

**EXP NO: 1**

## **AZURE DEVOPS ENVIRONMENT SETUP**

### **Aim:**

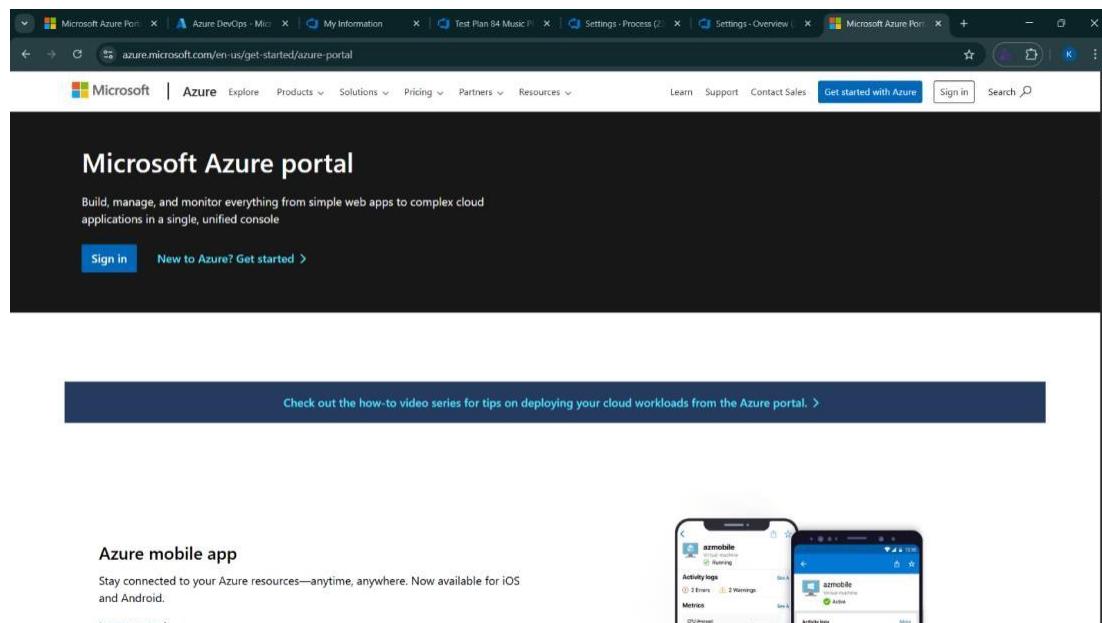
To set up and access the Azure DevOps environment by creating an organization through the Azure portal.

### **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

The screenshot shows the Microsoft Azure home page. At the top, there's a search bar with placeholder text "Search resources, services, and docs (G+)" and a user profile icon. Below the search bar, a banner says "Welcome to Azure!" with a note about free trials. There are three main sections: "Start with an Azure free trial", "Manage Microsoft Entra ID", and "Azure for Students". Each section has a small icon, a brief description, and a "Start" button. Below these, there's a "Azure services" section with a "Create a resource" button and icons for various services like Quickstart Center, Azure AI services, Kubernetes services, Virtual machines, App Services, Storage accounts, SQL databases, Azure Cosmos DB, and More services.

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

This screenshot is similar to the previous one, showing the Azure home page. However, a search overlay has been triggered. The search bar at the top now contains the text "Azure DevOps". The search results are displayed below the search bar, under categories like "Services", "Marketplace", and "Documentation". The "Services" category lists "Azure DevOps organizations", "Azure Cosmos DB", "Azure Database for MySQL servers", and "Azure Deployment Environments". The "Marketplace" category lists "Build Agents for Azure DevOps", "Azure DevOps Auditing", "Azure DevOps Backup Tool", and "Self Hosted Runner for Azure DevOps". The "Documentation" category lists "Secure your Azure DevOps - Azure DevOps", "Billing overview - Azure DevOps", and "Deploying to Azure VMs using deployment groups in Azure Pipelines - Azure Pl...". At the bottom of the search results, it says "Continue searching in Microsoft Entra ID". The rest of the page, including the "Azure services" section, remains visible.

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.

Microsoft Azure Search resources, services, and docs (G+) Copilot 231801096@rajalakshmi...  
DEFAULT DIRECTORY (231801096...)

Home > Azure DevOps ...

We've made it easier to manage Azure DevOps billing and subscriptions. You can [set up billing](#), [change your subscription](#) or [pay for more users and resources](#) within Azure DevOps. [Learn more](#)

## Azure DevOps

Plan smarter, collaborate better, and ship faster with a set of modern dev 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](#)



### Result:

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

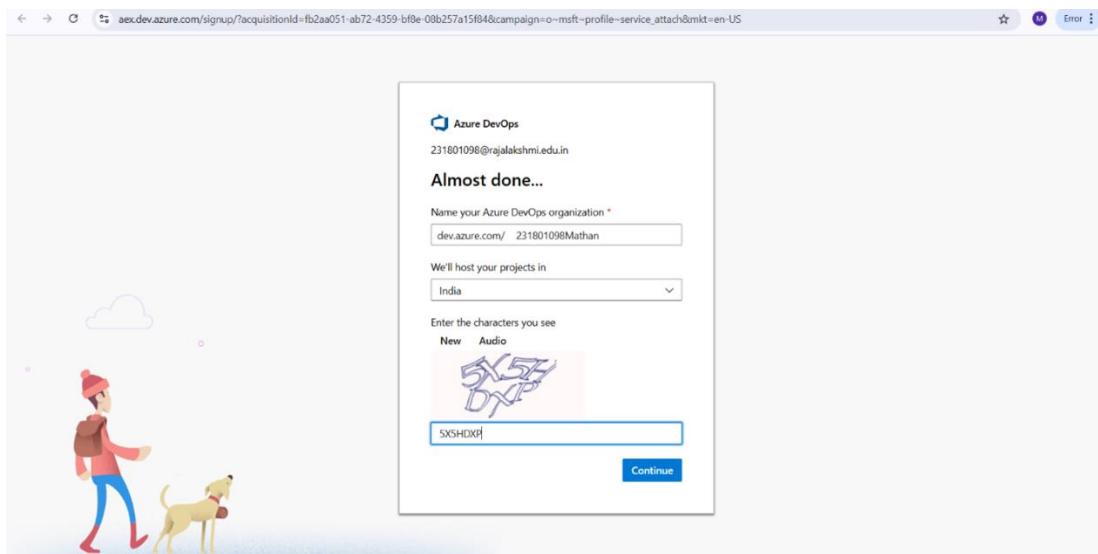
**EXP NO: 2**

## **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

Project name \*

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 [?](#)

Work item process [?](#)

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.

The screenshot shows the Azure DevOps Organizations dashboard. On the left, there is a sidebar with the user's profile picture (a purple circle with a white 'M'), name (Manisha P), email (231801096@rajalakshmi.edu.in), and account type (Microsoft account). It also displays location (India) and contact information (231801096@rajalakshmi.edu.in). Below this, there is a section for 'Visual Studio Dev Essentials' with a link to 'Use your benefits'. The main area is titled 'Azure DevOps Organizations' and shows a link to 'dev.azure.com/231801072 (Member)'. It encourages creating a Team Project and provides actions like 'Create new organization', 'Open in Visual Studio', 'Manage security', 'Browse extensions', and 'Leave'.

#### 4. Project dashboard

The screenshot shows the Azure DevOps project dashboard for 'BATCH DATA ANALYSIS AND VISUALIZATION'. The top navigation bar includes links for Overview and Summary. The main content area features a 'About this project' section with a description of the project's purpose: automating data ingestion, processing, storage, and visualization using Azure Data Factory, Databricks, and Power BI. To the right, there are two cards: 'Project stats' (showing 9 work items created and 0 work items completed) and 'Members' (listing five team members with their initials: JP, M, MS, KP, and a placeholder icon).

