

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>

The screenshot shows the Microsoft Azure portal homepage. At the top, there's a banner with three main options: "Start with an Azure free trial", "Manage Microsoft Entra ID", and "Azure for Students". Below this, there's a section titled "Azure services" with icons for "Create a resource", "Azure DevOps organizations", "Managed DevOps Pools", "Help + support", "Subscriptions", "Quickstart Center", "Azure AI foundry", "Kubernetes services", "Virtual machines", and "More services". At the bottom, there's a navigation bar with various icons and a status bar showing "Very humid Now", "ENG IN", "07:32 AM", and the date "21-05-2025".

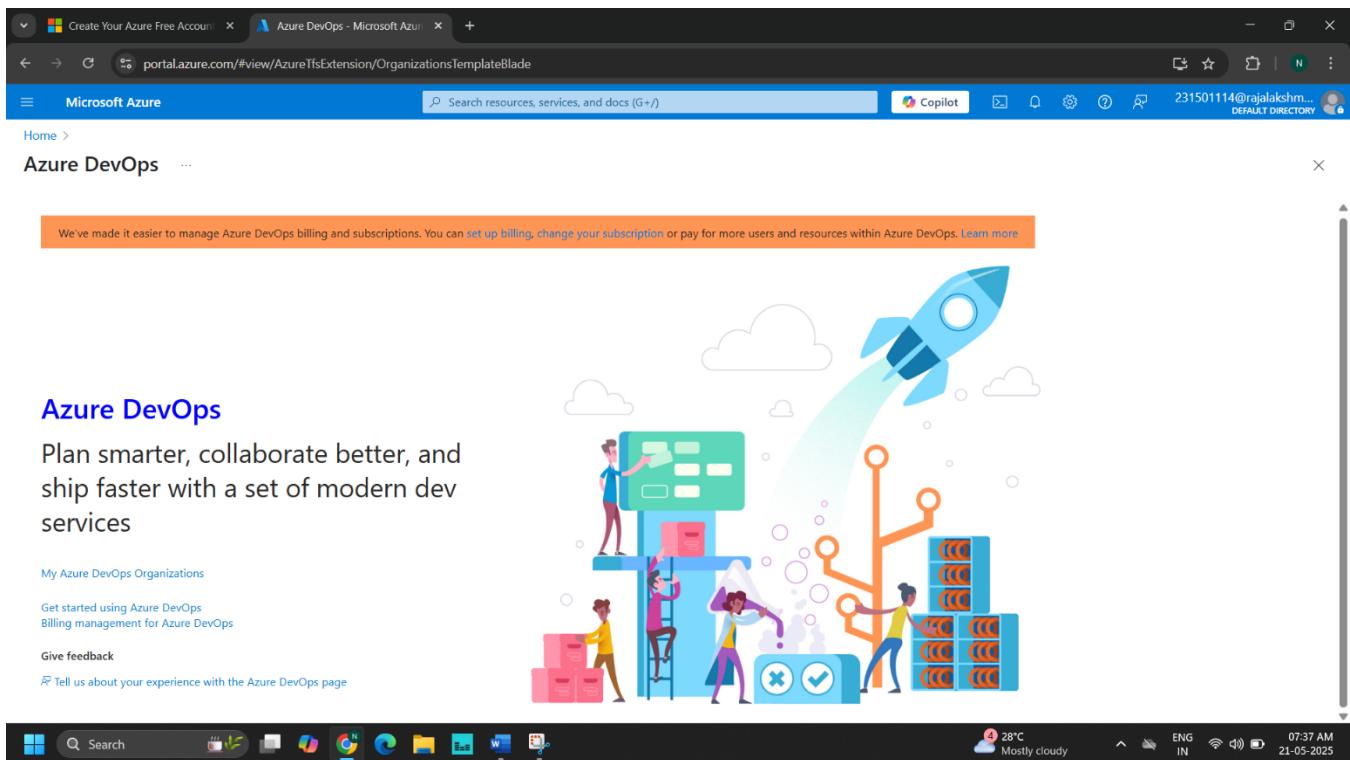
2. Azure home page

The screenshot shows the Microsoft Azure home page. At the top, there are three main promotional sections: "Start with an Azure free trial" (blue key icon), "Manage Microsoft Entra ID" (shield and server icon), and "Azure for Students" (pen and notebook icon). Below these are sections for "Azure services" (with icons for Create a resource, Azure DevOps organizations, Managed DevOps Pools, Help + support, Subscriptions, Quickstart Center, Azure AI foundry, Kubernetes services, Virtual machines, and More services) and "Resources" (Windows taskbar with various pinned icons like File Explorer, Edge, and File History).

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

The screenshot shows the Microsoft Azure home page with a search bar at the top containing the text "devops". The search results are displayed below, under the "Services" tab, listing items such as "Azure Native New Relic Service", "Managed DevOps Pools", "Azure DevOps organizations", and "Azure Native Dynatrace Service". The rest of the page layout is identical to the first screenshot, including the "Azure services" sidebar and the Windows taskbar at the bottom.

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.

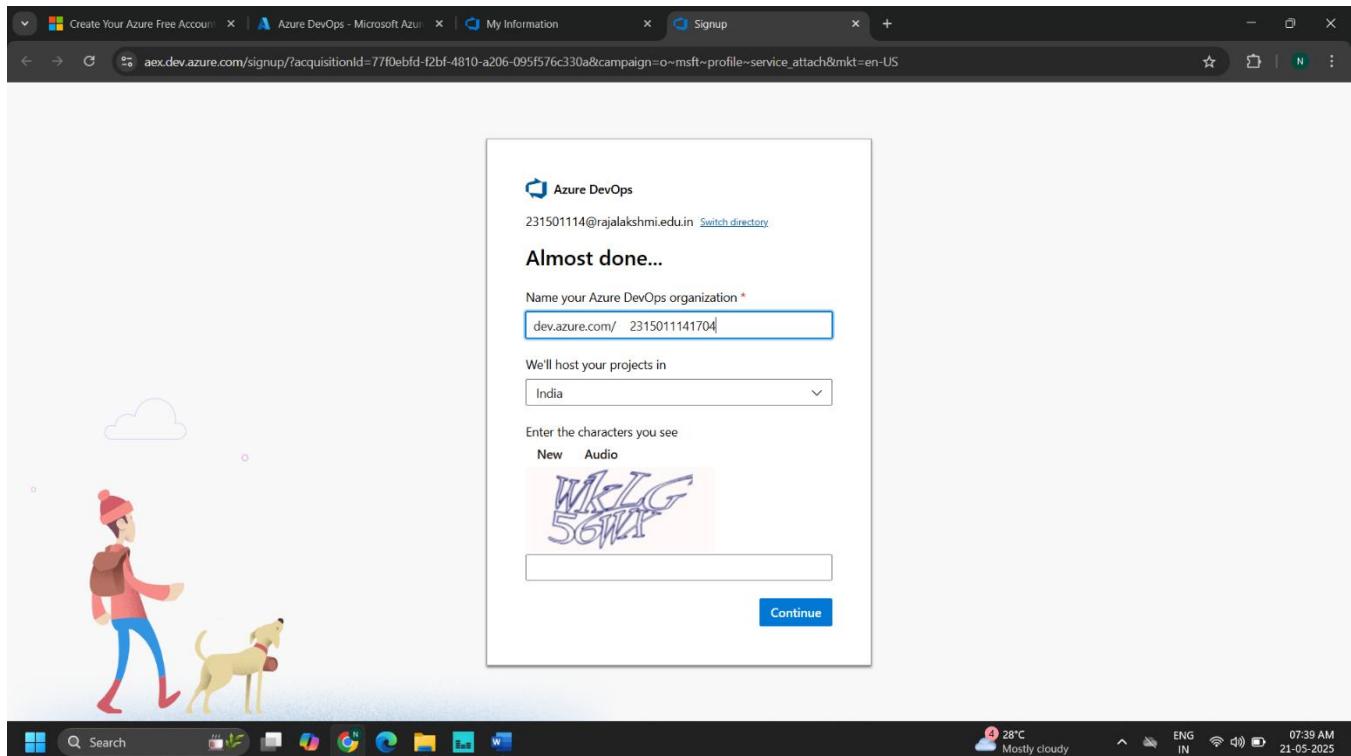
EXP NO: 2

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

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 *

Music Playlist Batch Creator

Description

Visibility



Public

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



Private

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



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

Advanced

Version control [?](#)

Git

Work item process [?](#)

Agile

Cancel

Create

- 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.

The screenshot shows the Azure DevOps Organizations dashboard. At the top right, it displays the user's name 'Nithesh Kumar S' and a 'Sign out' button. Below the header, there are two sections: 'Azure DevOps Organizations' and 'Create new organization'. The first section lists two organizations: 'dev.azure.com/231501114' (Owner) and 'dev.azure.com/pragadeeshld2005' (Member). Under each organization, there are 'Projects' and 'Actions' sections. The 'Projects' section for the first organization shows 'ATM' and 'Promotional Campaign Integration In Billing System'. The 'Actions' section for the first organization includes 'Open in Visual Studio'. The 'Projects' section for the second organization shows 'playlist batch creator'. The 'Actions' section for the second organization includes 'Open in Visual Studio', 'Manage security', 'Browse extensions', and 'Leave'. On the left side of the dashboard, there is a profile section for 'Nithesh Kumar S' with contact information (email: 231501114@rajalakshmi.edu.in), a dropdown for 'Microsoft account', and location details ('India', email: 231501114@rajalakshmi.edu.in). Below this, there is a 'Visual Studio Dev Essentials' section with a brief description and a 'Use your benefits' link. The bottom of the screenshot shows the Windows taskbar with various pinned icons and system status indicators.

4. Project dashboard

The screenshot shows the Azure DevOps project dashboard for 'playlist batch creator'. The left sidebar contains navigation links: Overview, Summary, Dashboards, Wiki, Boards, Repos, Pipelines, Test Plans, Artifacts, and Project settings. The main content area is titled 'playlist batch creator'. It features a 'About this project' section with a description of the tool, key features, custom templates, and use cases. To the right, there is a 'Project stats' section showing work item metrics (7 created, 0 completed), pull requests (0 opened), commits (4 by 2 authors), and pipeline builds (50% succeeded). Below the stats is a 'Members' section showing five team members. The bottom of the screenshot shows the Windows taskbar with various pinned icons and system status indicators.

