EXP NO: 1	AZURE DEVOPS ENVIRONMENT SETUP

Aim:

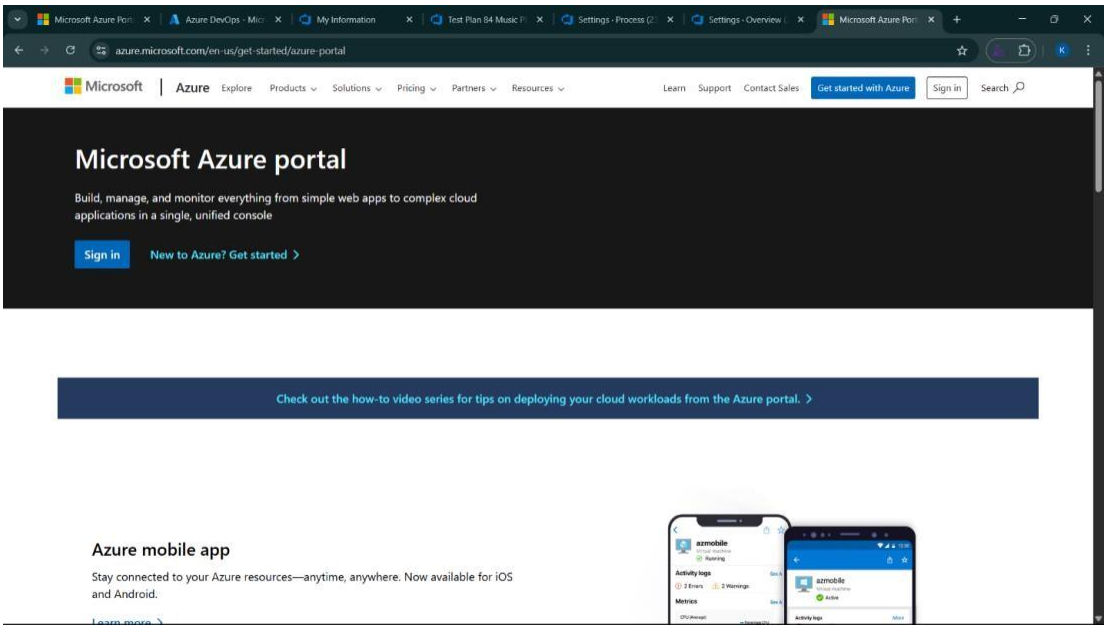
To set up and access the Azure DevOps environment by creating an organization through the Azure portal.

INSTALLATION

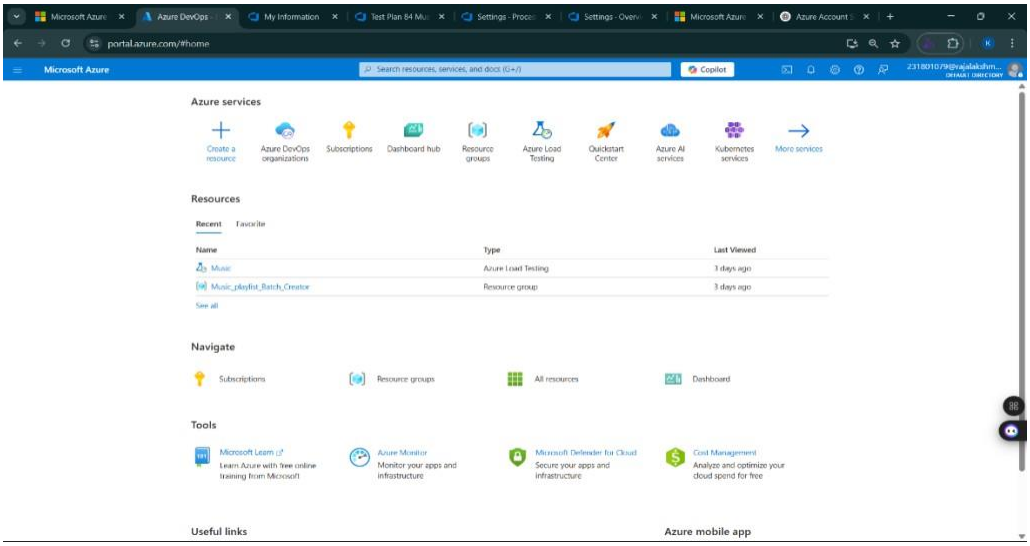
1. Open your web browser and go to the Azure website: https://azure.microsoft.com/en-us/get-started/azure-portal.

Sign in using your Microsoft account credentials.

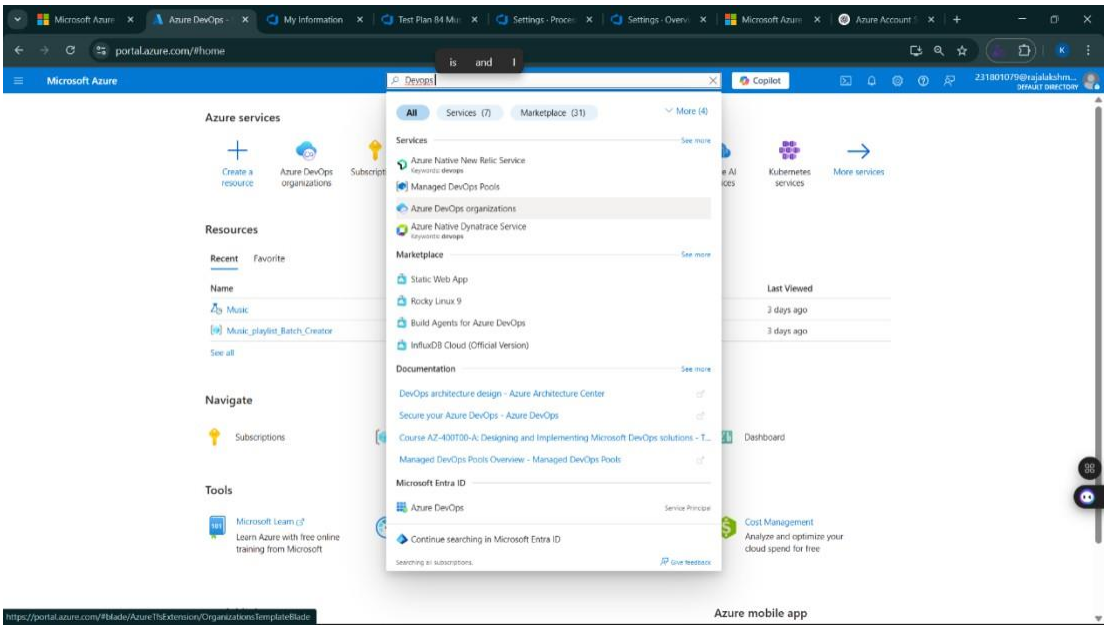
If you don't have a Microsoft account, you can create one here: https://signup.live.com/?lic=1



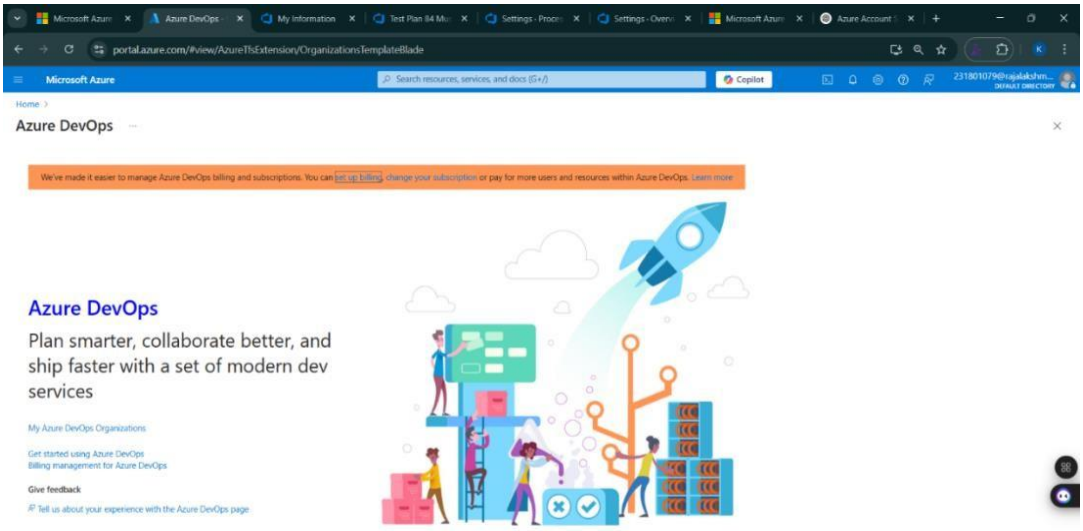
2. Azure home page



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



4. Click on the ***My Azure DevOps Organization*** link and create an organization and you should be taken to the Azure DevOps Organization Home page.



Result:

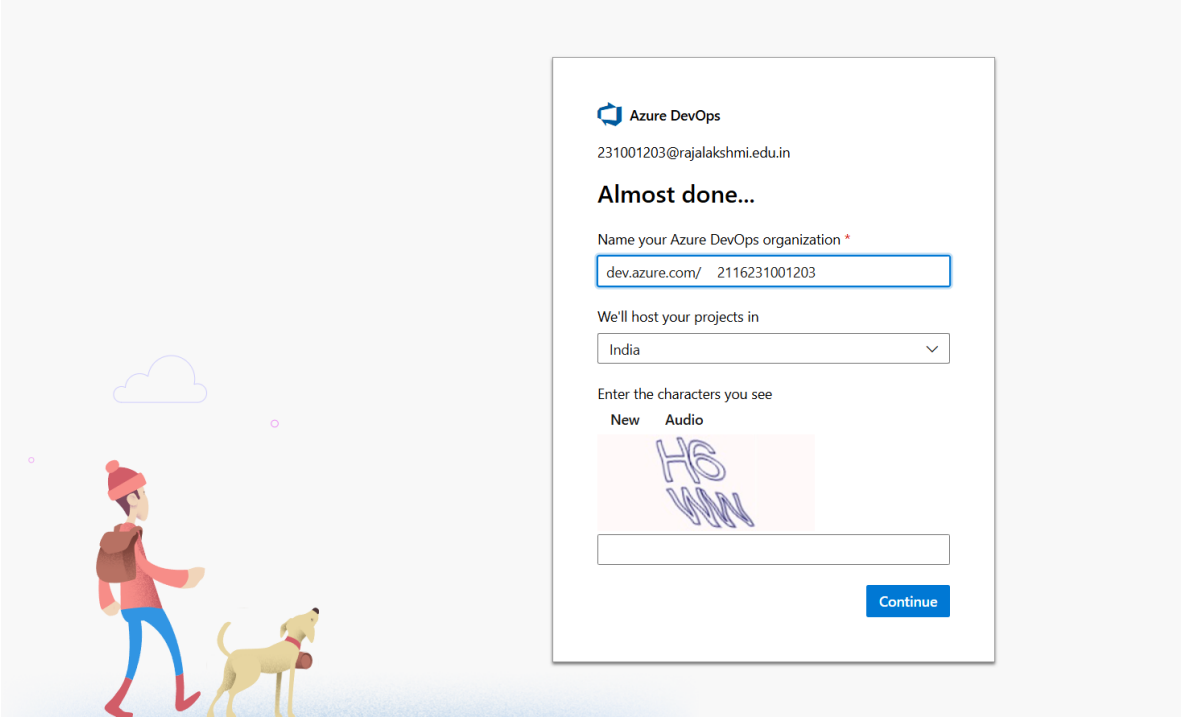
Successfully accessed the Azure DevOps environment and created a new organization through the Azure portal.

EXP NO: 2	AZURE DEVOPS PROJECT SETUP AND USER STORY MANAGEMENT

Aim:

To set up an Azure DevOps project for efficient collaboration and agile work management.

1. Create An Azure Account



2. Create the First Project in Your Organization

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.

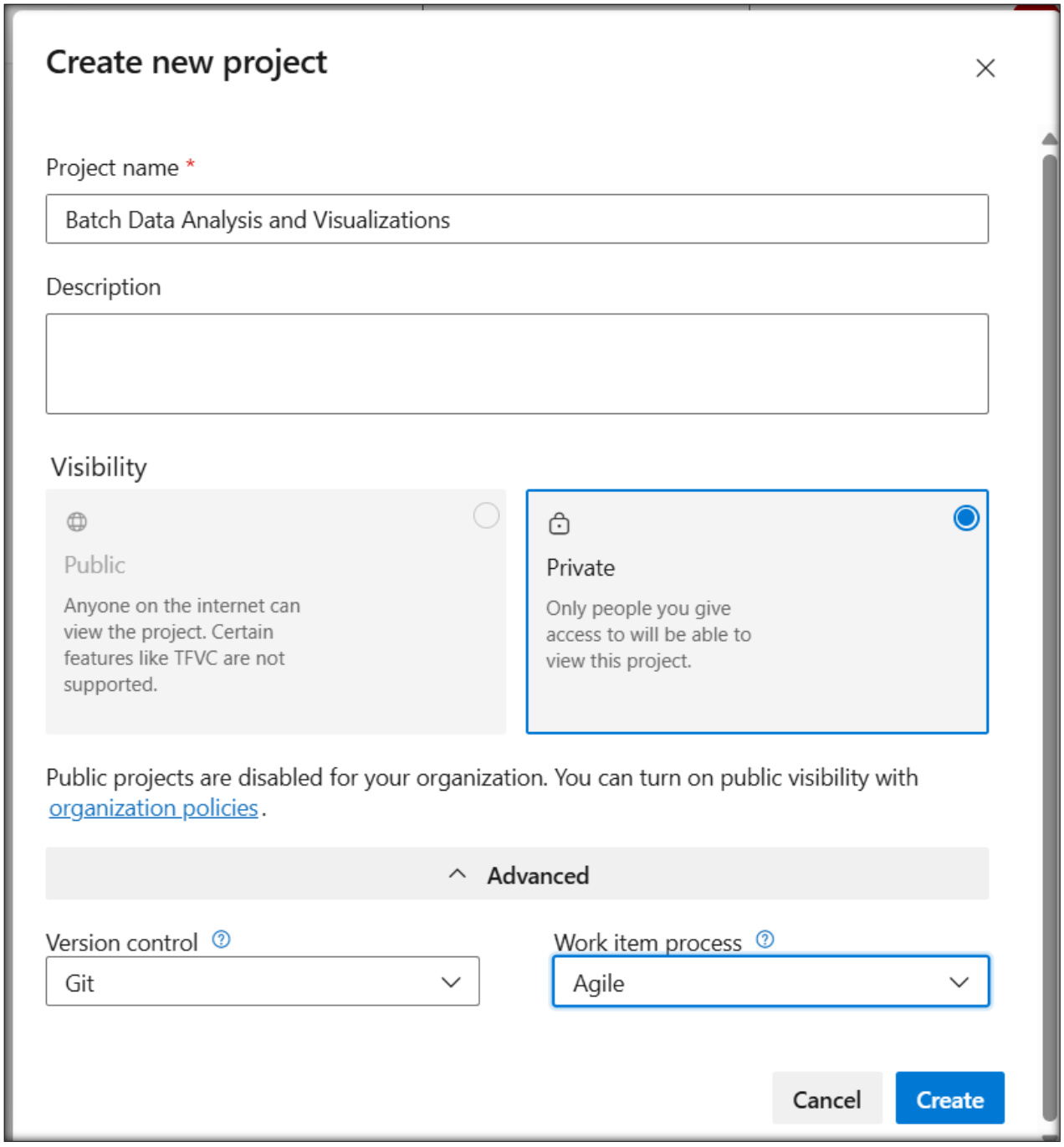
c. Enter the project name, description, and visibility options:

***Name**:* Choose a name for the project (e.g., LMS).

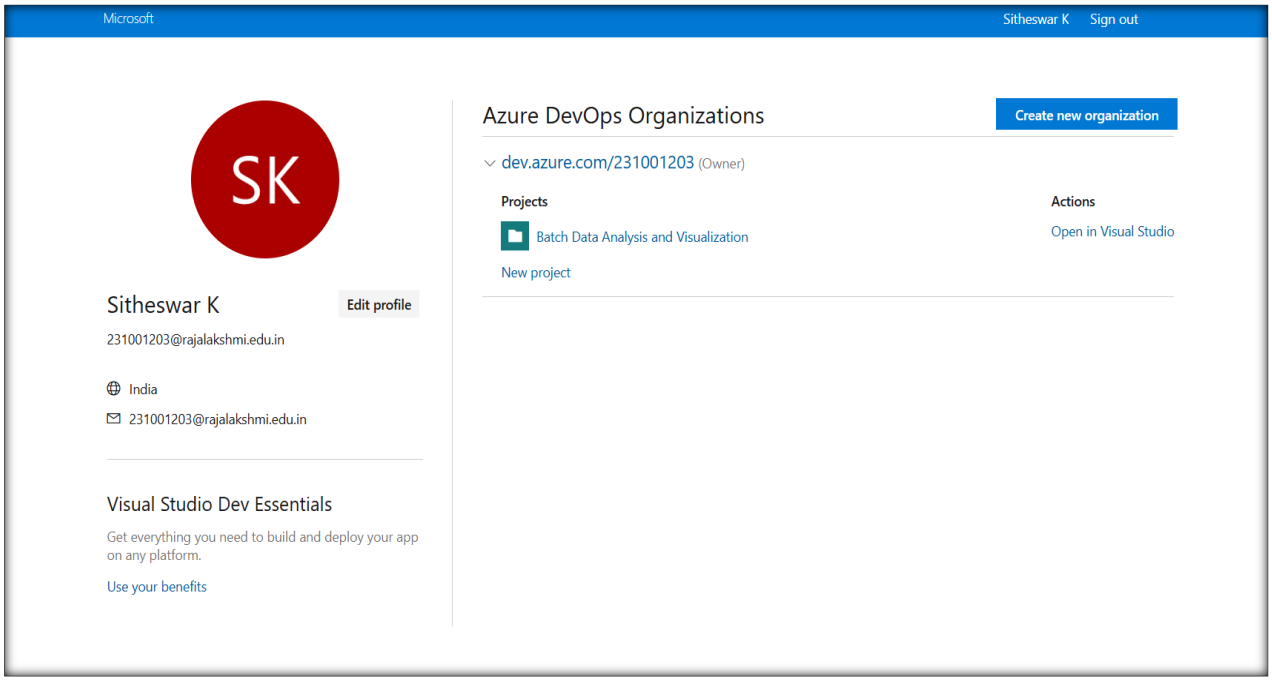
***Description**:* Optionally, add a description to provide more context about the project.

