign out

PV

PRASHAANT V Edit profile
231001151@rajalakshmi.edu.in

Microsoft account ▾ India

Azure DevOps Organizations Create new organization

dev.azure.com/231001143 (Owner)

Projects Actions

- sample Open in Visual Studio
- Task Management System
- ToDoListManagement System
- Task Management
- To Do List2

New project

3. Project dashboard

Azure DevOps 231001143 / Task Management System / Overview / Summary

Search PV

Task Management Syst... +

- Overview
- Summary
- Dashboards
- Wiki
- Boards
- Repos
- Pipelines
- Test Plans
- Artifacts

+ Add Project Description

Task Management System

Public Invite

About this project

Help others to get on board!
Describe your project and make it easier for other people to understand it.

Project stats Period: Last 7 days

Boards

Work items created	Work items completed
34	0

Members 1

PV

4. 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 'Task Management System' team. The left sidebar includes links for Overview, Boards, Work items, Boards, Backlogs, Sprints, Queries, Delivery Plans, Analytics views, Repos, Pipelines, Test Plans, and Project settings. The main area displays a backlog of User Stories, each with a title, state (New), story points, value area (Business), and iteration (Task). A 'Planning' pane on the right allows dragging work items into a sprint, showing the 'Task Management System Team backlog' and 'Iteration 408/05/2025 - 29/05/2025' with a planned effort of 0:16 working days.

	Order	Work Item Type	Title	State	Story...	Value Area	Itera...
1	1	User Story	As a new user, I want to create an account so that I can access...	New		Business	Task
2	2	User Story	As a registered user, I want to log in using my credentials so...	New		Business	Task
3	3	User Story	As a newly registered user, I want to receive an OTP via email...	New		Business	Task
4	4	User Story	As a user with an unverified account, I want to verify my email...	New		Business	Task
5	5	User Story	As a logged-in user, I want to create a new task so that I can...	New		Business	Task
6	6	User Story	As a task owner, I want to edit my existing tasks so that I can...	New		Business	Task
7	7	User Story	As a user, I want to view all my tasks in a dashboard so that ...	New		Business	Task
8	8	User Story	As a user, I want to filter tasks based on status (pending/co...	New		Business	Task
9	9	User Story	As a user, I want to mark tasks as completed so that I can tr...	New		Business	Task
10	10	User Story	As a user, I want to delete tasks that are no longer relevant ...	New		Business	Task
11	11	User Story	As a user, I want to set due dates and times for my tasks so ...	New		Business	Task

The screenshot shows the Azure DevOps interface for the 'TO DO LIST APP WITH REMAINDER' project. The left sidebar includes links for Overview, Boards, Work items, Backlogs (selected), Sprints, Queries, Delivery Plans, Analytics views, Repos, Pipelines, Test Plans, Artifacts, and Project settings. The main area displays the backlog with the following data:

Order	Work Item Type	Title	State	Story... Value Area
1	User Story	TASK MANAGEMENT SYSTEM	New	Business
2	User Story	REMINDER SYSTEM	New	Business
3	User Story	USER ACCOUNT & CROSS-PLATFORM SYNC	New	Business
4	User Story	UI/UX & CUSTOMIZATION	New	Business

On the right side, there is a Microsoft account sign-in section with a green 'PA' profile picture, and a sidebar showing Iterations 1, 2, and 3, each with 'No work scheduled yet'. A '+ New Sprint' button is also present.

Result:

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

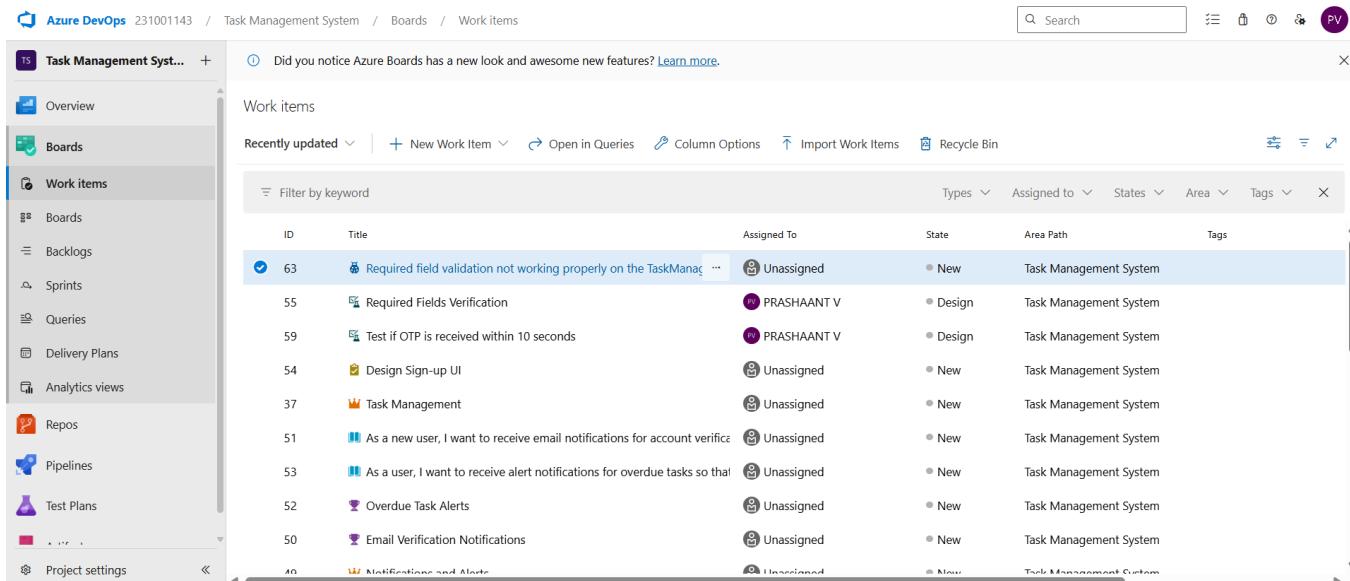
EXP NO: 3

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

Aim:

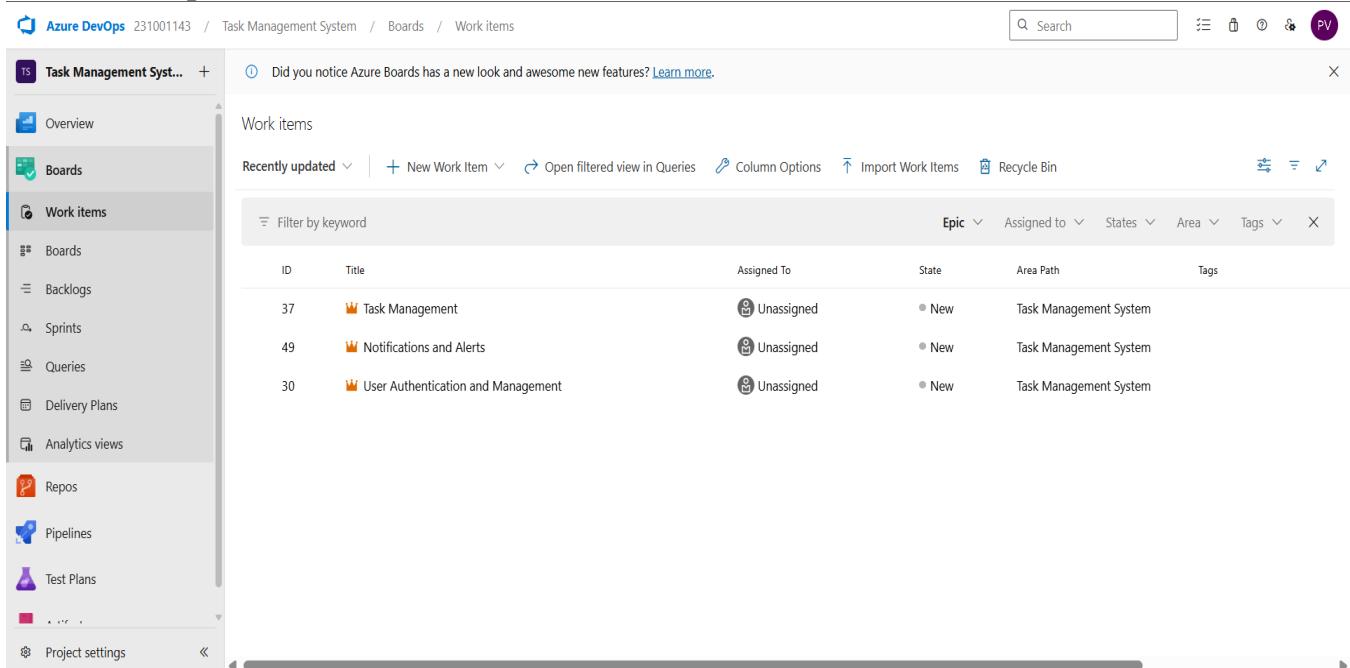
To learn about how to create epics, user story, features, backlogs for your assigned project.