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 'playlist batch creator' team. The left sidebar includes options like Overview, Boards, Work items, Backlogs, Sprints, Queries, Delivery Plans, Analytics views, Repos, Pipelines, Test Plans, Artifacts, and Project settings. The main area displays the backlog for the 'playlist batch creator Team'. It lists three Epic items: 1. Song Selection for Playlist Creation, 2. Playlist Customization, and 3. Payment & Download. Each item has a state (New), effort, business value, and priority. To the right, there's a 'Planning' section showing three sprints: sprint_6 (5/22/2025 - 5/29/2025), sprint_7 (5/30/2025 - 6/6/2025), and sprint_8 (6/9/2025 - 6/16/2025). The bottom status bar indicates the user is 'Air: Moderate Now' and the date and time are 22-05-2025 06:29 AM.

Order	Work Item Type	Title	State	Effort	Business Value	Priority
1	Epic	> Song Selection for Playlist Creation	New	Business	High	1
2	Epic	> Playlist Customization	New	Business	Medium	2
3	Epic	> Payment & Download	New	Business	Low	3

for Team Epic x Microsoft account security code x +

am/Epics

Search

Microsoft Sign out

Nithesh Kumar S
231501114@rajalakshmi.edu.in
[My Microsoft account](#)
[Switch directory](#) ...

+ New Work Item

View

State	Effort	Business	Value
● New	Business	Business	Business
● New	Business	Business	Business
● New	Business	Business	Business

Sign in with a different account

playlist batch creator Team backlog

sprint 6 5/22/2025 - 5/29/2025

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 the 'playlist batch creator' team. On the left, the navigation menu is visible with options like Overview, Boards, Work items, Backlogs, Sprints, Queries, Delivery Plans, Analytics views, Repos, Pipelines, Test Plans, Artifacts, and Project settings. The 'Backlogs' option is currently selected. The main area displays the backlog board for the 'playlist batch creator Team'. The backlog is organized into three main epics:

- Epic 1: Song Selection for Playlist Creation
 - Feature: Browse and Select Songs
 - User Story: As a user, I want to browse my music library and select songs.
 - User Story: As a user, I want to be able to select multiple songs at once.
 - Feature: Search and Filter for Songs
 - User Story: As a user, I want to search for songs by artist, genre, or keyword.
 - User Story: As a user, I want to filter songs based on criteria like song length or release date.
- Epic 2: Playlist Customization
- Epic 3: Payment & Download

On the right side of the backlog board, there is a 'Planning' section where sprints are listed:

- sprint 6: 5/22/2025 - 5/29/2025, Planned Effort: 0, 6 working days, 1 task
- sprint 7: 5/30/2025 - 6/6/2025, Planned Effort: 0, 6 working days, 3 tasks
- sprint 8: 6/9/2025 - 6/16/2025, Planned Effort: 0, 6 working days, 1 task

1. Fill in Epics

A screenshot of the Azure DevOps interface showing a work item details page. The URL in the browser is dev.azure.com/pragadeeshld2005/playlist%20batch%20creator/_backlogs/backlog/playlist%20batch%20creator%20Team/Epics?workitem=7. The page title is "7 Song Selection for Playlist Creation". The work item type is "EPIC". The "Planning" section shows a priority of 2. The "Deployment" section includes a note about tracking releases via Releases and deployment status reporting. The "Development" section has a placeholder for adding links to Azure Repos. The "Related Work" section is currently empty. The sidebar on the left lists various project management sections like Boards, Backlogs, and Queries. The bottom of the screen shows the Windows taskbar with icons for search, file explorer, and other applications.

2. Fill in Features

The screenshot shows the 'FEATURE 8' work item in Azure DevOps. The task title is 'Browse and Select Songs'. The 'Description' field contains the placeholder 'Click to add Description.' The 'Planning' section shows a priority of 2. The 'Deployment' section includes a note about tracking releases and a link to 'Releases'.

FEATURE 8
8 Browse and Select Songs
No one selected

State: New Area: playlist batch creator
Reason: New Iteration: playlist batch creator\sprint 1

Description: Click to add Description.

Planning: Priority 2
Risk:

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](#)

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

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: 025 days

3. Fill in User Story Details

The screenshot shows the 'USER STORY 9' work item in Azure DevOps. The story text is: 'As a user, I want to browse my music library and select songs to add to my playlist, so I can easily customize my playlist with my favorite songs.' The 'Description' field contains the placeholder 'Click to add Description.' The 'Acceptance Criteria' field contains the placeholder 'Click to add Acceptance Criteria.' The 'Classification' section shows a value area of 'Business'.

USER STORY 9
9 As a user, I want to browse my music library and select songs to add to my playlist, so I can easily customize my playlist with my favorite songs.
Pragadeesh kumar L D 0 Comments Add Tag

State: New Area: playlist batch creator
Reason: New Iteration: playlist batch creator\sprint 1

Description: Click to add Description.

Acceptance Criteria: Click to add Acceptance Criteria.

Classification: Value area: Business

Planning: Story Points
Priority 2
Risk:

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: 025 days

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 'playlist batch creator' project. The left sidebar is collapsed, showing options like Overview, Boards, Work items, Boards, Backlogs, Sprints (selected), Queries, Delivery Plans, Analytics views, Repos, Pipelines, Test Plans, Artifacts, and Project settings. The main area is titled 'playlist batch creator Team' and shows the 'Taskboard' tab selected. A message at the top says 'Did you notice Azure Boards has a new look and awesome new features? Learn more.' Below it, the 'Taskboard' section displays a single user story under 'sprint 6'. The story is titled 'As a user, I want to name my playlists and give them descriptions, so I can easily identify them and share them with others.' It is categorized as 'New' and 'Unassigned'. The taskboard has columns for New, Active, Resolved, and Closed. At the bottom right, there's a status bar showing 'May 22 - May 29' and '6 work days remaining'. The system tray at the bottom of the screen shows icons for battery, signal, and date/time (22-05-2025).

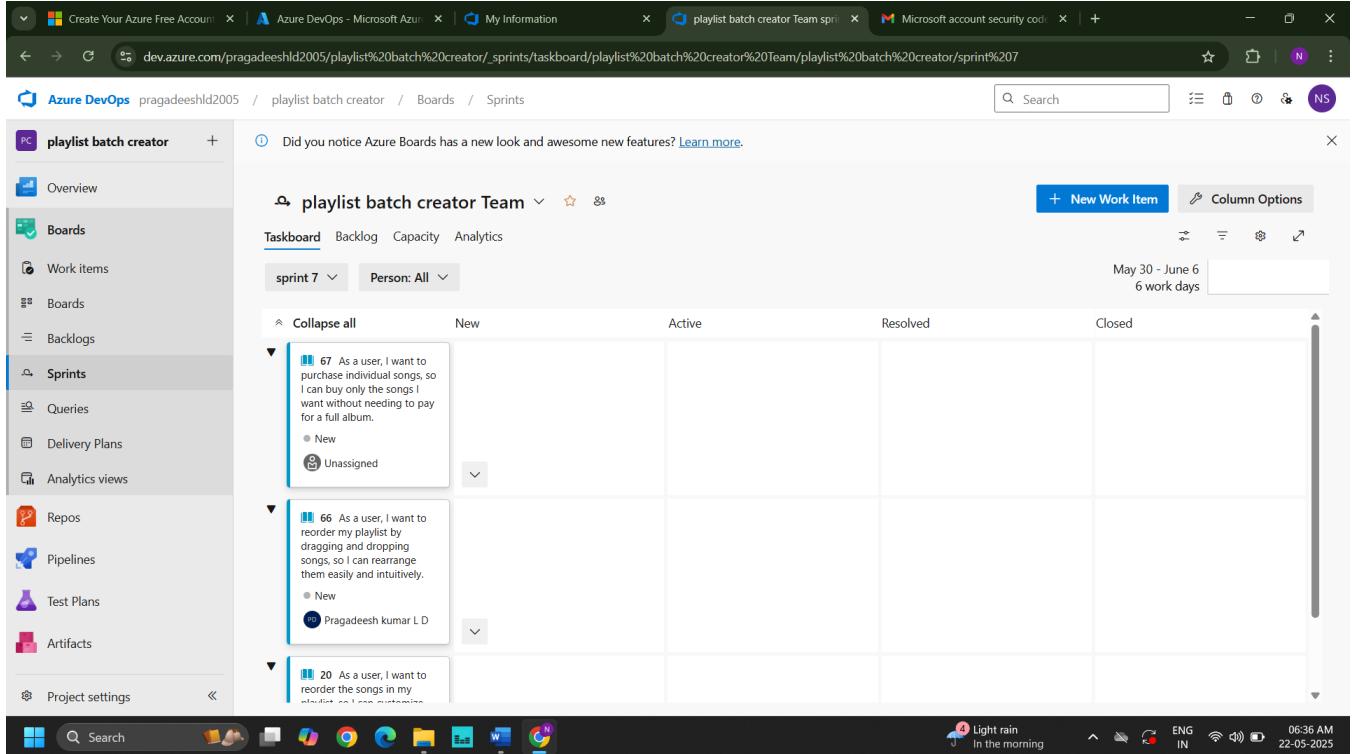
Sprint 2

The screenshot shows the Azure DevOps Taskboard for the 'playlist batch creator Team' sprint 5. The board is organized into columns: New, Active, Resolved, and Closed. Two work items are visible in the New column:

- 63** As a user, I want to name my playlists and give them descriptions, so I can easily identify them and share them with others.
Status: New
Assigned to: Nithesh Kumar S
- 18** As a user, I want to create custom playlists and save them, so I can listen to the same playlist again in the future without having to recreate it.
Status: New
Assigned to: Pragadeesh kumar L D

The left sidebar shows the project navigation menu with 'Sprints' selected. The top navigation bar includes links for 'Create Your Azure Free Account', 'Azure DevOps - Microsoft Azure', 'My Information', 'playlist batch creator Team sprint', and 'Microsoft account security code'. The bottom taskbar shows various system icons and the date/time: 22-05-2025, 06:36 AM.

