AZURE DEVOPS ENVIRONMENT SETUP

Aim:

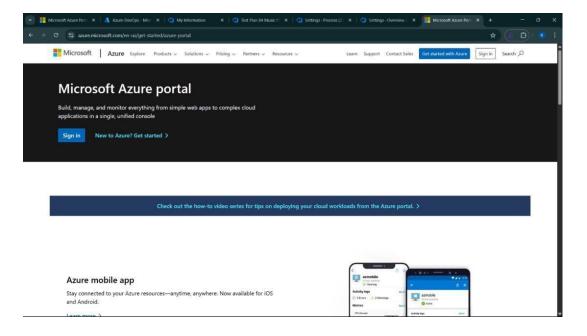
To set up and access the Azure DevOps environment by creating an organization through the Azure portal.

INSTALLATION

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

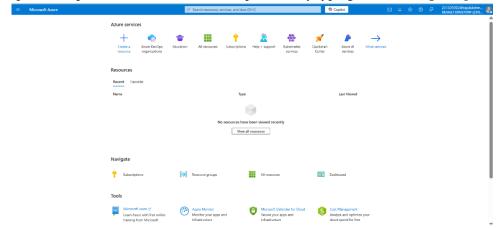
Sign in using your Microsoft account credentials.

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

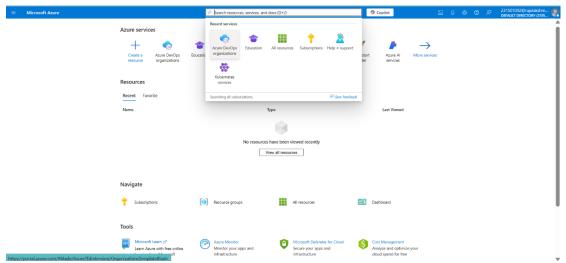


2. Azure home page

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:

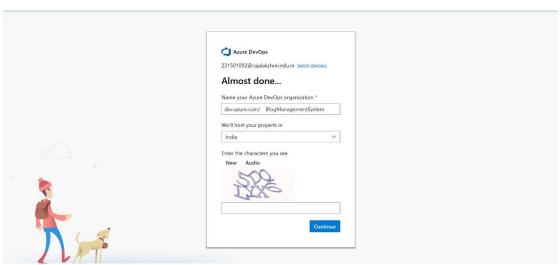
Successfully accessed the Azure DevOps environment and created a new organization through the Azure portal.

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

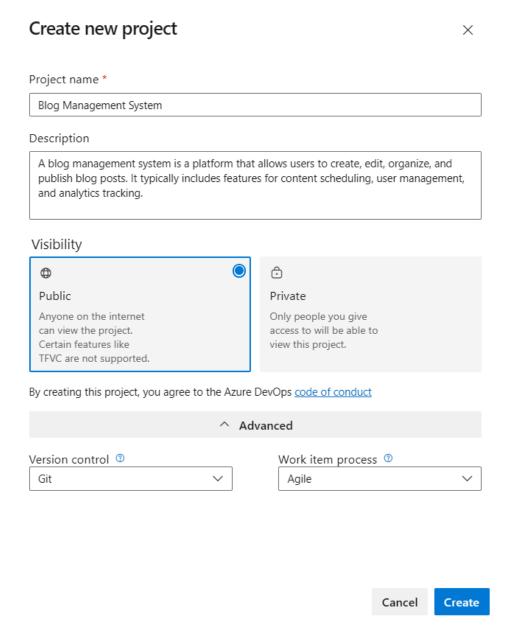


- 2. Create the First Project in Your Organization
- a. After the organization is set up, you'll need to create your first **project**. This is where you'll begin to manage code, pipelines, work items, and more.
 - b. On the organization's **Home page**, click on the **New Project** button.
 - c. Enter the project name, description, and visibility options:

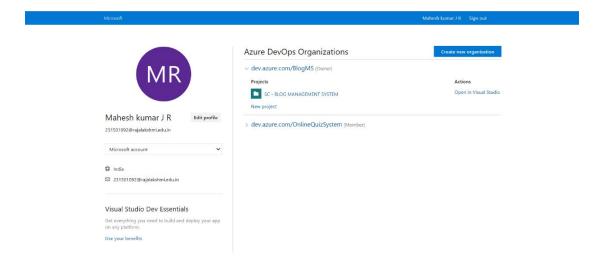
Name: Choose a name for the project (e.g., LMS).

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.