## 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 Boards backlog page. At the top, there are navigation links for 'Organization Settings' and 'Processes'. Below that, a search bar and a 'Help' link. The main area is titled 'BATCH DATA ANALYSIS AND VISUALIZATION Team'. It features a 'Backlog' tab and an 'Analytics' tab. The backlog table has columns for Order, Work item type, Title, State, Effort, Business Area, and Tags. The data in the table is as follows:

Order	Work item type	Title	State	Effort	Business Area	Tags
1	Epic	Batch Data Analysis and Visualization on Azure	New		Business	
	Feature	User Authentication & Data Submission	New		Business	
	User Story	Secure User Login	New		Business	
	Task	Design Login User Interface (UI)	New			
	Task	Set Up Authentication System	New			
	Task	Validate User Credentials	New			
	Task	Implement Password Recovery Option	New			
	Task	Display Login Feedback Messages	New			
	User Story	Upload Batch Data	New		Business	
	Task	Design Upload Form Interface	New			
	Task	Support Multiple File Formats	New			
	Task	Validate File Before Upload	New			

**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 Boards Backlog view for the 'BATCH DATA ANALYSIS AND VISUALIZATION Team'. The backlog is organized into sections: Backlog and Analytics. Under Backlog, there is an Epic titled 'Batch Data Analysis and Visualization on Azure' which contains several child items: Feature ('User Authentication & Data Submission'), User Story ('Secure User Login'), Task ('Design Login User Interface (UI)'), Task ('Set Up Authentication System'), Task ('Validate User Credentials'), Task ('Implement Password Recovery Option'), Task ('Display Login Feedback Messages'), User Story ('Upload Batch Data'), Task ('Design Upload Form Interface'), Task ('Support Multiple File Formats'), and Task ('Validate File Before Upload'). The User Story 'Secure User Login' has a child Task 'Design Login User Interface (UI)'. All items are marked as 'New' and belong to the 'Business' category. The interface includes standard Azure navigation elements like the ribbon, search bar, and column options.

### **1. Fill in Epics**

The screenshot shows the details page for 'EPIC 141' titled 'Batch Data Analysis and Visualization on Azure'. The page includes fields for Status (New), Reason (New), Area (BATCH DATA ANALYSIS AND VISUALIZATION), Iteration (BATCH DATA ANALYSIS AND VISUALIZATION/Automation, Monitoring and Error Handling), and a 'Details' tab. The 'Description' section contains a detailed description of the epic's purpose: 'As an organization, we want to build a cloud-based system where users can upload batch data, and the system will automatically ingest, clean, preprocess, and visualize this data. The visual insights should be shared back with users for verification and understanding. This ensures efficient data handling, transparency, and decision-making using Azure services and Power BI.' The 'Planning' section shows priority (2), risk, effort, and business value. The 'Deployment' section provides instructions on tracking releases. The 'Development' section includes a link to an Azure Repos repository. The 'Related Work' section allows adding links to existing work items. The bottom of the page shows a 'Classification' section with a 'Value area' dropdown.

## 2. Fill in Features

FEATURE 149

## 149 User Authentication & Data Submission

M Mathan S 0 Comments Add Tag

State: New Area: BATCH DATA ANALYSIS AND VISUALIZATION Updated by Manisha P. Monday

Reason: New Iteration: BATCH DATA ANALYSIS AND VISUALIZATION\Automation, Monitoring and Error Handling

**Description**

- Allows users to securely log in and submit batch data for processing.

**Planning**

Priority: 2  
Risk:  
Effort:  
Business Value:  
Time Criticality:

**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**

**Development**

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

**Related Work**

Add link Parent

Hot weather Now

Search

BATCH DATA ANALYSIS AND VISUALIZATION

Inbox (4,376) - 2

11:29 23-04-2023

### **3. Fill in User Story Details**

User Story 217

Secure User Login

M Mathan S 0 Comments Add Tag

Save and Close Follow Details

State: New Area: BATCH DATA ANALYSIS AND VISUALIZATION Updated by Manisha P: Monday

Reason: New Iteration: BATCH DATA ANALYSIS AND VISUALIZATION\Automation, Monitoring and Error Handling

Description

Planning

As a User, I want to log in securely so that I can access the platform to submit batch data.

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](#)

Acceptance Criteria

Click to add Acceptance Criteria.

Classification

Priority: 2 Risk: 1

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.

Discussion

Gleek

9|eek\_

Related Work

Add link Parent

149 User Authentication & Data Submission

Hot weather Now

Search

11:30 23-04-2025

**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 Batch Data Analysis and Visualization

### **Sprint Planning**

#### **Sprints :**

The screenshot shows the Azure Boards interface for the 'BATCH DATA ANALYSIS AND VISUALIZATION' team. The backlog is displayed in a grid format with columns for Order, Title, State, Assigned To, and Remaining. The backlog is organized into three sprints:

- Automation, Monitoring and Error Handling** (February 25 - April 8, 43 work days):
  - Set Up Authentication System (New, Mathan S)
  - Validate User Credentials (New, Mathan S)
  - Implement Password Recovery Option (New, Mathan S)
  - Display Login Feedback Messages (New, Mathan S)
- Upload Batch Data** (February 25 - April 8, 43 work days):
  - Design Upload Form Interface (New, Mathan S)
  - Support Multiple File Formats (New, Mathan S)
  - Validate File Before Upload (New, Mathan S)
  - Store Uploaded Files in Cloud Storage (New, Mathan S)
  - Display Upload Status (New, Mathan S)
- Store Uploaded Batch Data** (February 25 - April 8, 43 work days):
  - (New, Manisha P)

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CS23432

**Result:**

The Sprints are created for the Batch Data Analysis And Visualization.

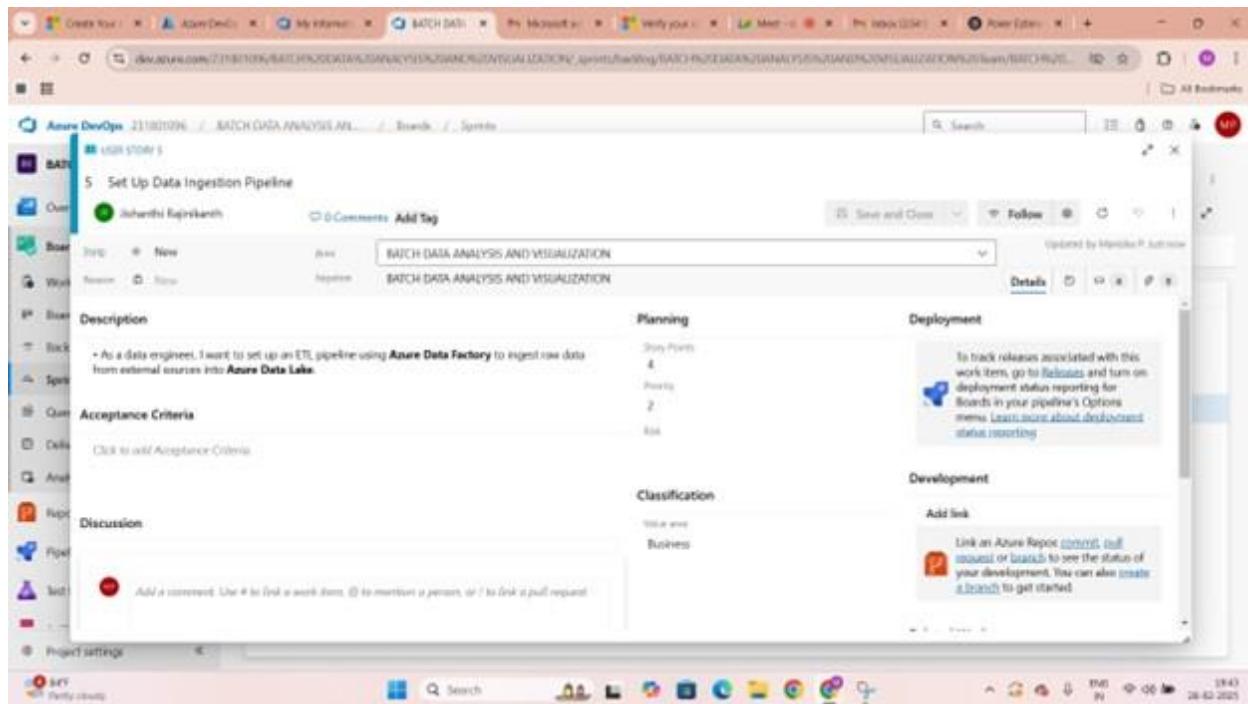
**EXP NO: 5**

## **POKER ESTIMATION**

### **Aim:**

Create Poker Estimation for the user stories - Batch Data Analysis And Visualization.