Create Epic, Features, User Stories, Task



The screenshot shows the Azure DevOps interface for managing work items. The left sidebar is titled 'Task Management System' and includes links for Overview, Boards, Work items, Backlogs, Sprints, Queries, Delivery Plans, Analytics views, Repos, Pipelines, Test Plans, and Project settings. The 'Work items' link is currently selected. The main area is titled 'Work items' and shows a list of tasks. The columns include ID, Title, Assigned To, State, Area Path, and Tags. One task is highlighted with a blue background: '63 Required field validation not working properly on the TaskManagementSystem'. Other tasks listed include 'Required Fields Verification', 'Test if OTP is received within 10 seconds', 'Design Sign-up UI', 'Task Management', 'As a new user, I want to receive email notifications for account verification', 'As a user, I want to receive alert notifications for overdue tasks so that', 'Overdue Task Alerts', 'Email Verification Notifications', and 'Notifications and Alerts'.

1. Fill in Epics



This screenshot shows the same Azure DevOps interface as the previous one, but the 'Epic' column is now visible in the header of the work item table. The table lists three epics: 'Task Management', 'Notifications and Alerts', and 'User Authentication and Management'. Each epic is associated with an ID (37, 49, 30), a title, an assigned-to status (Unassigned), a state (New), and an area path (Task Management System).

2. Fill in Features

Azure DevOps Task Management System - Boards - Work items

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

Work items

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

ID	Title	Assigned To	State	Area Path	Tags
37	Task Management	Unassigned	New	Task Management System	
52	Overdue Task Alerts	Unassigned	New	Task Management System	
50	Email Verification Notifications	Unassigned	New	Task Management System	
49	Notifications and Alerts	Unassigned	New	Task Management System	
47	Task Due Date Management	Unassigned	New	Task Management System	
44	Task Status Management	Unassigned	New	Task Management System	
41	Task Viewing and Organization	Unassigned	New	Task Management System	
38	Task Creation and Editing	Unassigned	New	Task Management System	
34	Email Verification	Unassigned	New	Task Management System	

3. Fill in User Story Details

Azure DevOps Task Management System - Boards - Work items

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

Work items

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

ID	Title	Assigned To	State	Area Path	Tags
37	Task Management	Unassigned	New	Task Management System	
51	As a new user, I want to receive email notifications for account verification so that I can verify my account.	Unassigned	New	Task Management System	
53	As a user, I want to receive alert notifications for overdue tasks so that I can stay on top of my responsibilities.	Unassigned	New	Task Management System	
52	Overdue Task Alerts	Unassigned	New	Task Management System	
50	Email Verification Notifications	Unassigned	New	Task Management System	
49	Notifications and Alerts	Unassigned	New	Task Management System	
48	As a user, I want to set due dates and times for my tasks so that I can manage my time effectively.	Unassigned	New	Task Management System	
47	Task Due Date Management	Unassigned	New	Task Management System	
46	As a user, I want to delete tasks that are no longer relevant so that I can keep my backlog organized.	Unassigned	New	Task Management System	
45	As a user, I want to mark tasks as completed so that I can track my progress.	Unassigned	New	Task Management System	

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 to-Do List App with Reminders Project.

Sprint Planning

Sprint 1

The screenshot shows the Azure DevOps Boards interface for the 'Task Management System' project. The left sidebar is collapsed, and the main area displays the backlog for 'Iteration 1'. There are three user stories listed:

- #32 As a new user, I want to create a new account so that I can access the task management system.
Status: New
Assignee: Unassigned
- #54 Design Sign-up UI
Status: New
Assignee: Unassigned
- #61 Required field validation properly on the Task Management System
Status: New
Assignee: Unassigned

The top right corner shows the sprint details: 5 May - 25 May, 0 work days remaining.

Sprint 2

The screenshot shows the Azure DevOps Boards interface for the 'Task Management System' project. The left sidebar is collapsed, and the main area displays the backlog for 'Iteration 2'. There are four user stories listed:

- #39 As a logged-in user, I want to create a new task so that I can track the work that needs to be done.
Status: New
Assignee: Unassigned
- #40 As a task owner, I want to edit my existing tasks so that I can update information as needed.
Status: New
Assignee: Unassigned
- #42 As a user, I want to view all my tasks in a dashboard so that I can see my work at a glance.
Status: New
Assignee: Unassigned
- #43 As a user, I want to...

The top right corner shows the sprint details: 26 May - 11 June, 13 work days.

Sprint 3

Azure DevOps Task Management System Team board for Sprint 3. The board shows tasks for Iteration 3. There are two tasks visible:

- 45**: As a user, I want to mark tasks as completed so that I can track my progress.
 - New
 - Unassigned
- 46**: As a user, I want to delete tasks that are no longer relevant so that I can keep my task list organized.
 - New
 - Unassigned

The board has columns for New, Active, Resolved, and Closed. The iteration date range is 13 June - 26 June, and it took 10 work days.

Sprint 4

Azure DevOps Task Management System Team board for Sprint 4. The board shows tasks for Iteration 4. There are three tasks visible:

- 48**: As a user, I want to set due dates and times for my tasks so that I can prioritize my work.
 - New
 - Unassigned
- 51**: As a new user, I want to receive email notifications for account verification so that I can complete the registration process.
 - New
 - Unassigned
- 53**: As a user, I want to receive alert notifications for overdue tasks so that I can address delayed work.
 - New
 - Unassigned

The board has columns for New, Active, Resolved, and Closed. The iteration date range is 27 June - 11 July, and it took 11 work days.

Result:

The Sprints are created for the TASK MANAGEMENT SYSTEM Project.

EXP NO: 5

POKER ESTIMATION

Aim:

Create Poker Estimation for the user stories – TASK MANAGEMENT SYSTEM PROJECT.

Poker Estimation :

The screenshot shows the Azure DevOps interface for a project titled "Task Management System". The left sidebar is open, showing options like Overview, Boards, Work items, Backlogs, Sprints, Queries, Delivery Plans, and Analytics views. The "Work items" option is selected. The main area displays a list of work items under the heading "Recently updated". One work item is highlighted: "USER STORY 35". The details for this story include:

- Description: "35 As a newly registered user, I want to receive an OTP via email so that I can verify my account."
- State: New
- Reason: New
- Area: Task Management System
- Iteration: Task Management System
- Planning: Story Points: 8, Priority: 2, Risk: 0
- Deployment: A note about tracking releases and deployment status reporting.

The top right of the interface includes a search bar, filter icons, and a user profile icon.

Result:

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

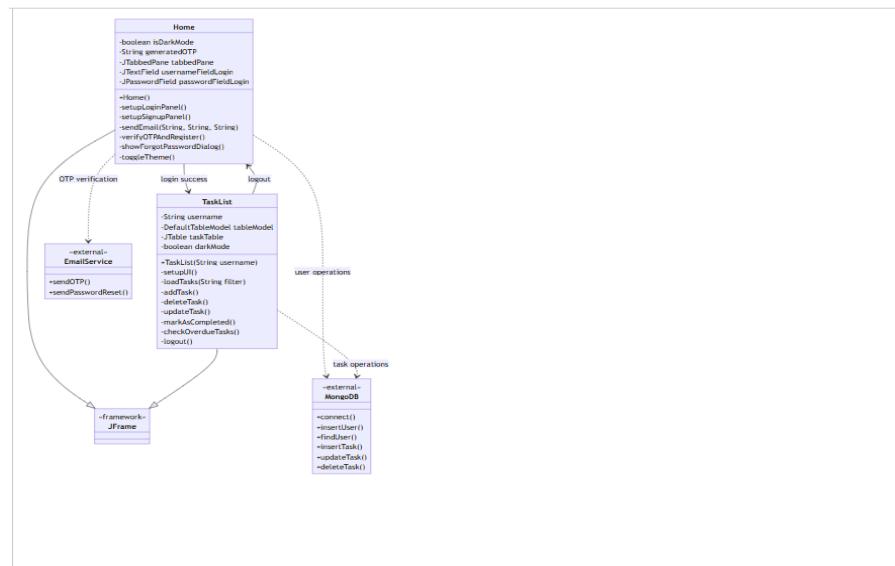
EXP NO: 6

DESIGNING CLASS AND SEQUENCE DIAGRAMS FOR PROJECT ARCHITECTURE

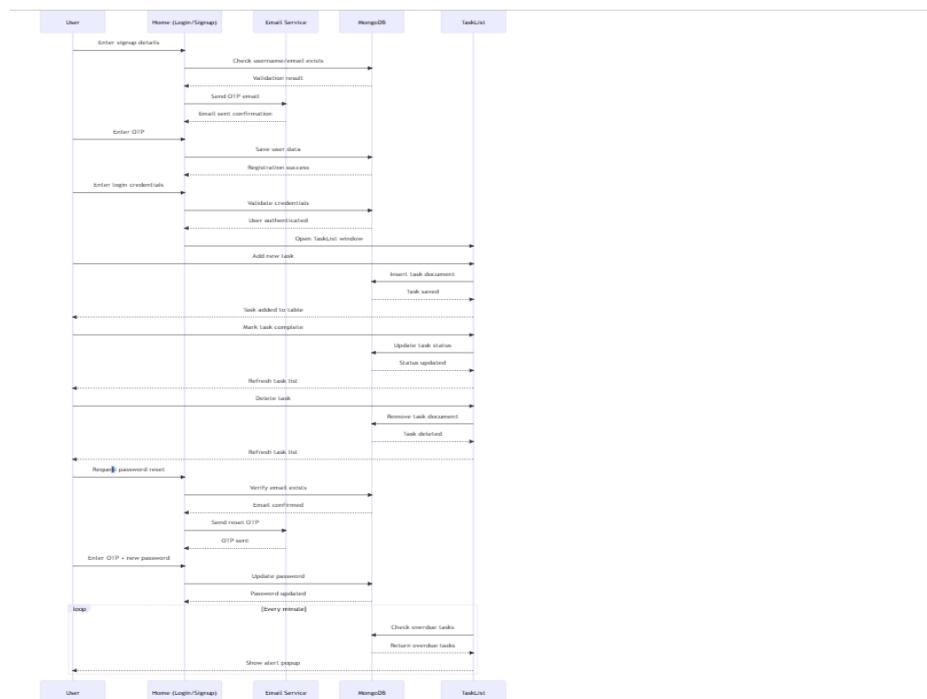
Aim:

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 TASK MANAGEMENT SYSTEM

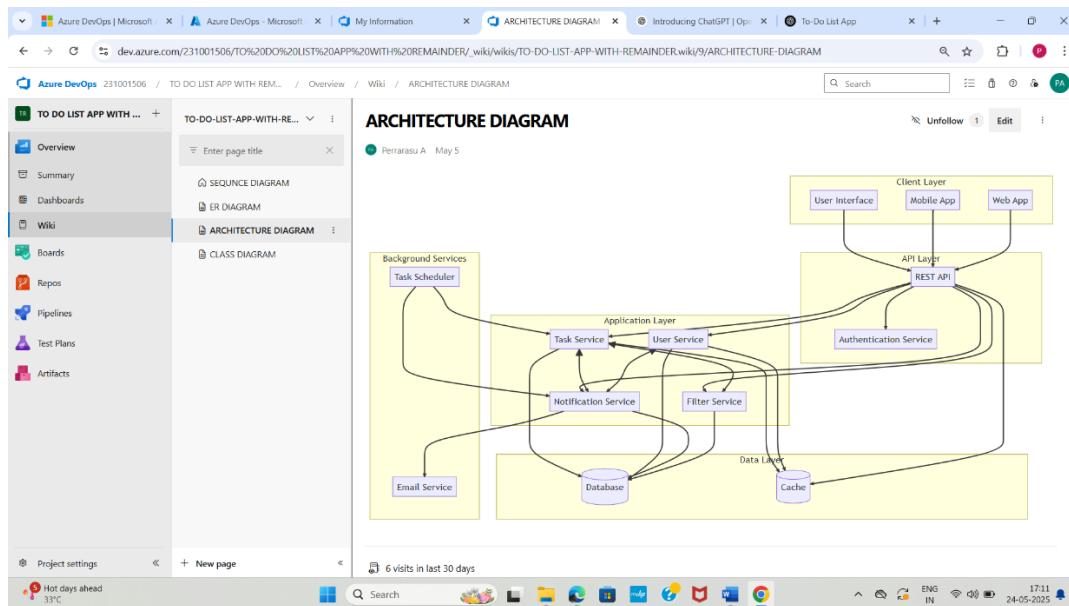
EXP NO: 7

DESIGNING ARCHITECTURAL AND ER DIAGRAMS FOR PROJECT STRUCTURE

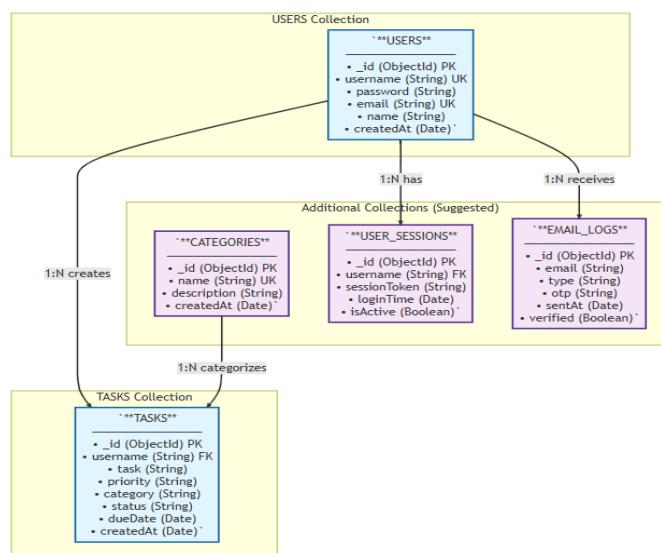
Aim:

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 TASK MANAGEMENT SYSTEM

EXP NO: 8	TESTING – TEST PLANS AND TEST CASES
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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
- Creating, Editing and Deleting Tasks
- Setting Task priorities and due dates
- Marking Tasks as complete or incomplete
- Viewing tasks by filters
- Setting reminders and notifications

2. Define User Interactions

- Each test case simulates real user behaviors such as signing up, adding a task, editing task details, completing tasks, or setting reminders.

3. Design Happy Path Test Cases

- Validate all core features work correctly under normal conditions.
- Example: User logs in successfully, creates a new task with a due date, marks it complete, and views it under the “Completed” filter.

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 User login).
- Helps in quick identification and linking to user stories or features.

7. Separate Test Suites

- Grouped test cases based on functionality (e.g., Login, Task Management, Notifications).

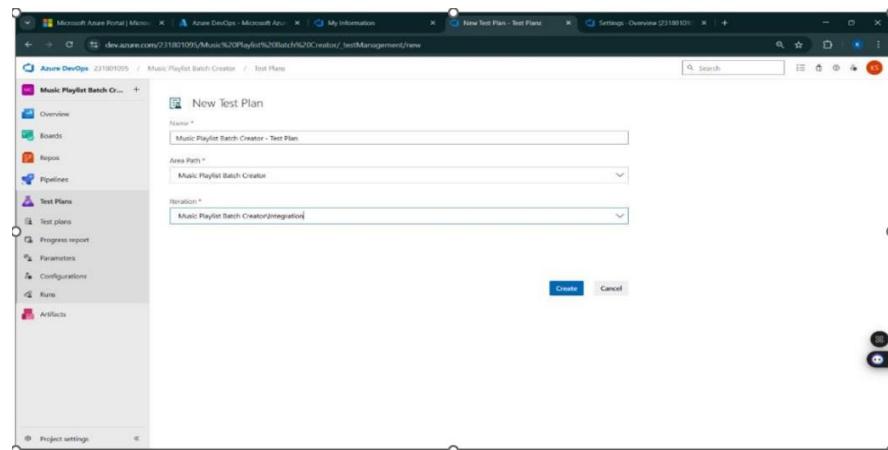
- Improves organization and test execution flow in Azure DevOps.

8. Prioritize and Review

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

1. New test plan

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.

Music Playlist Batch Creator – Test Plans

USER STORIES

- As a user, I want to sign up and log in securely so that I can access my playlists (ID: 79).
- As a user, I need to see my playlist in one place (ID: 76).
- As a user, I should be able to create an audio playlist as needed (ID: 73).
- As a user, I should be able to rename, record, and change the playlist (ID: 68).
- As a user, I need to have real-time metadata (ID: 65).

Test Suites

Test Suit: TS01 - User Login (ID: 86)

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 - View Playlists (ID: 87)

1. TC05 – View Playlist Page

- **Action:**
 - Log in successfully.
 - Navigate to "My Playlists" section.
- **Expected Results:**
 - All created playlists are displayed clearly.
- **Type:** Happy Path

2. TC06 – Playlist Loading Failure

- **Action:**
 - Disconnect from the internet.
 - Navigate to "My Playlists".
- **Expected Results:**
 - Network is offline.
 - Error message "Unable to load playlists" is shown.
- **Type:** Error Path

Test Suit: TS03 - Real-Time Metadata (ID: 88)

1. TC07 – Real-Time Metadata Display

- **Action:**
 - Play a song.
 - Observe the metadata panel.
- **Expected Results:**
 - Metadata (title, artist, album, duration) is displayed and updates in real time.
- **Type:** Happy Path

2. TC08 – Metadata Not Updating

- **Action:**

- Play a different song.
 - Observe the metadata panel.
- **Expected Results:**
 - Metadata remains static or shows default/fallback message.
- **Type:** Error Path

Test Suit: TS04 - Playlist Editing (ID: 89)

1. TC09 – Rename Playlist Successfully

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

2. TC10 – Rename with Blank Name

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

3. TC11 – Change Playlist Order

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

4. TC12 – Change Playlist Order Fails

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

Test Suit: TS05 - Smart Playlist Creation (ID: 90)

1. TC13 – Generate Playlist Based on Various Categories

- Action:

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

- Expected Results:

- Playlist is generated based on selected mood and categories.