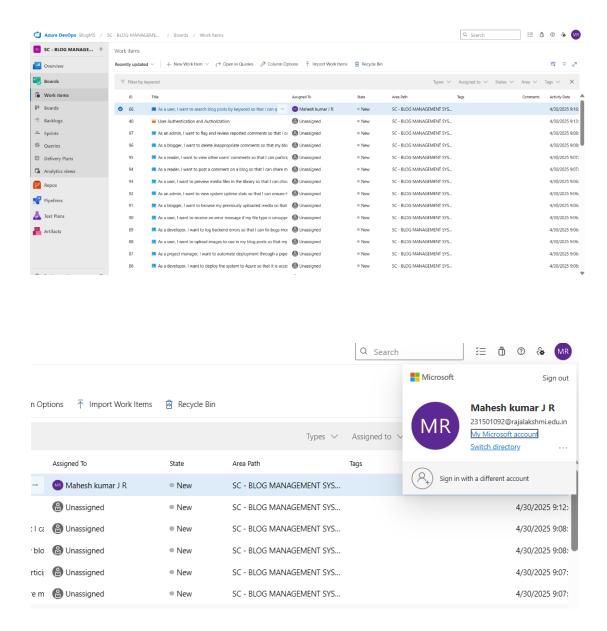
3. Once logged in, ensure you are in the correct organization. If you're part of multiple organizations, you can switch between them from the top left corner (next to your user profile). Click on the Organization name, and you should be taken to the Azure DevOps Organization Home page.



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.



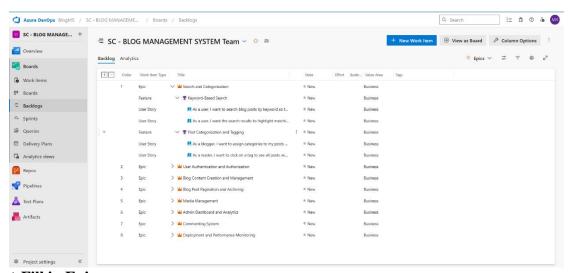
Result:	
Successfully created an Azure DevOps project with user story man	agement and agile workflow
setup.	-
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SETTING UP EPICS, FEATURES, AND USER STORIES FOR PROJECT PLANNING

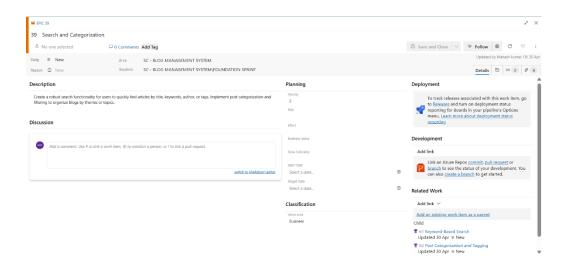
Aim:

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

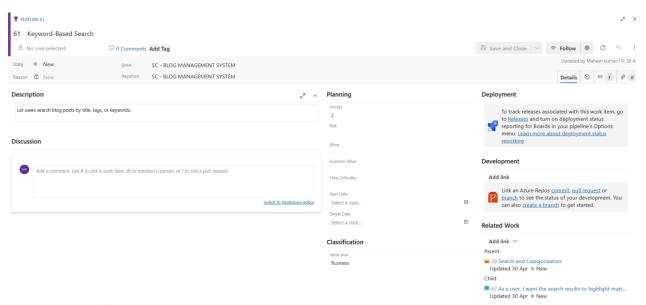
Create Epic, Features, User Stories, Task



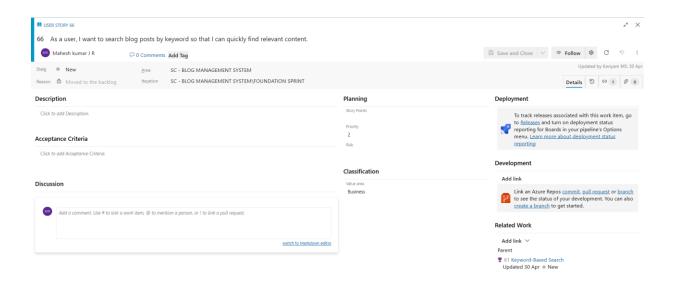
1. Fill in Epics



2. Fill in Features



3. Fill in User Story Details



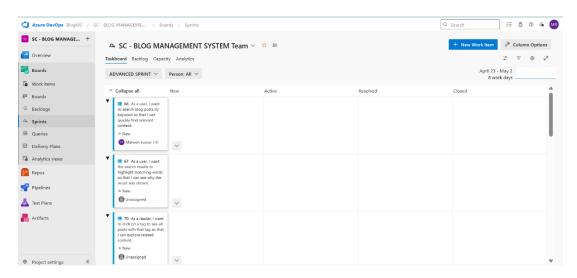
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Result:	
Thus, the creation of epics, features, user stor	y and task has been created successfully.
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SPRINT PLANNING

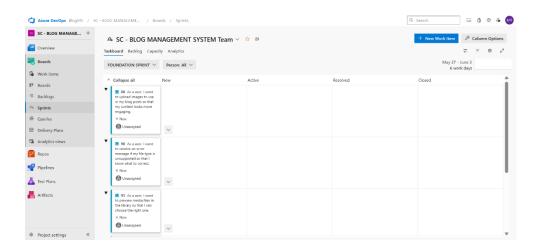
Aim:

To assign user story to specific sprint for the Project Online Quiz System.