### **Poker Estimation**



### **Result:**

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

**EXP NO: 6**

## **DESIGNING CLASS AND SEQUENCE DIAGRAMS FOR PROJECT ARCHITECTURE**

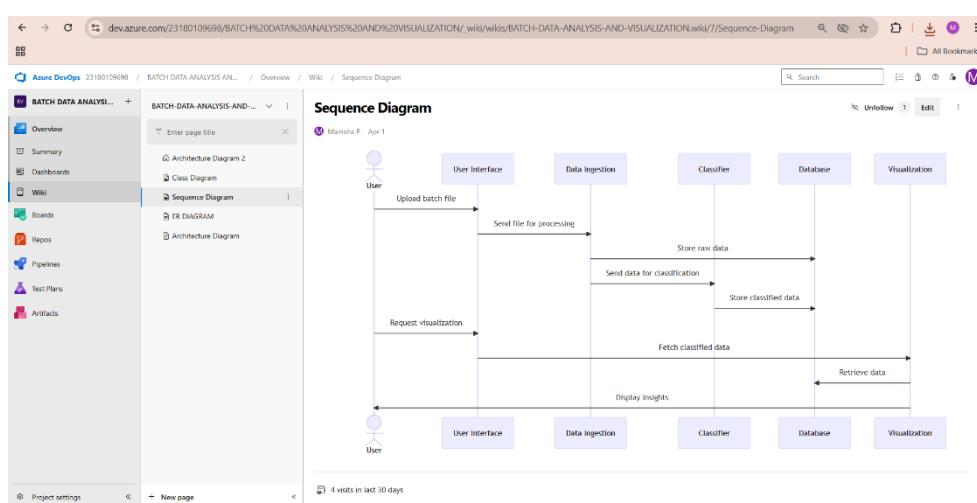
### **Aim:**

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.

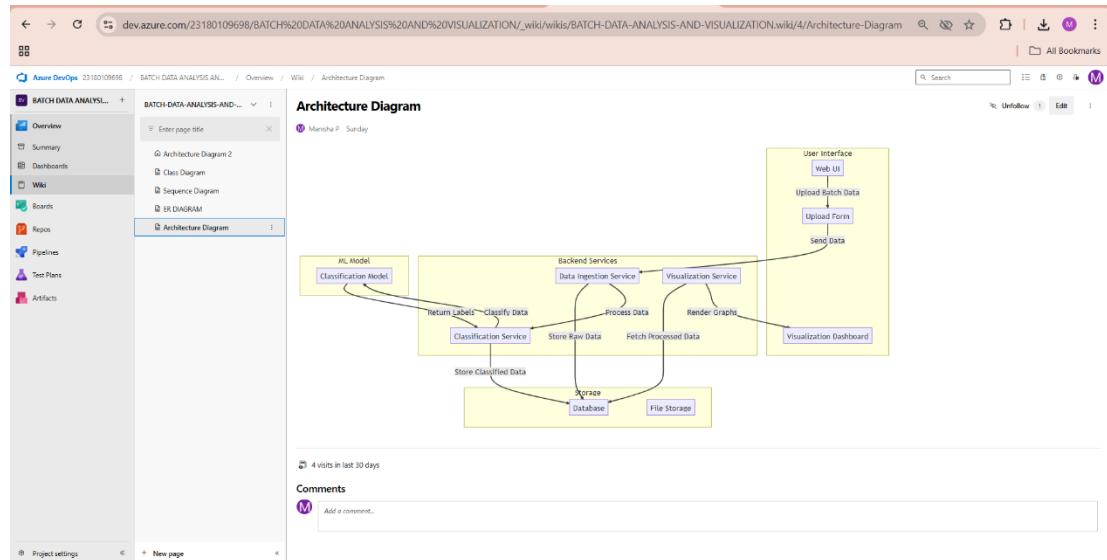
**EXP NO: 7**

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

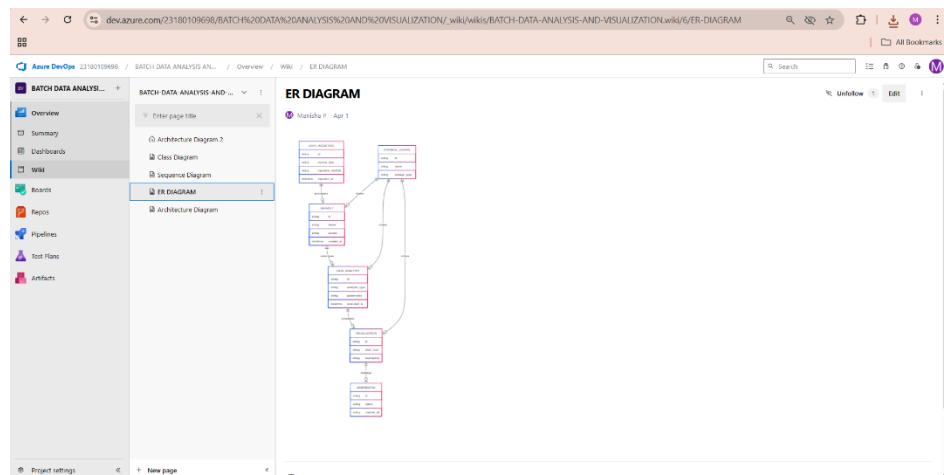
### **Aim:**

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 Music Playlist Batch Creator

**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
- Allow users to securely create an account and log into the platform.
- Navigation to Data Upload Feature
- Enable users to navigate from the dashboard to the data upload section.
- Data Upload and Validation
- Allow users to upload CSV/Excel files and validate uploaded data for structure and format.
- Data Preprocessing and Cleaning
- Perform data cleaning activities like handling missing values, removing duplicates, and standardizing data.
- Data Visualization
- Generate visual insights (charts, graphs) based on processed data.

**2. Define User Interactions**

- Each test case simulates a real user behavior:
- Logging in to the platform.
- Uploading raw data files.
- Preprocessing and cleaning uploaded data.
- Generating charts and graphs from the processed data.
- Handling errors when invalid data or incorrect formats are uploaded.

**3. Design Happy Path Test Cases**

- Focused on validating that all features work properly under normal conditions:
- User logs in successfully with valid credentials.
- Data file (CSV/Excel) is uploaded successfully when correct format and structure are used.
- Missing values are handled correctly during preprocessing.
- Duplicate records are identified and removed.
- Graphs are generated correctly based on selected fields.

**4. Design Error Path Test Cases**

- Simulate negative or unexpected scenarios to test system robustness:
- Login fails when credentials are incorrect.
- Upload fails when file format is unsupported (e.g., .txt file).
- Upload fails when mandatory columns are missing in the file.
- Preprocessing fails when the dataset is empty.
- Visualization fails gracefully if selected fields are missing.

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

- Each test case includes:
- Step-by-step actions (e.g., click "Upload," select file, submit)
- Expected outcomes (e.g., "File uploaded successfully," "Error message displayed")

- This helps ensure clarity for manual testers and automation teams.

## 6. Use Clear Naming and IDs

- Test cases are clearly named and numbered for easy identification:
- TC01 – Successful Login
- TC02 – Successful Data Upload
- TC03 – Invalid Login Credentials
- TC04 – Upload File with Invalid Format
- TC05 – Generate Graph from Cleaned Data

## 7. Separate Test Suites

- Test cases are organized into logical groups for better execution:
- Functional Tests:
  - Login
  - Upload
  - Data Cleaning
  - Visualization
- UI Tests:
  - Navigation to Upload Section
  - Upload Button Visibility
  - Visualization Chart Display
- Edge Case Tests:
  - Invalid file formats
  - Missing fields in data
  - Uploading empty datasets
  - Login with empty fields

## 8. Prioritize and Review

- Critical user actions like Login, Upload, and Visualization are marked as High Priority.
- Test cases are reviewed for completeness and traceability to feature requirements.
- Priority factors considered:
  - Impact on system functionality
  - Business importance
  - Technical complexity

### New test plan

The screenshot shows the Azure DevOps Test Management interface. A modal dialog titled "New Test Plan" is open. The "Name" field contains "LOGIN". The "Area Path" dropdown is set to "BATCH DATA ANALYSIS AND VISUALIZATION". The "Iteration" dropdown shows "BATCH DATA ANALYSIS AND VISUALIZATION\Automation, Monitoring and Error Handling" with the date range "2/25/2025 - 4/8/2025". The bottom right of the dialog has "Create" and "Cancel" buttons.