- Type: Happy Path

2. TC14 – Fail to Generate Playlist Due to Missing Category Selection or Invalid Input

- Action:

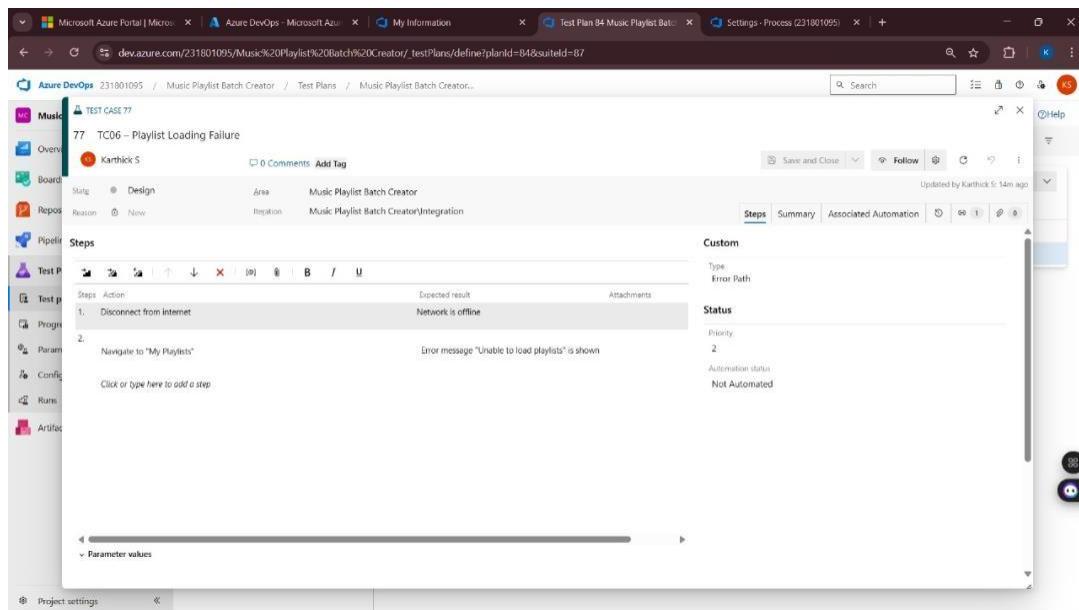
- Login with valid credentials.
- Click on "Generate Playlist".
- Select categories.
- Click "Generate Playlist".

- Expected Results:

- Error message: "Please select at least one valid category" or "No recommendations found for the selected filters".

- Type: Error Path

Test Cases



The screenshot shows the Azure DevOps Test Plan interface. A test case named 'TC05 – View Playlist Page' is selected. The test case details include:

- Category:** TEST CASE 75
- Owner:** Karthick S
- Comments:** 0
- Tags:** Add Tag
- State:** Design
- Reason:** New
- Iteration:** Music Playlist Batch Creator\Integration

The **Steps** section contains two steps:

1. Log in successfully. Expected result: User is redirected to dashboard.
2. Navigate to "My Playlists" section. Expected result: All created playlists are displayed clearly.

The **Status** section shows:

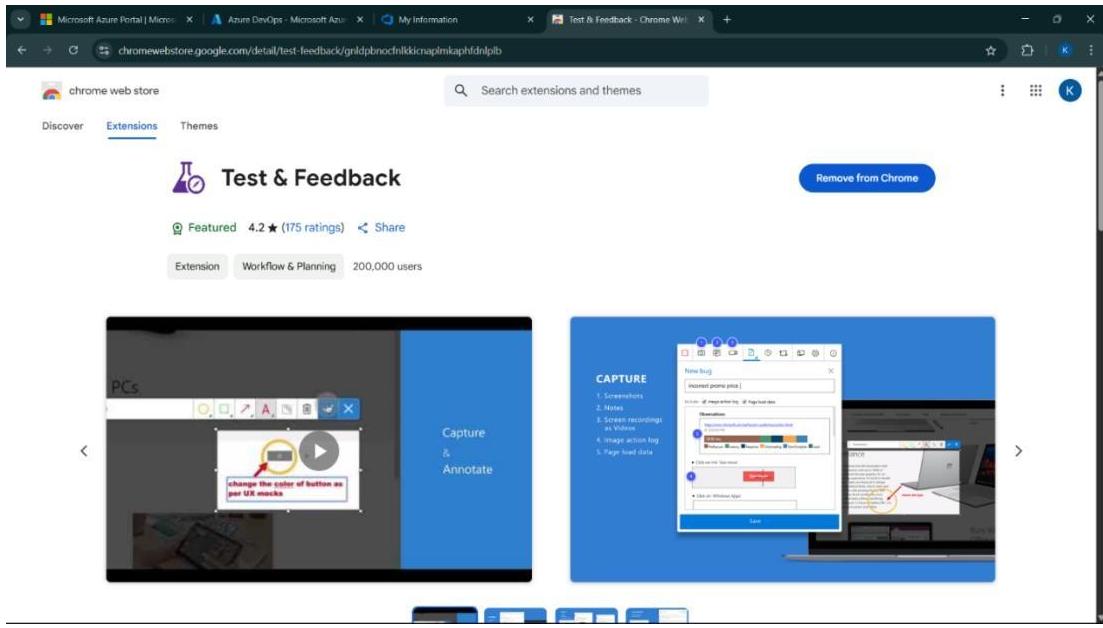
- Priority: 2
- Automation status: Not Automated

4. Installation of test

The screenshot shows the Chrome Web Store page for the 'Test & Feedback' extension. The extension details are as follows:

- Rating:** 4.2 ★ (175 ratings)
- Category:** Workflow & Planning
- Users:** 200,000 users

The extension features a screenshot titled 'PCs' showing a browser window with a red annotation over a play button. Another screenshot titled 'Capture & Annotate' shows a screenshot of a bug reporting interface with annotations. A large 'Add to Chrome' button is visible at the top right.



Test and feedback

Showing it as an extension

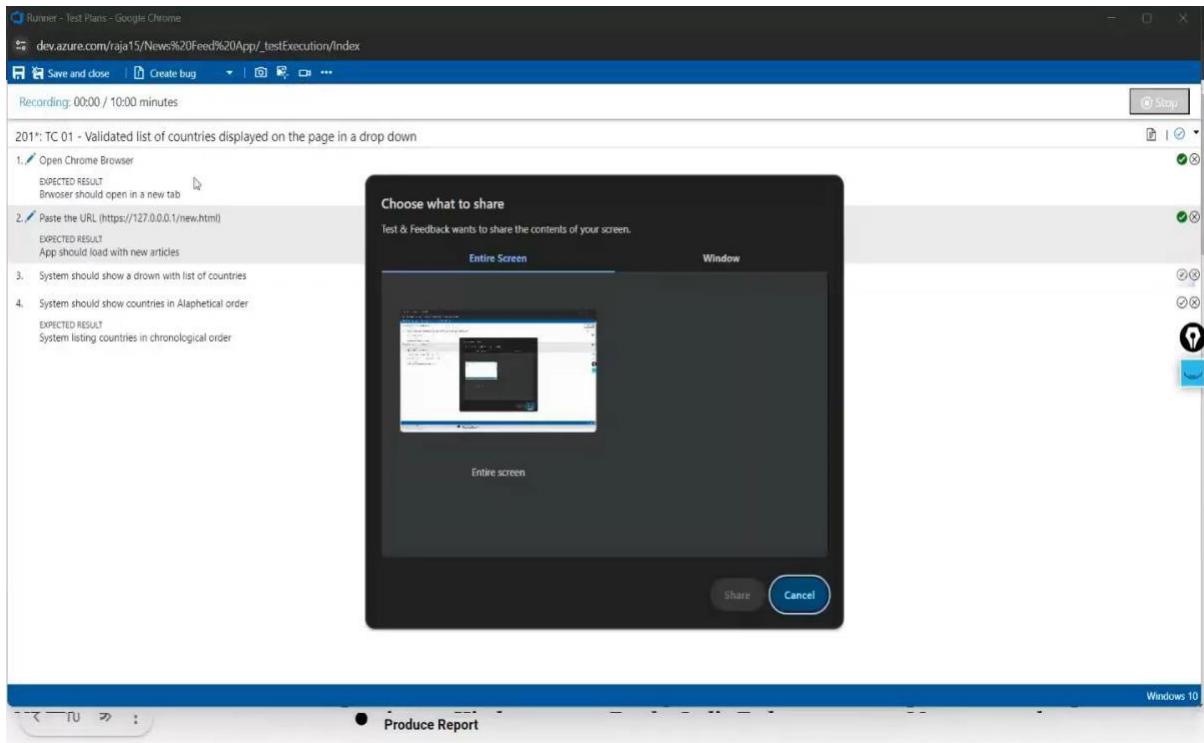
A screenshot of the Azure DevOps Test Plan interface. On the left, there's a navigation sidebar with options like Overview, Boards, Repos, Pipelines, Test Plans, Test plans, Progress report, Parameters, Configurations, Runs, and Artifacts. The "Test plans" option is currently selected. The main area shows a "Music Playlist Batch Creator" test plan with a "Test Suites" section containing "TS01 - User Login (ID: 86)". This suite has four test cases: "Title", "TC01 - Successful Sign Up", "TC02 - Secure Login", "TC03 - Sign Up with Existing Email", and "TC04 - Login with Wrong Password". On the right side, there's a vertical "Extensions" sidebar titled "Full access" which lists several extensions: "Copy Text from Picture", "Dark Reader", "Monica: ChatGPT AI Assist...", "Selected: Copy Text from V...", and "Test & Feedback". The "Test & Feedback" extension is highlighted with a blue border. At the bottom right of the interface, there's a small circular icon with a question mark and a number "88".