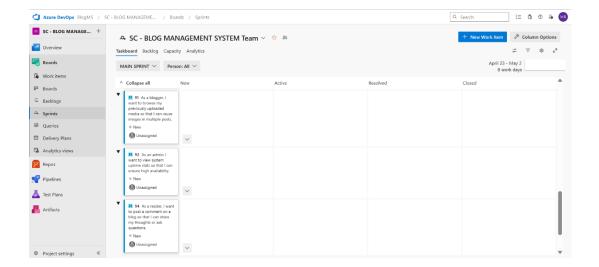
Sprint Planning Sprint 1



Sprint 2



Sprint 3



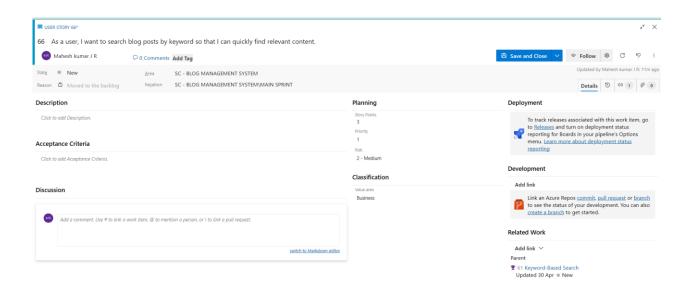
Result:	
The Sprints are created for the Project Online Quiz System.	
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POKER ESTIMATION

Aim:

Create Poker Estimation for the user stories - Online Quiz System Project.

Poker Estimation



Result:

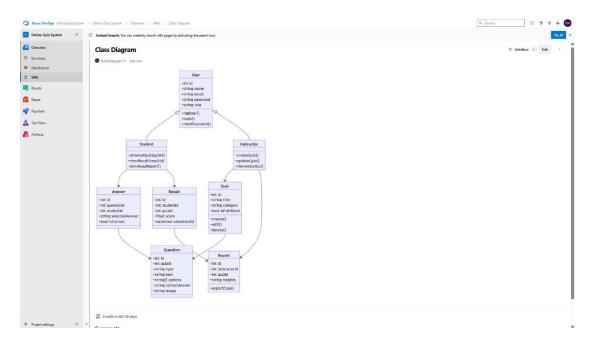
The Estimation/Story Points is created for the project using Poker Estimation.

DESIGNING CLASS AND SEQUENCE DIAGRAMS FOR PROJECT ARCHITECTURE

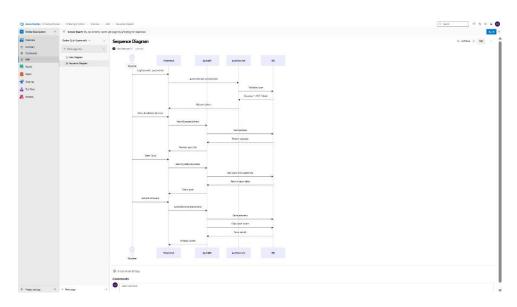
Aim:

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

6A. Class Diagram



6B. Sequence Diagram



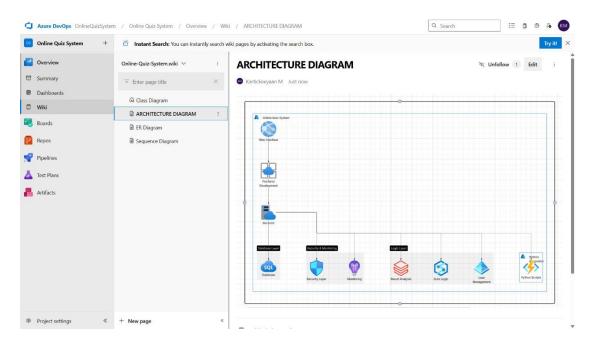
. .	4		
Resul			
	The Class Diagram and Sequence	Diagram is designed Successfully for the Pr	oject Online Quiz
	System.	•	-
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DESIGNING ARCHITECTURAL AND ER DIAGRAMS FOR PROJECT STRUCTURE

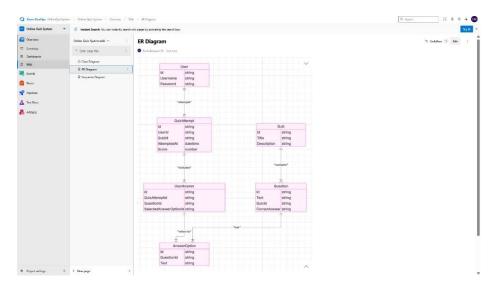
Aim:

To Design an Architectural Diagram and ER Diagram for the given Project.

7A. Architectural Diagram



7B.ER Diagram



D 14	
Result:	ad Sugarafully for the Music Playlist Datch
The Architecture Diagram and ER Diagram is design Creator	ed Successiumy for the music Flayinst Batch
C10mO1	
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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 Test Case Design Procedure

1. Understand Core Features of the Application

- User Signup & Login
- Viewing and Managing Playlists
- o Fetching Real-time Metadata
- o Editing playlists (rename, reorder, record)
- o 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

- o 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

- o 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

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

6. Use Clear Naming and IDs

- o 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

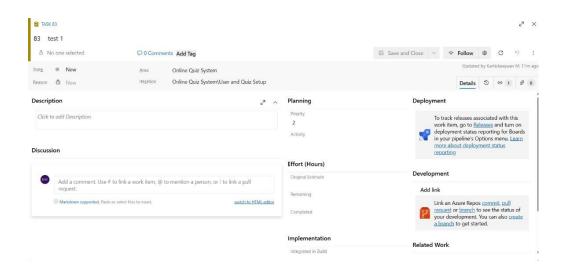
 Grouped test cases based on functionality (e.g., Login, Playlist Editing, Recommendation System).

o Improves organization and test execution flow in Azure DevOps.