Sprint 3

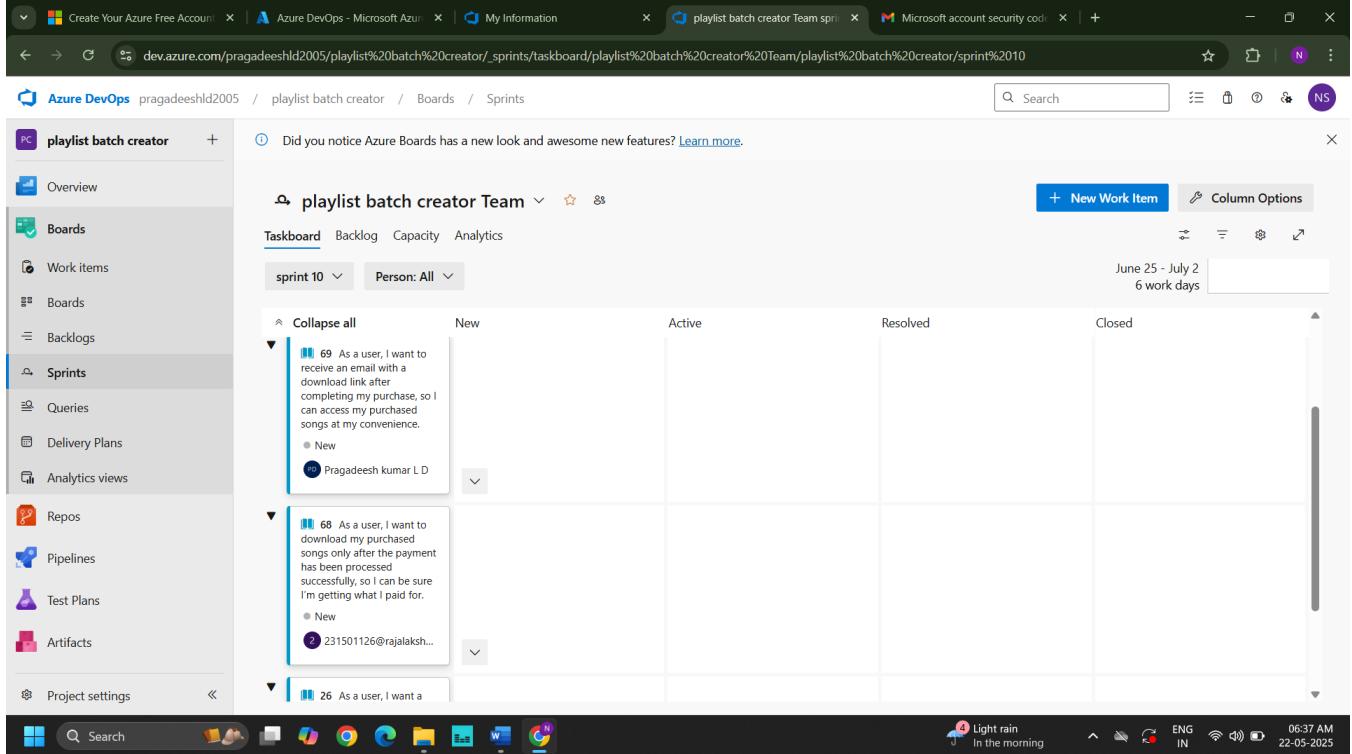


A screenshot of the Azure DevOps Taskboard for the 'playlist batch creator Team' in Sprint 3. The taskboard shows three work items:

- Work Item 67: As a user, I want to purchase individual songs, so I can buy only the songs I want without needing to pay for a full album.
 - Status: New
 - Assignee: Unassigned
- Work Item 66: As a user, I want to reorder my playlist by dragging and dropping songs, so I can rearrange them easily and intuitively.
 - Status: New
 - Assignee: Pragadeesh kumar L D
- Work Item 20: As a user, I want to reorder the songs in my playlist by dragging and dropping songs, so I can rearrange them easily and intuitively.
 - Status: New
 - Assignee: Unassigned

The taskboard includes filters for 'sprint 7' and 'Person: All'. The timeline shows 'May 30 - June 6' with '6 work days'. The bottom status bar indicates 'Light rain In the morning'.

Sprint 4



A screenshot of the Azure DevOps Taskboard for the 'playlist batch creator Team' in Sprint 4. The taskboard shows three work items:

- Work Item 69: As a user, I want to receive an email with a download link after completing my purchase, so I can access my purchased songs at my convenience.
 - Status: New
 - Assignee: Pragadeesh kumar L D
- Work Item 68: As a user, I want to download my purchased songs only after the payment has been processed successfully, so I can be sure I'm getting what I paid for.
 - Status: New
 - Assignee: 231501126@rajalaksh...
- Work Item 26: As a user, I want a...

The taskboard includes filters for 'sprint 10' and 'Person: All'. The timeline shows 'June 25 - July 2' with '6 work days'. The bottom status bar indicates 'Light rain In the morning'.

Result:

The Sprints are created for the Music Playlist Batch Creator Project.

EXP NO: 5

POKER ESTIMATION

Aim:

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

Poker Estimation

The screenshot shows a Microsoft Edge browser window displaying an Azure DevOps user story card. The URL in the address bar is dev.azure.com/pragadeeshld2005/playlist%20batch%20creator/_backlogs/backlog/playlist%20batch%20creator%20Team/Epics?workitem=18. The card details are as follows:

- User Story 18:** As a user, I want to create custom playlists and save them, so I can listen to the same playlist again in the future without having to recreate it.
- Assignee:** Pragadeesh kumar L D
- Comments:** 0
- Add Tag:** (button)
- State:** New
- Area:** playlist batch creator
- Reason:** Moved to the backlog
- Iteration:** playlist batch creator\sprint 5
- Planning:** Story Points: 1, Priority: 2, Risk: 0
- 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.
- Classification:** Value area: Business
- Discussion:** Add a comment. Use # to link a work item, @ to mention a person, or ! to link a pull request.
- Related Work:** (button)

Result:

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

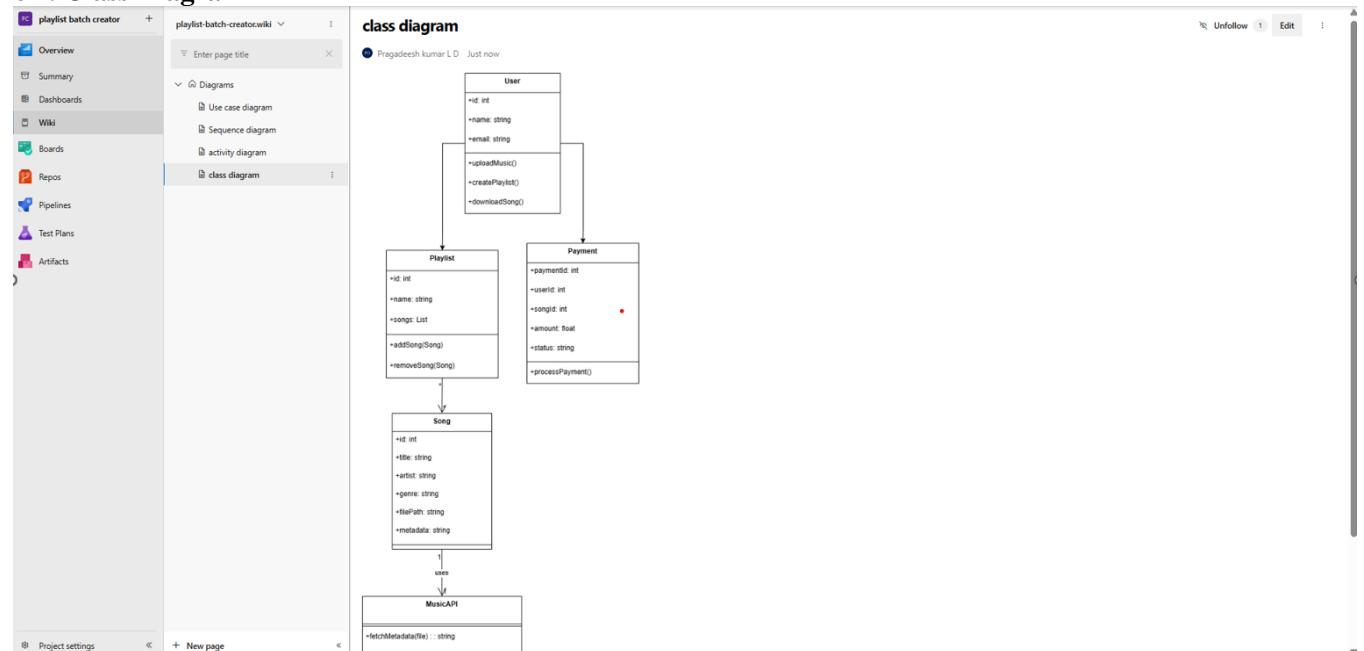
EXP NO: 6

DESIGNING CLASS AND SEQUENCE DIAGRAMS FOR PROJECT ARCHITECTURE

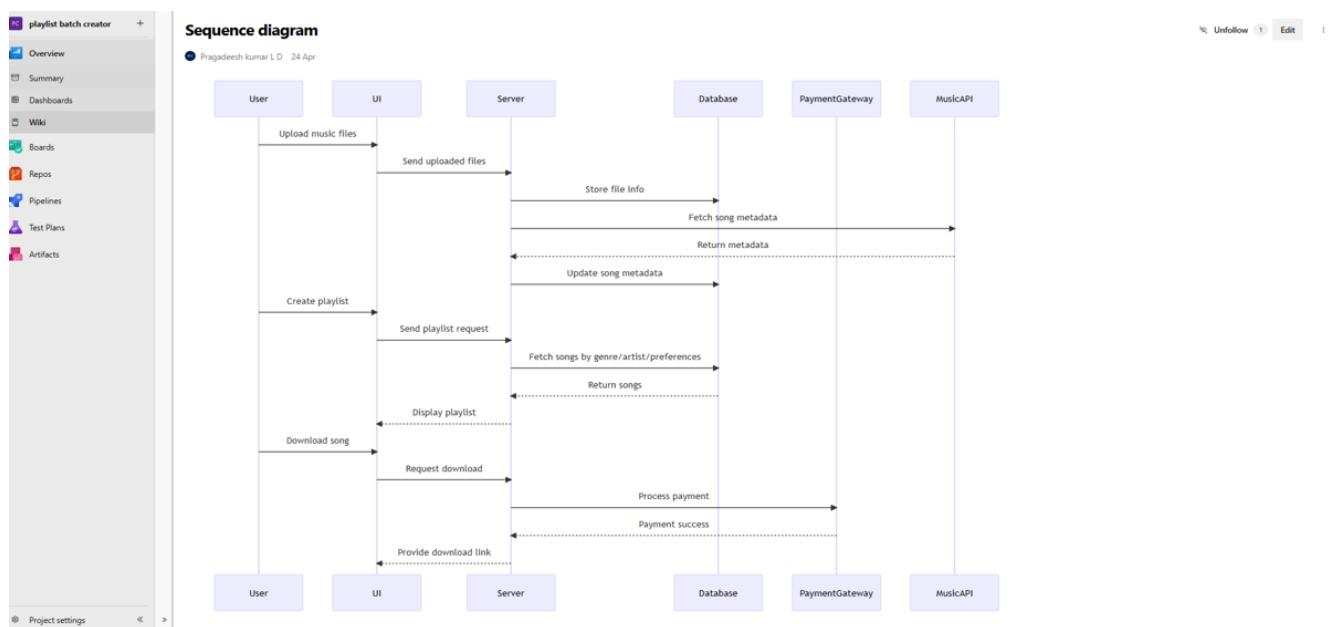
Aim:

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 Music Playlist Batch Creator.