***Visibility**:* Choose whether you want the project to be **Private** (accessible only to those invited) or **Public** (accessible to anyone).

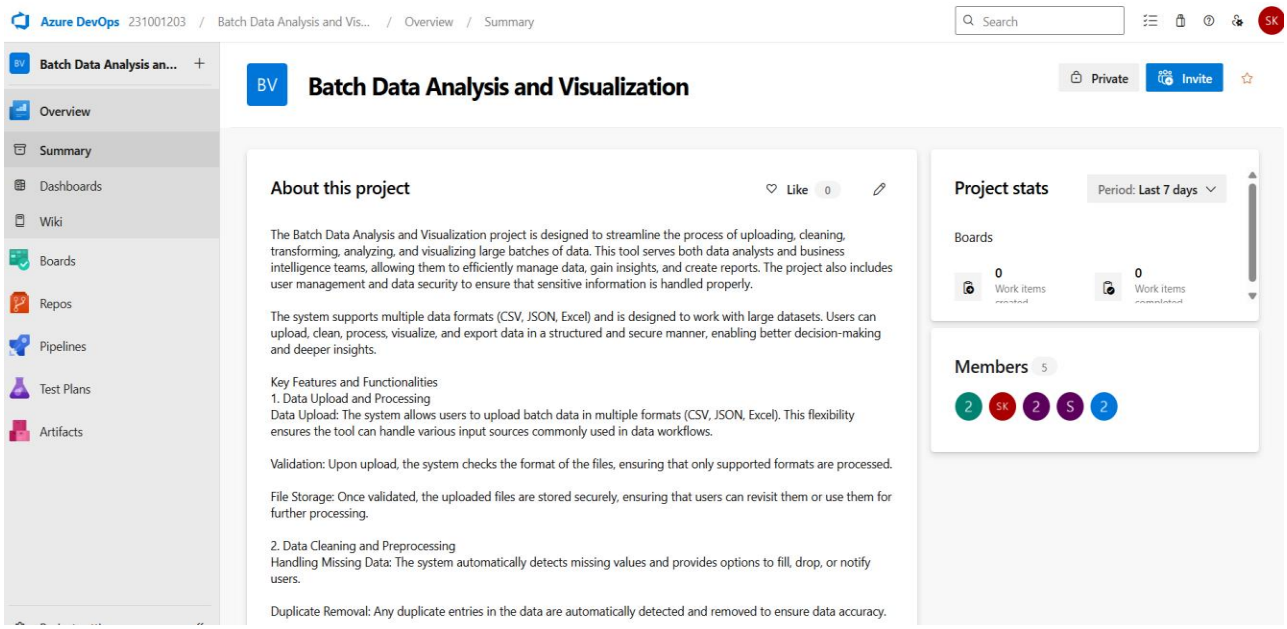
d. Once you've filled out the details, click **Create** to set up your first project.


Create new project
Project name *
Batch Data Analysis and Visualizations
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

3. Once logged in, ensure you are in the correct organization. If you're part of multiple organizations, you can switch between them from the top left corner (next to your user profile). Click on the Organization name, and you should be taken to the Azure DevOps Organization Home page.



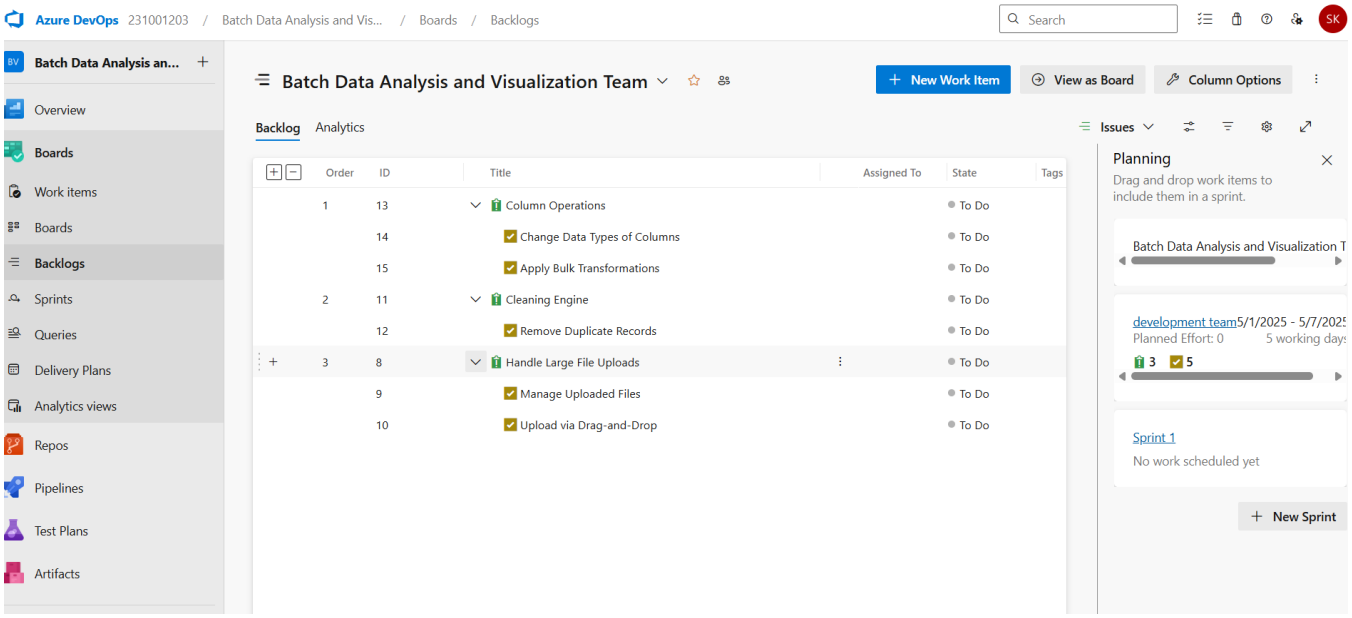
4. Project dashboard

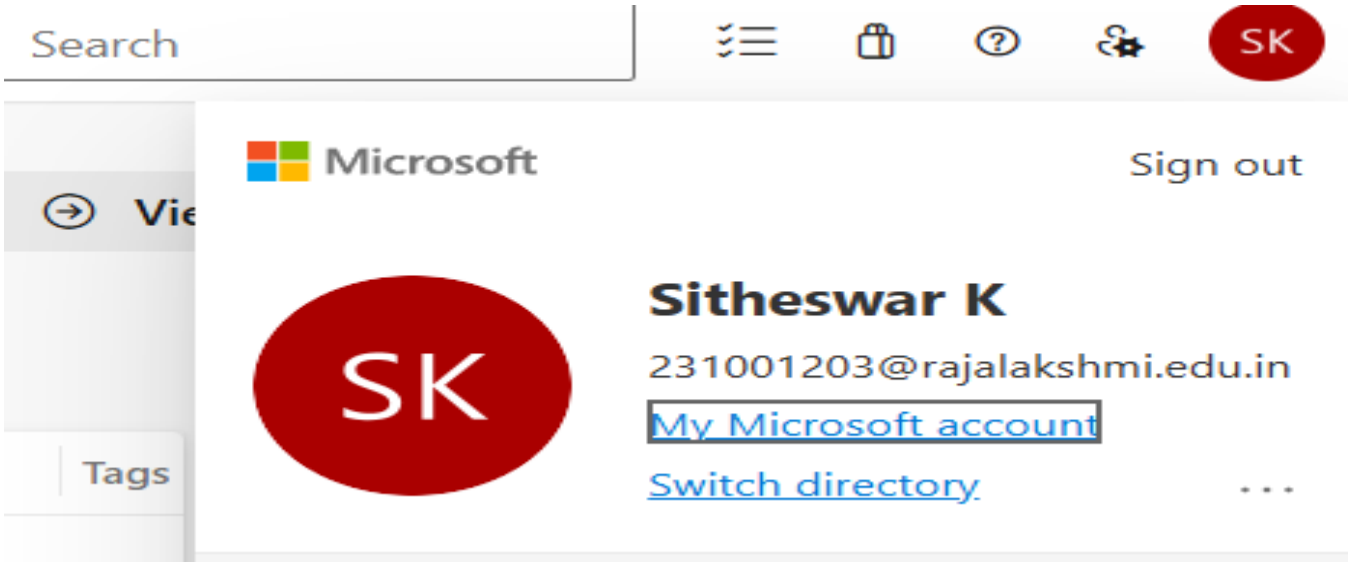


5. To manage user stories:

a. From the **left-hand navigation menu**, click on **Boards**. This will take you to the main **Boards** page, where you can manage work items, backlogs, and sprints.

b. On the **work items** page, you'll see the option to **Add a work item** at the top. Alternatively, you can find a **+** button or **Add New Work Item** depending on the view you're in. From the **Add a work item** dropdown, select **User Story**. This will open a form to enter details for the new User Story.





Result:

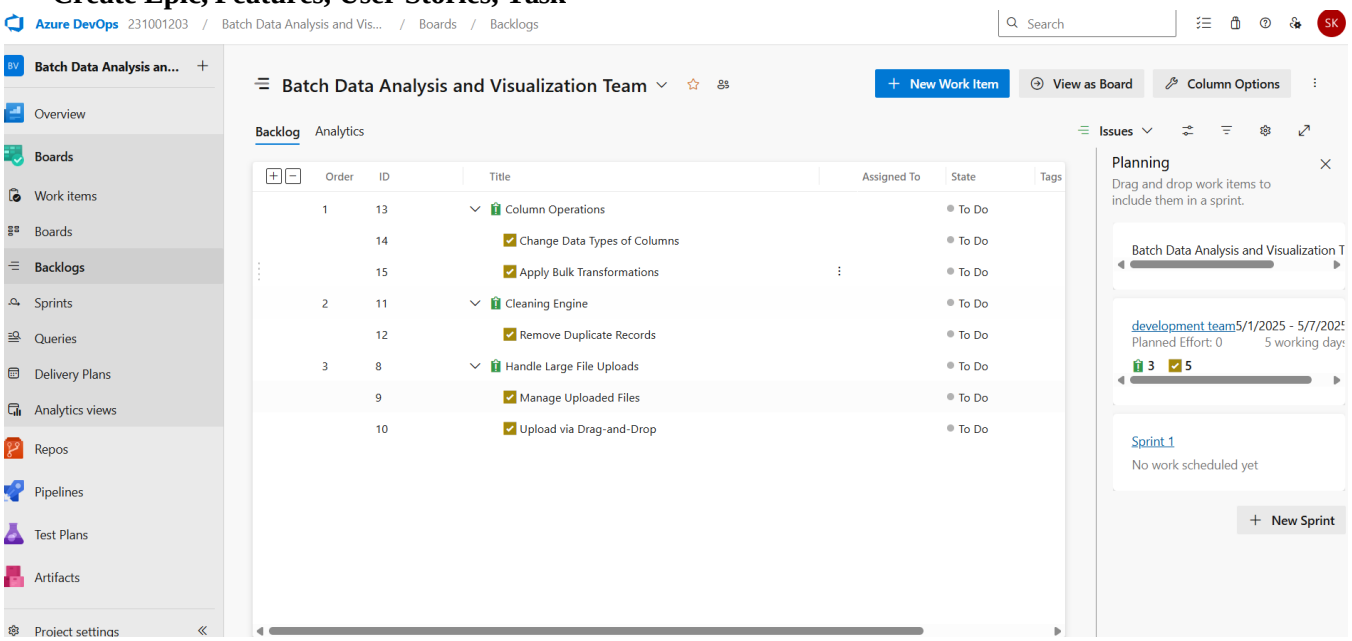
Successfully created an Azure DevOps project with user story management and agile workflow setup.

EXP NO: 3	SETTING UP EPICS, FEATURES, AND USER STORIES FOR PROJECT PLANNING

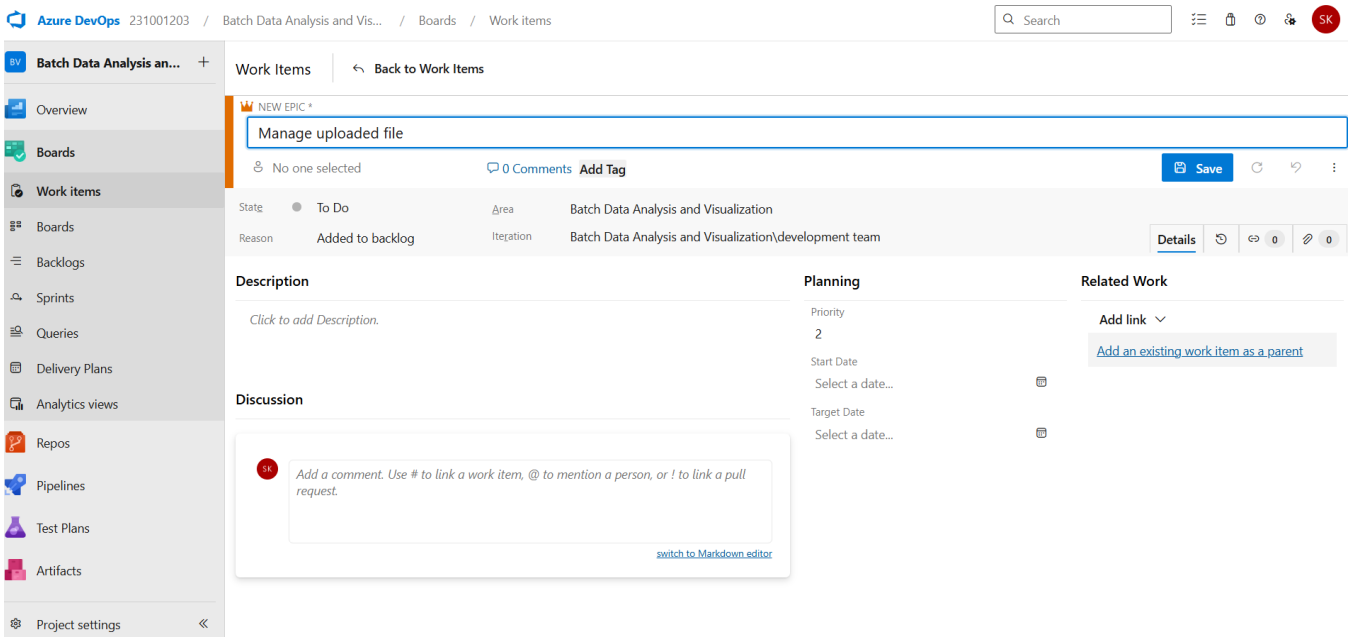
Aim:

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

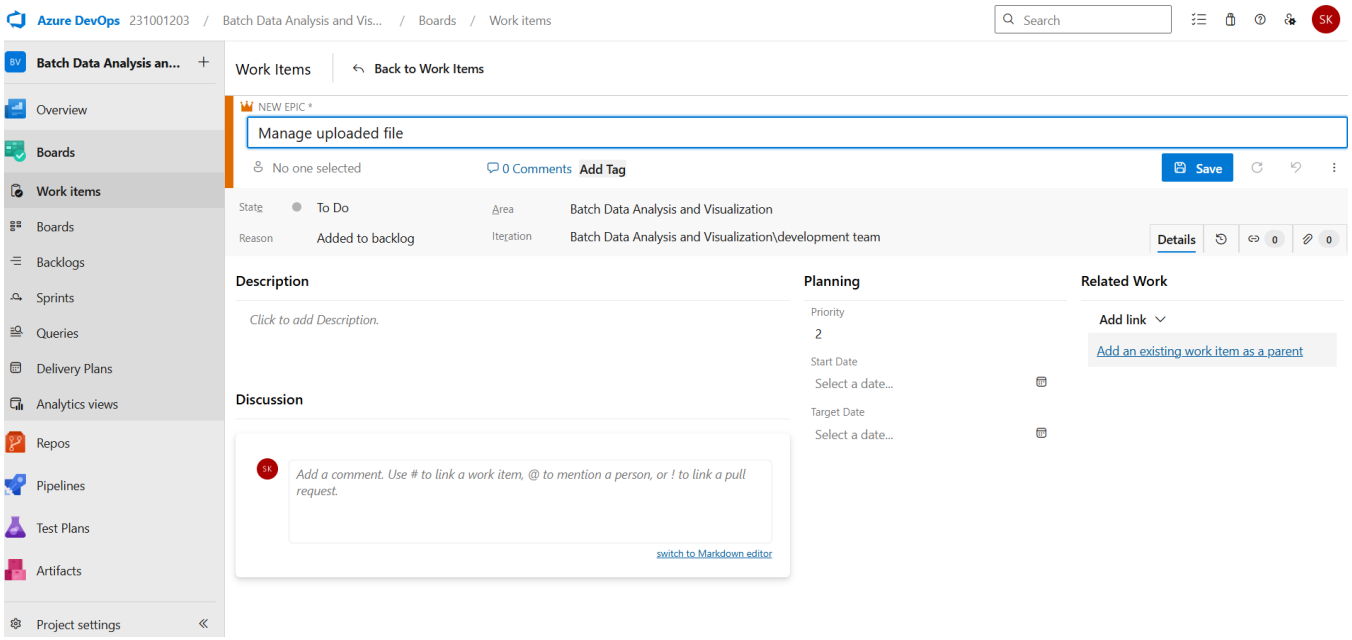
Create Epic, Features, User Stories, Task