5. Running the test cases

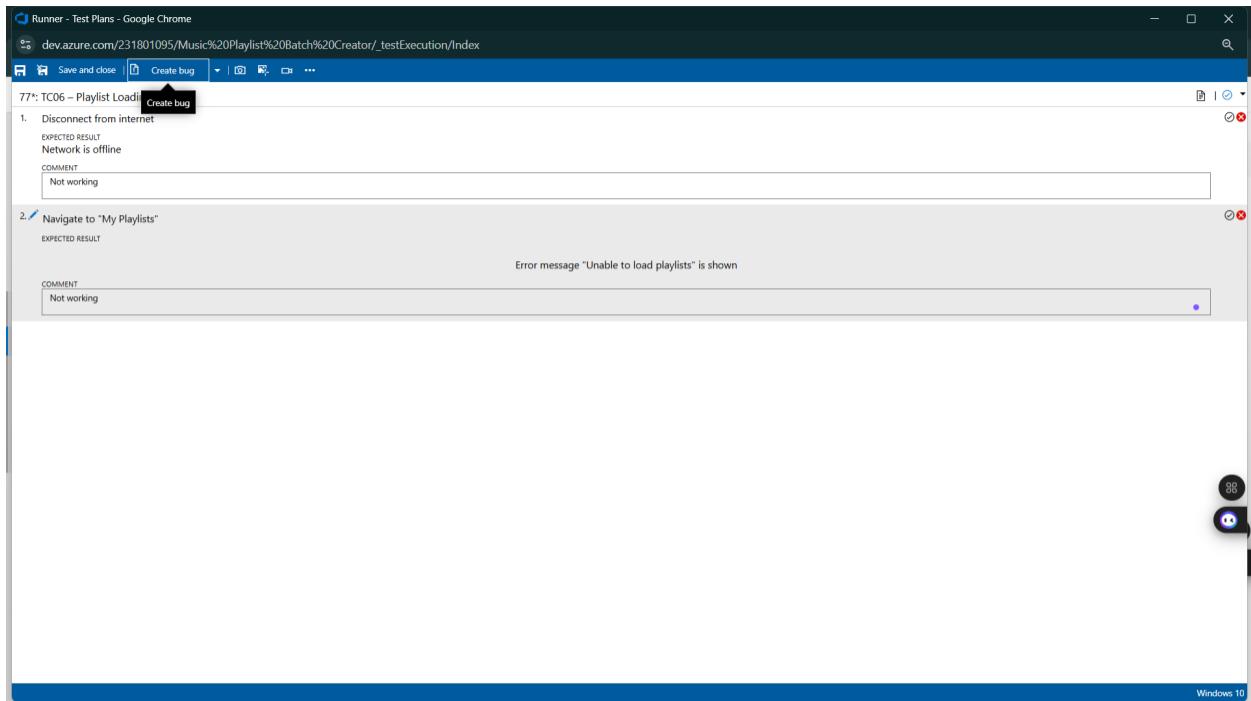
The screenshot shows the Azure DevOps Test Plan interface. On the left, the navigation bar includes 'Overview', 'Boards', 'Repos', 'Pipelines', 'Test Plans', 'Test plans' (selected), 'Progress report', 'Parameters', 'Configurations', 'Runs', and 'Artifacts'. Under 'Test plans', 'Music Playlist Batch Creator - T...' is expanded, showing 'TS01 - User Login (4)', 'TS02 - View Playlists (2)' (selected), 'TS03 - Real-Time Met...', 'TS04 - Playlist Editing (4)', and 'TS05 - Smart Playlist ...'. The main area displays 'TS02 - View Playlists (ID: 87)'. The 'Execute' tab is selected, showing 'Test Points (2 items)': 'TC05 – View Playlist Page' (Passed, Order 1, Test Case Id 75, Windows 10, Tester Malu karthick B...) and 'TC06 – Playlist Loading Failure' (Not run). A context menu is open over 'TC05 – View Playlist Page' with options: 'View execution history', 'Mark Outcome' (checkbox checked), 'Run' (disabled), 'Reset test to active', 'Edit test case', 'Assign tester', and 'View test result'. The top navigation bar shows tabs for 'Test Plan 84 Music Playlist', 'Settings - Overview (231801095)', and 'Bug Report Playlist Page'. The address bar shows 'dev.azure.com/231801095/Music%20Playlist%20Batch%20Creator/_testPlans/execute?planId=84&suiteId=87'. The status bar at the bottom right shows 'Windows 10'.

The screenshot shows a browser window titled 'Runner - Test Plans - Google Chrome' with the URL 'dev.azure.com/231801095/Music%20Playlist%20Batch%20Creator/_testExecution/Index'. The page displays the steps for '75*: TC05 – View Playlist Page': 1. Log in successfully (EXPECTED RESULT: User is redirected to dashboard) and 2. Navigate to "My Playlists" section (EXPECTED RESULT: All created playlists are displayed clearly). The status bar at the bottom right shows 'Windows 10'.

6. Recording the test case



7. Creating the bug



Runner - Test Plans - Google Chrome
dev.azure.com/231801095/Music%20Playlist%20Batch%20Creator/_testExecution/Index

77: TC06 - Playlist Loading Failure

1. Disconnect from internet
EXPECTED: Network connection is lost.
Actual Result: Playlist loading spinner keeps spinning indefinitely on poor network.

2. Navigate to "My Playlists".
EXPECTED: Playlist list is displayed.
Actual Result: Bug filed on "TC06 - Playlist Loading Failure".

TB01 - Playlist loading spinner keeps spinning indefinitely on poor network

Unassigned 0 comments Add tag TB01 - Playlist loading spinner keeps spinning indefinitely on poor network Save & Close ...

State: New Area: Music Playlist Batch Creator
Reason: New Iteration: Music Playlist Batch Creator

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.
Actual Result: Comments: Page Not loading
2. Failed Navigate to "My Playlists".
Expected Result: Error message "Unable to load playlists" is shown.

Test Configuration: Windows 10

Planning
Resolved Reason: 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.
Story Points: 1
Priority: 2
Severity: 3 - Medium
Activity: 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.

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

Windows 10

Microsoft Azure Portal | Azure DevOps - Microsoft | My Information | Test Plan 84 Music | Runs - Test Plans | Settings - Overview | Bug Report Playlist | +

dev.azure.com/231801095/Music%20Playlist%20Batch%20Creator/_testManagement/runs?a=resultSummary&runId=48&resultId=100000

Azure DevOps 231801095 / Music Playlist Batch Creator / Test Plans / Runs

Search

Music Playlist Batch Cr... BUG 92 Run 48 - TS02 - View Playlists (Manual) / TC06 - Playlist Loading Failure

Overview Board Repos Pipelines Test Plans Test plans Program Parameters Configuration Runs Artifacts

92 TB01 - Playlist loading spinner keeps spinning indefinitely on poor network

Unassigned 0 comments Add tag

State: New Area: Music Playlist Batch Creator
Reason: New Iteration: Music Playlist Batch Creator

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	x64_64
Operating system - Processor	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.