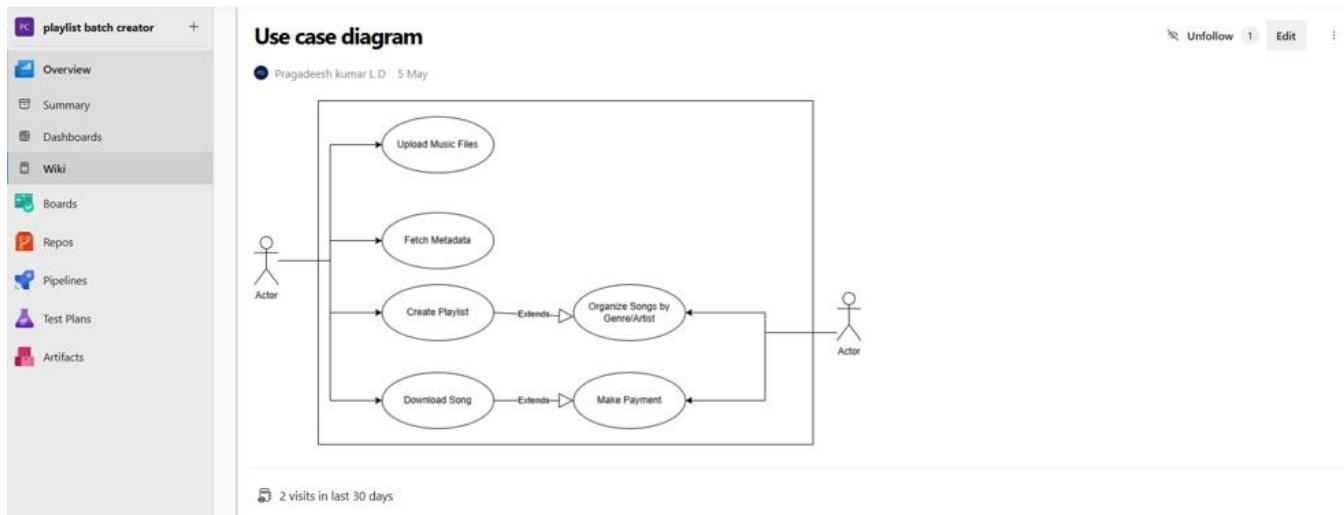
EXP NO: 7

DESIGNING USE CASE AND ACTIVITY DIAGRAMS FOR PROJECT STRUCTURE

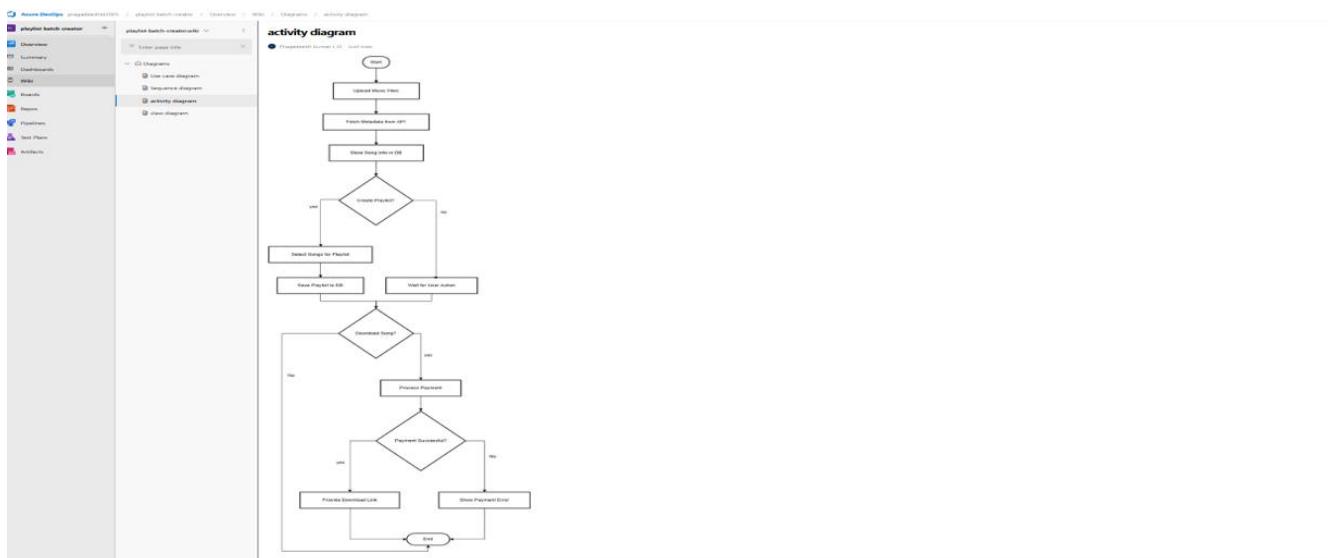
Aim:

To Design an Use Case Diagram and Activity Diagram for the given Project.

7A. Use Case Diagram



7B. Activity Diagram



Result:

The Use Case Diagram and Activity Diagram is designed Successfully for the Music Playlist Batch Creator

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
- Viewing and Managing Playlists
- Fetching Real-time Metadata
- Editing playlists (rename, reorder, record)
- Creating smart audio playlists based on categories (mood, genre, artist, etc.)

2. Define User Interactions

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

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 to playlist, or creates a category-based playlist.

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 Playlist 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, Playlist 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

The screenshot shows the Azure DevOps interface for creating a new test plan. The left sidebar is titled 'playlist batch creator' and includes links for Overview, Boards, Repos, Pipelines, Test Plans (which is selected), Test plans, Progress report, Parameters, Configurations, Runs, and Artifacts. Below the sidebar is a 'Project settings' link. The main area is titled 'New Test Plan' and contains fields for 'Name' (set to 'song selection for playlist creation'), 'Area Path' (set to 'playlist batch creator'), and 'Iteration' (set to 'playlist batch creator'). At the bottom right are 'Create' and 'Cancel' buttons. The top navigation bar shows tabs for 'Create Your Azure Free Account', 'Azure DevOps - Microsoft Azure', 'My Information', 'New Test Plan - Test Plans', and 'Microsoft account security code'. The address bar shows the URL 'dev.azure.com/pragadeeshld2005/playlist%20batch%20creator/_testManagement/new'. The system tray at the bottom right shows 'Air: Severe Saturday', battery level, signal strength, and the date '22-05-2025'.

2. Test suite

The screenshot shows the Azure DevOps interface for a project named "playlist batch creator". The left sidebar is open, showing options like Overview, Boards, Repos, Pipelines, Test Plans, and Artifacts. The "Test Plans" section is selected. The main area displays a "Payment & Download" test plan, which is part of a suite named "Payment & Download (2)". The "Execute" tab is active, showing two test points: "Purchase Song" and "Secure Payment Flow", both of which have passed.

Title	Outcome	Order	Test Case Id
Purchase Song	Passed	1	61
Secure Payment Flow	Passed	2	62

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

1. As a user, I want to browse my music library and select songs to add to a playlist.
2. As a user, I want to be able to select multiple songs at once.
3. As a user, I want to search for songs by artist, genre, or title.
4. As a user, I want to filter songs based on criteria like style or release year.
5. As a user, I want to create custom playlists and save them.

Test Suites

Test Suite: TS06 – Song Selection for Playlist Creation

Feature: Browse and Select Songs, Search and Filter for Songs

- ◆ **TC15 – Browse Music Library**

- **Objective:** Verify the user can browse the music library.
- **Steps:**

1. Login to the app.
2. Navigate to the music library section.
3. Scroll through available songs.

- **Expected Result:** Songs should be visible and scrollable.

- **Type:** Happy Path

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- ◆ **TC16 – Multi-select Songs**

- **Objective:** Verify multiple songs can be selected.
- **Steps:**

1. Navigate to the music library.
2. Select multiple songs using checkboxes or multi-select options.

- **Expected Result:** Multiple songs should be selected without losing previous selections.

- **Type:** Happy Path

- ◆ **TC17 – Search and Filter Songs**

- **Objective:** Verify search and filtering functionality.

- **Steps:**
 1. Enter a keyword in the search bar (e.g., artist name).
 2. Apply filters like genre or year.
- **Expected Result:** Only relevant songs should be displayed based on search/filter criteria.
- **Type:** Happy Path

 **Test Suite: TS07 – Playlist Customization**

Feature: Create and Save Playlists, Edit Playlist Order

◆ **TC18 – Create Playlis**

- **Objective:** Verify the user can create a custom playlist.
- **Steps:**
 1. Click "Create Playlist."
 2. Add songs.
 3. Name the playlist and save.
- **Expected Result:** Playlist should be created and saved successfully.
- **Type:** Happy Path

◆ **TC19 – Name and Save Playlist**

- **Objective:** Ensure playlists can be named and saved with a custom title.
- **Steps:**
 1. Enter a custom name.
 2. Click “Save.”
- **Expected Result:** Playlist should be saved with the correct name.
- **Type:** Happy Path

◆ **TC20 – Reorder Songs in Playlist**

- **Objective:** Test drag-and-drop or manual reordering.
- **Steps:**
 1. Open an existing playlist.
 2. Reorder songs using drag-and-drop or arrow buttons.
- **Expected Result:** Songs should rearrange correctly and persist after saving.
- **Type:** Happy Path

Test Suite: TS08 – Payment & Download

Feature: Paid Song Downloads, Download Access Control

◆ **TC21 – Purchase Song**

- **Objective:** Verify users can purchase individual songs.
- **Steps:**
 1. Select a song to purchase.
 2. Proceed to payment.
 3. Complete the transaction.
- **Expected Result:** Payment should be successful and the song marked as purchased.
- **Type:** Happy Path

◆ **TC22 – Secure Payment Flow**

- **Objective:** Ensure payment is handled securely.
- **Steps:**
 1. Initiate payment.
 2. Enter card or payment details.
- **Expected Result:** Data is transmitted securely (e.g., via HTTPS), and the payment gateway processes the transaction without errors.
- **Type:** Happy Path

◆ **TC23 – Download Purchased Songs**

- **Objective:** Confirm users can download purchased songs.
- **Steps:**
 1. Navigate to purchased songs.
 2. Click “Download.”
- **Expected Result:** Download should begin, and a confirmation email should be sent.
- **Type:** Happy Path

Test Cases

The screenshot shows a Microsoft Edge browser window displaying the Azure DevOps interface. The URL is dev.azure.com/pragadeeshld2005/playlist%20batch%20creator/_testPlans/define?planId=50&suiteId=51. The page title is "Test Plan 50 Song Selection for Playlist C...". The main content is a "TEST CASE 52" titled "52 Browse Music Library" created by "Pragadeesh kumar LD". The test case details include:

- State:** Design
- Area:** playlist batch creator
- Reason:** New
- Iteration:** playlist batch creator\sprint 1

The "Steps" section contains the following steps:

1. Login to the app.
2. Navigate to the music library section.
3. Scroll through available songs.

The "Expected result" for step 3 is "Songs should be visible".

