



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

DEPARTMENT OF INFORMATION TECHNOLOGY
LAB MANUAL

CS23432 – Software Construction

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Exp.No: 1	AZURE DEVOPS ENVIRONMENT SETUP
Date:22/01/2025	

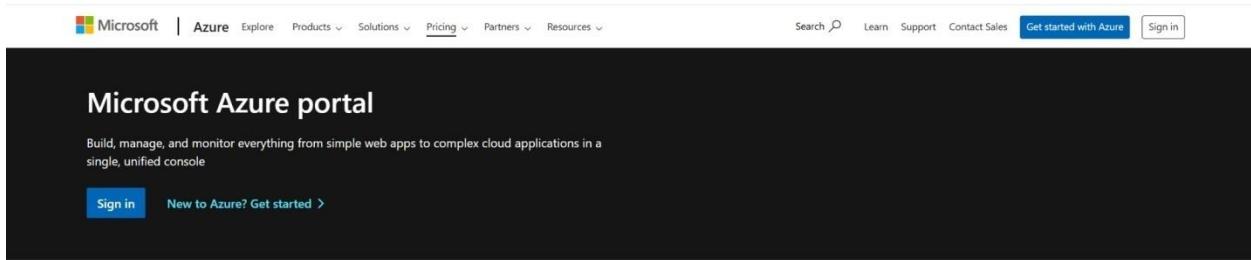
AIM: To set up and access the Azure DevOps environment by creating an organization through the Azure Portal.

INSTALLATION

1. Open your web browser and go to the Azure website: <https://azure.microsoft.com/en-us/getstarted/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>



Check out the how-to video series for tips on deploying your cloud workloads from the Azure portal. >

Azure mobile app

Stay connected to your Azure resources—anytime, anywhere. Now available for iOS and Android.

[Learn more >](#)



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+)". Below the search bar, there are three main promotional sections: "Start with an Azure free trial", "Manage Microsoft Entra ID", and "Azure for Students". Each section has a small icon and a brief description. Below these are "Azure services" and "Resources" sections with icons for various services like Create a resource, Azure DevOps organizations, Tenant properties, Subscriptions, Quickstart Center, Azure AI services, Kubernetes services, Virtual machines, App Services, and More services.

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

The screenshot shows the Microsoft Azure home page again, but with a search bar at the top containing the text "Azure devops organization". A dropdown menu appears below the search bar, listing "Services (99+)" and "Resources". Under "Services", there are links for "Azure DevOps organizations", "Azure Cosmos DB", "Azure Database for MySQL servers", and "Azure Arc". Under "Documentation", there are links for "Organization Class", "Use service principals & managed identities - Azure DevOps", "Organization interface", "Delete or remove an organization - Azure DevOps Services", and "Continue searching in Microsoft Entra ID". The rest of the page layout is similar to the first screenshot, including the "Azure services" and "Resources" sections.

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.

portal.azure.com/#view/AzureTfsExtension/OrganizationsTemplateBlade

Microsoft Azure Search resources, services, and docs (G + /)

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.