Recent attachments

Name	Size
SystemInformation-2025-04-18T03-23-58.168Z.json	1K

Project settings

8. Test case results

The screenshot shows the Azure DevOps interface for a test plan named 'Music Playlist Batch Creator'. The left sidebar navigation includes 'Overview', 'Boards', 'Repos', 'Pipelines', 'Test Plans', 'Test plans' (selected), 'Progress report', 'Parameters', 'Configurations', 'Runs', and 'Artifacts'. The main content area displays 'TS02 - View Playlists (ID: 87)' with tabs for 'Define', 'Execute' (selected), and 'Chart'. Under 'Test Suites', 'TS02 - View Playlists (2)' is selected. The 'Test Points (2 items)' section lists 'TC05 – View Playlist Page' (Passed) and 'TC06 – Playlist Loading Failure' (Not Applicable). A detailed table titled 'Test Case Results' shows execution history for TC05 across various configurations and dates. The table includes columns for Outcome, TimeStamp, Configuration, Run by, Tester, and Test Point. The tester for all entries is 'Karthick S'. The configuration varies between Windows 10 and Windows 12. The outcome is mostly Passed, with one Not Applicable entry.

Outcome	TimeStamp	Configuration	Run by	Tester	Test Point
Passed	4m ago	Windows 10	Karthick S	Karthick S	Malu karthick Balaji ... Music
Passed	12m ago	Windows 10	Karthick S	Karthick S	Malu karthick Balaji ... Music
Not Applicable	12m ago	Windows 10	Karthick S	Karthick S	Malu karthick Balaji ... Music
Passed	14m ago	Windows 10	Karthick S	Karthick S	Malu karthick Balaji ... Music
Passed	Tuesday	Windows 10	Karthikayen Senthil	Karthikayen Senthil	Malu karthick Balaji ... Music
Passed	Saturday	Windows 10	Malu karthick Balaji ...	Malu karthick Balaji ...	Malu karthick Balaji ... Music
Failed	Saturday	Windows 10	Malu karthick Balaji ...	Malu karthick Balaji ...	Malu karthick Balaji ... Music
Passed	Apr 11	Windows 10	Karthick S	Karthick S	Malu karthick Balaji ... Music
Passed	Apr 11	Windows 10	Karthick S	Karthick S	Malu karthick Balaji ... Music

9. Test report summary

The screenshot shows the Azure DevOps interface for a project named 'News Feed App'. The left sidebar navigation includes 'Overview', 'Boards', 'Work items' (selected), 'Backlogs', 'Sprints', 'Queries', 'Delivery Plans', 'Analytics views', 'Repos', 'Pipelines', 'Test Plans', and 'Artifacts'. The main content area displays a work item titled 'BUG 203: BG 01 - Countries Drop down Not Available on the page'. The work item details include:

- Title:** BUG 203
- State:** New
- Reason:** New
- Iteration:** News Feed App
- Repro Step:** Active, Resolved, Closed (with note: 'Validated list of countries displayed on the')
- Step no. Result Title**
 - 1. Passed Open Chrome Browser
Expected Result: Browser should open in a new tab
 - 2. Passed Paste the URL (<https://127.0.0.1/new.html>)
Expected Result: App should load with new articles
 - 3. Failed System should show a dropdown with list of countries
Action: Produce Report
- Planning:** Resolved Reason, Story Points, Priority (2), Severity (3 - Medium), Activity
- 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.
- Effort (Hours):** Original Estimate
- Related Work:** (empty)

- Assigning bug to the developer and changing state

Bug 92*

92 TB01 - Playlist loading spinner keeps spinning indefinitely on poor network

Repro Steps

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

Step no. **Result** **Title**

- Failed** Disconnect from internet
- Failed** Expected Result: Network is offline
- 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

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: ?? TC06 – Playlist Loading Failure Updated 10-04-2025. ● Design

System Info

10. Progress report

Progress report

Summary

- 1 test plans
- 14 Test points
- 14 (14 / 14) Test points run
- 100% Run
- 100% (14 / 14) Pass rate
- 14 Passed

Outcome trend

Last 14 Days

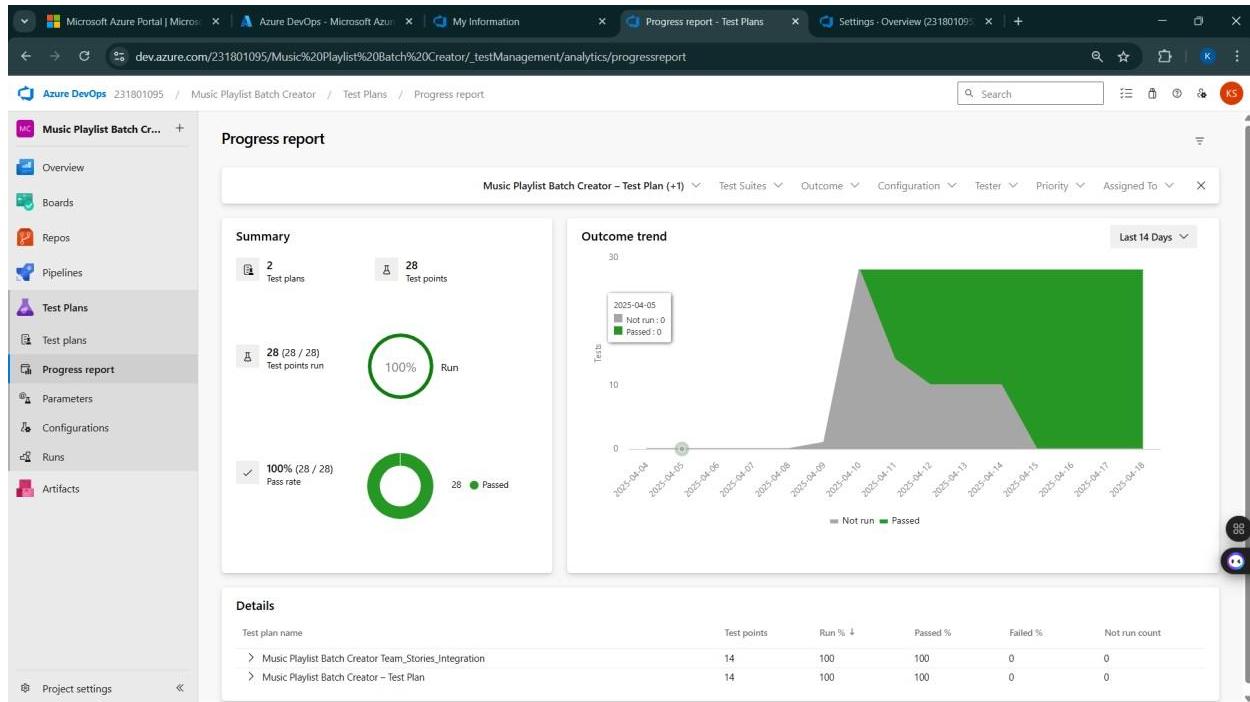
Music Playlist Batch Creator – Test Plan

Test	Not run	Passed
2025-04-01	14	0
2025-04-02	14	0
2025-04-03	14	0
2025-04-04	14	0
2025-04-05	14	0
2025-04-06	14	0
2025-04-07	14	0
2025-04-08	14	0
2025-04-09	14	0
2025-04-10	14	0
2025-04-11	14	0
2025-04-12	14	0
2025-04-13	14	0
2025-04-14	14	0
2025-04-15	14	0