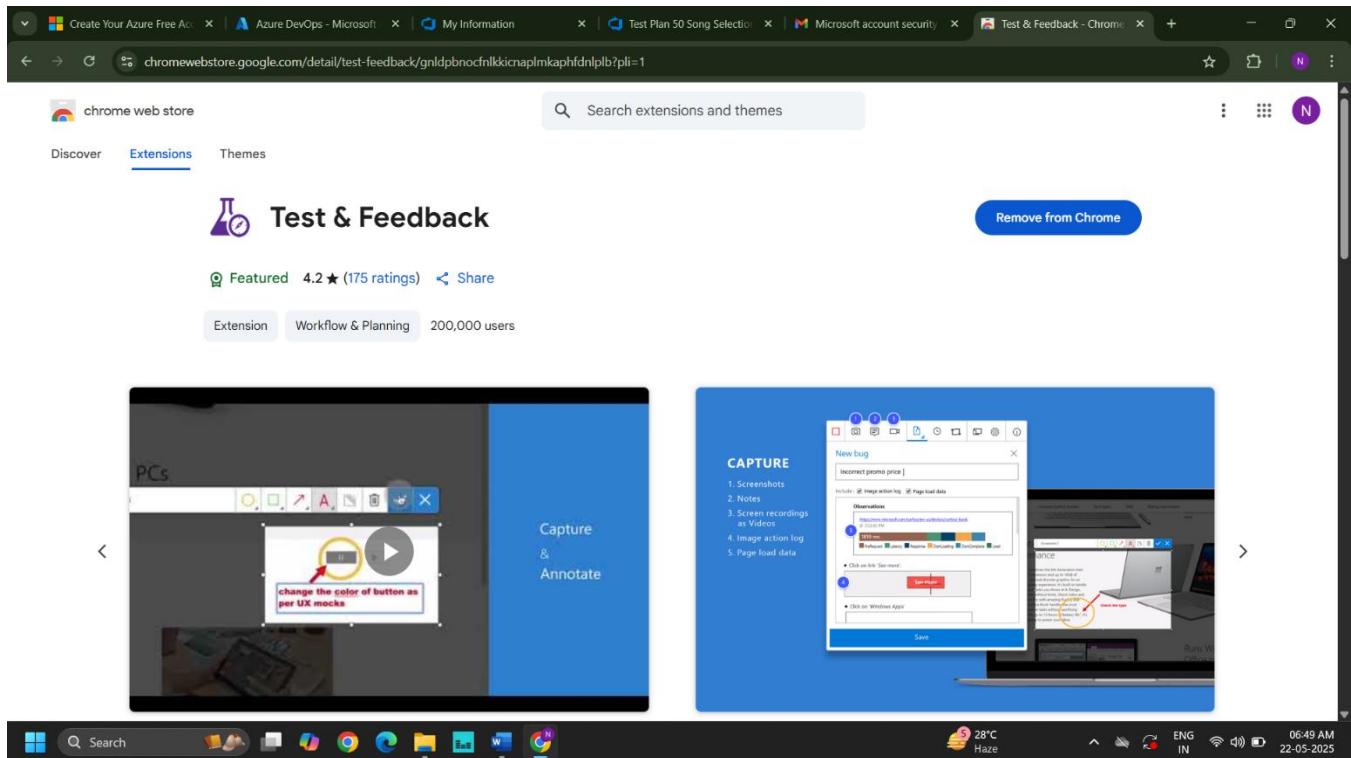
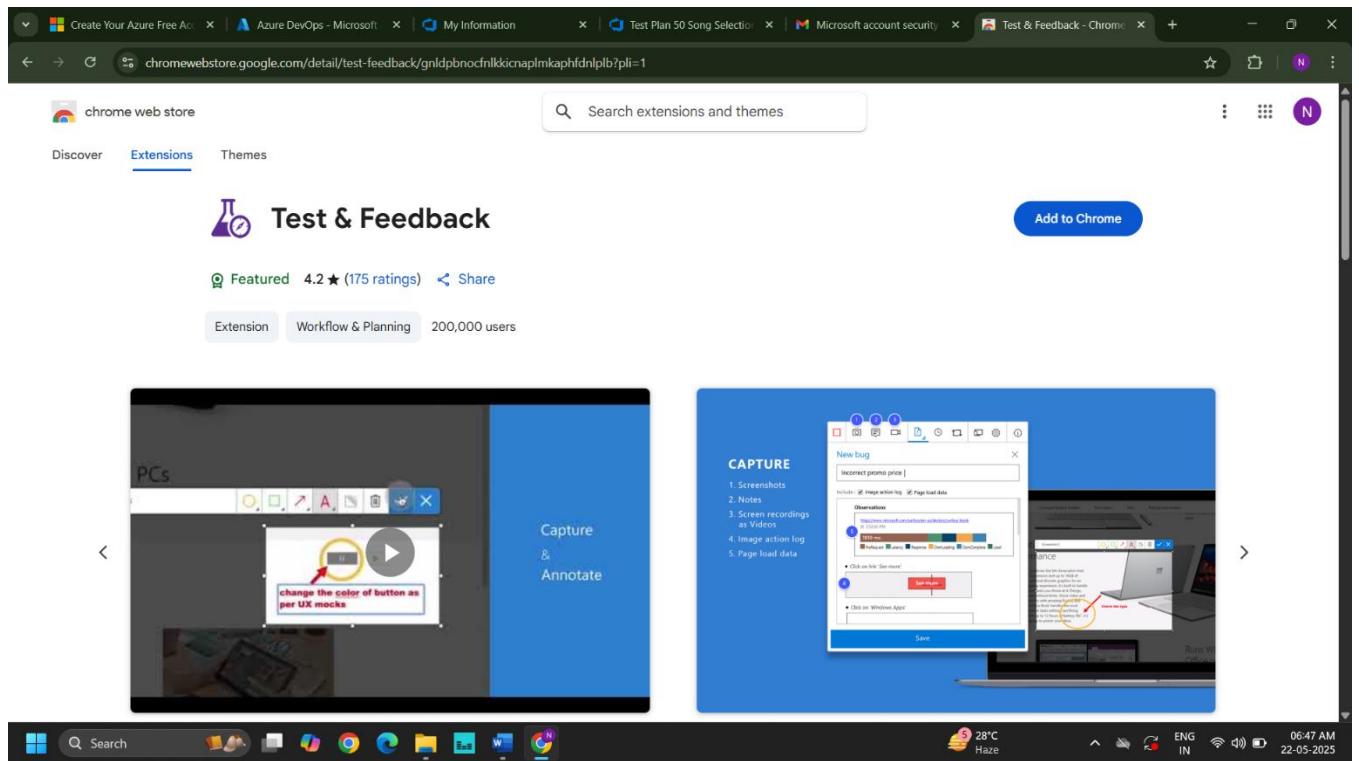
The "Deployment" section provides instructions to track releases associated with the work item using [Releases](#) and [deployment status reporting](#).

The "Development" section includes a "Add link" button and a note about linking to Azure Repos [commit](#), [pull request](#), or [branch](#).

The "Custom" section shows a placeholder "Type1".

At the bottom, there are "Related Work" links and a system tray showing the date and time as 22-05-2025.

4. Installation of test



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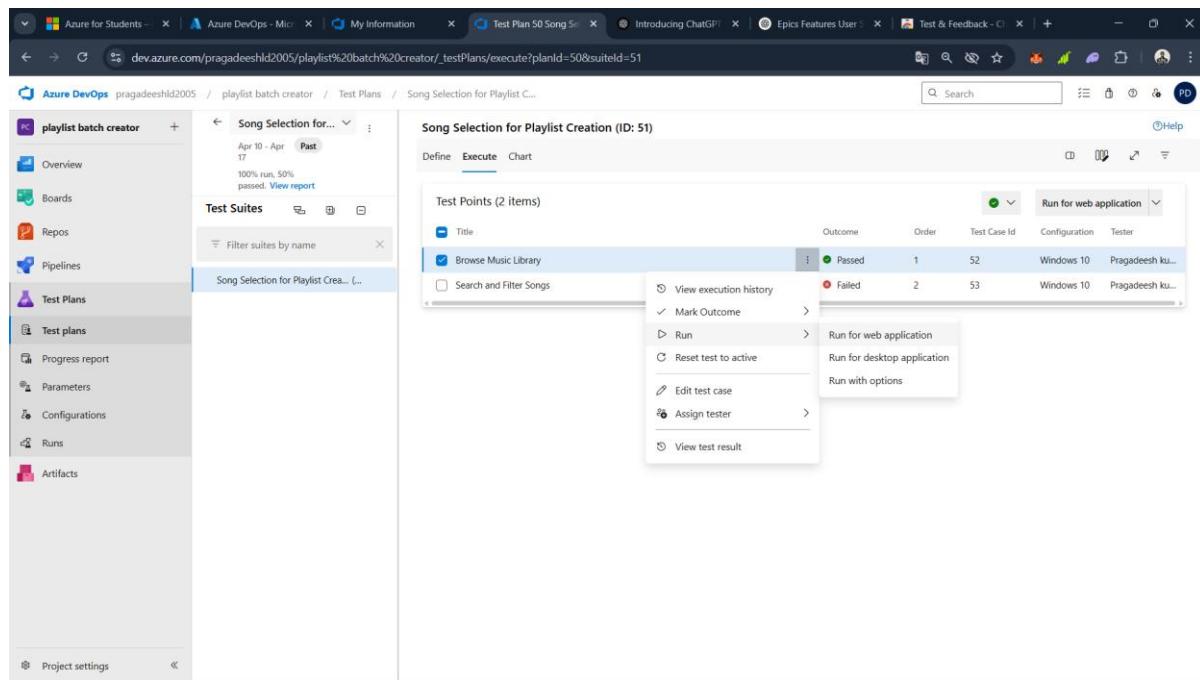
CS23432