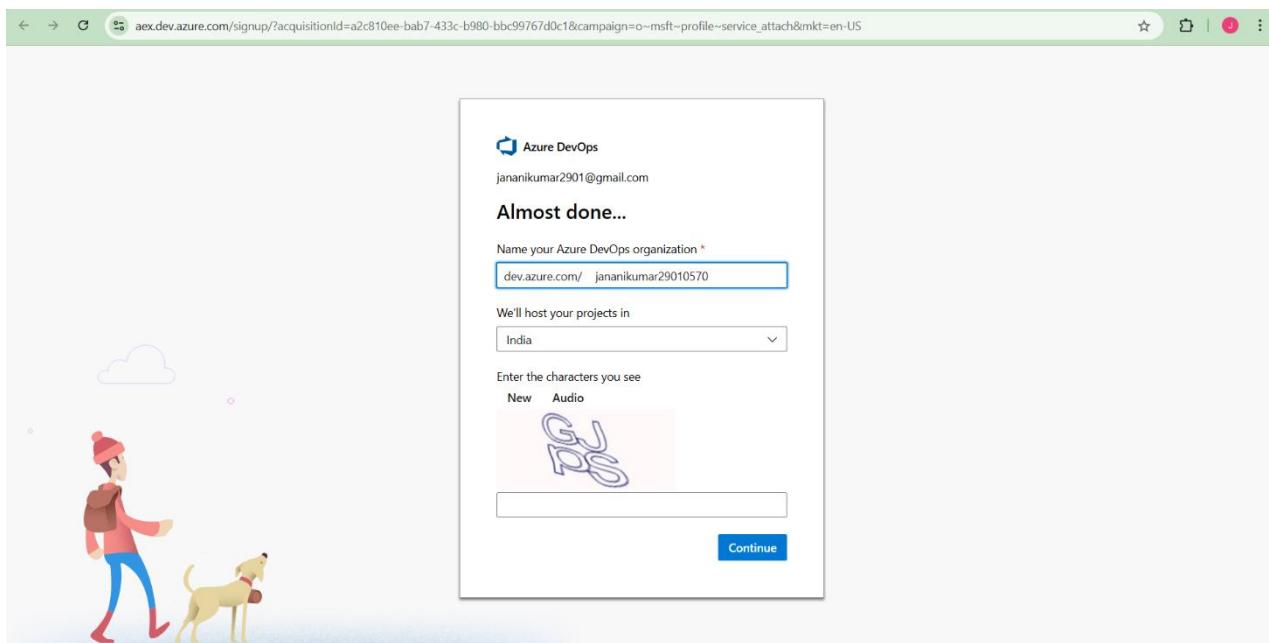
Exp.No: 2
Date: 07/02/2025

AZURE DEVOPS PROJECT SET UP AND USER STORY MANAGEMENT

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

STEPS:

1.Create An Azure Account



2.Create the First Project in Your Organization

- 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.
- On the organization's **Home page**, click on the **New Project** button.
- 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).
- Once you've filled out the details, click **Create** to set up your first project.

The screenshot shows the Azure DevOps Organization Home page. On the left, there's a sidebar with organization names: jananikumar29010702, jananikumar29010547, jananikumar2901, and sjoshika20040630. Below this are links for '2 more organizations' and 'New organization'. The main area features a central illustration of a person sitting on the ground with a dog, surrounded by clouds. To the right, there's a 'Create a project to get started' form. The 'Project name' field contains 'Evaluation of Academic Performance'. Under 'Visibility', the 'Public' option is selected, with a note that public projects are disabled for the organization. The 'Private' option is also shown. A note at the bottom says 'Public projects are disabled for your organization. You can turn on public visibility with [organization policies](#)'. There's an 'Advanced' button and a 'Create project' button at the bottom.

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 Organization Home page. On the left, there's a profile picture for 'Janani K' and her contact information: 'jananikumar2901@gmail.com', 'India', and 'jananikumar2901@gmail.com'. Below this is a 'Visual Studio Dev Essentials' section with a description and a 'Use your benefits' link. The main area is titled 'Azure DevOps Organizations' and lists several organizations: 'dev.azure.com/jananikumar2901' (Owner), 'Evaluation of Academic Performance' (Project), 'The Evaluation of Academic Performance' (Project), 'New project', 'dev.azure.com/jananikumar29010507' (Owner), 'dev.azure.com/jananikumar29010547' (Owner), 'dev.azure.com/jananikumar29010602' (Owner), 'dev.azure.com/jananikumar29010702' (Owner), and 'dev.azure.com/sjoshika20040630' (Member). There are 'Actions' and 'Open in Visual Studio' buttons for the first organization. A 'Create new organization' button is located at the top right.

4. Project dashboard

The screenshot shows the Azure DevOps interface for a project titled 'Evaluation of Academic performance'. The left sidebar contains navigation links: Overview, Summary, Dashboards, Wiki, Boards, Pipelines, Artifacts, and Project settings. The main content area has a title 'Evaluation of Academic performance' with a 'Private' button and an 'Invite' button. A message at the top states: 'You have been assigned Stakeholder access and will experience limited features in Azure DevOps. [Learn more](#)'. Below this is a section titled 'About this project' which describes the system's purpose and features for teachers, students, and parents. To the right is a 'Project stats' panel showing 'Boards' (0 work items) and 'Members' (5 users: JG, JK, S, J, KM). The URL in the browser bar is dev.azure.com/sjoshika20040630/Evaluation%20of%20Academic%20performance.