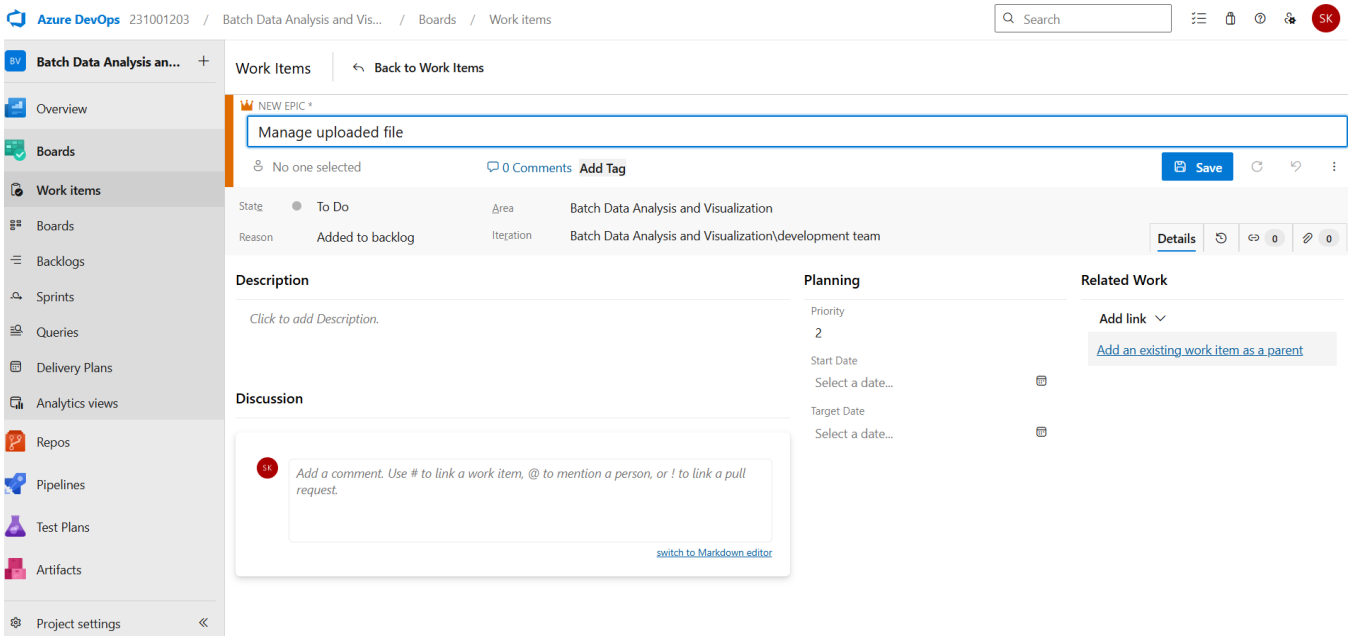
1. Fill in Epics



2. Fill in Features



3. Fill in User Story Details



Result:

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

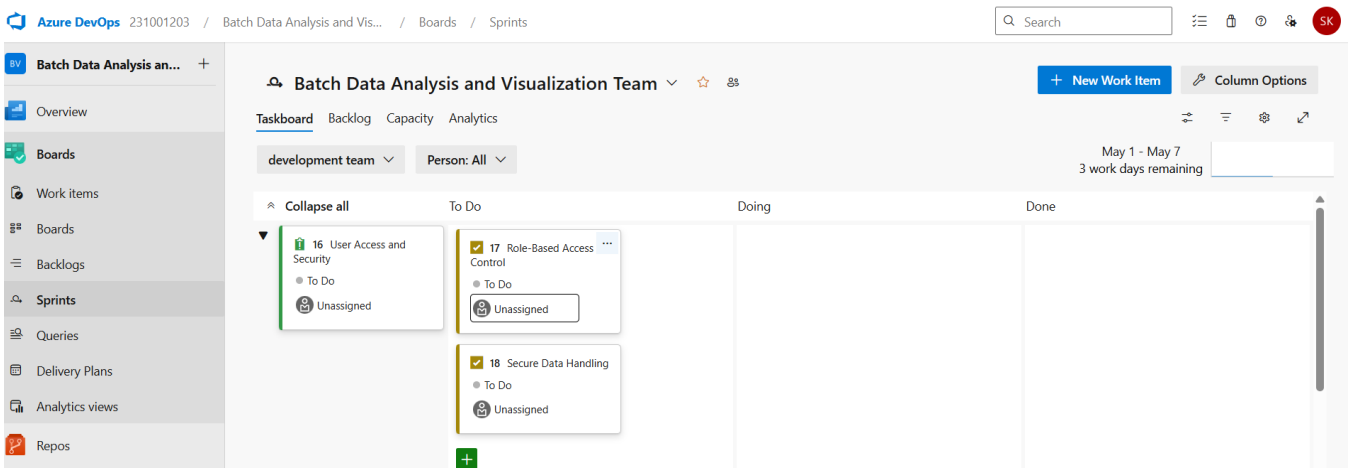
EXP NO: 4	SPRINT PLANNING

Aim:

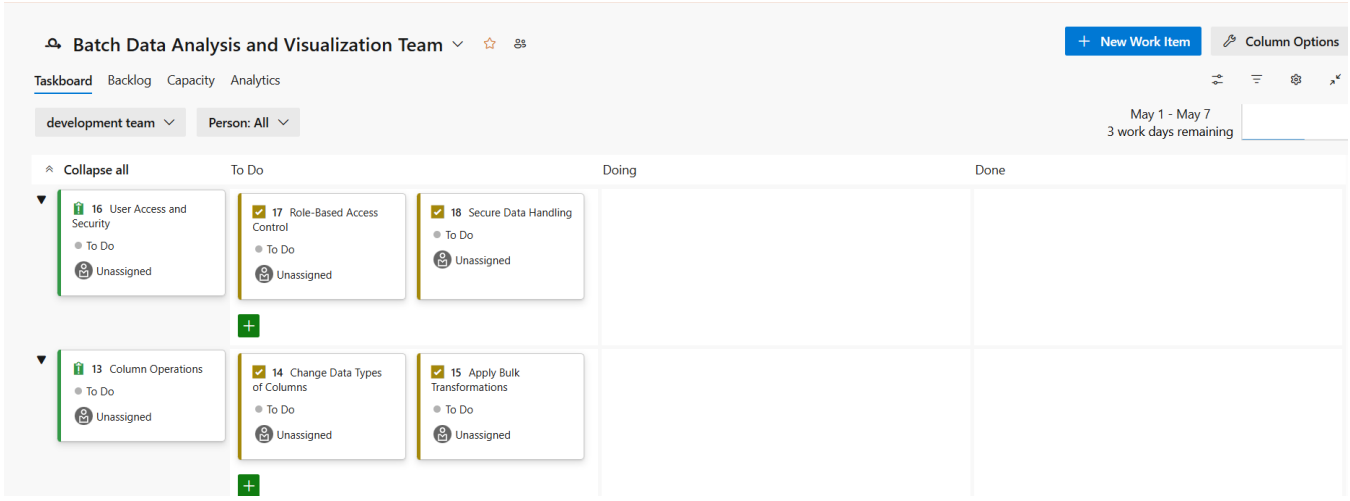
To assign user story to specific sprint for the Music Playlist Batch Creator Project.

Sprint Planning

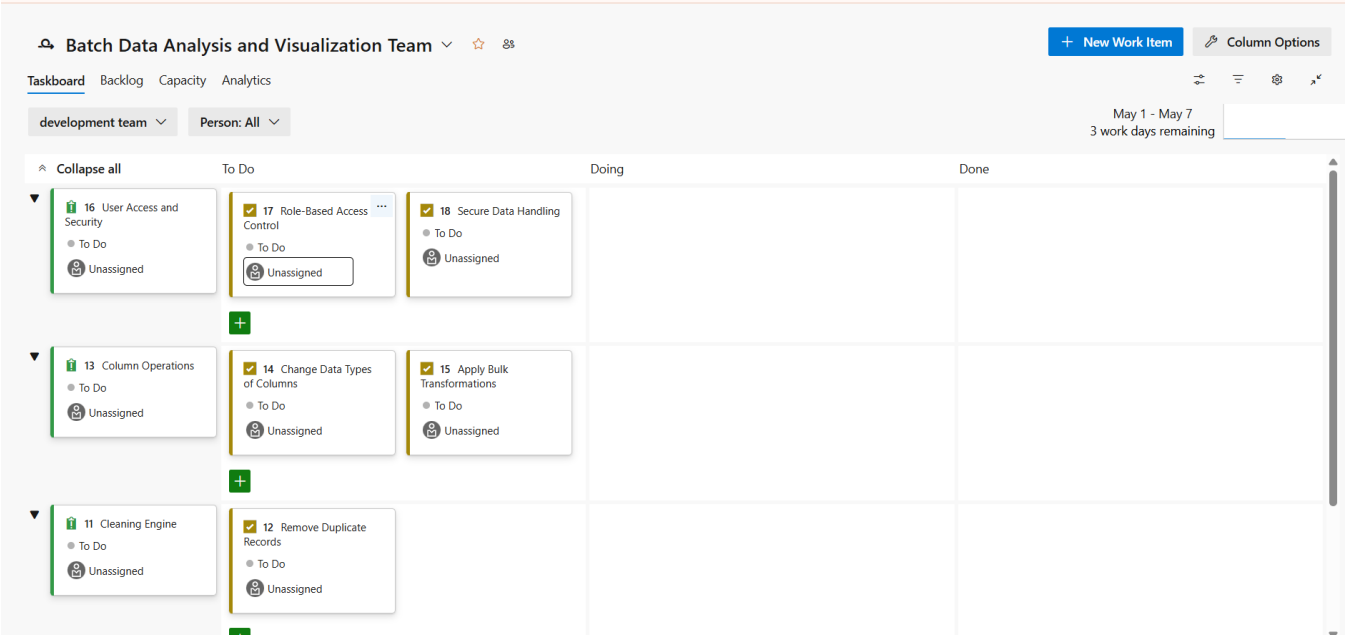
Sprint 1



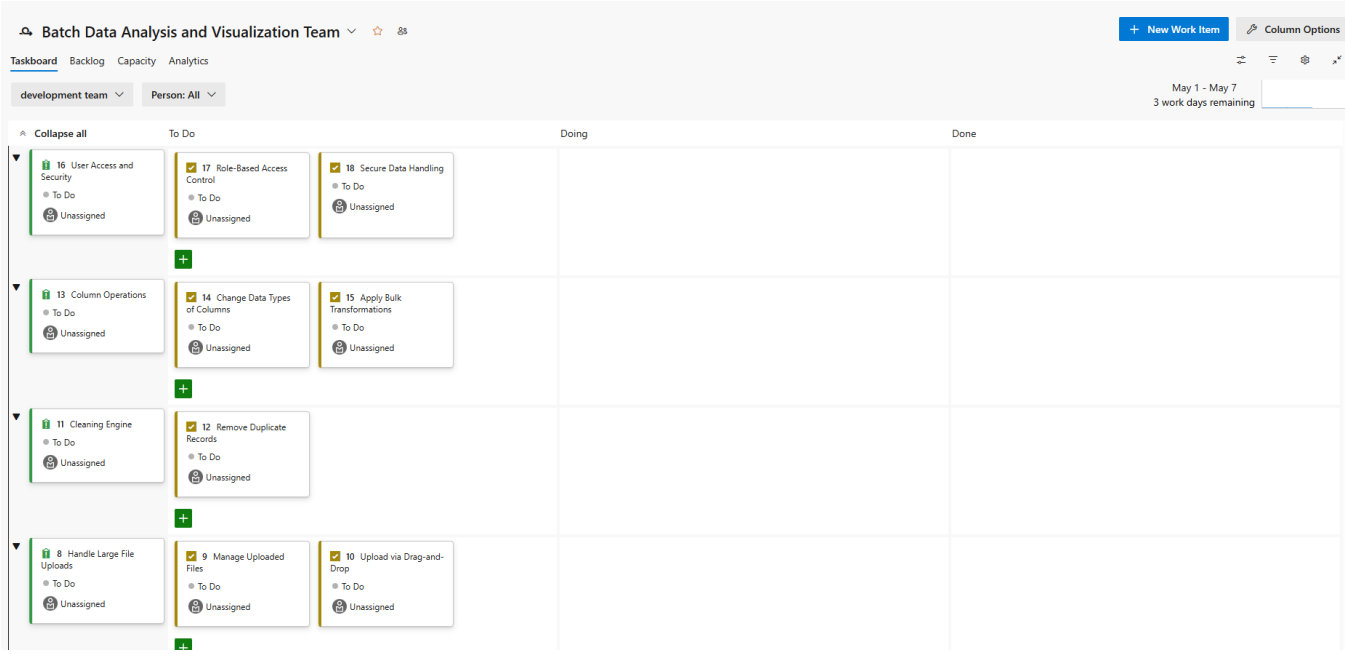
Sprint 2



Sprint 3



Sprint 4



Result:

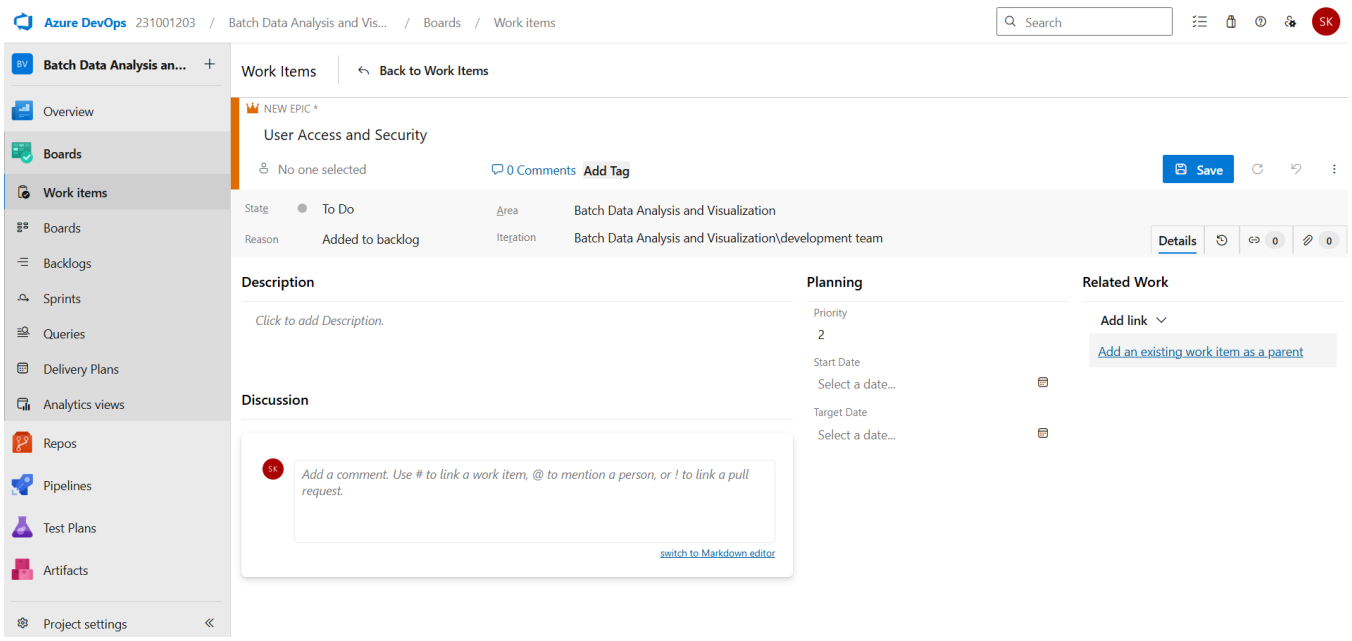
The Sprints are created for the Music Playlist Batch Creator Project.

EXP NO: 5	POKER ESTIMATION

Aim:

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

Poker Estimation



Result:

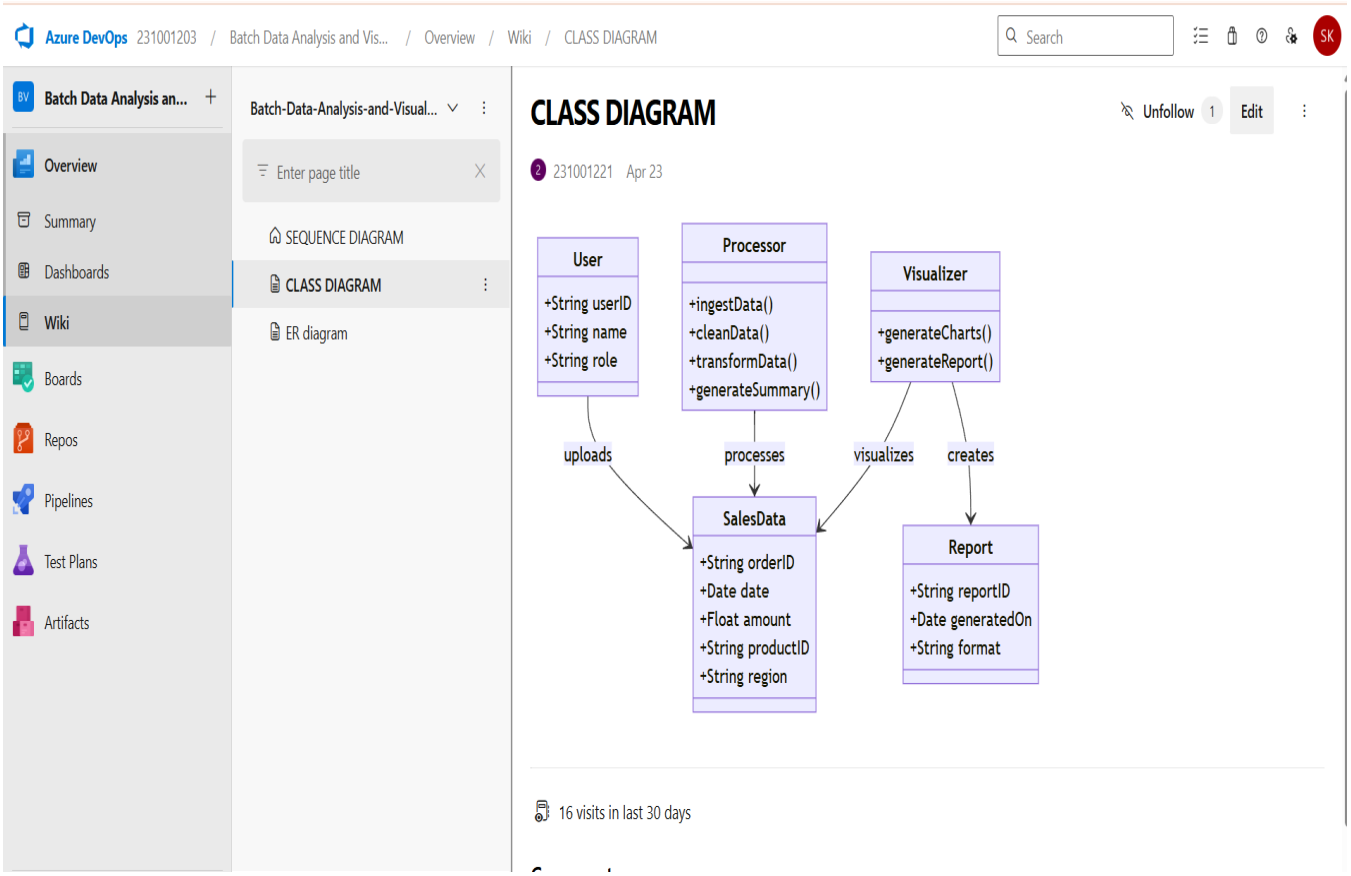
The Estimation/Story Points is created for the project using Poker Estimation.