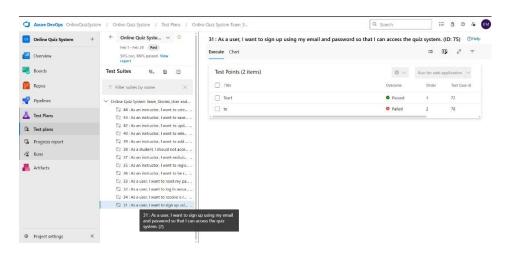
8. Prioritize and Review

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

1. New test plan



2. Test suite



User Story 1: Secure Sign-Up and Login (ID: 79)

Test Plan: Test 1 – User Login

• TC01 – Successful Sign Up

Type: Happy Path

Action:

- o Navigate to the Sign-Up page
- o Enter valid name, email, and password
- Click "Sign Up" Expected Result:
- o Fields accept values
- Account is created
- User is redirected to the dashboard
- TC02 Secure Login

Type: Happy Path

Action:

- o Go to Login page
- Enter valid credentials
- Click "Login" Expected Result:
- o Login is successful
- o User lands on the dashboard
- TC03 Sign Up with Existing Email

Type: Error Path

Action:

- Use an already registered email
- Click "Sign Up" Expected Result:
 - Error: "Email already registered"
- TC04 Login with Wrong Password

Type: Error Path

Action:

- Enter valid email and wrong password
- Click "Login" Expected Result:
- o Error: "Invalid username or password"

User Story 2: View Quiz List (ID: 76)

Test Plan: Test 2 – View Quizzes

TC05 – View Quiz Page

Type: Happy Path

Action:

- Login
- o Navigate to "Available Quizzes"

Expected Result:

- All available quizzes are displayed clearly
- TC06 Quiz Loading Failure

Type: Error Path

Action:

- Disconnect from the internet
- Try accessing "Available Quizzes"

Expected Result:

Error: "Unable to load quizzes"

User Story 3: Real-Time Score Display (ID: 65)

Test Plan: Test 2 – Real-Time Results

• TC07 – Score Display After Submission

Type: Happy Path

Action:

- o Complete a quiz
- Submit answers
- Observe the result panel

Expected Result:

- o Score is calculated and displayed instantly
- TC08 Score Not Displaying

Type: Error Path

Action:

o Submit quiz with a backend issue

Expected Result:

o Error: "Unable to fetch results, please try again"

User Story 4: Edit Quiz Details (ID: 68)

Test Plan: Test 3 – Quiz Editing

• TC09 – Rename Quiz Successfully

Type: Happy Path

Action:

- o Admin navigates to quiz list
- O Clicks "Edit" on a quiz
- Changes quiz name and saves
 Expected Result:
- o Quiz name updates successfully
- TC10 Rename with Blank Name

Type: Error Path

Action:

- Click "Edit"
- Leave the quiz name blank
- o Click "Save"

Expected Result:

- o Error: "Quiz name cannot be empty"
- TC11 Change Quiz Question Order

Type: Happy Path

Action:

- Open quiz editor
- Drag and drop questions to reorder
- o Click "Save"

Expected Result:

- **Question order is saved**
- TC12 Reordering Fails Due to Error

Type: Error Path

Action:

- Try reordering during server error
- Click "Save"
 - **Expected Result:**
- o Error: "Failed to update. Try again later"

User Story 5: Generate Quiz Based on Categories (ID: 73)

Test Plan: Test 3 - Smart Quiz Generation

• TC13 – Generate Quiz Based on Subject

Type: Happy Path

Action:

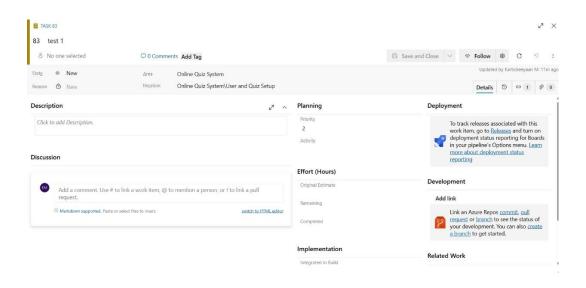
- Select subject and difficulty
- Click "Generate Quiz" Expected Result:
- New quiz is created based on selected filters
- TC14 Fail to Generate Quiz (Missing/Invalid Input)