- Test suite

The screenshot shows the Azure DevOps Test Plans interface. On the left, there's a sidebar with 'Test Suites' and a dropdown for 'DataVizBatch'. A context menu is open over the 'DataVizBatch' item, showing options like 'New Suite', 'Assign configurations', 'Export', 'Assign testers to run all tests', and 'Import test suites'. The main area displays a table titled 'Test Cases (3 items)'. The table has columns for 'Title', 'Order', 'Test Case Id', 'Assigned To', and 'State'. The rows are:

Title	Order	Test Case Id	Assigned To	State
upload large files(stress test)	1	234	Jishanthi Rajinika...	Design
general contract integrity	2	235	Jishanthi Rajinika...	Design
lid Datatypes	3	236	Jishanthi Rajinika...	Design

## 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 upload and view my data files. (ID: 101)
- As a user, I need to upload CSV/Excel files easily for analysis. (ID: 102)
- As a user, I want the system to clean and preprocess my uploaded data automatically. (ID: 103)
- As a user, I should be able to generate charts and graphs from my processed data. (ID: 104)
- As a user, I need clear error messages if upload or analysis fails. (ID: 105)

### Test Suites

#### Test Suite: TS01 – User Login (ID: 110)

##### 1. TC01 – Successful Login

- **Action:**
  - Go to the Login page.
  - Enter valid username and password.
  - Click "Login."
- **Expected Results:**
  - Login form accepts data.
  - User is redirected to the dashboard.

- **Type:** Happy Path

## 2. TC02 – Login with Invalid Credentials

- **Action:**

- Go to the Login page.
- Enter invalid username or password.
- Click "Login."

- **Expected Results:**

- Error message: "Invalid Username or Password" is displayed.

- **Type:** Error Path

## Test Suite: TS02 – Data Upload (ID: 111)

### 1. TC03 – Successful Data Upload

- **Action:**

- Login successfully.
- Navigate to the "Upload" section.
- Select a valid CSV/Excel file.
- Click "Submit."

- **Expected Results:**

- File is uploaded successfully.
- Confirmation message: "Upload Successful."

- **Type:** Happy Path

### 2. TC04 – Upload Unsupported File Format

- **Action:**

- Login successfully.
- Navigate to "Upload."
- Select a .txt or .docx file.
- Click "Submit."

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- **Expected Results:**
  - Error message: "Unsupported file format."
- **Type:** Error Path

## Test Suite: TS03 – Data Preprocessing (ID: 112)

### 1. TC05 – Successful Data Cleaning

- **Action:**
  - After successful upload, click "Start Preprocessing."
  - Allow the system to clean data (remove duplicates, handle missing values).
- **Expected Results:**
  - Data is cleaned and summary report is shown.
- **Type:** Happy Path

### 2. TC06 – Preprocessing Fails on Empty File

- **Action:**
  - Upload an empty CSV file.
  - Click "Start Preprocessing."
- **Expected Results:**
  - Error message: "Uploaded file is empty."
- **Type:** Error Path

## Test Suite: TS04 – Data Visualization (ID: 113)

### 1. TC07 – Generate Graph Successfully

- **Action:**
  - After preprocessing, select fields for visualization.
  - Choose graph type (bar, pie, line).
  - Click "Generate Graph."
- **Expected Results:**
  - Graph is displayed correctly based on selected data.
- **Type:** Happy Path

### 2. TC08 – Graph Generation Fails without Selecting Fields

- **Action:**

- Skip selecting fields.
- Click "Generate Graph."

- **Expected Results:**

- Error message: "Please select fields to generate graph."

- **Type:** Error Path

## Test Suite: TS05 – Error Handling & Alerts (ID: 114)

### 1. TC09 – Display Upload Error on Server Failure

- **Action:**

- Try uploading when server is down (simulate).

- **Expected Results:**

- Error message: "Server unavailable. Try again later."

- **Type:** Error Path

### 2. TC10 – Missing Mandatory Fields

- **Action:**

- Upload a file missing important columns (e.g., 'Name', 'Age').

- **Expected Results:**

- Error message: "Missing mandatory fields."

- **Type:** Error Path

## Test Cases

The screenshot shows a Microsoft Test Case management interface. The test case is titled "upload large files(stress test)" and is assigned to Jishanthi Rajinikanth. It has 0 comments and no tags. The status is "Design". The iteration is "BATCH DATA ANALYSIS AND VISUALIZATION". The description is "BATCH DATA ANALYSIS AND VISUALIZATION/Automation, Monitoring and Error Handling".

**Steps:**

- Action: User selects and uploads a .csv file with over 100,000 valid records.
- Expected result: The system accepts the file and begins processing without crashing or freezing.
- Action: User waits for the upload and processing to complete.
- Expected result: System provides a loading indicator or progress bar, showing real-time progress until completion.
- Action: User monitors system performance during upload (e.g., response time of other UI elements).
- Expected result: The application remains responsive, and no significant performance lag is observed in the UI.
- Action: After upload, user checks if all records are inserted into the database or available in the batch list view.
- Expected result: All 100,000+ records are successfully saved and displayed in the system (or accessible via a link).
- Action: User checks for any error notifications or failure logs after upload.
- Expected result: No error messages are shown. System logs reflect successful processing of all records, and any invalid rows (if present) are clearly flagged with appropriate error messages.

**Attachments:**

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

**Development:** Add link. Link a GitHub commit, pull request or branch to see the status of your development. You can also create a branch to get started. [Learn more](#).

**Related Work:** Add link. Add an existing work item as a parent.

The screenshot shows a Microsoft Azure Test Case page. At the top, the URL is dev.azure.com/23180109698/BATCH%20DATA%20ANALYSIS%20AND%20VISUALIZATION/\_testPlans/define?planId=223&suitId=233. The page title is "TEST CASE 236". Below the title, it says "Upload File with Invalid Datatypes". The test case is assigned to Jishanthi Rajnikanth, has 0 comments, and no tags. The state is Design, area is BATCH DATA ANALYSIS AND VISUALIZATION, reason is New, and iteration is BATCH DATA ANALYSIS AND VISUALIZATION\Automation, Monitoring and Error Handling. It was updated by Manisha P. Monday.

**Steps**

Steps	Action	Expected result	Attachments
1.	User uploads a .csv file containing invalid data types in specific fields (e.g., "ABC" in a quantity field that expects an integer)	System begins validating the file and detects the incorrect data types.	
2.	System processes the file and checks each record for data type compliance	Invalid records are flagged, and the system stops processing those rows while continuing with valid ones (if partial upload is supported).	
3.	System shows validation results	A clear error summary is displayed to the user: e.g., "Row 5: Invalid value in 'Quantity' field – expected number but found text."	

Click or type here to add a step

**Deployment**

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

**Development**

Add link

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

**Related Work**

Add link

Add an existing work item as a parent

Tests

dev.azure.com/23180109698/BATCH%20DATA%20ANALYSIS%20AND%20VISUALIZATION/\_testPlans/define?planId=223&suitId=233

**TEST CASE 235** cancel upload midway

Jishanthi Rajinikanth 0 Comments Add Tag

State: Design Area: BATCH DATA ANALYSIS AND VISUALIZATION  
Reason: New Iteration: BATCH DATA ANALYSIS AND VISUALIZATION\Automation, Monitoring and Error Handling

Updated by Manisha P: Monday

**Steps**

Steps	Action	Expected result	Attachments
1.	User initiates the upload of a large .csv file (e.g., 100,000+ rows).	System immediately halts the upload process and stops reading the remaining data.	
2.	User clicks the "Cancel" button during the upload process.	System begins processing and shows a visible progress indicator (e.g., progress bar or spinner).	
3.	User checks the database or batch list after cancellation.	No new records from the canceled upload appear in the system. Partial uploads are not saved.	