EXP NO: 6	DESIGNING CLASS AND SEQUENCE DIAGRAMS FOR PROJECT ARCHITECTURE

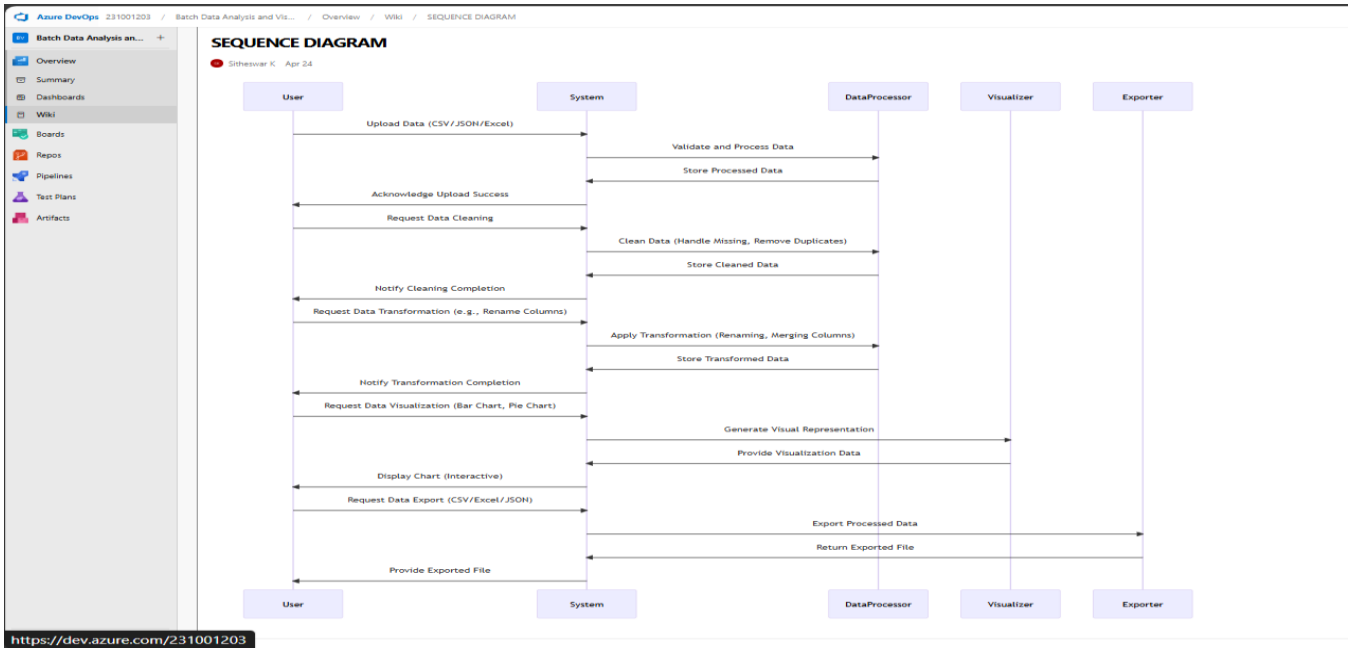
Aim:

To Design a Class Diagram and Sequence Diagram for the given Project.

6A. Class Diagram



6B. Sequence Diagram



Result:

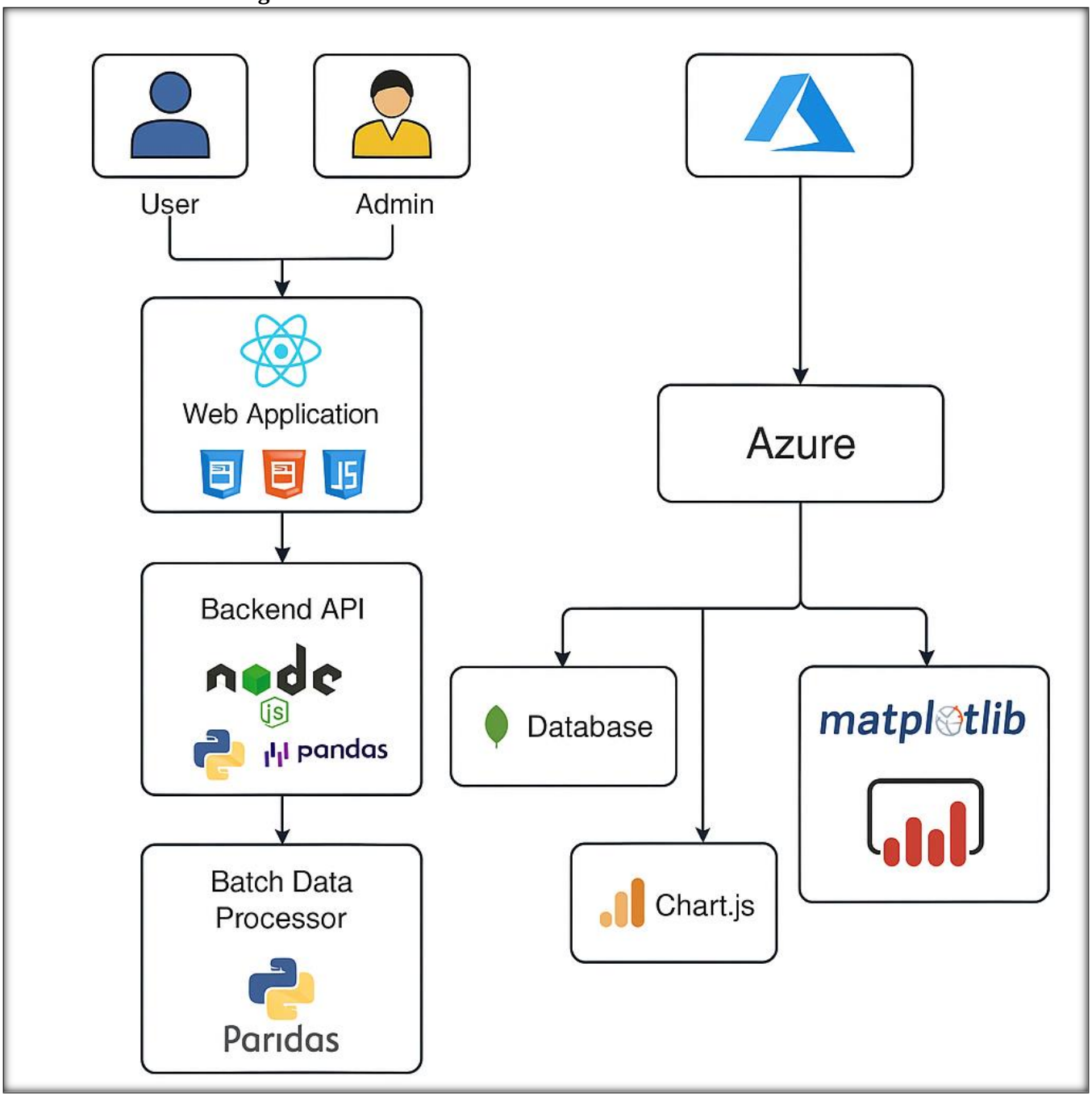
The Class Diagram and Sequence Diagram is designed Successfully for the Music Playlist Batch Creator.

EXP NO: 7	DESIGNING ARCHITECTURAL AND ER DIAGRAMS FOR PROJECT STRUCTURE

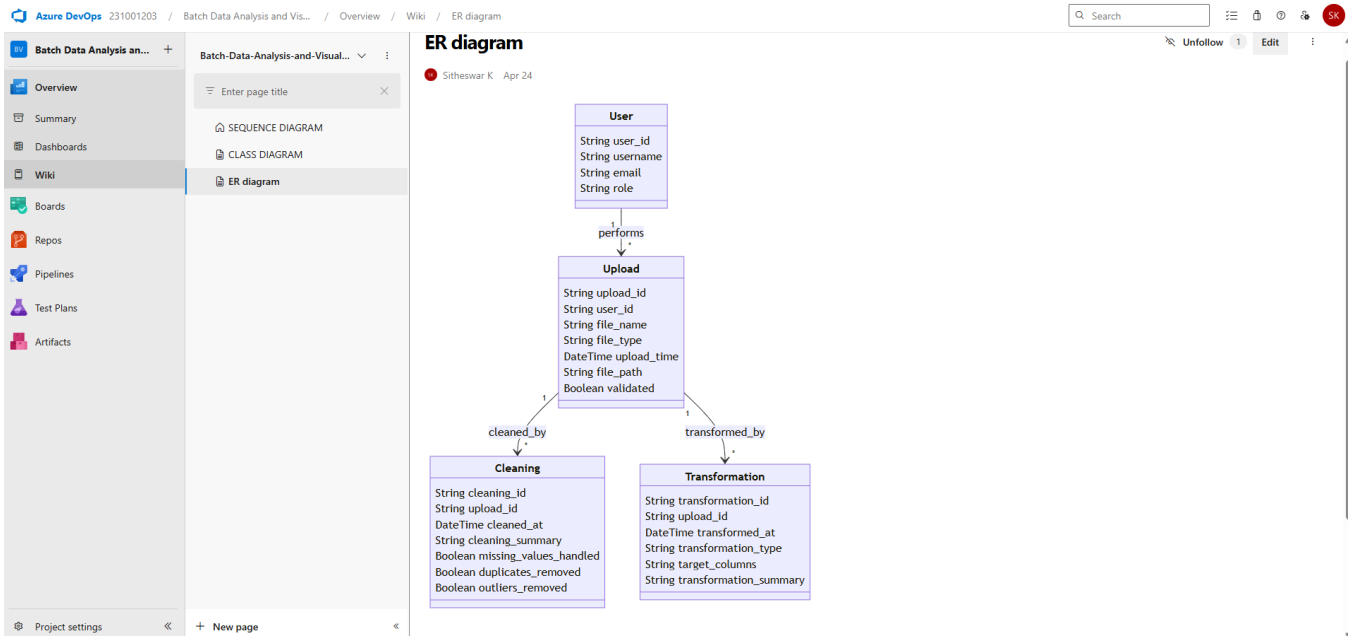
Aim:

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

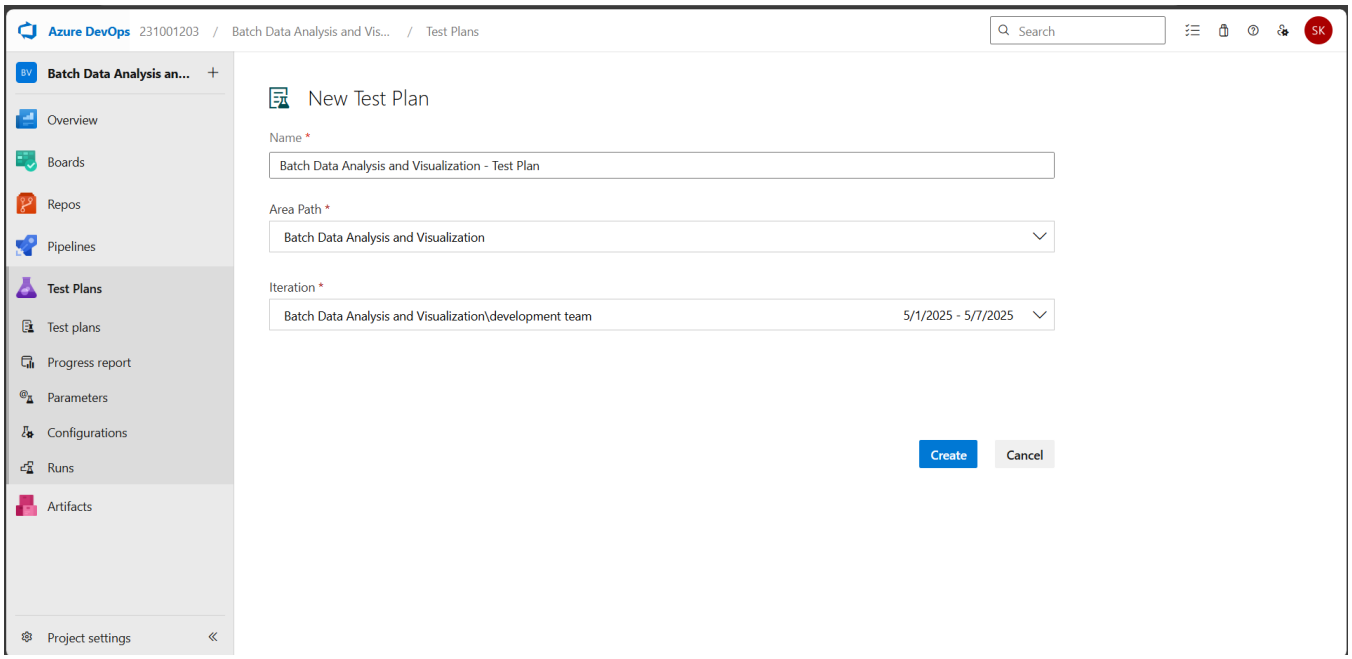
EXP NO: 8	TESTING – TEST PLANS AND TEST CASES

Aim:

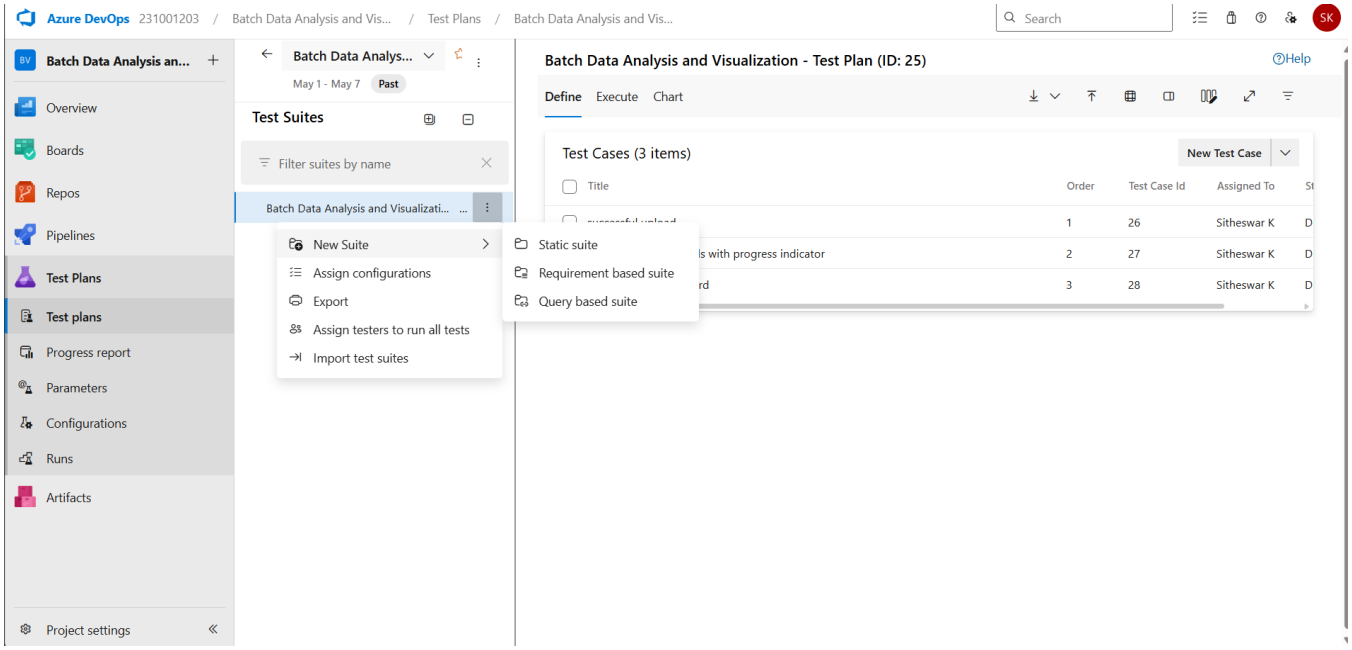
Test Plans and Test Case and write two test cases for at least five user stories showcasing the happy path and error scenarios in azure DevOps platform.