Test and feedback

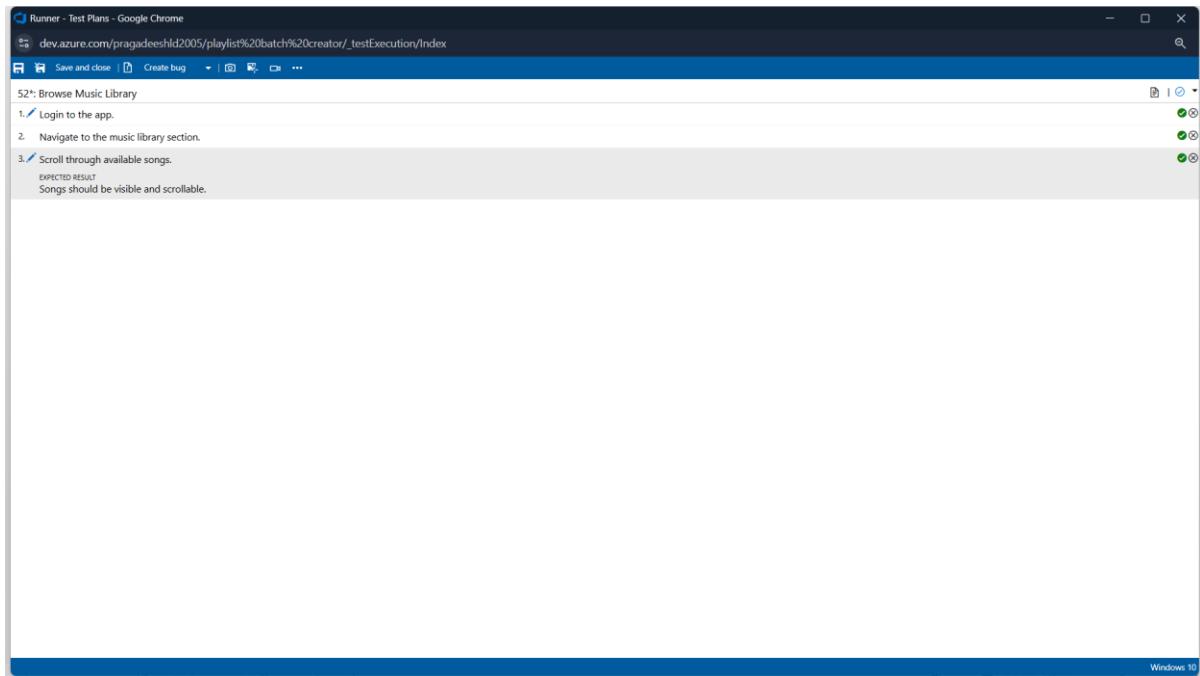
Showing it as an extension

The screenshot shows the Azure DevOps interface for a project named "playlist batch creator". The left sidebar is open, showing options like Overview, Boards, Repos, Pipelines, Test Plans, and Artifacts. The "Test plans" option is selected. In the center, there's a "Song Selection for..." card with a status bar indicating "Apr 10 - Apr 17" and "100% run, 100% passed". Below this is a "Test Suites" section with a "Song Selection for Playlist Creat..." suite. To the right, a modal window titled "Song Selection for Playlist Creation (ID: 51)" is displayed, showing "Test Cases (2 items)". One case, "Browse Music Library", has a checked checkbox. At the bottom of the modal, there are buttons for "Define", "Execute", and "Chart". On the far right, a vertical sidebar titled "Extensions" is visible, listing "Full access" extensions: Adobe Acrobat: PDF edit, c..., McAfee® WebAdvisor, and Test & Feedback (which is currently selected). Below these are "Manage extensions" and "Search and Filter Songs". The bottom of the screen shows the Windows taskbar with various pinned icons and the system tray.

5. Running the test cases

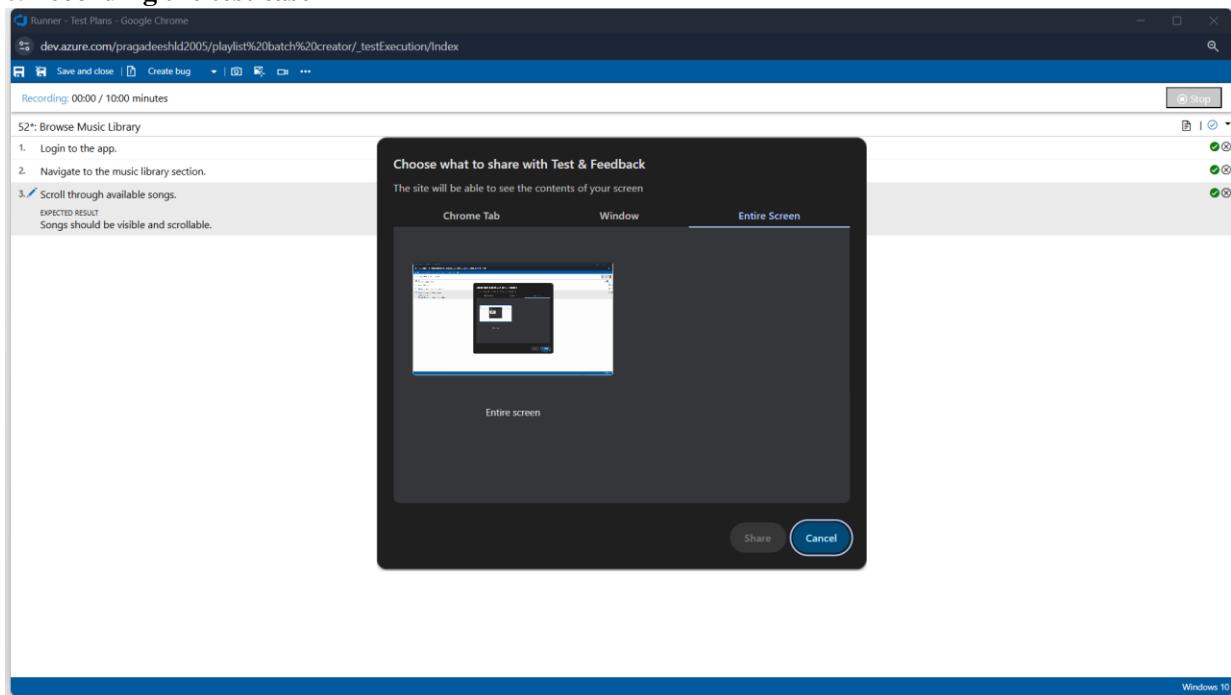


The screenshot shows the Azure DevOps Test Plan interface. On the left, the navigation bar includes 'Overview', 'Boards', 'Repos', 'Pipelines', 'Test Plans' (selected), 'Test plans', 'Progress report', 'Parameters', 'Configurations', 'Runs', and 'Artifacts'. Below this is 'Project settings'. The main area displays a 'Song Selection for Playlist Creation (ID: 51)' test plan. Under 'Test Suites', there are two items: 'Browse Music Library' (Passed) and 'Search and Filter Songs' (Failed). A context menu is open over the 'Browse Music Library' row, listing options: 'View execution history', 'Mark Outcome' (with 'Passed' checked), 'Run', 'Reset test to active', 'Edit test case', 'Assign tester', and 'View test result'. At the top right of the main area, there are buttons for 'Define', 'Execute' (selected), and 'Chart', along with a search bar and help links.

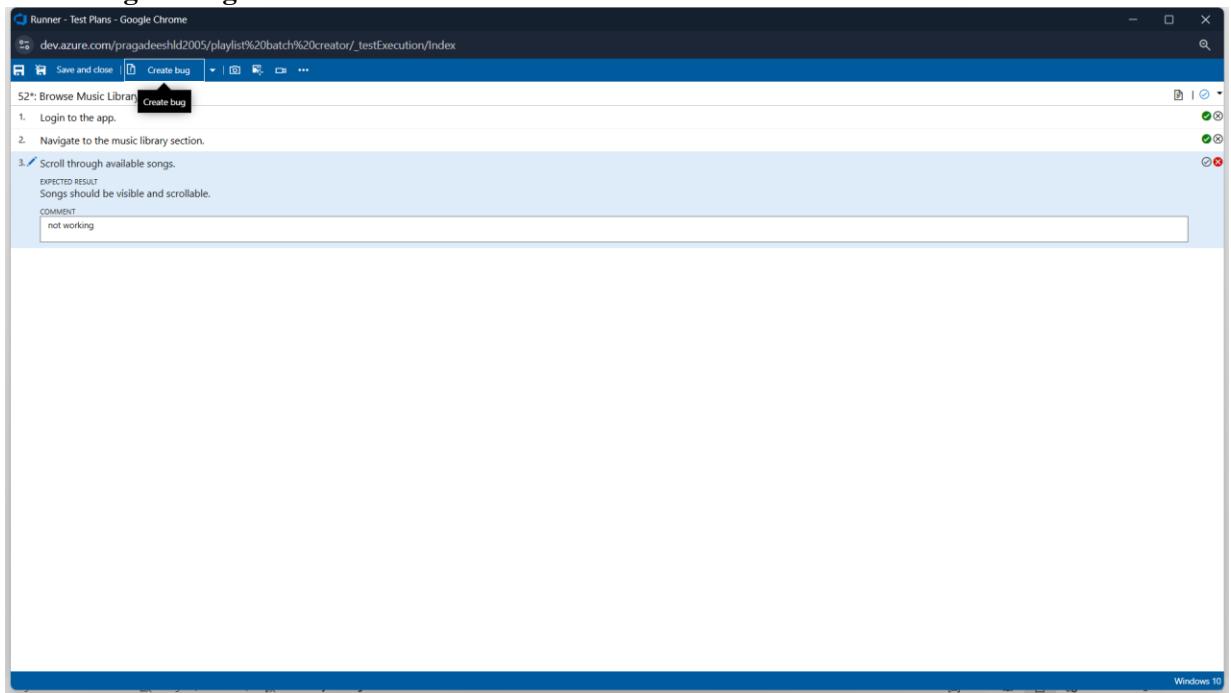


The screenshot shows a browser window titled 'Runner - Test Plans - Google Chrome' with the URL 'dev.azure.com/pragadeeshld2005/playlist%20batch%20creator/_testExecution/Index'. The page displays a test step for 'Browse Music Library': '1. Login to the app.' (Passed), '2. Navigate to the music library section.' (Passed), and '3. Scroll through available songs.' (Passed). Below this, under 'EXPECTED RESULT', it states 'Songs should be visible and scrollable.' The browser has a standard toolbar at the top and a status bar at the bottom indicating 'Windows 10'.