Click or type here to add a step

**Deployment**

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

**Development**

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

**Related Work**

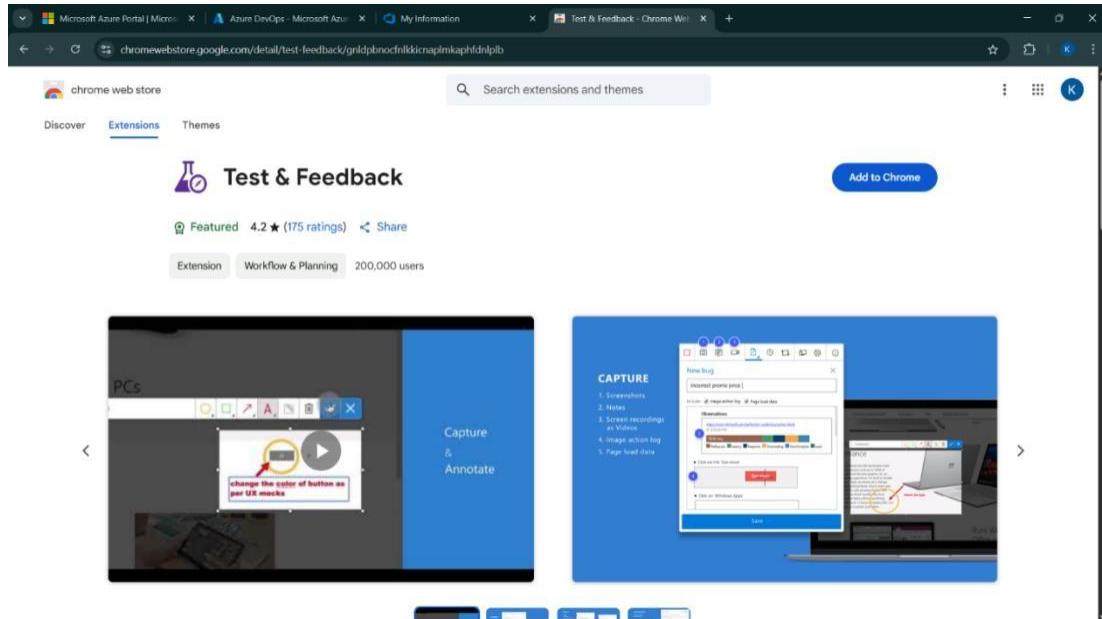
Add link ▾

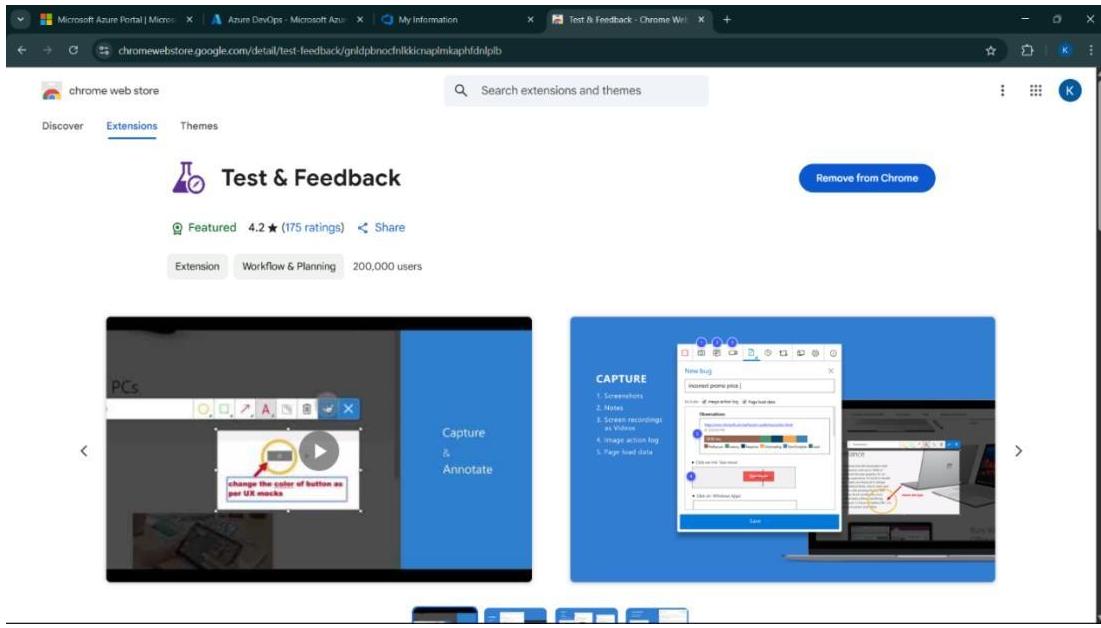
Add an existing work item as a parent

Tests

Parameter values

## Installation of test





## Test and feedback

Showing it as an extension

A screenshot of a web browser window showing the Azure DevOps Test Plan interface for a project named "Music Playlist Batch Creator". The left sidebar shows navigation options like Overview, Boards, Repos, Pipelines, Test Plans, and Artifacts. The main area displays a "Test Suites" section for "TS01 - User Login (ID: 86)". The "Test Cases (4 items)" list includes "Title", "TC01 - Successful Sign Up", "TC02 - Secure Login", "TC03 - Sign Up with Existing Email", and "TC04 - Login with Wrong Password". On the right side, a sidebar titled "Extensions" is open, showing a list of installed extensions with "Full access": "Copy Text from Picture", "Dark Reader", "Monica: ChatGPT AI Assist...", "Selected: Copy Text from V...", and "Test &amp; Feedback". A "Manage extensions" link is also present at the bottom of the sidebar.

- Running the test cases

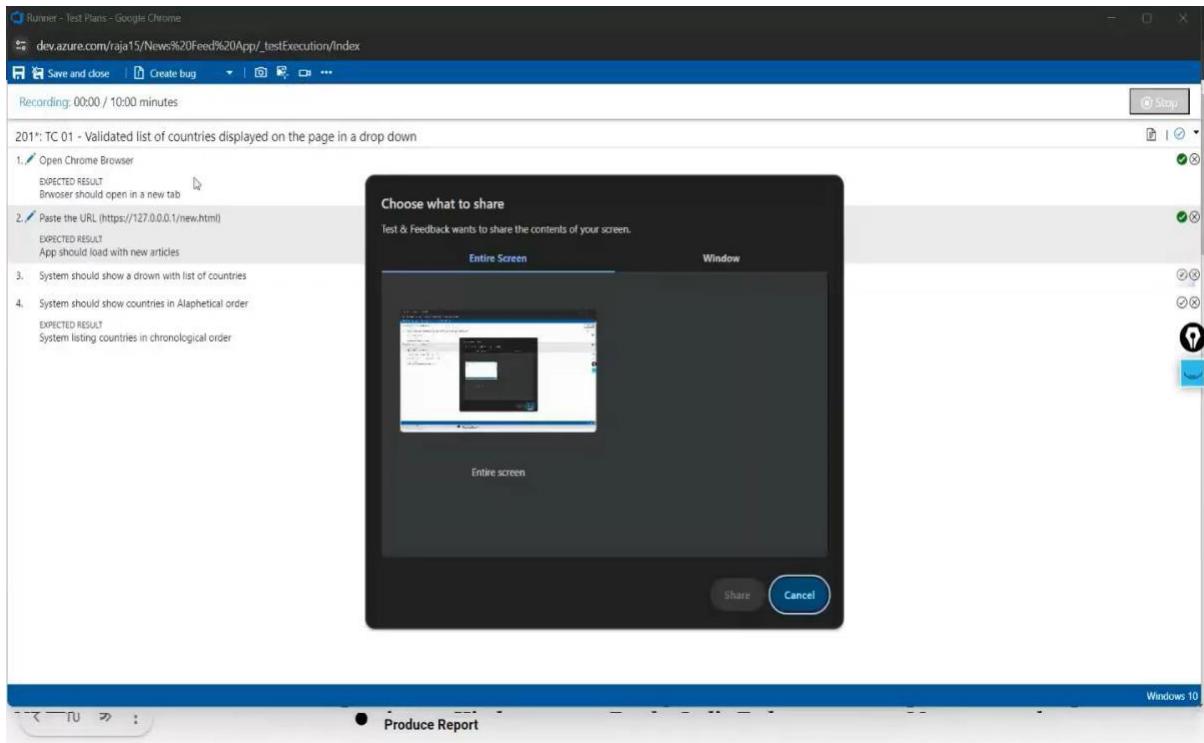
The screenshot shows the Azure DevOps Test Plans interface. On the left, the navigation bar includes 'Overview', 'Boards', 'Repos', 'Pipelines', 'Test Plans' (selected), 'Test plans', 'Progress report', 'Parameters', 'Configurations', 'Runs', and 'Project settings'. The main area displays a 'Test Suites' list under 'DataVizBatch (3)'. A specific test suite, '211 : Upload Batch Data (ID: 233)', is selected. The 'Execute' tab is active. A context menu is open over the first test point, 'upload large files(stress test)', listing options like 'Run for web application', 'Run for desktop application', and 'Run with options'. The table below shows three test points:

Title	Outcome	Order
<input checked="" type="checkbox"/> upload large files(stress test)	Passed	1
<input type="checkbox"/> cancel upload midway	Passed	2
<input type="checkbox"/> Upload File with Invalid Datatypes	Active	3