Test Planning and Test Case

1. New test plan



2. Test suite



USER STORIES

- **US01 (ID: 201): As a user, I want to upload data files (CSV, JSON, etc.) for analysis.**
- **US02 (ID: 202): As a user, I want to view the uploaded data in tabular format.**
- **US03 (ID: 203): As a user, I want to visualize insights (charts, graphs) using various parameters.**
- **US04 (ID: 204): As an admin, I want to manage users and access controls.**
- **US05 (ID: 205): As a user, I want to download the analyzed data or charts**

Test Suite: TS01 - Data Upload & Parsing (ID: 301)

TC01 – Successful CSV Upload

- **Action:**
  - **Log in.**
  - **Go to upload section.**
  - **Select a valid CSV file and upload.**
- **Expected:**
  - **File uploads successfully, and data preview is shown.**
- **Type: Happy Path**

TC02 – Upload with Unsupported Format

- **Action:**
  - **Try uploading an XML file.**
- **Expected:**
  - **Error: "Unsupported file format."**
- **Type: Error Path**

Test Suite: TS02 - Data Viewing (ID: 302)

TC03 – Display Uploaded Data

- **Action:**
  - **Upload a valid CSV file.**
  - **Click “View Data”.**
- **Expected:**
  - **Table displays with correct rows and columns.**
- **Type: Happy Path**

TC04 – View Without Upload

- **Action:**
  - **Directly click “View Data” without any upload.**
- **Expected:**
  - **Error: "No data available. Please upload a file."**
- **Type: Error Path**

Test Suite: TS03 - Visualization (ID: 303)

TC05 – Generate Chart from Data

- **Action:**
  - **Upload data.**
  - **Select chart type (e.g., bar).**
  - **Select fields and click "Generate".**
- **Expected:**
  - **Chart displays based on selected fields.**
- **Type: Happy Path**

TC06 – Chart Generation with Missing Input

- **Action:**
  - **Upload data but don’t select any field.**
  - **Click “Generate Chart”.**
- **Expected:**
  - **Error: "Select at least one field to visualize."**
- **Type: Error Path**

Test Suite: TS04 - Admin User Management (ID: 304)

TC07 – Admin Access Dashboard

- **Action:**
  - **Login as admin.**
  - **Go to "User Management".**
- **Expected:**
  - **List of registered users appears.**
- **Type: Happy Path**

TC08 – Non-Admin Tries Admin Access

- **Action:**
  - **Login as a normal user.**
  - **Attempt to access admin panel via URL.**
- **Expected:**
  - **Error: "Access Denied."**
- **Type: Error Path**

Test Suite: TS05 - Data Download (ID: 305)

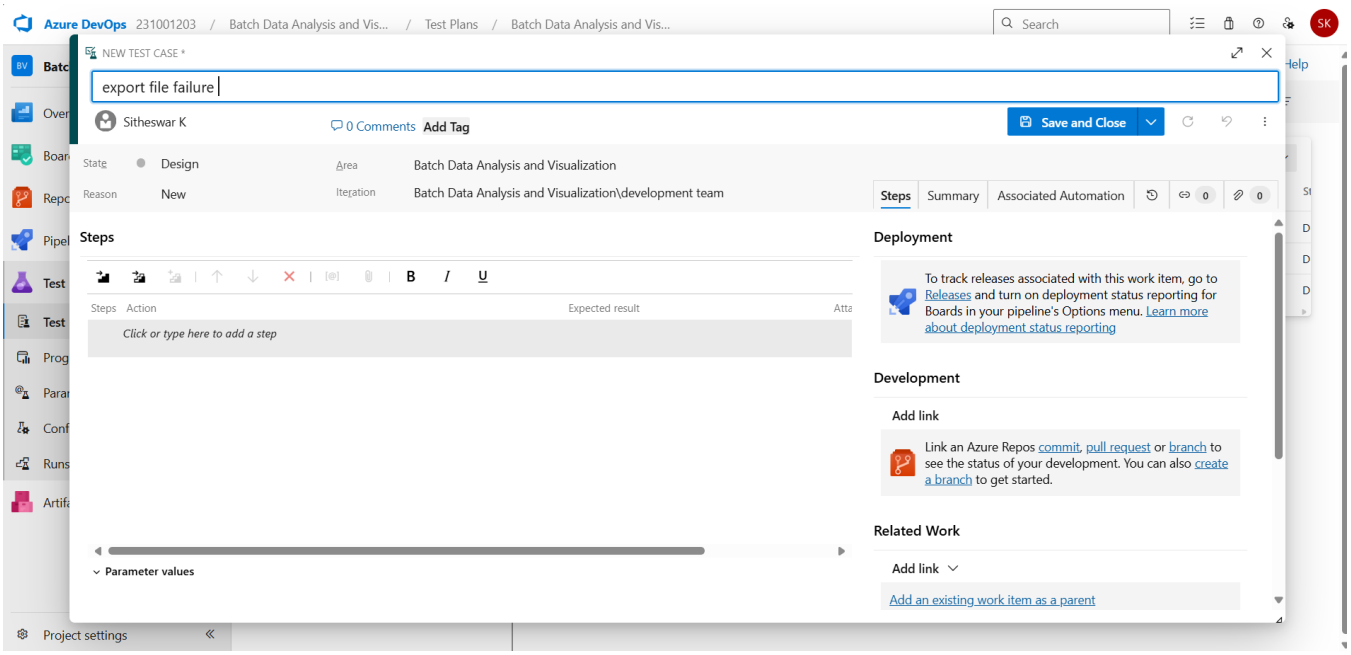
TC09 – Download Data as CSV

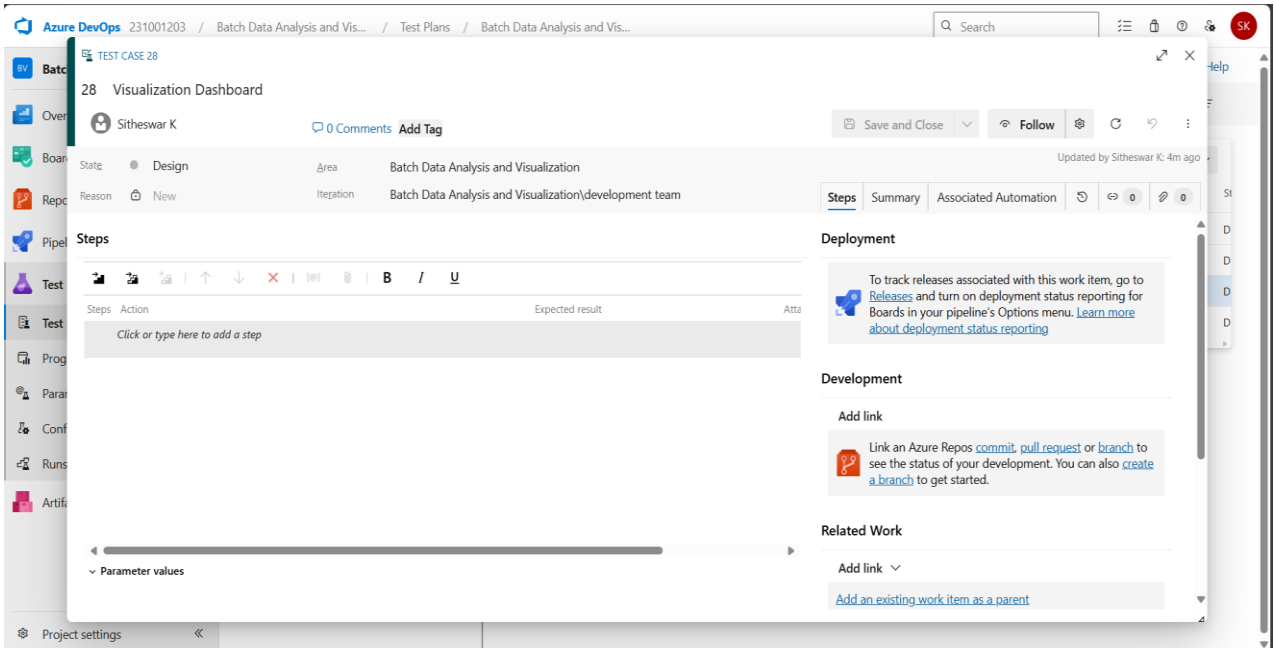
- **Action:**
  - **After analysis, click “Download CSV”.**
- **Expected:**
  - **File downloads successfully.**
- **Type: Happy Path**

TC10 – Download Without Analysis

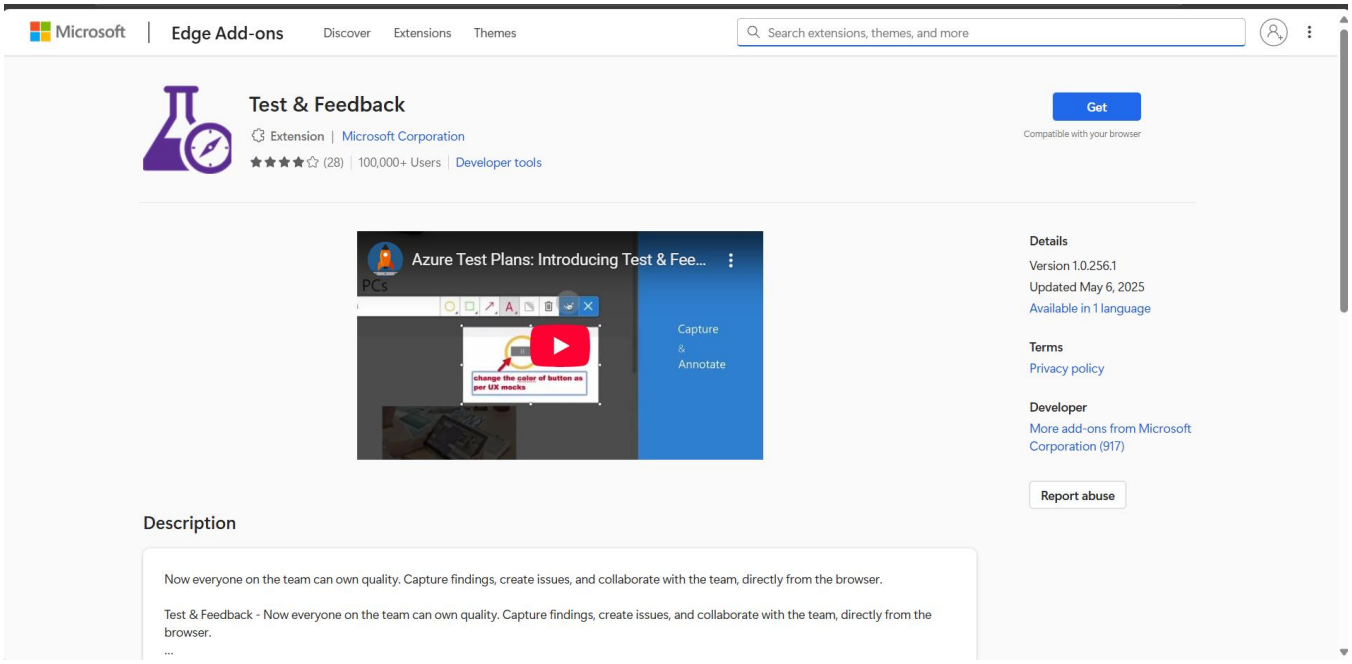
- **Action:**
  - **Click “Download CSV” before uploading any data.**
- **Expected:**
  - **Error: "No data available to download."**
- **Type: Error Path**

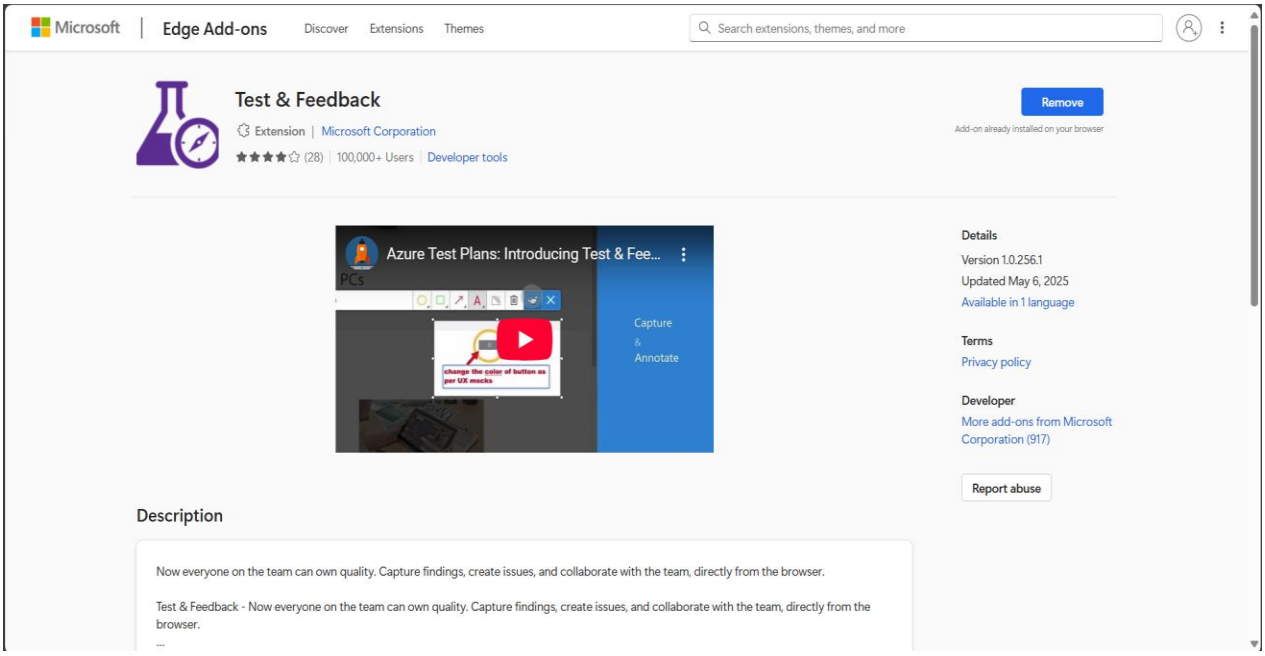
Test Cases


Azure DevOps 231001203 / Batch Data Analysis and Vis... / Test Plans / Batch Data Analysis and Vis...
Search
NEW TEST CASE *
export file failure
Sitheswar K
0 Comments Add Tag
Save and Close
State Design
Reason New
Area Batch Data Analysis and Visualization
Iteration Batch Data Analysis and Visualization\development team
Steps Summary Associated Automation
Steps
Steps Action Expected result
Click or type here to add a step
Parameter values
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
Project settings

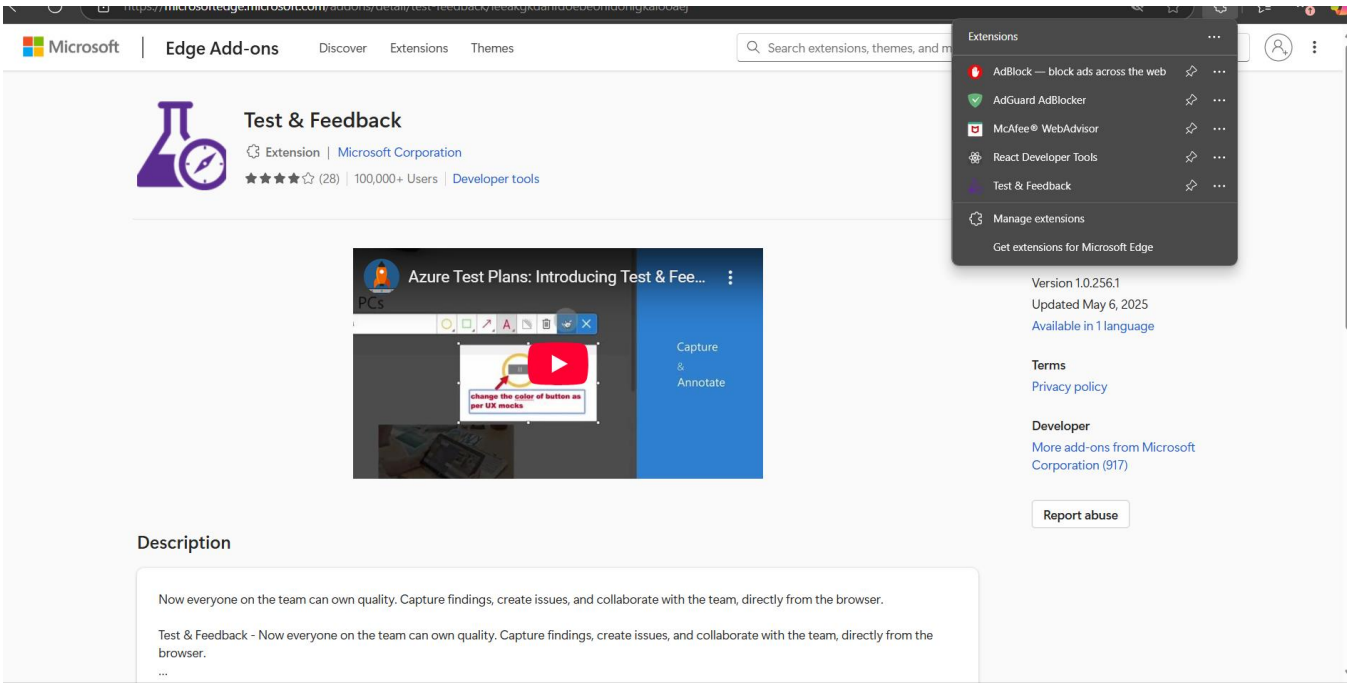

Azure DevOps 231001203 / Batch Data Analysis and Vis... / Test Plans / Batch Data Analysis and Vis...
Search
TEST CASE 28
28 Visualization Dashboard
Sitheswar K
0 Comments Add Tag
Save and Close
Follow
Updated by Sitheswar K: 4m ago
State Design
Reason New
Area Batch Data Analysis and Visualization
Iteration Batch Data Analysis and Visualization\development team
Steps Summary Associated Automation
Steps
Steps Action Expected result
Click or type here to add a step
Parameter values
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
Project settings