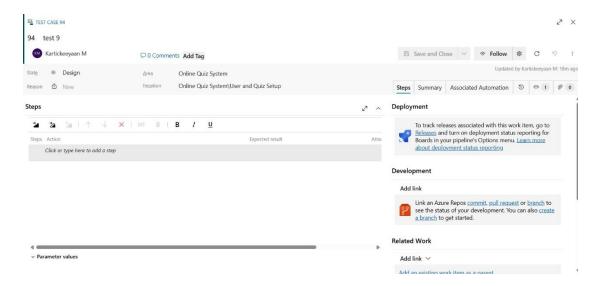
Type: Error Path

Action:

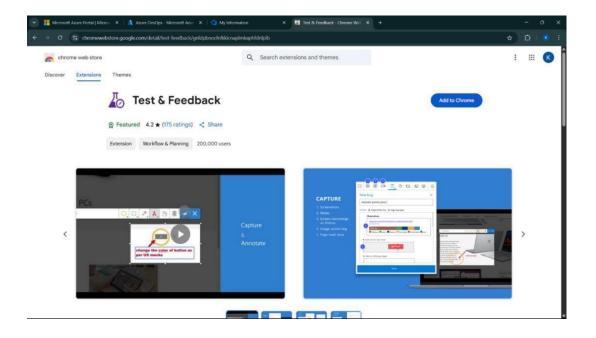
- Click "Generate" without selecting subject Expected Result:
- o Error: "Please select a valid subject/category"