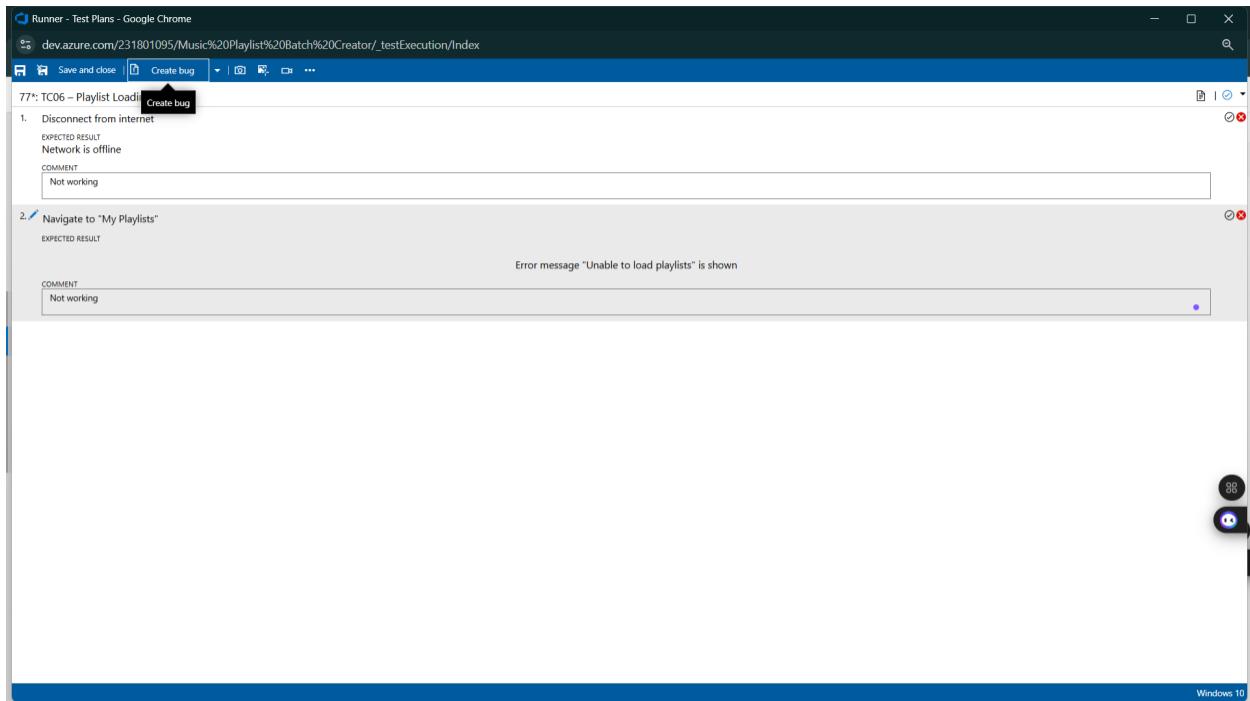
The screenshot shows the Azure DevOps Test Runs interface. The left sidebar includes 'Recent test runs' (selected), 'Test runs' (with a plus sign icon), 'Recent exploratory sessions', and other icons. The main area displays a table titled 'Recent test runs' with the following data:

State	Run ...	Title	Completed Date	Build Number	Failed	Pass Rate
Completed	5	211 : Upload Batch Data (Manual)	4/21/2025 8:31:53 AM		0	100%
Completed	4	150 : View and Verify Charts (Manual)	4/21/2025 8:29:30 AM		0	100%
Completed	3	211 : Upload Batch Data (Manual)	4/21/2025 8:13:59 AM		0	100%
Completed	2	150 : View and Verify Charts (Manual)	4/21/2025 8:13:15 AM		0	100%

- Recording the test case



- 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

**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 ...

2. Navigate to "My Playlists"

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  
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 Deployment

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 Priority 2  
Severity 3 - Medium  
Activity

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) Related Work  
Original Estimate Remaining Completed  
+ Add link Add an existing work item as a parent  
Tested By 77 TC06 - Playlist Loading Failure Updated 10-04-2025, 8: Design

System Info Found in Build

Windows 10

Microsoft Azure Pipelines - Pipeline 1 | 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 Creator + Enter Run ID... Go Run 48 - TS02 - View Playlists (Manual) / TC06 - Playlist Loading Failure

BUG 92 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 Updated by Karthick S 8m ago

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

Project settings

- Test case results

The screenshot shows the Azure DevOps Test Plans interface. On the left, there's a navigation pane with 'DataVizBatch' selected. Under 'Test Suites', '150 : View and Verify Charts (3)' is highlighted. The main area displays '150 : View and Verify Charts (ID: 230)' with tabs for 'Define', 'Execute', and 'Chart'. The 'Execute' tab is active, showing 'Test Points (3 items)'. One point, 'Validate supported file formats (CSV, JSON, Parquet)', is checked and has a green 'Passed' status. A tooltip indicates '44% run, 100% passed'. To the right, a modal window titled 'Test Case Results' shows a table with columns: Outcome, TimeStamp, Configuration, Run by, Tester, and Test Plan. The first row shows 'Passed', 'Monday', 'Windows 10', 'Manisha P', 'Kavinya P', and 'DataVizBatch'. At the bottom of the modal, a link says 'Open execution history for current test point'.

- Test report summary

The screenshot shows the Azure DevOps Work Items interface. On the left, the 'News Feed App' project is selected. In the center, a work item titled '203 - BG 01 - Countries Drop down Not Available on the page' is displayed. The 'Details' tab is open, showing the following details:

- Title:** BUG 203
- Description:** 203 - BG 01 - Countries Drop down Not Available on the page
- Assignee:** rajesh prabhu
- State:** New
- Reason:** New
- Iteration:** News Feed App
- Repro Step:** Active
- 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  
[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.
- Related Work:** (empty)

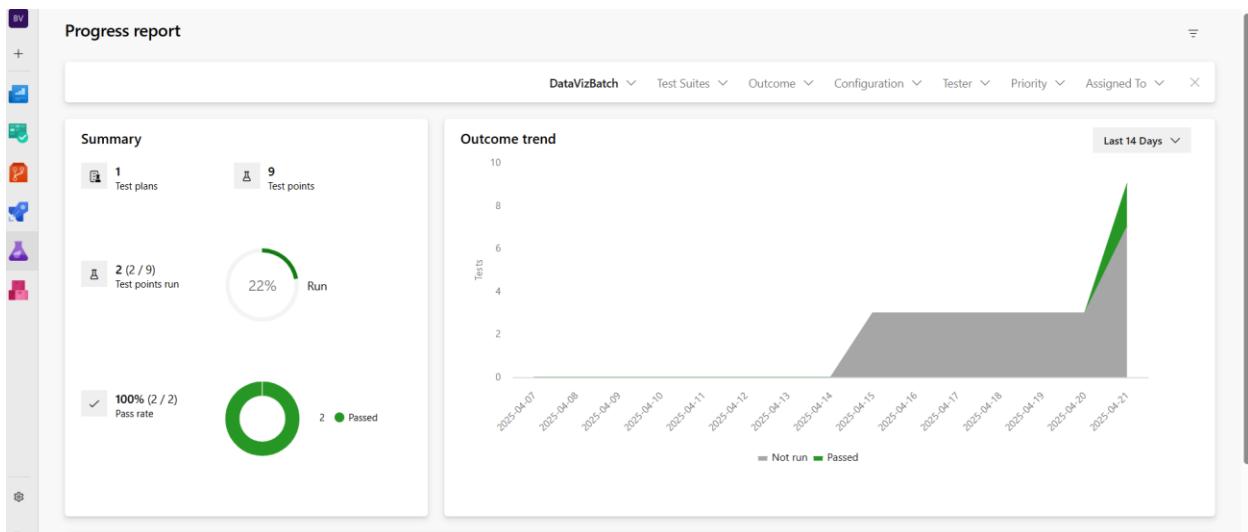
- Assigning bug to the developer and changing state