3. Installation of test

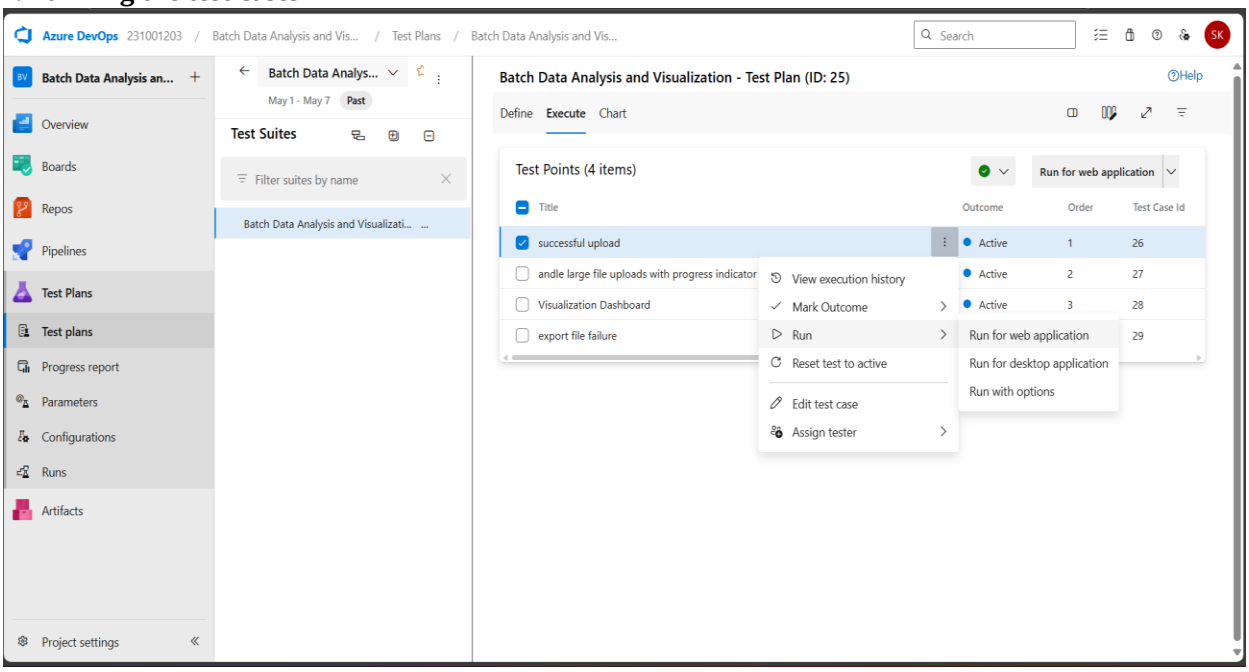


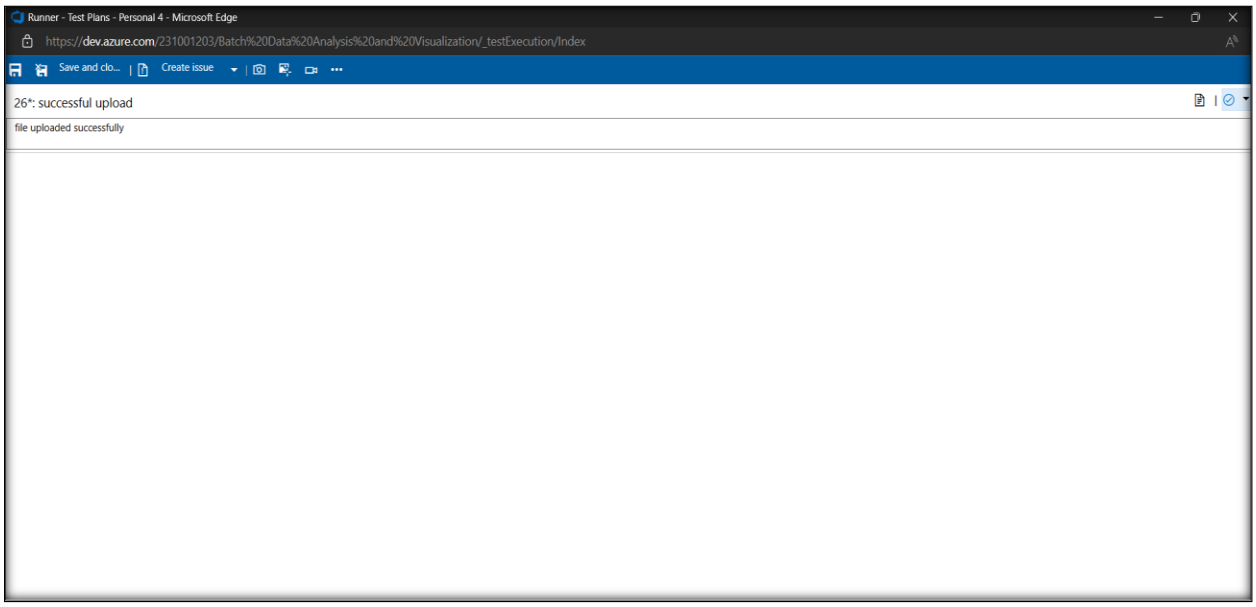


Test and feedback
Showing it as an extension

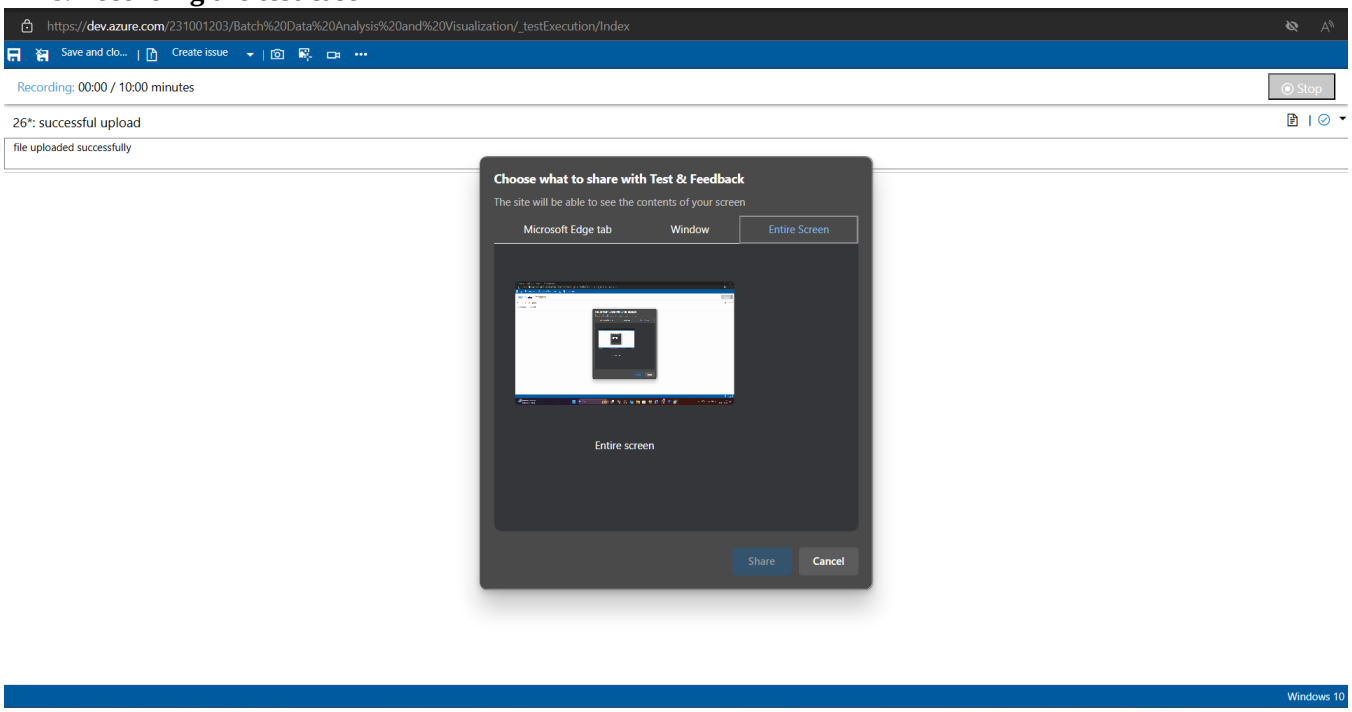


4. Running the test cases

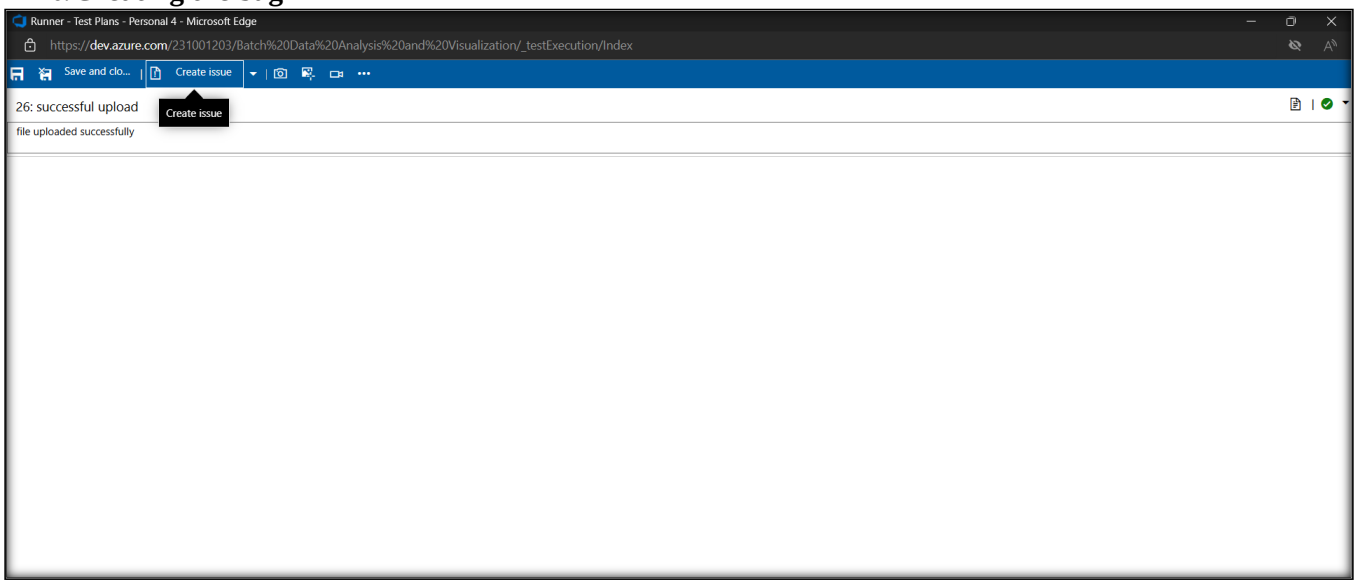


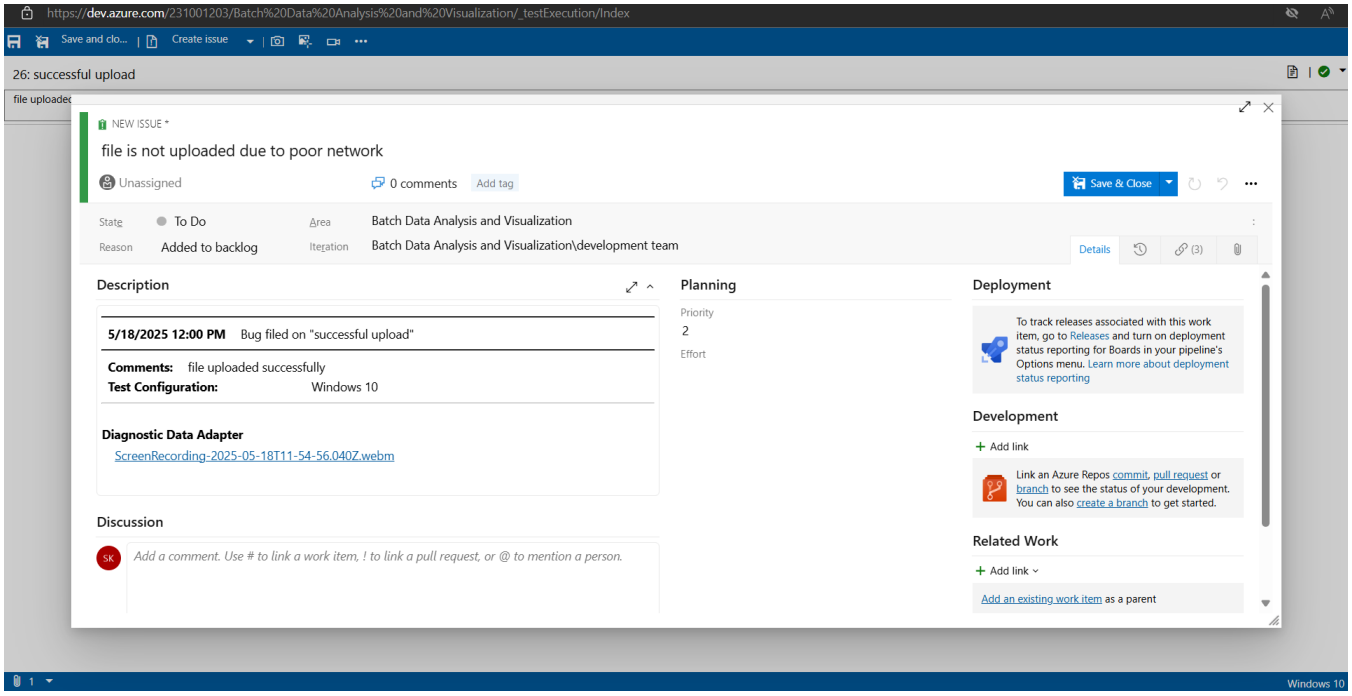


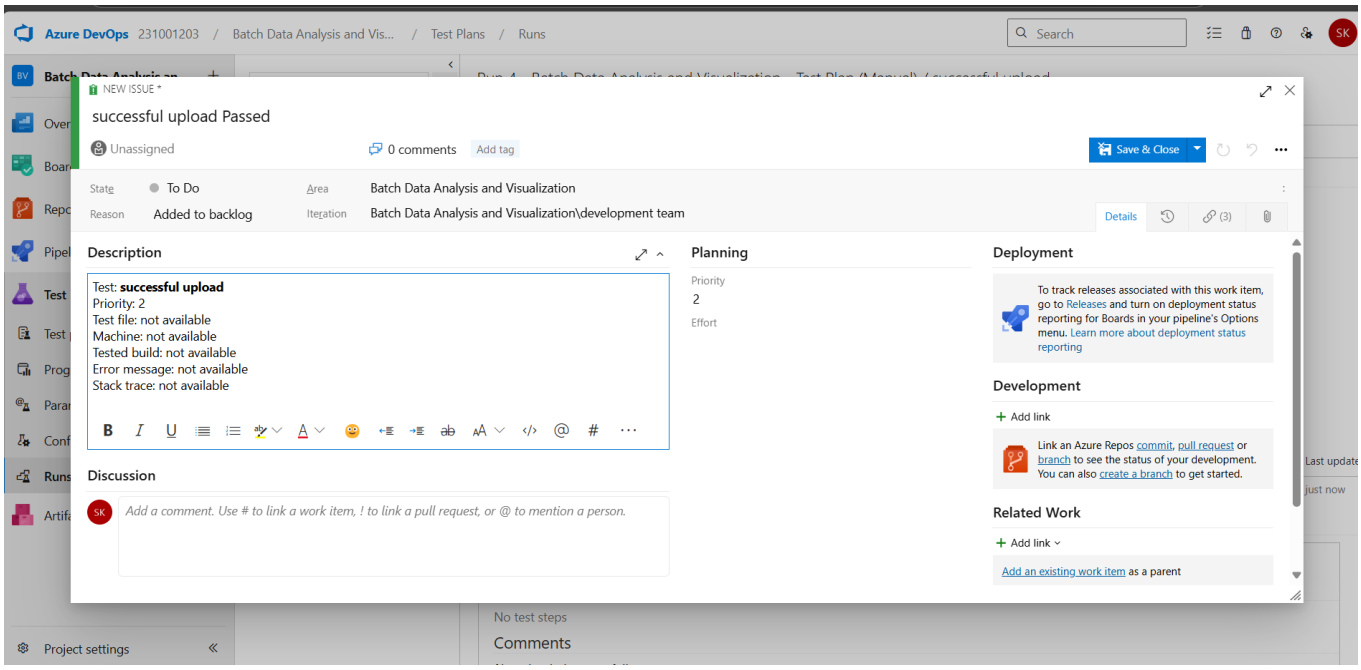
5. Recording the test case



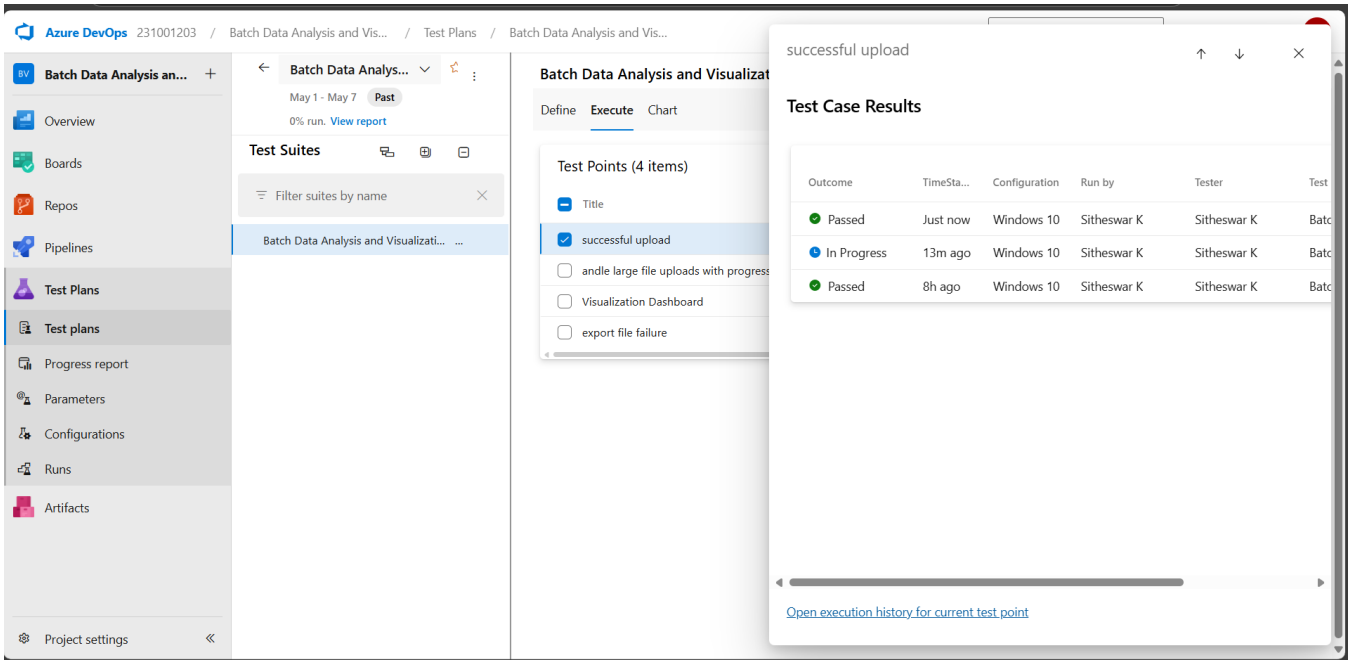
6. Creating the bug



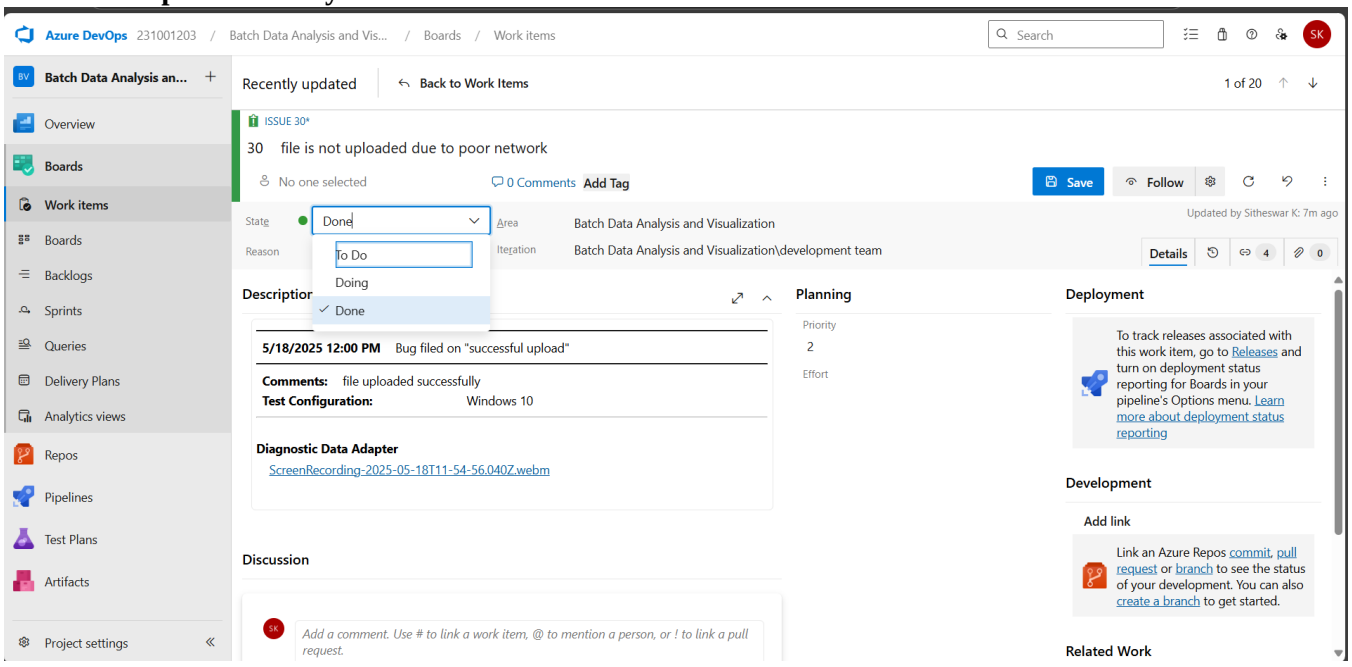

https://dev.azure.com/231001203/Batch%20Data%20Analysis%20and%20Visualization/_testExecution/Index
Save and clo...
Create issue
26: successful upload
NEW ISSUE *
file is not uploaded due to poor network
Unassigned
0 comments
Add tag
Save & Close
State
To Do
Area
Batch Data Analysis and Visualization
Reason
Added to backlog
Iteration
Batch Data Analysis and Visualization\development team
Details
Description
5/18/2025 12:00 PM Bug filed on "successful upload"
Comments: file uploaded successfully
Test Configuration: Windows 10
Diagnostic Data Adapter
ScreenRecording-2025-05-18T11-54-56.040Z.webm
Discussion
Add a comment. Use # to link a work item, ! to link a pull request, or @ to mention a person.
Planning
Priority
2
Effort
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
Windows 10