5. To manage user stories:

- 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.
- 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 this user story.

The screenshot shows the Azure DevOps interface for the 'The Evaluation of Academic Performance Team' project. The left sidebar navigation includes 'Overview', 'Boards', 'Work items', 'Backlogs' (selected), 'Sprints', 'Queries', 'Delivery Plans', 'Analytics views', 'Repos', 'Pipelines', 'Test Plans', 'Artifacts', and 'Project settings'. The main area displays the backlog with two items:

Order	Work Item Type	Title	State	Effort	Business Value
1	Epic	> Academic Records Management	New		Business
2	Epic	> Attendance and Communication Management	New		Business

To the right, there is a 'Planning' section with a message: 'Drag and drop work items to include them in a sprint.' Below it are three iteration boxes: 'Iteration 1' (Planned Effort: 0, 8 points), 'Iteration 2' (No work scheduled yet), and 'Iteration 3' (No work scheduled yet). A '+ New Sprint' button is located at the bottom right of the planning area.

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

Exp.No: 3

Date: 14/02/2025

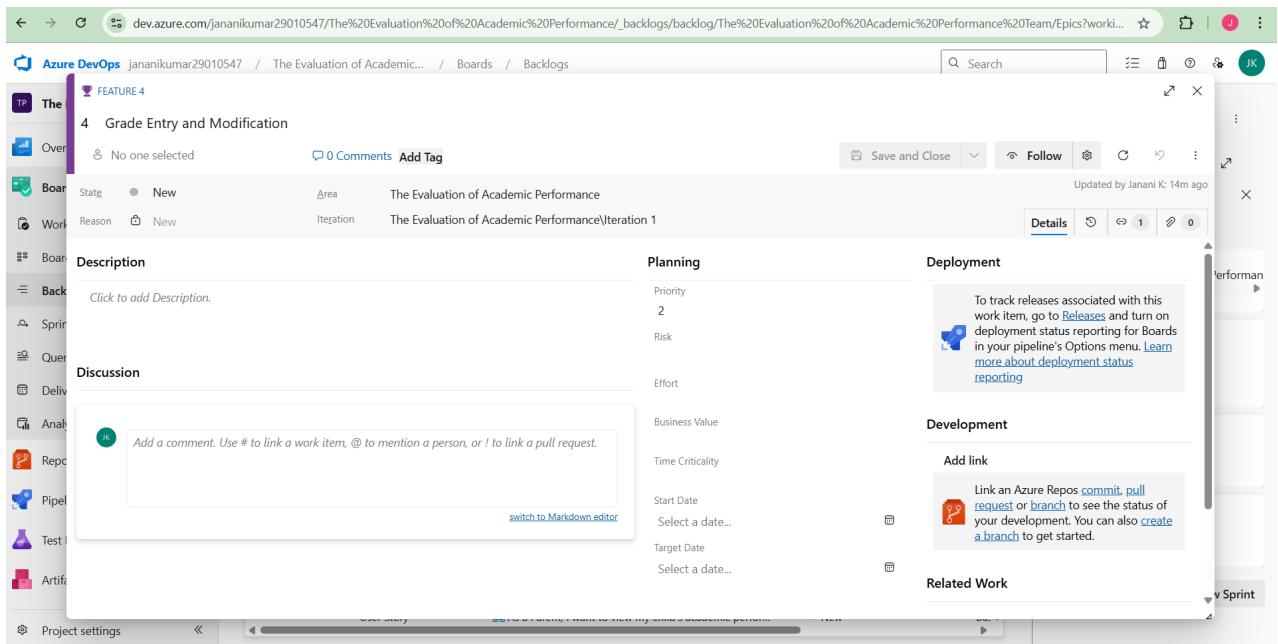
SETTING UP EPICS FEATURES AND USER STORIES FOR PROJECT PLANNING

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

1.Fill in Epics

The screenshot shows the Azure DevOps interface for creating an Epic. The URL in the address bar is dev.azure.com/jananikumar29010547/The%20Evaluation%20of%20Academic%20Performance/_backlogs/backlog/The%20Evaluation%20of%20Academic%20Performance%20Team/Epics?worki... . The main title is "EPIC 1" under the heading "1 Academic Records Management". The "Description" section contains the placeholder "Click to add Description.". The "Planning" section includes fields for Priority (set to 2), Risk, Effort, Business Value, and Time Criticality. The "Deployment" section provides instructions on tracking releases. The "Development" section includes an "Add link" button and a note about linking to Azure Repos. The "Related Work" section is currently empty. On the left sidebar, the "Backlogs" tab is selected. The bottom navigation bar shows "Project settings" and "User stories".