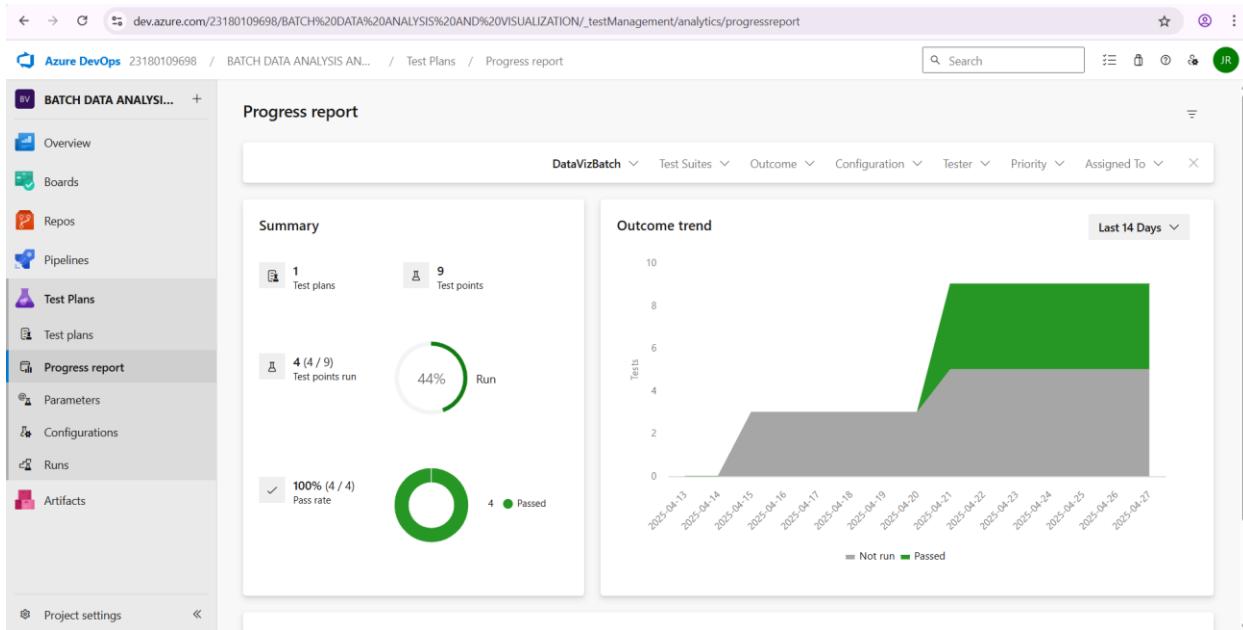
The screenshot shows a detailed view of a test step in the Azure DevOps Test Plan interface. The step is titled "92 TB01 - Playlist loading spinner keeps spinning indefinitely on poor network". It is categorized under "Repro Steps" and has two steps listed:

- Step no.**: 1, **Result**: Failed, **Title**: Disconnect from internet. Expected Result: Network is offline.
- Step no.**: 2, **Result**: Failed, **Title**: Navigate to "My Playlists". Expected Result: Error message "Unable to load playlists" is shown.

The "Planning" section includes fields for Resolved Reason, Story Points, Priority (2), Severity (3 - Medium), and Activity. The "Deployment" section provides links to releases and deployment status reporting. The "Development" section includes a link to an Azure Repos pull request. The "Related Work" section allows adding existing work items as parents. The "System Info" section shows the test was last updated on 10-04-2025 by Karthick S.

- **Progress report**





- **Changing the test template**

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

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

Name	Description	Team projects
Basic	This template is flexible for any process and great for teams getting started with Azure DevOps.	0
Agile	This template is flexible and will work great for most teams using Agile planning methods, including those pract...	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

The screenshot shows the 'All processes' list in the Azure DevOps Settings - Process page. The 'Processes' tab is selected. The list includes the standard templates and a new custom process:

Name	Description	Team projects
Basic	This template is flexible for any process and great for teams getting started with Azure DevOps.	0
Agile	This template is flexible and will work great for most teams using Agile planning methods, including those pract...	0
231801095 Agile (default)		1
Agile Plus		0
Scrum	This template is for teams who follow the Scrum framework.	0
CMMI	This template is for more formal projects requiring a framework for process improvement and an auditable reco...	0

- 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 has tabs for 'Definition', 'Options', and 'Layout'. Under 'Definition', it says 'Add a field to store custom, queryable data about your work items.' Under 'Options', there are two radio buttons: 'Create a field' (selected) and 'Use an existing field'. Under 'Layout', it shows 'Field' set to 'Acceptance Criteria'. Below these, there's a 'Name' input field containing 'Type', a 'Type' dropdown set to 'Text (single line)', and a 'Description' input field. At the bottom right of the dialog are 'Add field' and 'Cancel' buttons.

The screenshot shows the 'Work-item types' section of the Azure DevOps settings. It lists a single item: 'Music Playlist Batch Creator'. The 'Name' column shows 'Music Playlist Batch Creator' and the 'Description' column shows 'The Azure Music Playlist Batch Creator is a cloud-based solution designed for bulk playlist creation and management. Levera...'. The 'Process' tab is selected in the navigation bar.

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](https://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 "Steps" field with the placeholder "Text (multiple lines)". To the right, there are sections for "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 large "Add a field ..." button is located on the far right.

### 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	<b>LOAD TESTING AND PERFORMANCE TESTING</b>
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**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:

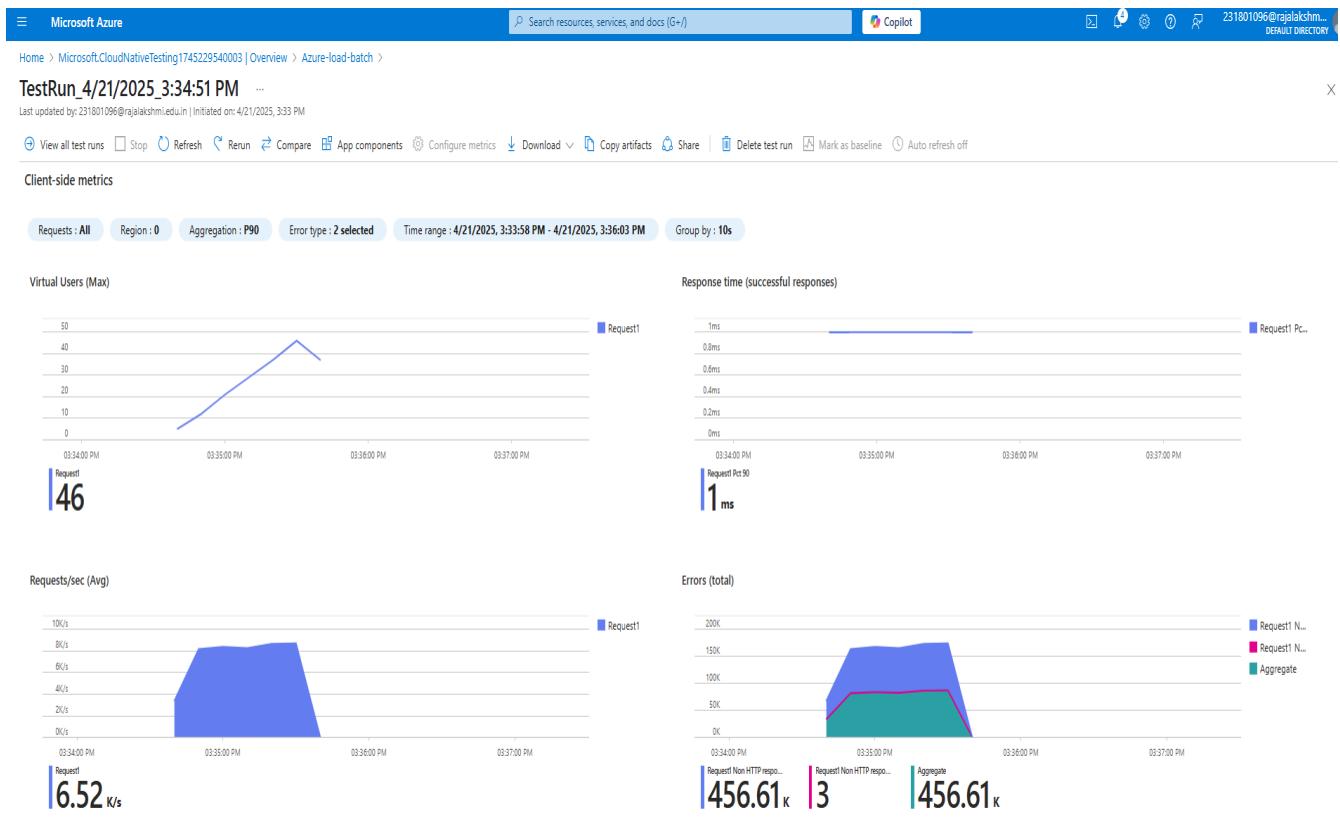
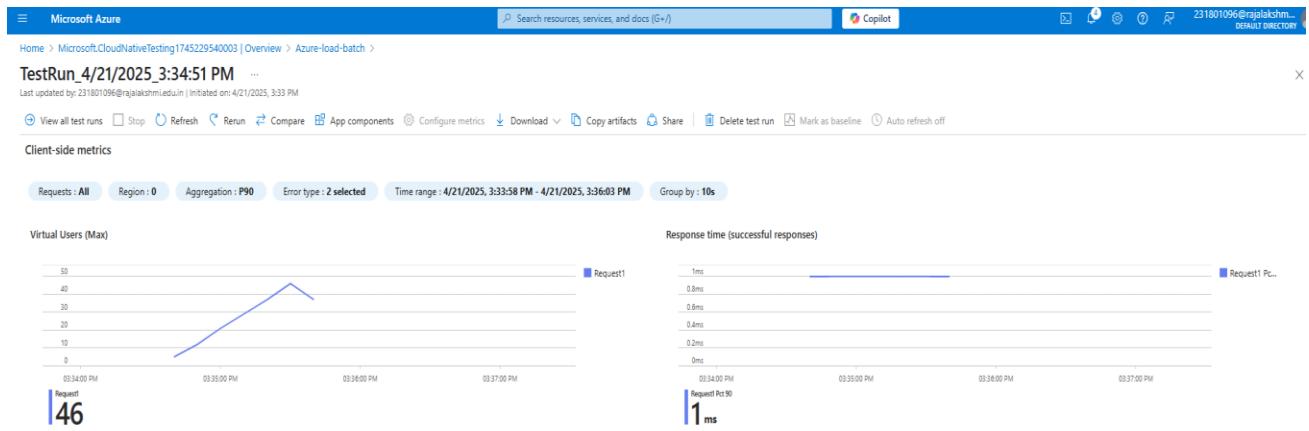
1. Sign in to Azure Portal  
Go to <https://portal.azure.com> and log in.
2. Create the Resource
  - o Go to *Create a resource* → Search for “Azure Load Testing”.
  - o Select Azure Load Testing and click Create.
3. Fill in the Configuration Details
  - o *Subscription*: Choose your Azure subscription.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