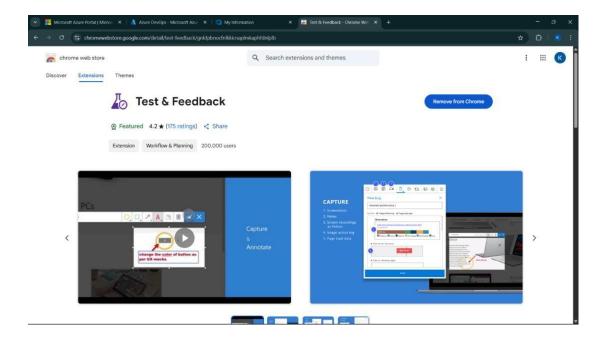
Test Cases



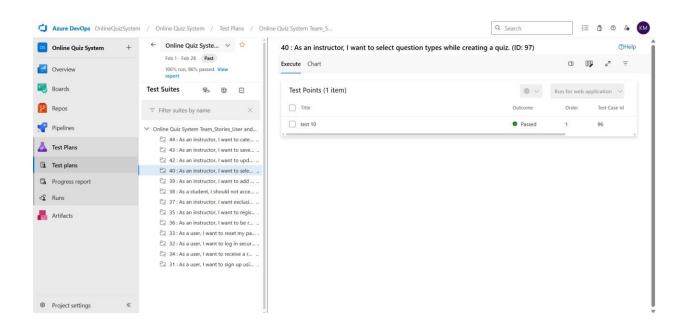


3. Installation of test

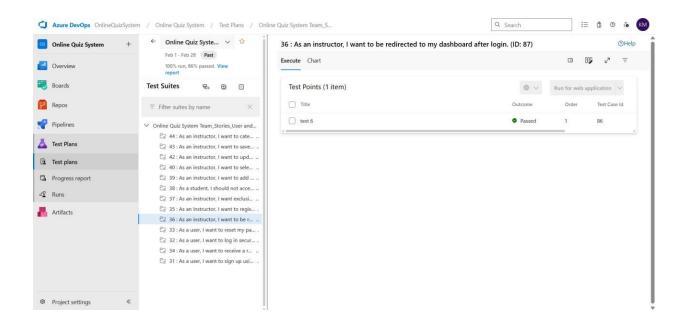




Test and feedback Showing it as an extension



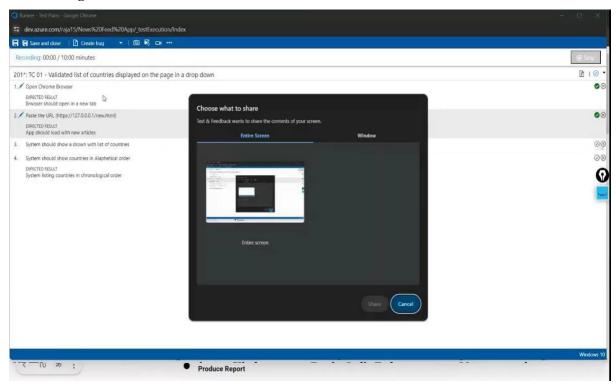
4. Running the test cases



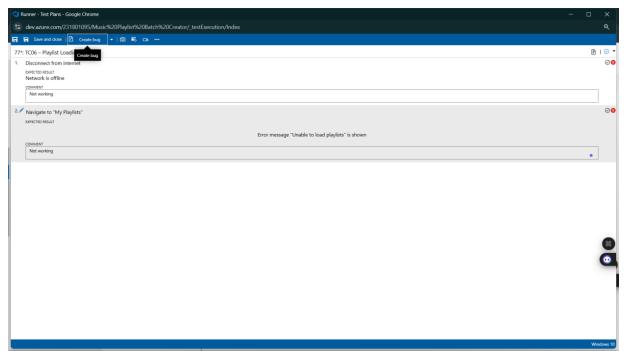




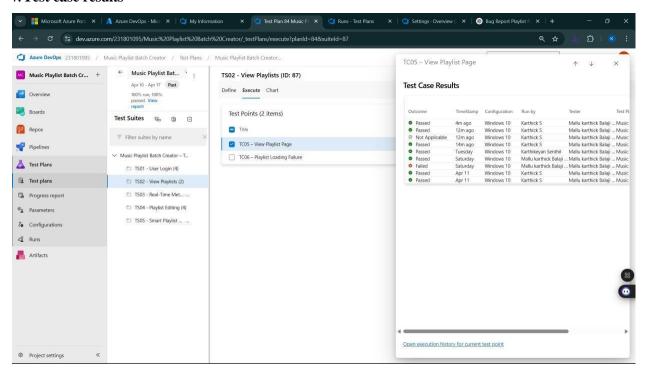
5. Recording the test case



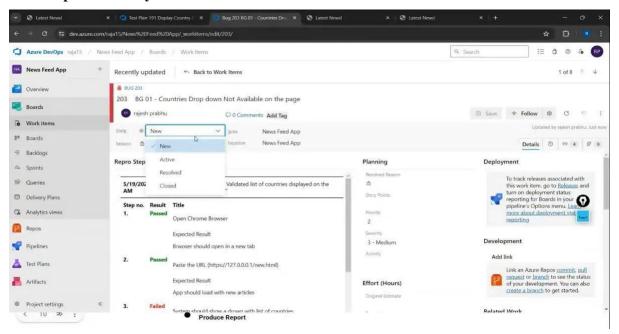
6. Creating the bug



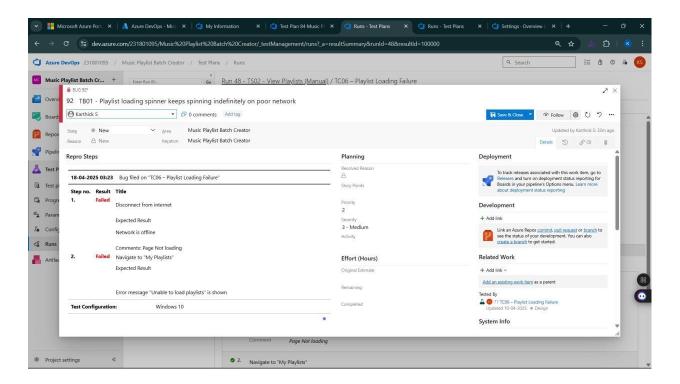
7. Test case results



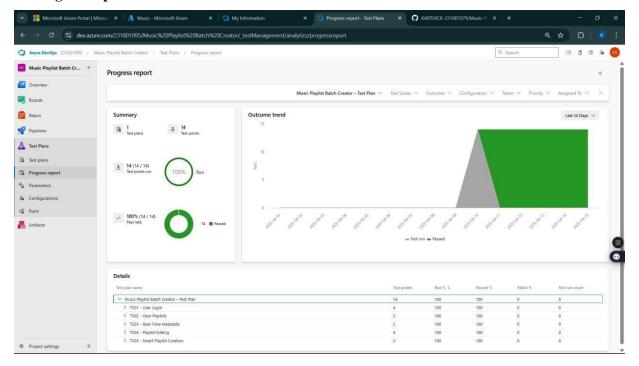
8. Test report summary

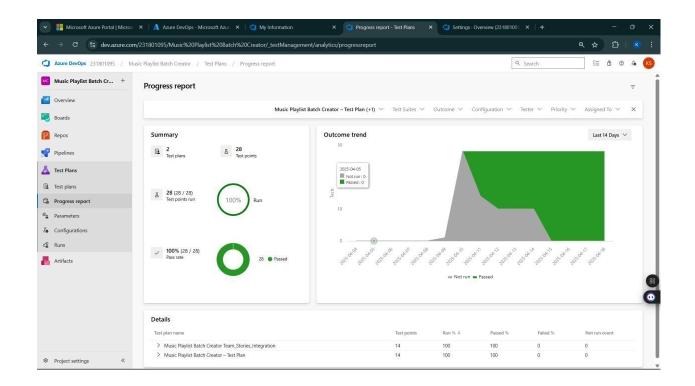


• Assigning bug to the developer and changing state

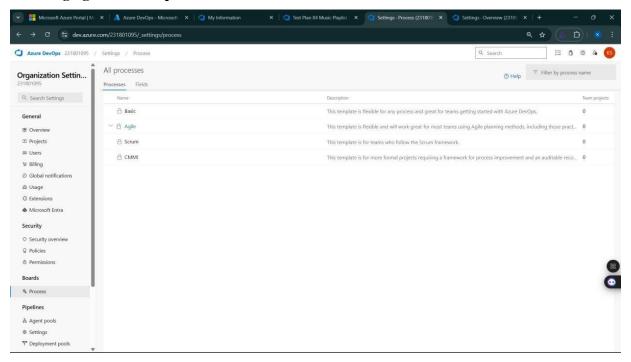


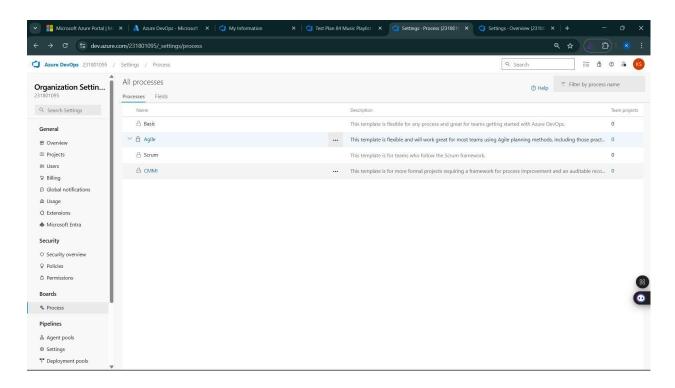
9. Progress report

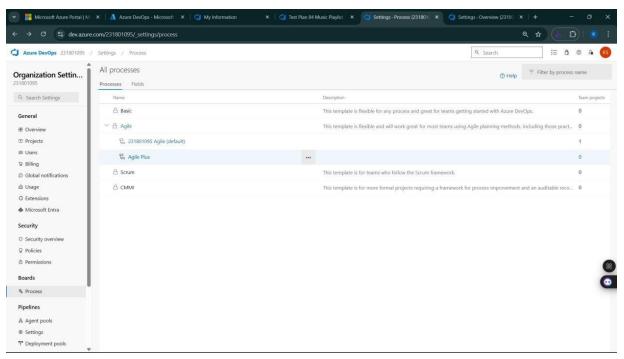




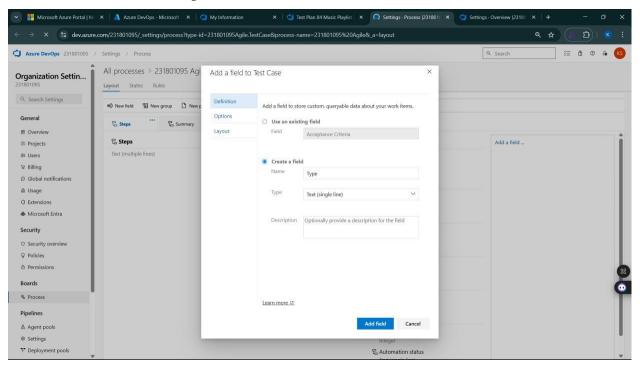