6. Recording the test case



7. Creating the bug



Runner - Test Plans - Google Chrome

dev.azure.com/pragadeeshld2005/playlist%20batch%20creator/_testExecution/Index

Save and close Create bug

52: Browse Music Library

1. Login to the app.

2. Navigate to the music library section.

3. Scroll through available songs.

Cannot scroll through the songs!

NEW BUG *

Unassigned 0 comments Add tag

State: New Area: playlist batch creator

Reason: New Iteration: playlist batch creator/sprint 10

Repro Steps

20-05-2025 09:43 Bug filed on "Browse Music Library"

Step no. Result Title

1. Passed Login to the app.

2. Passed Navigate to the music library section.

3. Failed Scroll through available songs.

Expected Result Songs should be visible and scrollable.

Comments: not working

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 52 Browse Music Library Updated 15-05-2025, 8 Design

System Info

Windows 10

Custom Info

Runner - Test Plans - Google Chrome

dev.azure.com/pragadeeshld2005/playlist%20batch%20creator/_testExecution/Index

Save and close Create bug

52: Browse Music Library

1. Login to the app.

2. Navigate to the music library section.

3. Scroll through available songs.

Cannot scroll through the songs!

NEW BUG *

Unassigned 0 comments Add tag

State: New Area: playlist batch creator

Reason: New Iteration: playlist batch creator/sprint 10

System Info

Browser - Name	Google Chrome 136
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/136.0.0.0 Safari/537.36
Operating system - Name	Windows NT 10.0; Win64; x64
Operating system - Architecture	x86_64
Operating system - Processor model	12th Gen Intel(R) Core(TM) i5-12450H
Operating system - Number of processors	12
Memory - Available	5609590784
Memory - Capacity	16868146624
Display - Pixels per inch (X axis)	120
Display - Pixels per inch (Y axis)	120
Display - Device pixel ratio	1.25

Discussion

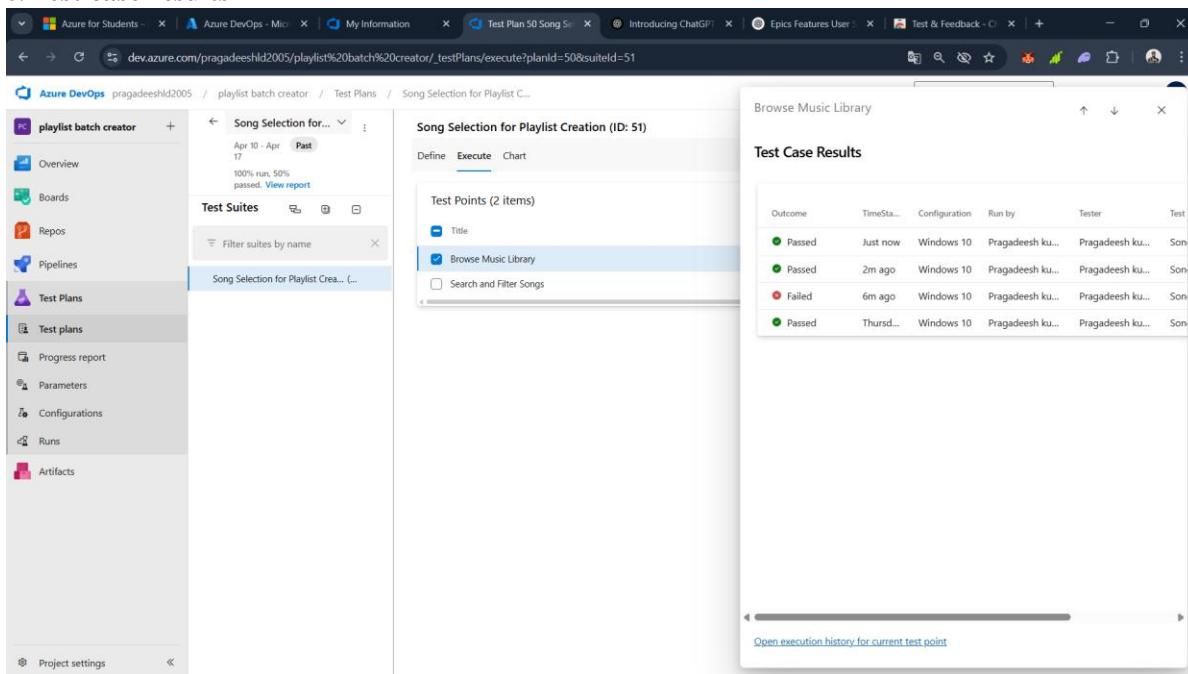
Add a comment. Use # to link to a work item, ! to link a pull request, or @ to mention a person.

Found in Build

Integrated in Build

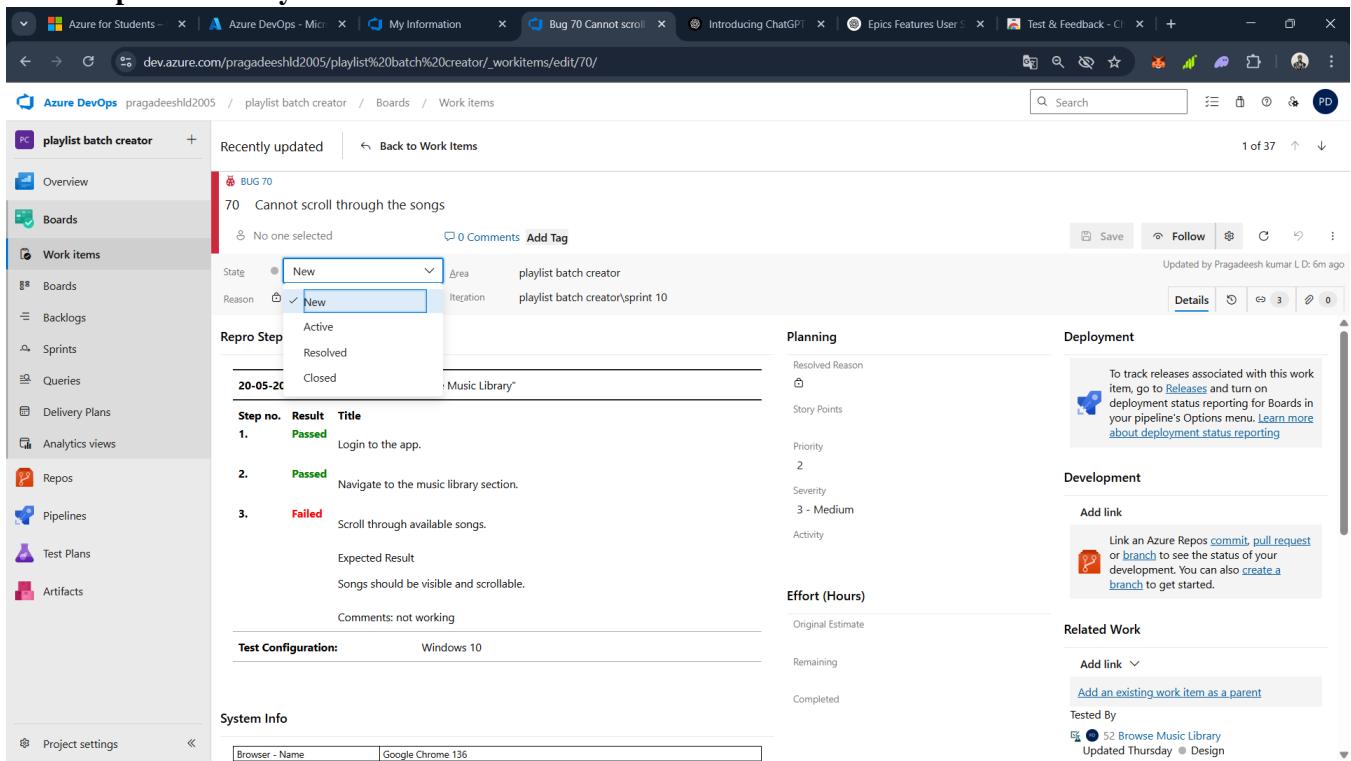
Windows 10

8. Test case results



The screenshot shows the 'Song Selection for Playlist Creation' test plan in Azure DevOps. The 'Execute' tab is selected, displaying four test points. The first three are passed (green), and the fourth is failed (red). The failed test point is titled 'Browse Music Library'. A tooltip at the bottom right says 'Open execution history for current test point'.

9. Test report summary



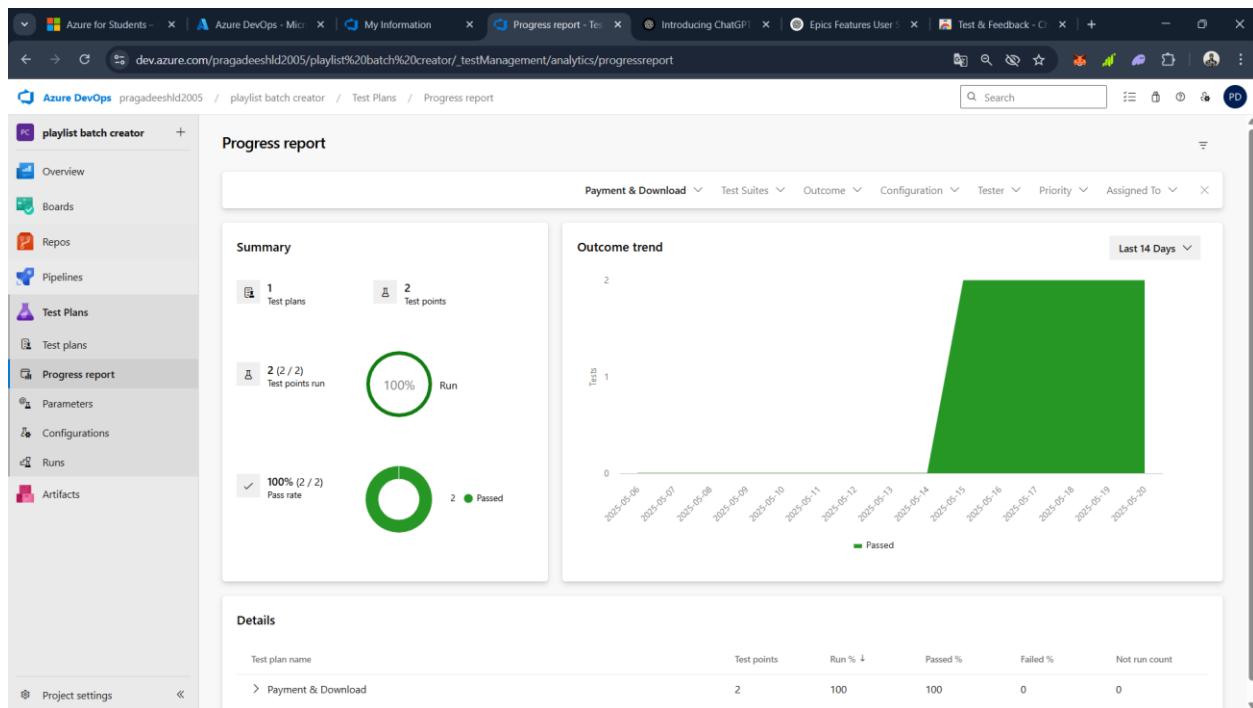
The screenshot shows a work item for 'BUG 70: Cannot scroll through the songs'. The 'New' state is selected. The 'Repro Step' section shows a step that failed. The 'Comments' field notes 'Songs should be visible and scrollable.' The 'Expected Result' field notes 'Songs should be visible and scrollable.' The 'Comments' field also notes 'Comments: not working'. The 'Deployment' section includes a note about tracking releases and deployment status reporting. The 'Development' section includes a note about linking to Azure Repos. The 'Related Work' section shows a link to an existing work item.