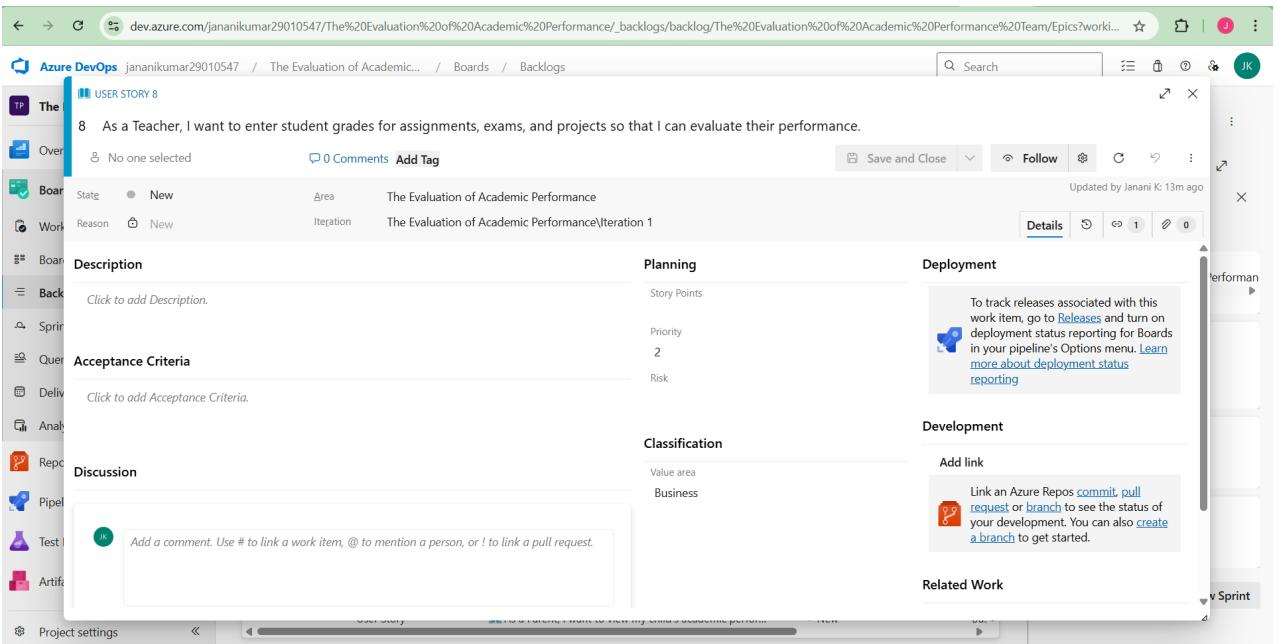
2.Fill in Features



A screenshot of the Azure DevOps interface showing the creation of a Feature. The URL is dev.azure.com/jananikumar29010547/The%20Evaluation%20of%20Academic%20Performance/_backlogs/backlog/The%20Evaluation%20of%20Academic%20Performance%20Team/Epics?worki... . The page title is "FEATURE 4". The main content area shows the following details:

- Description:** Click to add Description.
- 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](#).
- 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:** Related work items are listed on the right.

3.Fill in User Story Details



A screenshot of the Azure DevOps interface showing the creation of a User Story. The URL is dev.azure.com/jananikumar29010547/The%20Evaluation%20of%20Academic%20Performance/_backlogs/backlog/The%20Evaluation%20of%20Academic%20Performance%20Team/Epics?worki... . The page title is "USER STORY 8". The main content area shows the following details:

- Description:** Click to add Description.
- Acceptance Criteria:** Click to add Acceptance Criteria.
- Planning:** Story Points, Priority: 2, Risk.
- Classification:** Value area: Business.
- 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:** Related work items are listed on the right.