10. Changing the test template

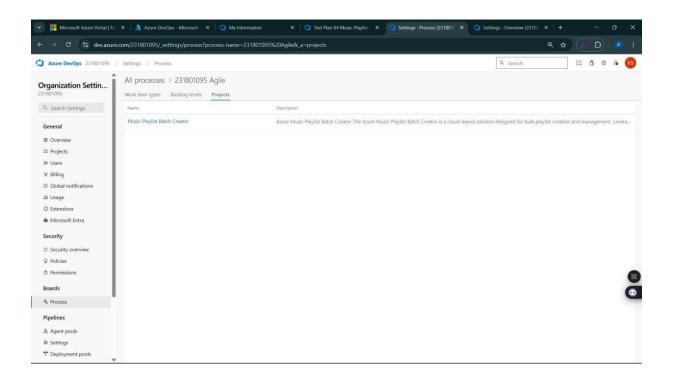


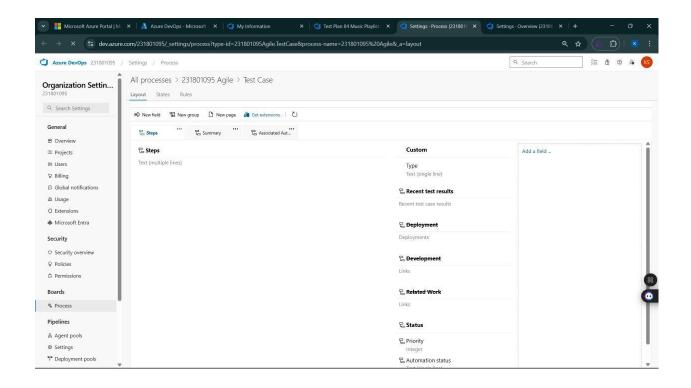




11. View the new test case template







Result:

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

LOAD TESTING AND PERFORMANCE TESTING

Aim:

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

Load Testing

Steps to Create an Azure Load Testing Resource:

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

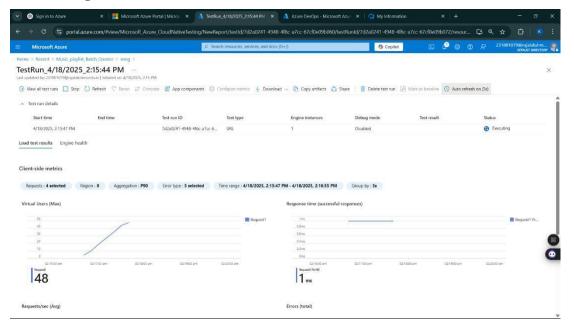
- 1. Sign in to Azure Portal
 - Go to https://portal.azure.com and log in.
- 2. Create the Resource
 - o Go to *Create a resource* → Search for "Azure Load Testing".
 - Select Azure Load Testing and click Create.
- 3. Fill in the Configuration Details
 - o Subscription: Choose your Azure subscription.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