Azure DevOps
231001203
Batch Data Analysis and Vis...
Test Plans
Runs
Search
NEW ISSUE *
successful upload Passed
Unassigned
0 comments
Add tag
Save & Close
State
To Do
Area
Batch Data Analysis and Visualization
Reason
Added to backlog
Iteration
Batch Data Analysis and Visualization\development team
Details
Description
Test: successful upload
Priority: 2
Test file: not available
Machine: not available
Tested build: not available
Error message: not available
Stack trace: not available
Discussion
Add a comment. Use # to link a work item, ! to link a pull request, or @ to mention a person.
Planning
Priority
2
Effort
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
Project settings
No test steps
Comments

7. Test case results

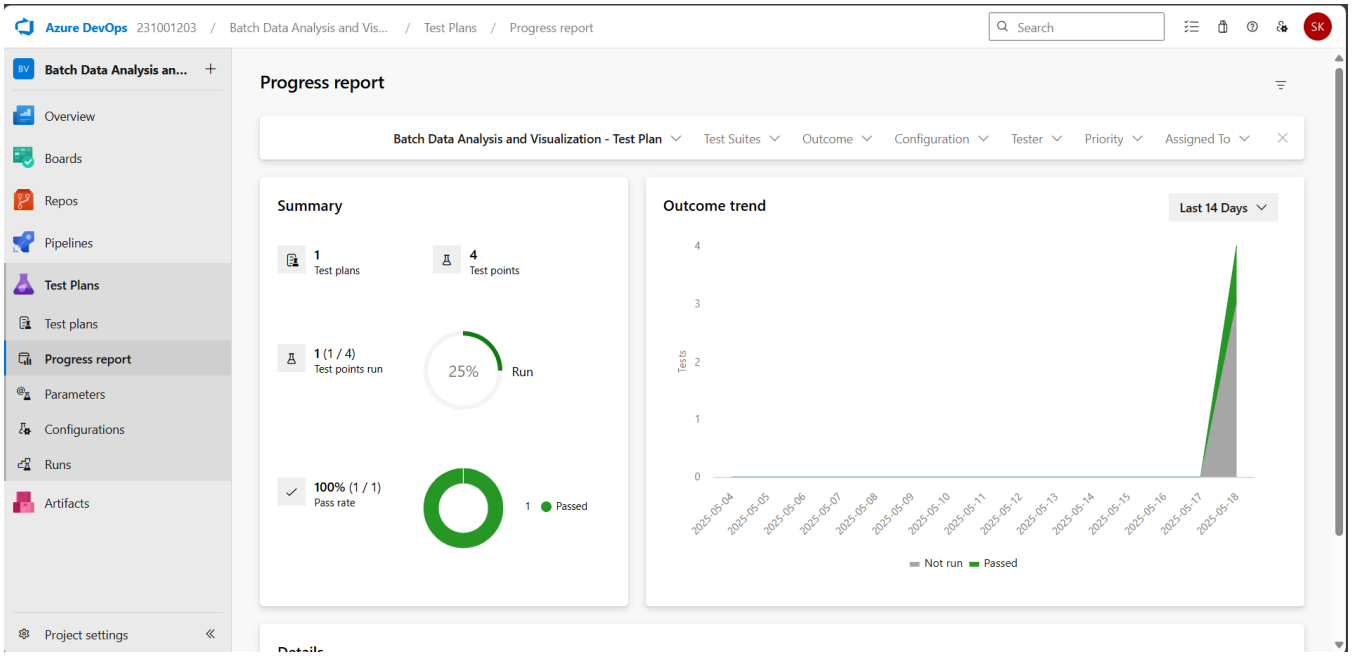


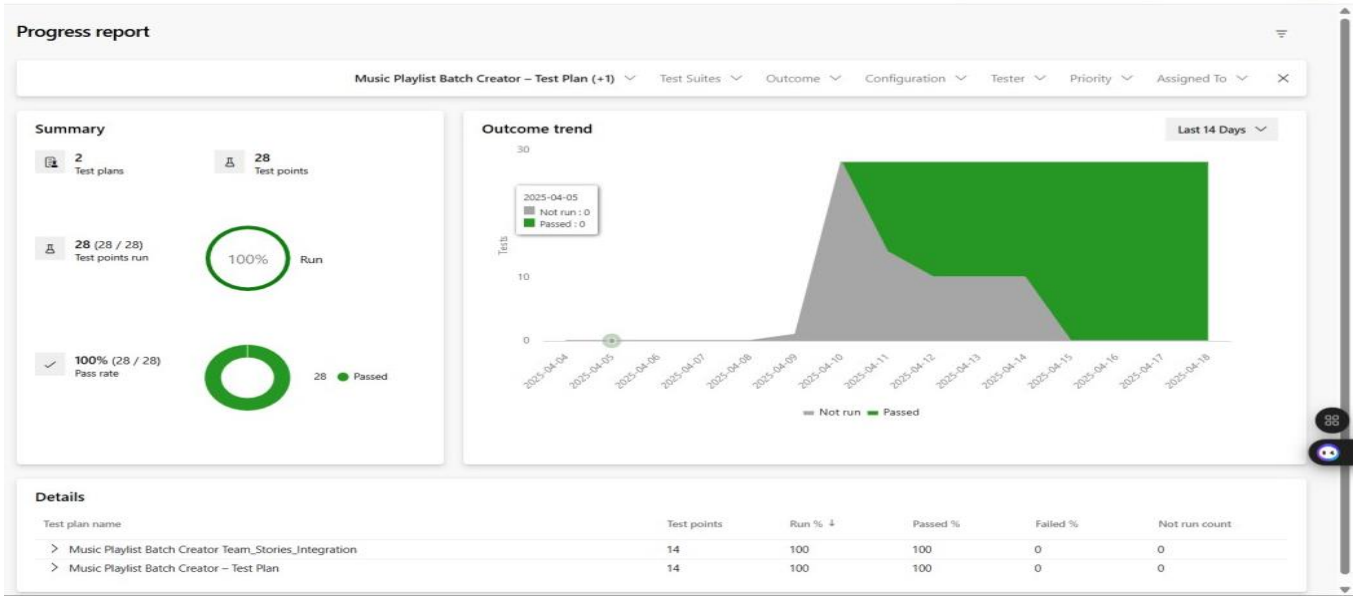
8. Test report summary



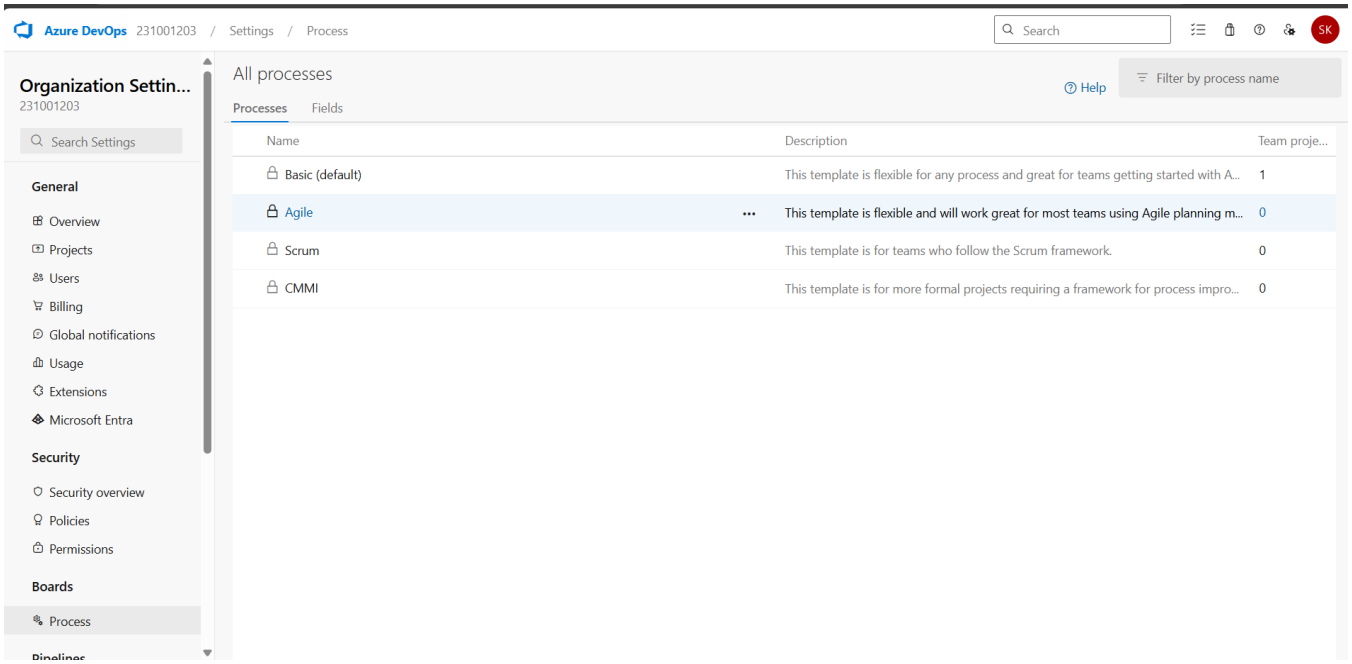
- Assigning bug to the developer and changing state