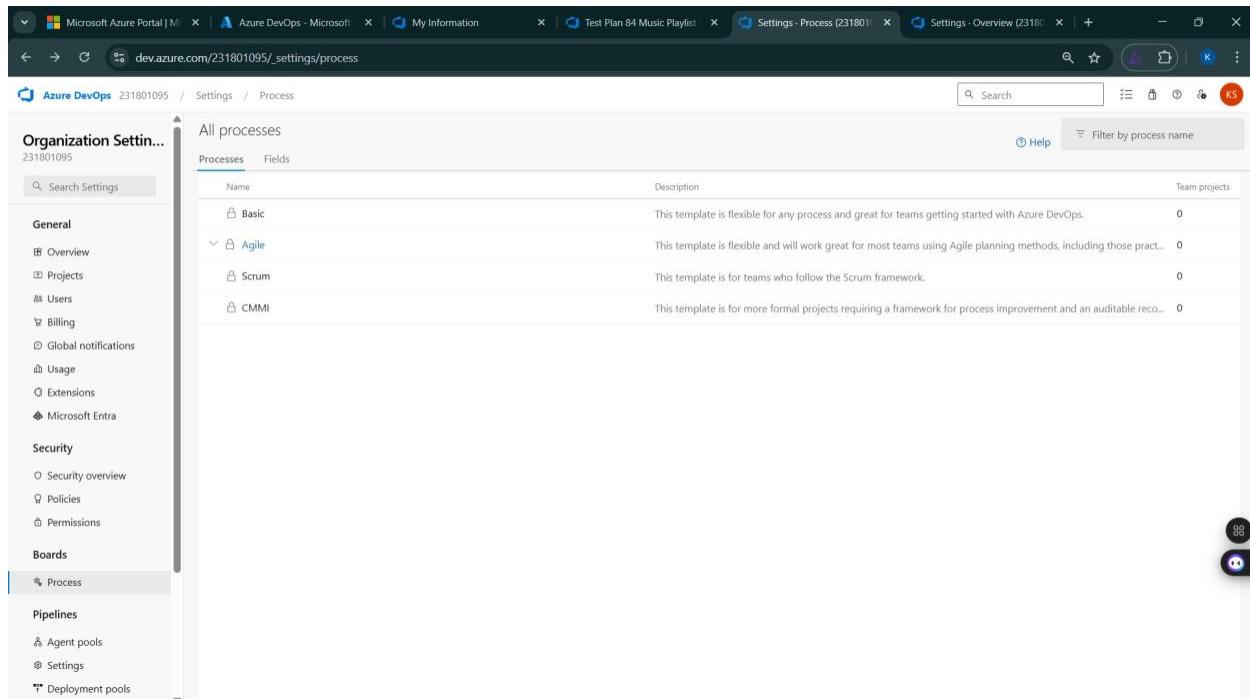
Details

Test plan name: Music Playlist Batch Creator – Test Plan

Test points	Run %	Passed %	Failed %	Not run count
14	100	100	0	0
4	100	100	0	0
2	100	100	0	0
2	100	100	0	0
4	100	100	0	0
2	100	100	0	0



11. Changing the test template



Microsoft Azure Portal | My Information | Azure DevOps - Microsoft | My Information | Test Plan 84 Music Playlist | Settings - Process (231801) | Settings - Overview (231801)

dev.azure.com/231801095/_settings/process

Azure DevOps 231801095 / Settings / Process

All processes

Processes Fields

Name Description Team projects

Basic This template is flexible for any process and great for teams getting started with Azure DevOps. 0

Agile

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 reco... 0

Help Filter by process name

Organization Settings 231801095

General

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

Security

- Security overview
- Policies
- Permissions

Boards

- Process

Pipelines

- Agent pools
- Settings
- Deployment pools

Microsoft Azure Portal | My Information | Azure DevOps - Microsoft | My Information | Test Plan 84 Music Playlist | Settings - Process (231801) | Settings - Overview (231801)

dev.azure.com/231801095/_settings/process

Azure DevOps 231801095 / Settings / Process

All processes

Processes Fields

Name Description Team projects

Basic This template is flexible for any process and great for teams getting started with Azure DevOps. 0

Agile

231801095 Agile (default) This template is flexible and will work great for most teams using Agile planning methods, including those pract... 1

Agile Plus ...

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 reco... 0

Help Filter by process name

Organization Settings 231801095

General

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

Security

- Security overview
- Policies
- Permissions

Boards

- Process

Pipelines

- Agent pools
- Settings
- Deployment pools

12. View the new test case template

The screenshot shows the 'Add a field to Test Case' dialog box overlaid on the Azure DevOps settings interface. The dialog box has a tabbed interface with 'Definition' selected, showing the option to 'Add a field to store custom, queryable data about your work items.' Below this, there are sections for 'Options' (radio buttons for 'New field' or 'Use an existing field'), 'Layout' (radio buttons for 'Steps' or 'Summary'), and 'Field' (set to 'Acceptance Criteria'). Under 'Create a field', fields for 'Name' (Type) and 'Type' (Text (single line)) are defined. A 'Description' field is also present. At the bottom are 'Add field' and 'Cancel' buttons.

The screenshot shows the 'Work-item types' section of the Azure DevOps settings. The 'Projects' tab is selected. A new work-item type named 'Music Playlist Batch Creator' is listed, with a detailed description: 'The Azure Music Playlist Batch Creator is a cloud-based solution designed for bulk playlist creation and management. Levera...'. The left sidebar shows the navigation menu with 'Process' selected under 'Pipelines'.

The screenshot shows the Azure DevOps Settings - Process page. The URL in the address bar is dev.azure.com/231801095/_settings/process?type-id=231801095Agile.TestCase&process-name=231801095%20Agile&_a=layout. The page title is "All processes > 231801095 Agile > Test Case". The left sidebar is titled "Organization Settings" and includes sections for General, Security, Boards, Pipelines, and Process. The "Process" section is currently selected. The main content area shows a form for creating a "Test Case". The "Steps" field is highlighted, containing the text "Text (multiple lines)". To the right of the form, there are several sections: "Custom" (Type: Text (single line)), "Recent test results" (Recent test case results), "Deployment" (Deployments), "Development" (Links), "Related Work" (Links), and "Status" (Priority: Integer, Automation status). A vertical scroll bar is visible on the right side of the main content area.

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 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:

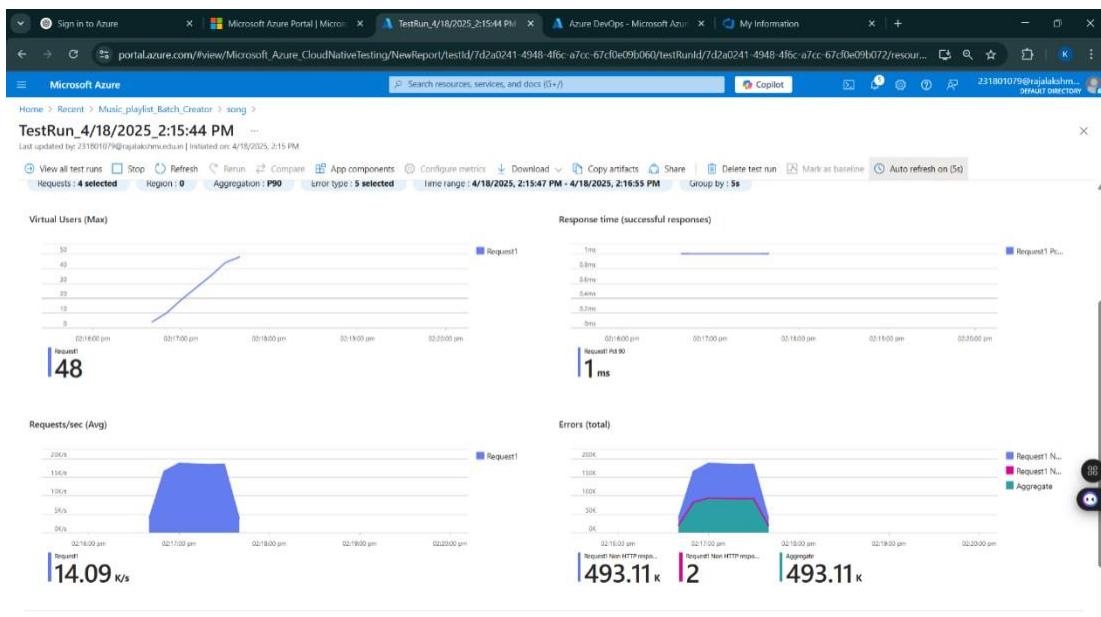
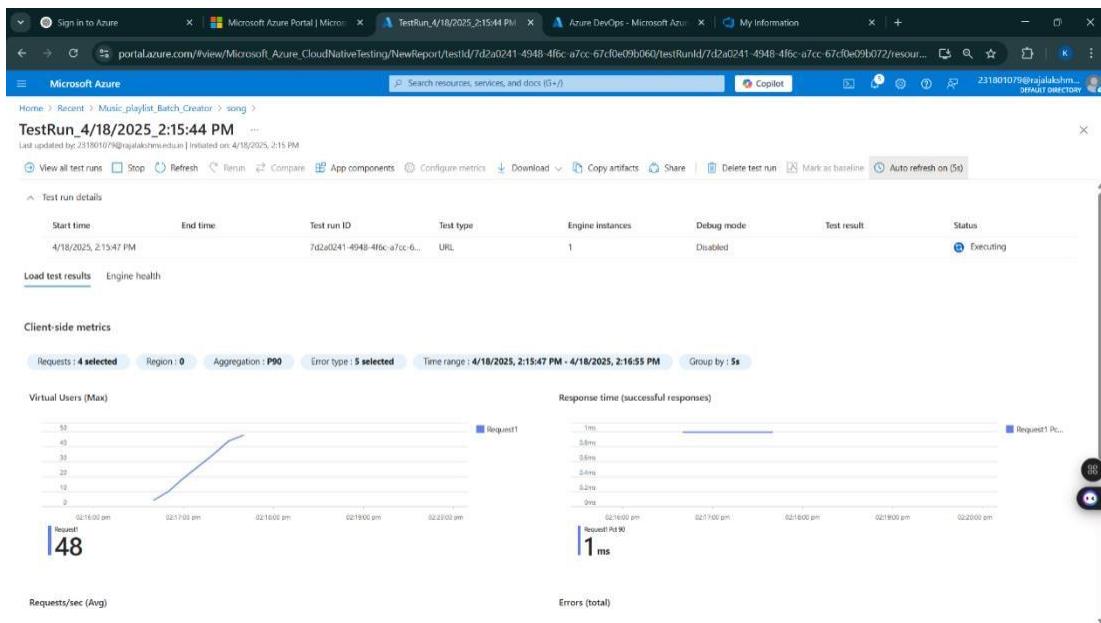
1. Sign in to Azure Portal
Go to <https://portal.azure.com> and log in.
2. Create the Resource
 - o Go to *Create a resource* → Search for “Azure Load Testing”.
 - o Select Azure Load Testing and click Create.
3. Fill in the Configuration Details
 - o *Subscription*: Choose your Azure subscription.
 - o *Resource Group*: Create new or select an existing one.
 - o *Name*: Provide a unique name (no special characters).
 - o *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.