- Assigning bug to the developer and changing state

The screenshot shows the Azure DevOps interface for a work item titled "BUG 70* Cannot scroll through the songs". The work item is categorized under "playlist batch creator" and has a status of "New". The "Repro Steps" section details three steps: 1. Login to the app (Passed), 2. Navigate to the music library section (Passed), and 3. Scroll through available songs (Failed). The "Planning" section includes fields for Resolved Reason, Story Points, Priority (2), Severity (3 - Medium), and Activity. The "Deployment" section provides instructions on tracking releases. The "Development" section includes links for adding a branch or committing changes. The "Related Work" section lists a task for "Browse Music Library" with a due date of "Updated Thursday".

10. Progress report

The screenshot shows the Azure DevOps interface for a test plan titled "Song Selection for Playlist Creation". The "Test Suites" section indicates 1 test plan and 2 test points. The "Outcome trend" chart tracks the progress from May 8 to May 22, showing a significant increase in passed tests starting around May 15. The "Summary" section shows a 100% pass rate for 2 out of 2 test points. The "Configuration" dropdown menu includes options for Song Selection, Configuration, Tester, Priority, and Assigned To.



11. Changing the test template

Organization Settings pragadeeshld2005

All processes

Name	Description	Team projects
Basic (default)	This template is flexible for any process and great for teams getting started with Az...	0
Agile	This template is flexible and will work great for most teams using Agile planning me...	1
Scrum	This template is for teams who follow the Scrum framework.	0
CMMI	This template is for more formal projects requiring a framework for process improv...	0

General

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

Security

- Security overview
- Policies
- Permissions

Boards

- Process

The screenshot shows the 'All processes' list in the Azure DevOps Settings - Process page. The list includes:

Name	Description	Team projects
Basic (default)	This template is flexible for any process and great for teams getting started with Az...	0
Agile	...	1
Scrum	This template is for teams who follow the Scrum framework.	0
CMMI	This template is for more formal projects requiring a framework for process improv...	0

The screenshot shows the 'All processes' list in the Azure DevOps Settings - Process page. The list includes:

Name	Description	Team proj...
Basic (default)	This template is flexible for any process and great for teams getting started with Azure DevOps.	0
Agile	...	2
231501117		0
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 reco...	0

12. View the new test case template

The screenshot shows the 'Add a field to Test Case' dialog box over a process configuration interface. The dialog has three tabs: Definition, Options, and Layout. The 'Definition' tab is selected, showing options to 'Use an existing field' (with 'Acceptance Criteria' selected) or 'Create a field'. A new field named 'Type1' is being created, defined as 'Text (single line)'. The 'Layout' tab shows a 'Steps' section with 'Text (multiple lines)'.

The screenshot shows the 'Work item types' page under the 'Process' settings. It lists a single work item type: 'playlist batch creator', which is described as 'The Azure Music Playlist Batch Creator is a cloud-based solution designed for bulk playlist creation and management. Levera...'. The page includes tabs for 'Work item types', 'Backlog levels', and 'Projects'.

The screenshot shows the Azure DevOps Settings - Process page for a specific test case. The URL is https://dev.azure.com/pragadeeshld2005/_settings/process?process-name=231501117&type-id=231501117.TestCase&a=layout. The left sidebar shows 'Organization Settings' for 'pragadeeshld2005' under 'Process'. The main content area is titled 'All processes > 231501117 > Test Case' and shows the 'Layout' tab selected. The 'Steps' section contains the text 'Text (multiple lines)'. To the right, there are sections for 'Recent test results', 'Custom', 'Deployment', 'Development', 'Related Work', and 'Status'. Each section has a description and a type indicator (e.g., Type1, Integer, Text (single line)).

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	Ci/CD PIPELINES IN AZURE
DATE:	

AIM:

To implement a Continuous Integration and Continuous Deployment (CI/CD) pipeline in Azure DevOps for automating the build, testing, and deployment process of the Student Management System, ensuring faster delivery and improved software quality.

PROCEDURE:

Steps to Create and implement pipelines in Azure:

1. Sign in to Azure DevOps and Navigate to Your Project
Log in to dev.azure.com, select your organization, and open the project where your Student Management System code resides.
2. Connect a Code Repository (Azure Repos or GitHub)
Ensure your application code is stored in a Git-based repository such as Azure Repos or GitHub. This will be the source for triggering builds and deployments in your pipeline.
3. Create a New Pipeline
Go to the Pipelines section on the left panel and click “Create Pipeline”.
Choose your source (e.g., Azure Repos Git or GitHub), and then select the repository containing your project code.
4. Choose the Pipeline Configuration
You can select either the YAML-based pipeline (recommended for version control and automation) or the Classic Editor for a GUI-based setup.
If using YAML, Azure DevOps will suggest a template or allow you to define your own.
5. Define Build Stage (CI - Continuous Integration) from YAML file
6. Install dependencies (e.g., npm install, dotnet restore)
7. Build the application (dotnet build, npm run build)
8. Run unit tests (dotnet test, npm test)
9. Publish build artifacts to be used in the release stage

10. Save and Run the Pipeline for the First Time

Save the YAML or build definition and click “Run”.

Azure will fetch the latest code and execute the defined build and test stages.

11. Configure Continuous Deployment (CD)

Navigate to the Releases tab under Pipelines and click “New Release Pipeline”. Add an Artifact (from the build stage) and create a new Stage (e.g., Development, Production).

12. Configure the CD stage with deployment tasks such as deploying to Azure App Service, running database migrations or scripts, and restarting services using the Azure App Service Deploy task linked to your subscription and app details.

13. Set Triggers and Approvals

Enable continuous deployment trigger so the release pipeline runs automatically after a successful build.

For production environments, configure pre-deployment approvals to ensure manual verification before release.

14. Monitor Pipelines and Manage Logs

View all pipeline runs under the Runs section.

Check logs for build/test/deploy stages to debug any errors.

You can also integrate email alerts or Microsoft Teams notifications for build failures.

15. Review and Maintain Pipelines

Regularly update your pipeline tasks or YAML configurations as your application grows. Ensure pipeline runs are clean and artifacts are stored securely.

Integrate quality gates and code coverage policies to maintain code quality.

The screenshot shows the Azure DevOps Pipelines interface for the 'Playlist_Batch_Creator' pipeline. The left sidebar is visible with 'Pipelines' selected. The main area displays two recent CI runs:

Description	Stages	Run Time
#20250517.1 • Set up CI with Azure Pipelines ↳ Manually triggered for main ↴ 2428baeb ↴	✓	Saturday 16s
#20250516.1 • Set up CI with Azure Pipelines ↳ Manually triggered for main ↴ 2428baeb ↴	✓	Friday 24s

At the bottom, the taskbar shows various pinned icons and the system status bar indicates it's 22-05-2025 at 07:01 AM.

The screenshot shows the detailed view of the first CI run (#20250517.1) for the 'Playlist_Batch_Creator' pipeline. The left sidebar shows 'Pipelines' selected. The main area includes:

- A summary card for the run, mentioning it was manually run by Pragadeesh kumar L D.
- Details about the repository and version: PlayList_Batch_Creator, main branch, commit 2428baeb.
- Timeline information: Started at 2:16 PM, duration 16s.
- Related work items: 0 work items, 1 published.
- Tests and coverage: View 2 changes, Get started.
- A 'Jobs' section showing one job named 'Job' with a success status and 11s duration.

At the bottom, the taskbar shows various pinned icons and the system status bar indicates it's 22-05-2025 at 07:01 AM.

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The screenshot shows the Azure DevOps Pipelines results page for a project named "playlist batch creator". The pipeline run is identified as "#20250516.1 • Set up CI with Azure Pipelines" and was triggered by "Pragadeesh kumar L D". The run was completed successfully, indicated by a green checkmark icon. The summary section provides details such as the repository and version (Playlist_Batch_Creator, main branch, commit 2428baeb), the start time (Fri at 2:15 PM), and duration (24s). It also shows related work items (0) and published artifacts (1). The "Jobs" section lists a single job named "Job" which was successful and took 7 seconds. A note indicates that this run is retained as one of three recent runs by the main branch.

RESULT:

Thus the pipelines for the given project “Student Management System has been executed successfully

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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 page for 'SC-Project-and-Record'. The repository is public and has 1 branch and 0 tags. The main branch contains the following files:

File	Description	Last Commit
images	Add files via upload	5 days ago
songs	Add files via upload	5 days ago
videos	Add files via upload	5 days ago
home.css	Add files via upload	5 days ago
index.html	Add files via upload	5 days ago
playlist1.html	Add files via upload	5 days ago
playlist1.js	Add files via upload	5 days ago
playlist2.html	Add files via upload	5 days ago
playlist2.js	Add files via upload	5 days ago
playlist3.html	Add files via upload	5 days ago
playlist3.js	Add files via upload	5 days ago

The repository has 1 commit by PRAGADEESH-KUMAR-LD. The 'About' section indicates no description, website, or topics provided. The 'Activity' section shows 0 stars, 1 watching, and 0 forks. The 'Releases' section shows no releases published. The 'Languages' section shows HTML 50.1%, CSS 38.6%, and JavaScript 11.3%.

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.