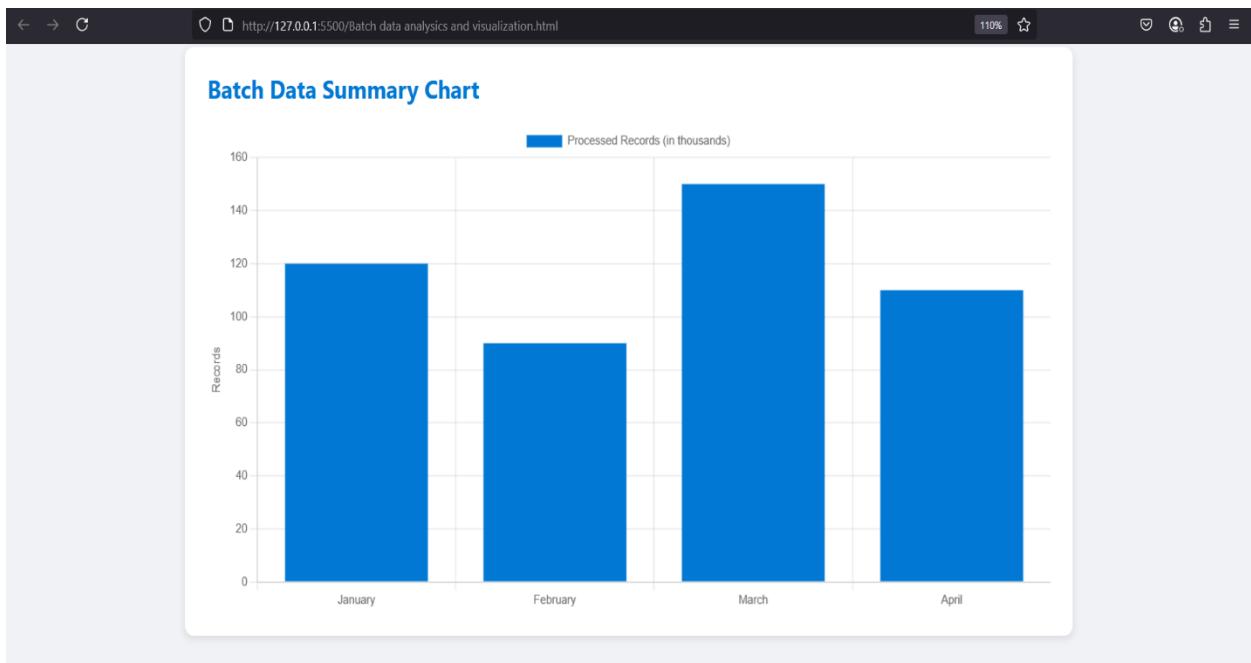
## Load Testing



Server-side metrics

The screenshot shows a web browser window with the following details:

- Address Bar:** http://127.0.0.1:5500/Batch data analytics and visualization.html
- Page Title:** Batch Data Analysis & Visualization
- Page Description:** Use Microsoft Azure tools to analyze, process, and visualize your batch data
- Section 1: Azure Synapse Analytics**
  - Description: Analyze massive amounts of data quickly using Azure Synapse. Integrate with big data tools and build high-performance pipelines for batch analytics.
  - Call-to-action button: Visit Synapse Analytics
- Section 2: Azure Data Factory**
  - Description: Build data pipelines, automate batch processing, and transform raw data at scale with Azure Data Factory's low-code interface.
  - Call-to-action button: Visit Data Factory
- Section 3: Power BI**
  - Description: Create stunning dashboards and interactive visualizations to explore your batch data insights with Power BI.
  - Call-to-action button: Visit Power BI



**Result:**

Successfully created the Azure Load Testing resource and executed a load test to assess the performance of the specified endpoint.

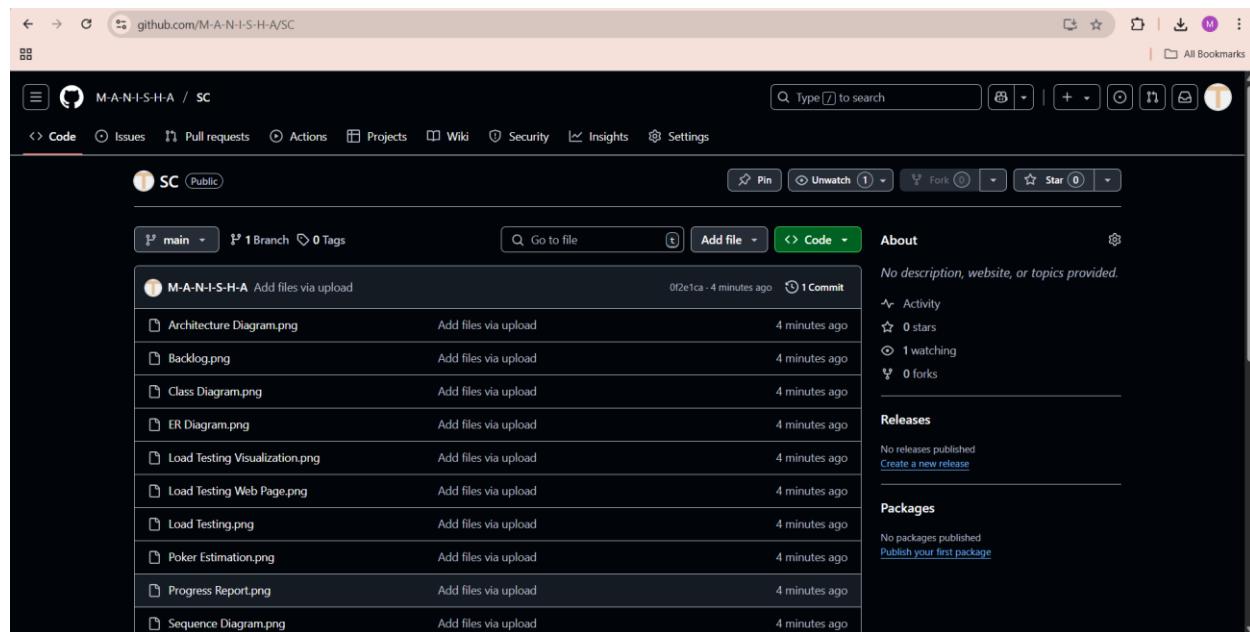
**EXP NO: 10**

## **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 Batch Data Analysis And Visualization.

### **GitHub Project Structure**



### **Result:**

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