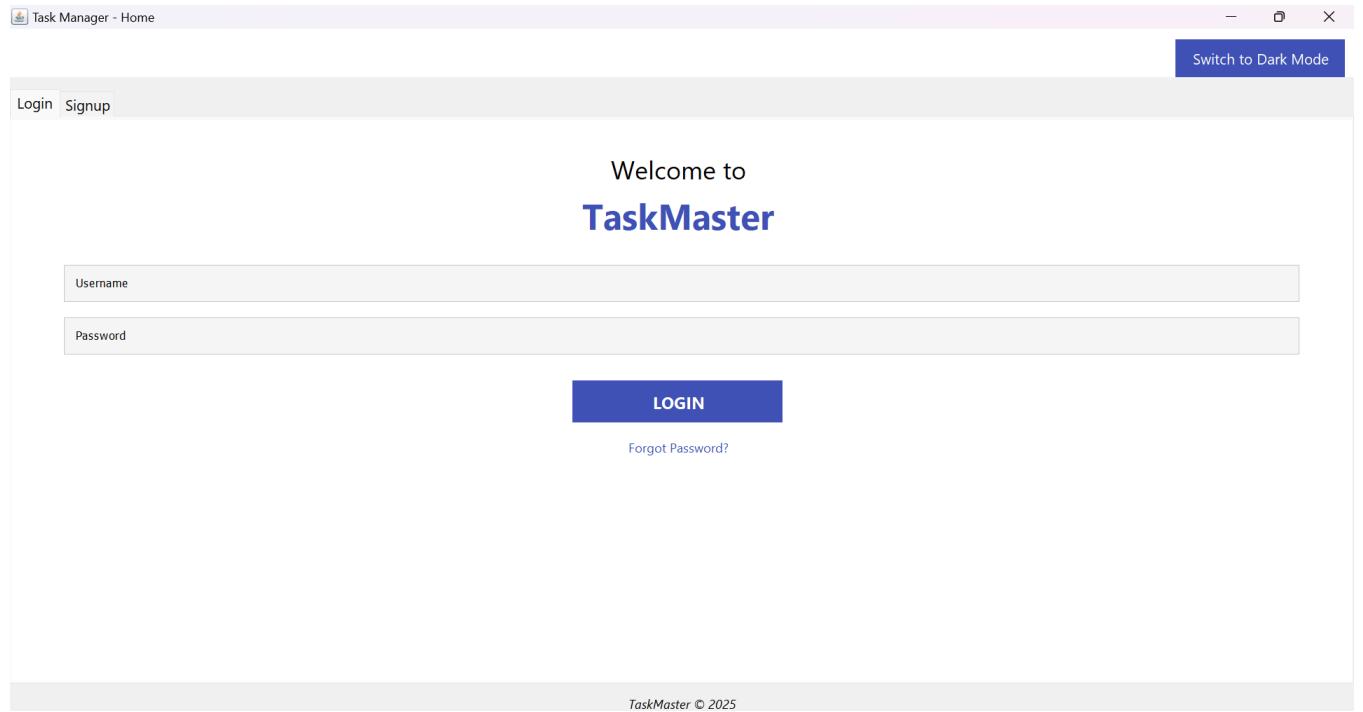
Steps to Create and Run a Load Test:

Once your resource is ready:

1. Go to your Azure Load Testing resource and click Add HTTP requests > Create.
2. Basics Tab
 - o *Test Name*: Provide a unique name.
 - o *Description*: (Optional) Add test purpose.
 - o *Run After Creation*: Keep checked.
3. Load Settings
 - o *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.

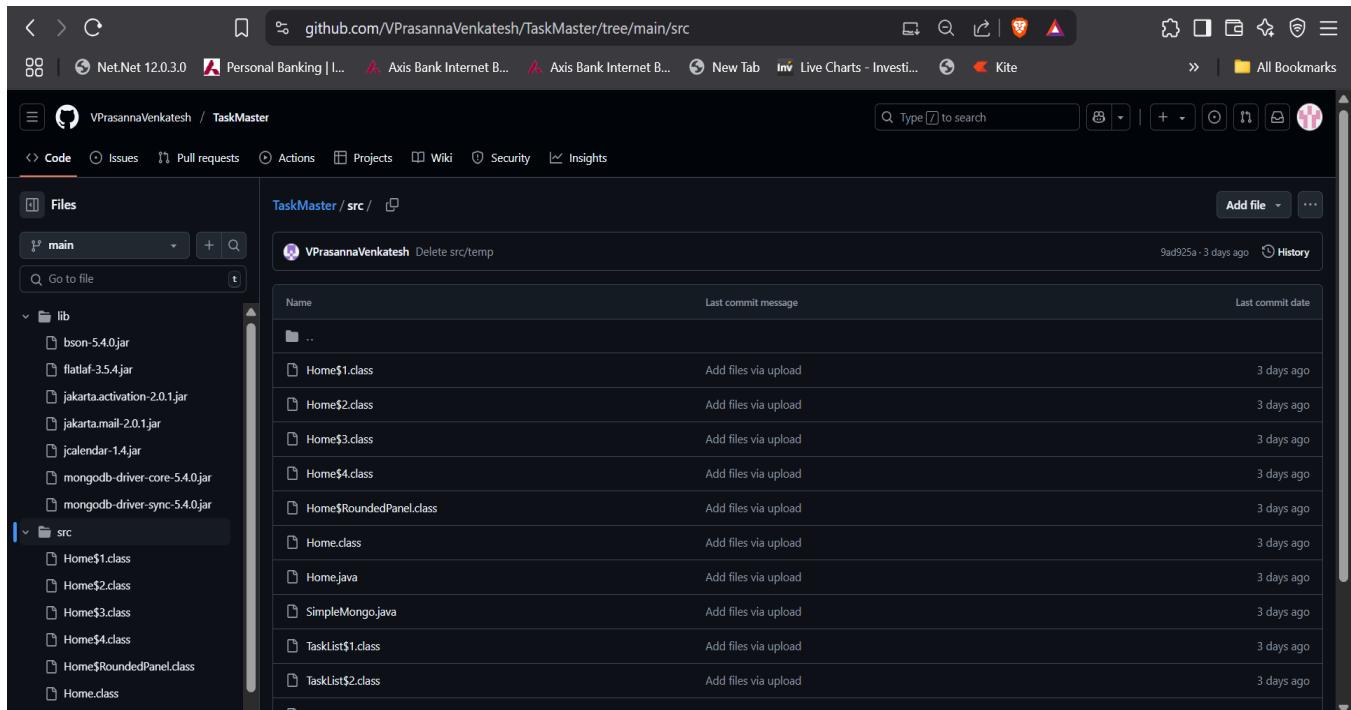
EXP NO: 10

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 Music Playlist Batch Creator project.

GitHub Project Structure:



The screenshot shows a GitHub repository named 'TaskMaster' at the URL github.com/VPrasannaVenkatesh/TaskMaster/tree/main/src. The repository interface displays a sidebar with 'Code' selected, showing the project structure. The main area shows the contents of the 'src' directory. The structure includes a 'lib' folder containing several JAR files like 'bson-5.4.0.jar', 'flatlat-3.5.4.jar', 'jackson.activation-2.0.1.jar', 'jackson.mail-2.0.1.jar', 'jcalendar-1.4.jar', 'mongodb-driver-core-5.4.0.jar', and 'mongodb-driver-sync-5.4.0.jar'. The 'src' folder contains Java source files such as 'Home\$1.class', 'Home\$2.class', 'Home\$3.class', 'Home\$4.class', 'Home\$RoundedPanel.class', 'Home.class', 'Home.java', 'SimpleMongo.java', 'TaskList\$1.class', and 'TaskList\$2.class'. A commit history for the 'src/temp' folder is visible, showing a single commit from 'VPrasannaVenkatesh' with the message 'Delete src/temp' made 3 days ago. The GitHub interface includes a search bar, a navigation bar with tabs like 'Issues', 'Pull requests', 'Actions', 'Projects', 'Wiki', 'Security', and 'Insights', and various browser extensions and bookmarks at the top.

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.