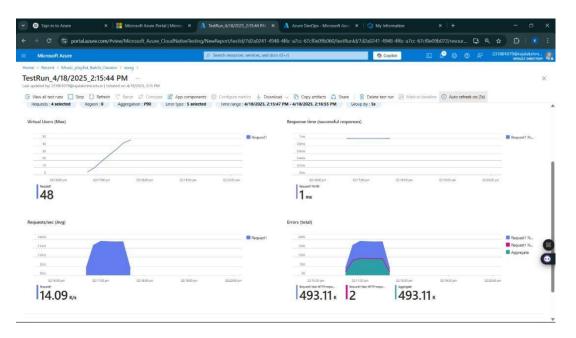
Steps to Create and Run a Load Test:

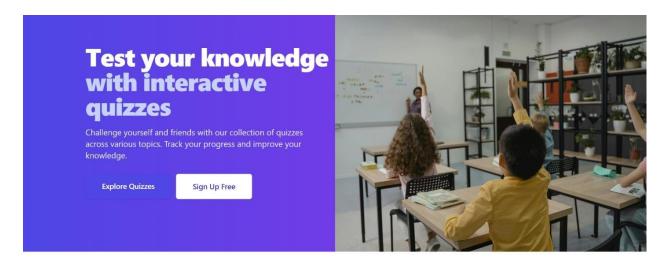
Once your resource is ready:

- 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







FEATURES

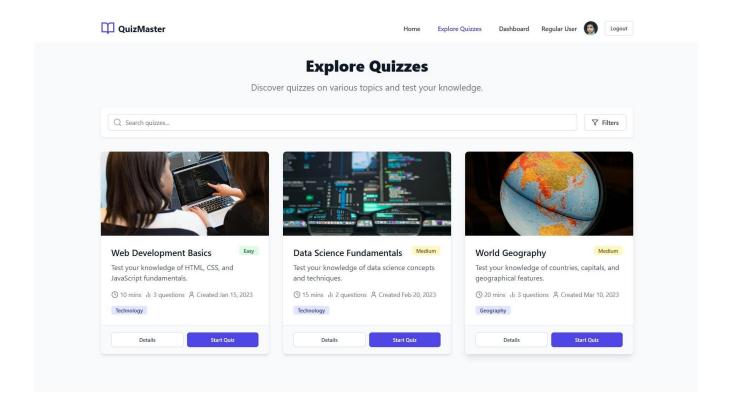
A better way to learn

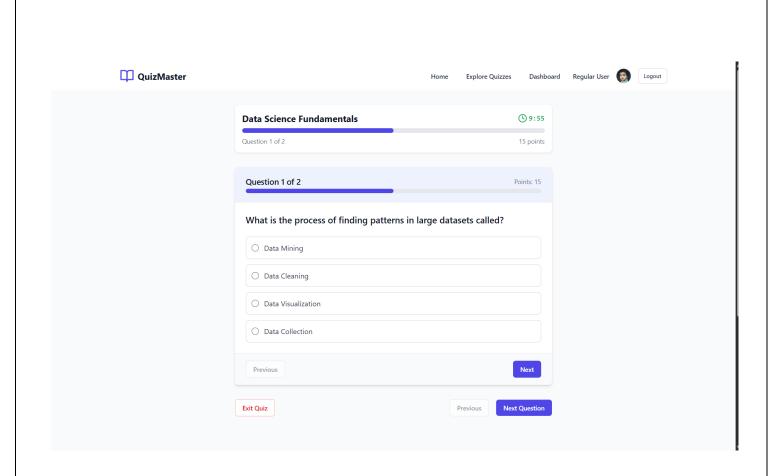
Our platform provides all the tools you need to test your knowledge and track your progress.











Result:

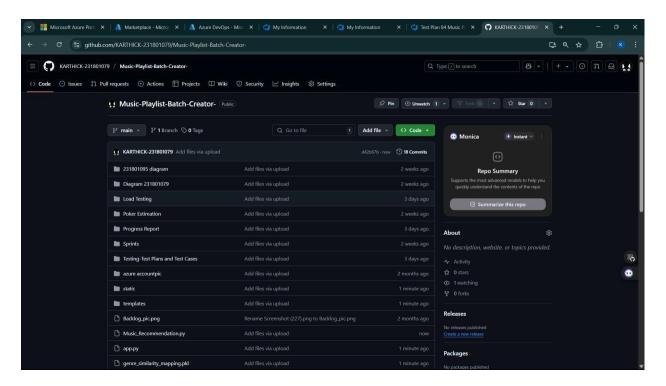
Successfully created the Azure Load Testing resource and executed a load test to assess the performance of the specified endpoint.

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.