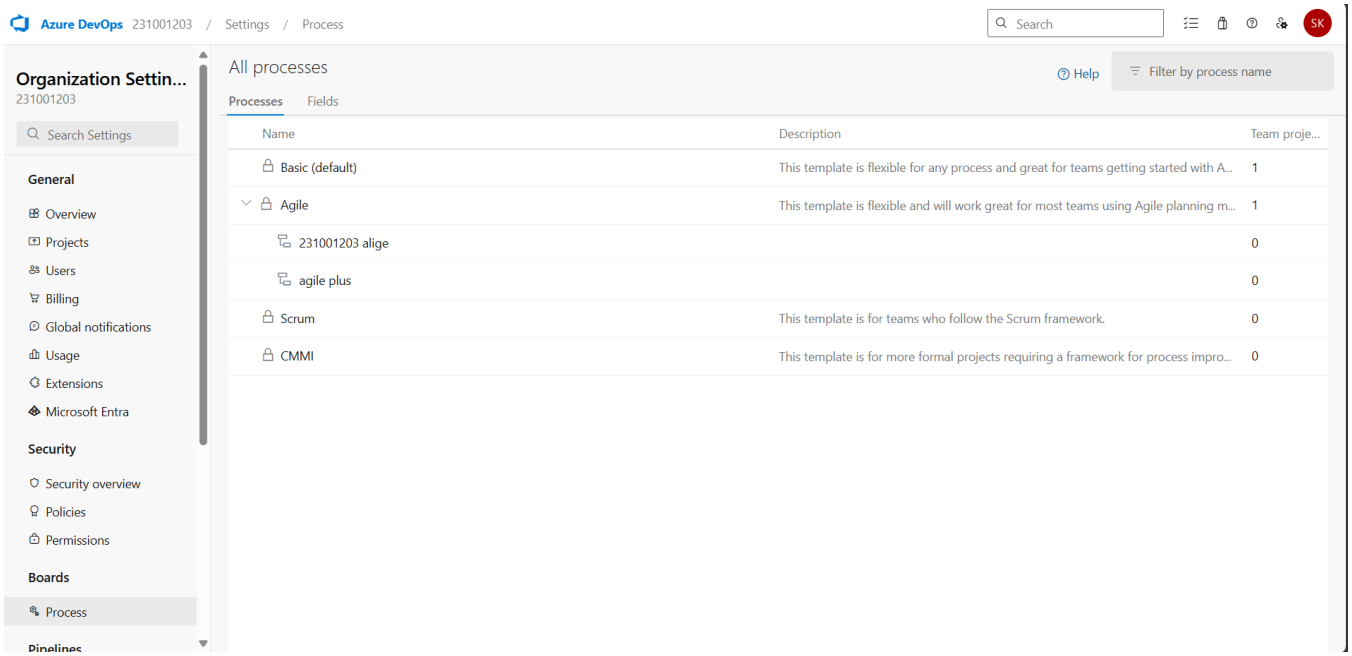
9. Progress report





10. Changing the test template

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Scrum
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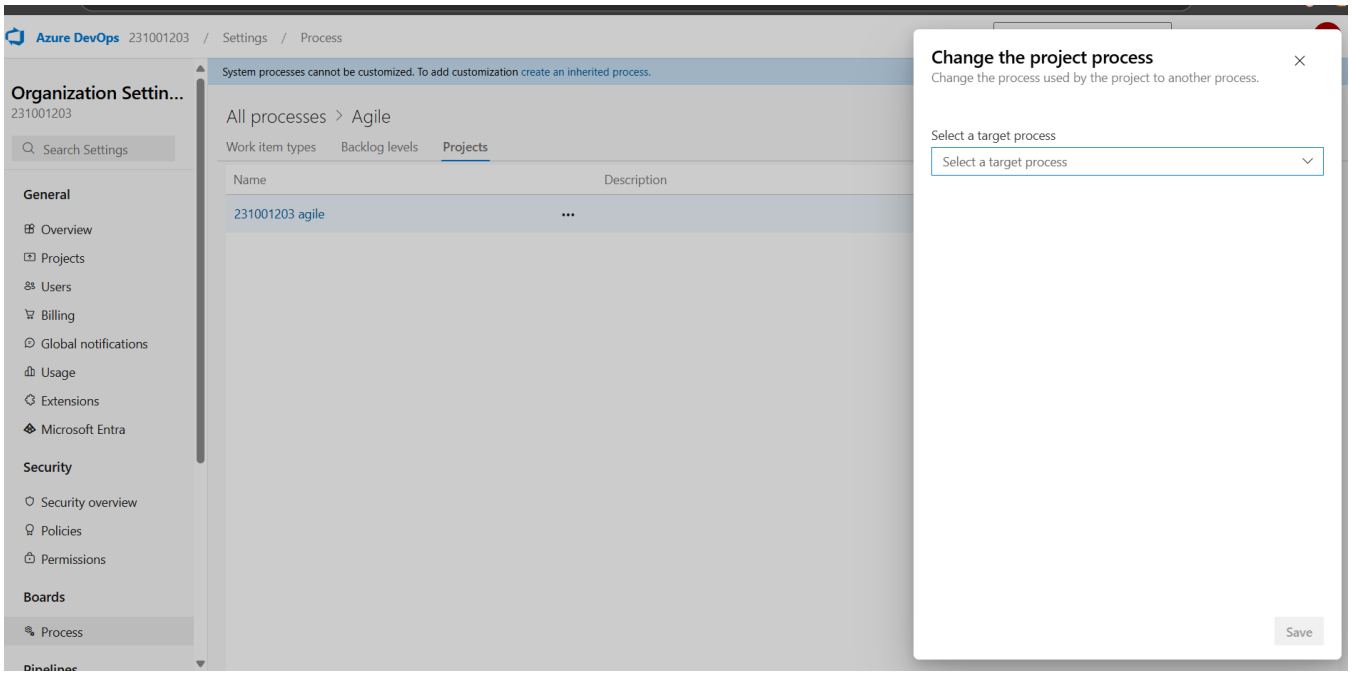
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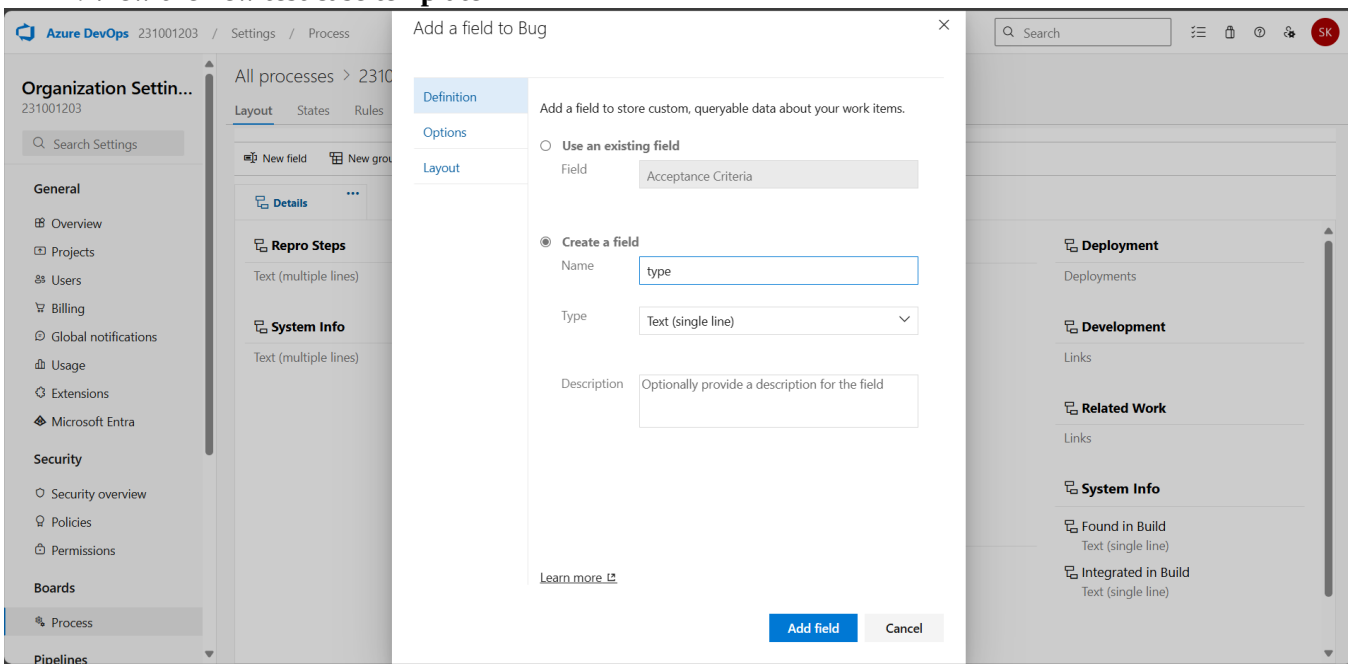
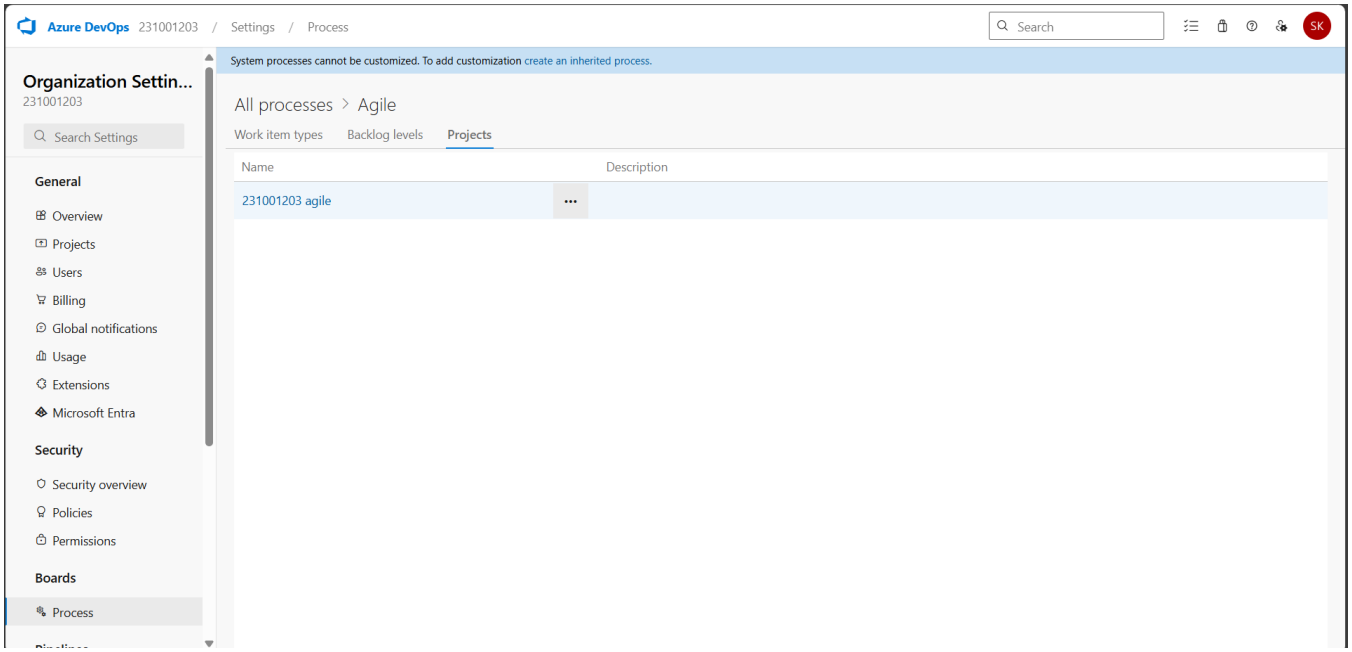
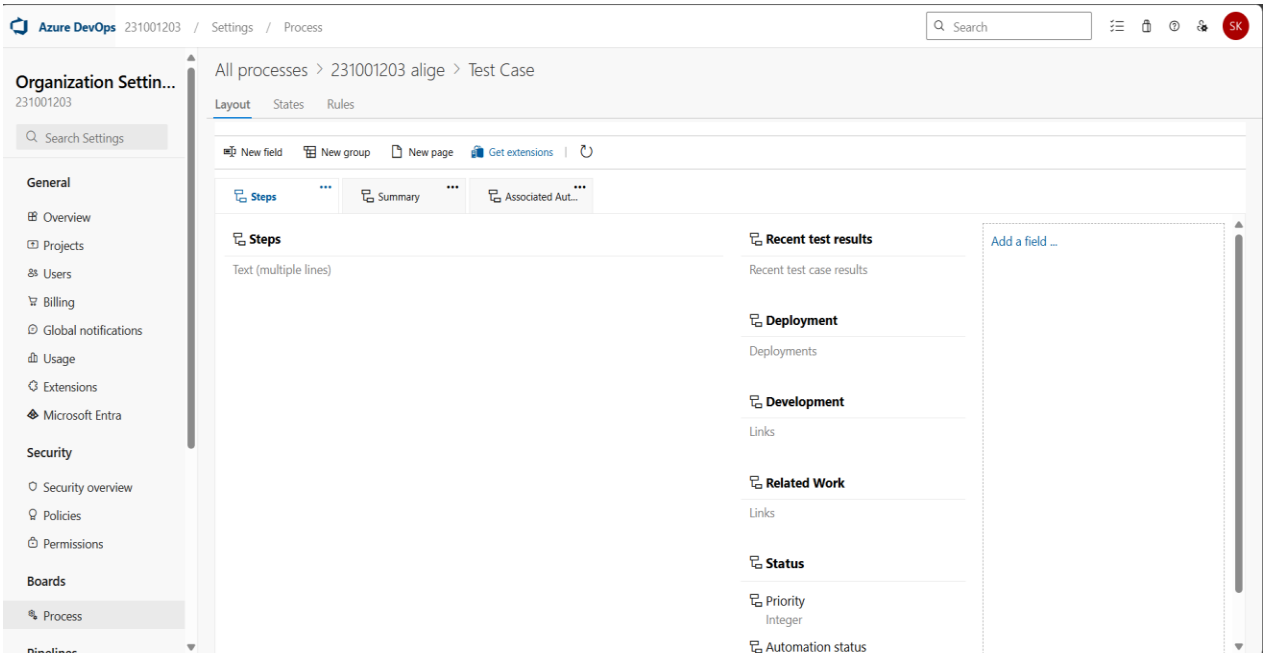
Boards
Process
Pipelines
System processes cannot be customized. To add customization create an inherited process.
All processes > Agile
Work item types
Backlog levels
Projects
Name
Description
231001203 agile
Change the project process
Change the process used by the project to another process.
Select a target process
Select a target process
Save

11. View the new test case template







Result:

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

EXP NO: 9	LOAD TESTING AND PERFORMANCE TESTING

Aim:

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

Load Testing

Steps to Create an Azure Load Testing Resource:

Before you run your first test, you need to create the Azure Load Testing resource:

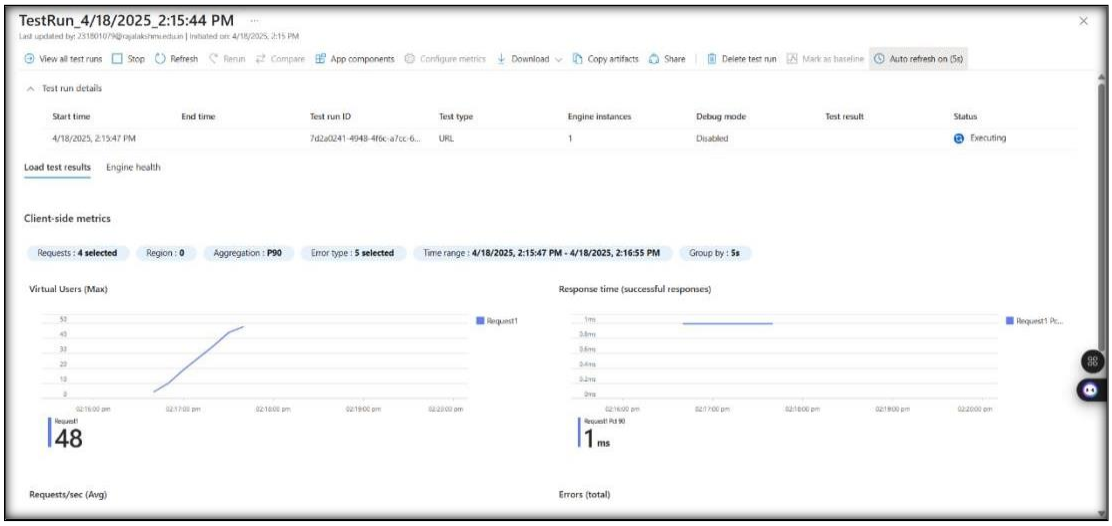
1. Sign in to Azure Portal
   Go to https://portal.azure.com and log in.
2. Create the Resource
   - Go to *Create a resource* → Search for "Azure Load Testing".
   - Select Azure Load Testing and click Create.
3. Fill in the Configuration Details
   - Subscription*:* Choose your Azure subscription.
   - *Resource Group:* Create new or select an existing one.
   - *Name:* Provide a unique name (no special characters).
   - *Location:* Choose the region for hosting the resource.
4. (Optional) Configure tags for categorization and billing.
5. Click Review + Create, then Create.
6. Once deployment is complete, click Go to resource.

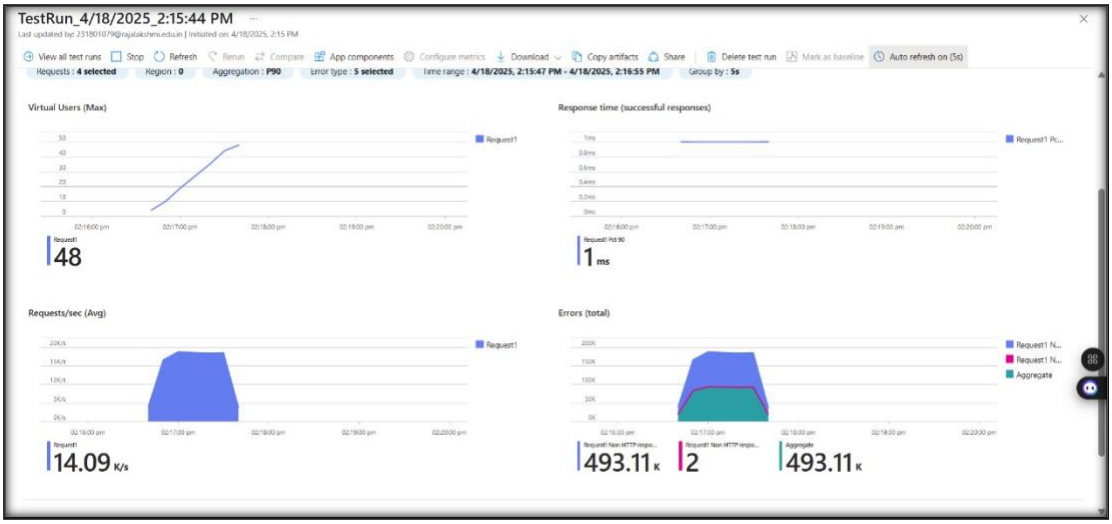
Steps to Create and Run a Load Test:

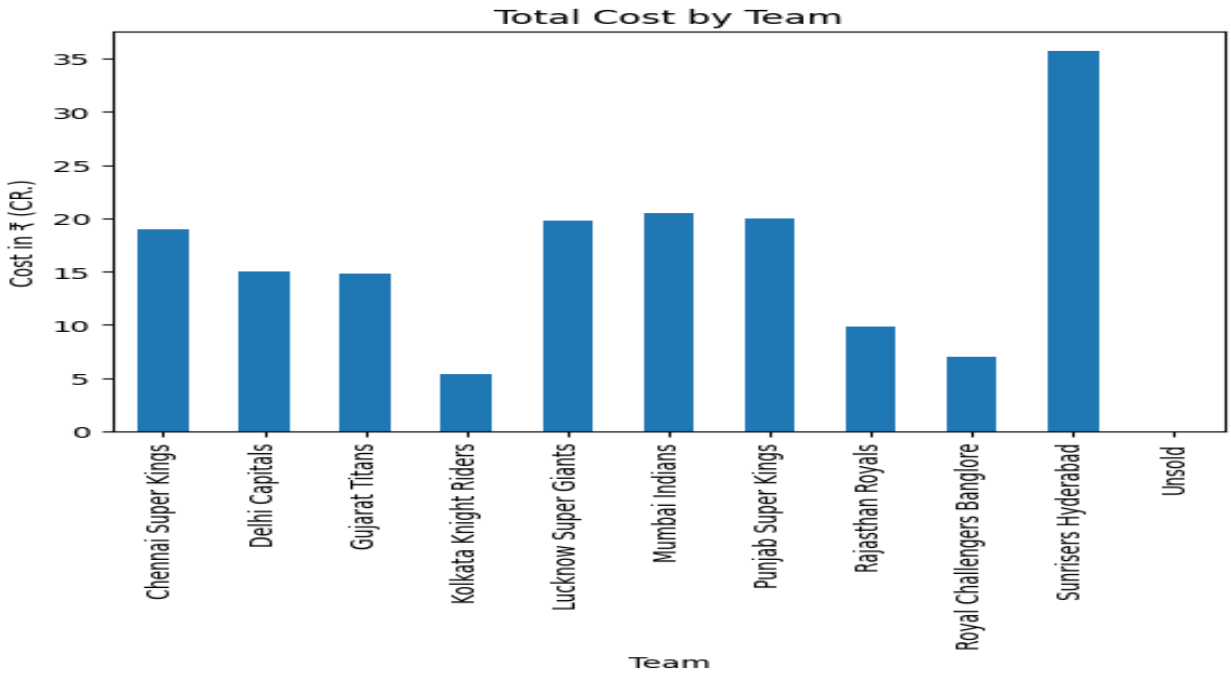
Once your resource is ready:

1. Go to your Azure Load Testing resource and click Add HTTP requests > Create.
2. Basics Tab
   - *Test Name:* Provide a unique name.
   - *Description:* (Optional) Add test purpose.
   - *Run After Creation:* Keep checked.
3. Load Settings
   - *Test URL:* Enter the target endpoint (e.g., https://yourapi.com/products).
4. Click Review + Create → Create to start the test.

Load Testing







Result:

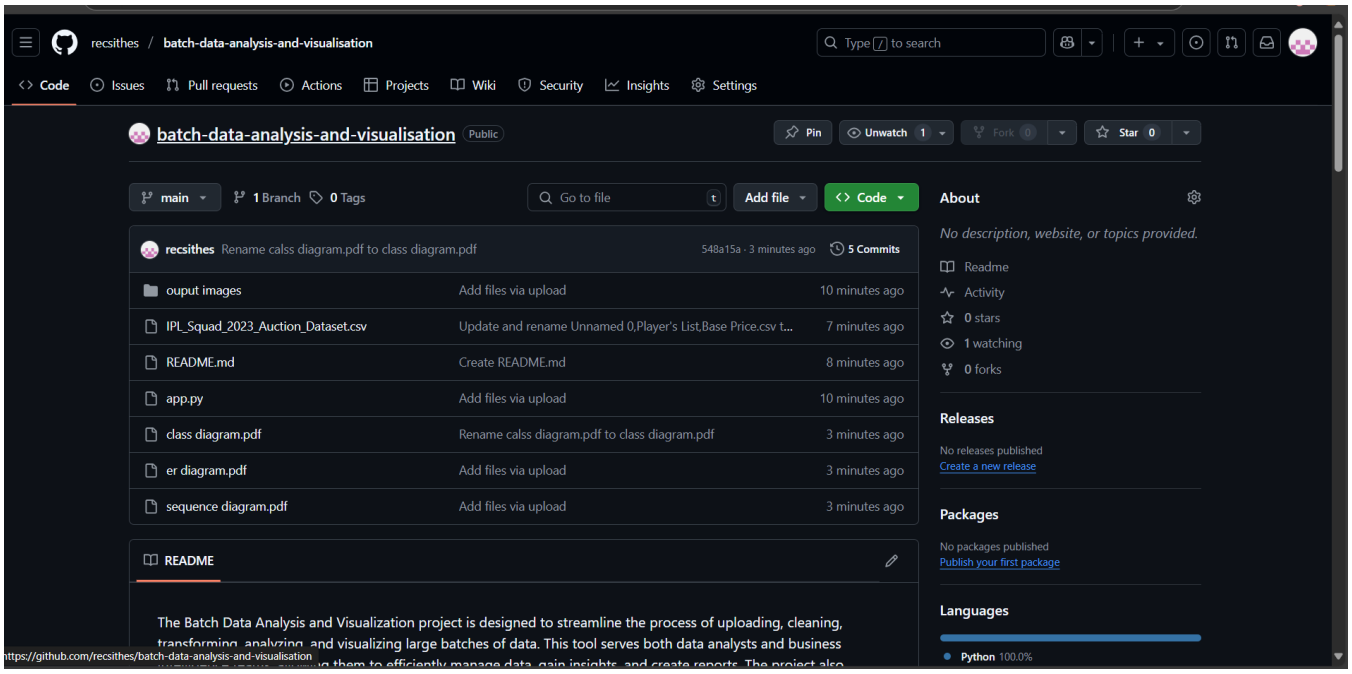
Successfully created the Azure Load Testing resource and executed a load test to assess the performance of the specified endpoint.

EXP NO: 10	GITHUB: PROJECT STRUCTURE & NAMING CONVENTIONS

Aim:

To provide a clear and organized view of the project's folder structure and file naming conventions, helping contributors and users easily understand, navigate, and extend the Music Playlist Batch Creator project.

GitHub Project Structure



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.