4.Fill in Task Details

The screenshot shows the Azure DevOps interface for a task titled 'TASK 24'. The task details are as follows:

- Description:** Click to add Description.
- Planning:** Priority: 2, Activity: None.
- 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](#).
- Effort (Hours):** Original Estimate: None, Remaining: None, Completed: None.
- 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.
- Implementation:** Integrated in Build.
- Related Work:** Add link: Parent.

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

Exp.No: 4
Date: 20/03/2025

SPRINT PLANNING

AIM: To assign user story to specific sprint for the Online Banking Project.

SPRINT PLANNING

Sprint 1

The screenshot shows the Azure DevOps Taskboard for the 'Evaluation of Academic performance Team'. The board is set up for 'Iteration 1' and shows two user stories assigned to 'Person: All'. Story 32 describes the desire to send messages to teachers or administrators. Story 31 describes the desire to view academic performance. Both stories are currently marked as 'New'.

	New	Active	Resolved	Closed
32 As a Parent, I want to send messages or concerns to teachers or administrators so that I can communicate directly about my child's education.	New			
31 As a Parent, I want to view my child's academic performance so that I can support their studies.	New			

Sprint 2

The screenshot shows the Taskboard view for the 'Evaluation of Academic performance Team'. The board has columns for New, Active, Resolved, and Closed work items. Iteration 1 is selected, and the filter is set to 'Person: All'. There are two rows of work items:

New	Active	Resolved	Closed
<p>32 As a Parent, I want to send messages or concerns to teachers or administrators so that I can communicate directly about my child's education. ● New Jayasurya J</p>	<p>55 Create a feature that allows parents to send messages or concern directly to teachers or administrators about their child's education. ● New Jayasurya J</p>		
<p>31 As a Parent, I want to view my child's academic performance so that I can support their studies. ● New Jayasurya J</p>	<p>56 Develop a feature that enables parents to view their child's academic performance, including grades, attendance, and progress reports. ● New</p>		

Sprint 3

The screenshot shows the Backlog view for the 'Evaluation of Academic performance Team'. The backlog is organized by iteration, with 'Iteration 1' selected. The filter is set to 'Person: All'. The backlog table includes columns for Order, Title, State, Assigned To, and Remaining Work.

Order	Title	State	Assigned To	Rem...
1	As a Parent, I want to send messages or concerns to teacher...	● New	Jayasurya J	
2	As a Parent, I want to view my child's academic performanc...	● New	Jayasurya J	
3	As a Parent, I want to receive notifications about my child's ...	● New	Jayasurya J	
4	As a Parent, I want to schedule meetings with teachers so th...	● New	Jayasurya J	
5	As a Parent, I want to send messages or concerns to teacher...	● New	Kanish Kumar M	
6	As an Administrator, I want to manage academic calendars ...	● New	Kanish Kumar M	
7	As an Administrator, I want to generate reports on class per...	● New	Kanish Kumar M	
8	The administrator can log in and access grading settings.	● New	Kanish Kumar M	
9	As an Administrator, I want to monitor teacher activity so th...	● New	Janani K	

Sprint 4

The screenshot shows the Azure DevOps interface for the 'Evaluation of Academic performance' project. The left sidebar navigation includes 'Evaluation of Academic...', 'Overview', 'Boards', 'Work items', 'Backlogs', 'Sprints', 'Queries', 'Delivery Plans', 'Analytics views', 'Repos', 'Pipelines', 'Test Plans', 'Artifacts', and 'Project settings'. The main content area displays the 'Evaluation of Academic performance Team' backlog under 'Iteration 1'. The backlog table has columns for Order, Title, State, and Assigned To. The 14 items listed are:

Order	Title	State	Assigned To
1	> As a Parent, I want to send messages or concerns to teacher... <small>New</small>	New	Jayasurya J
2	> As a Parent, I want to view my child's academic performanc... <small>New</small>	New	Jayasurya J
3	As a Parent, I want to receive notifications about my child's ... <small>New</small>	New	Jayasurya J
4	As a Parent, I want to schedule meetings with teachers so th... <small>New</small>	New	Jayasurya J
5	As a Parent, I want to send messages or concerns to teacher... <small>New</small>	New	Kanish Kumar M
6	As an Administrator, I want to manage academic calendars ... <small>New</small>	New	Kanish Kumar M
7	As an Administrator, I want to generate reports on class per... <small>New</small>	New	Kanish Kumar M
8	The administrator can log in and access grading settings. <small>New</small>	New	Kanish Kumar M
9	As an Administrator, I want to monitor teacher activity so th... <small>New</small>	New	Janani K
10	As an Administrator, I want to manage user roles (student, t... <small>New</small>	New	Janani K
11	As a Student, I want to submit assignments online so that I ... <small>New</small>	New	Janani K
12	As a Teacher, I want to send feedback on student performa... <small>New</small>	New	Janani K
13	As a Student, I want to track my academic progress over ti... <small>New</small>	New	Janani G
14	> As a Student, I want to generate a report showing my grade... <small>New</small>	New	Janani G

RESULT: The Sprints are created for the Evaluation of Academic Performance Project.

Exp.No: 5	POKER ESTIMATION
Date: 28/03/2025	

AIM: Create Poker Estimation for the user stories - Online Banking System Project.

POKER ESTIMATION

The Evaluation of Academic Performance

User Story 19

19 As a student, I want to generate a report comparing my grades to class averages.

Priority: 2
Story Points: 2d

Classification: Business

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

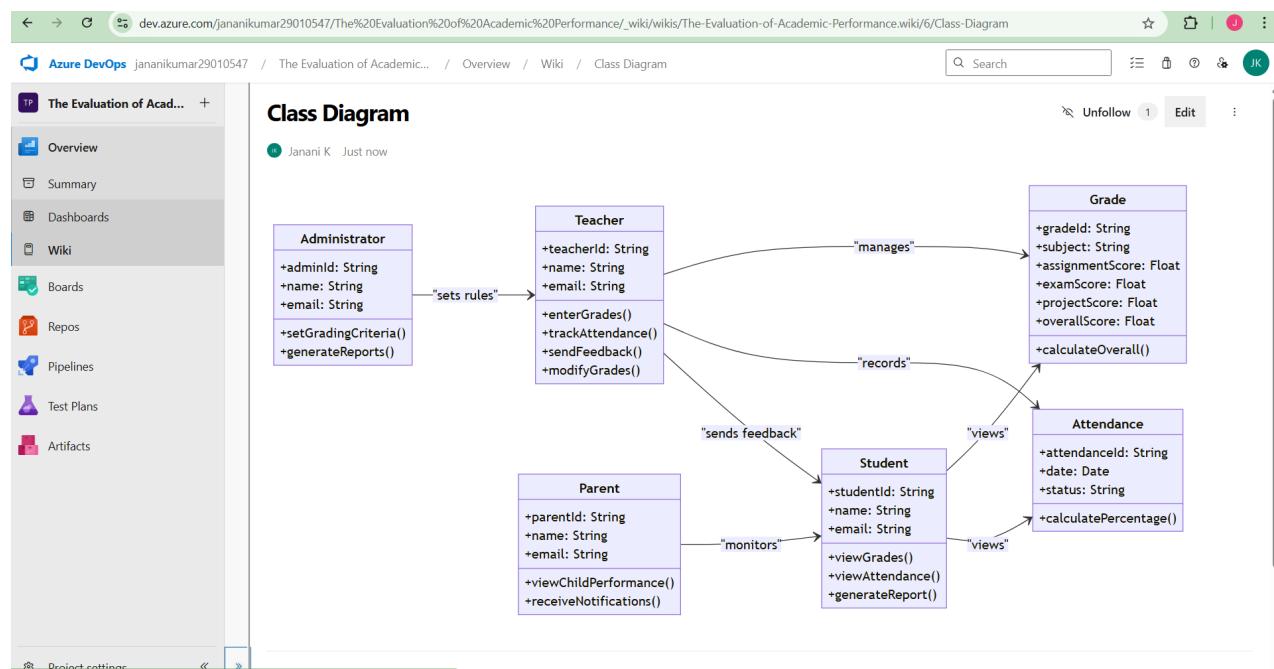
Exp.No: 6

DESIGNING CLASS AND SEQUENCE DIAGRAMS FOR PROJECT ARCHITECTURE

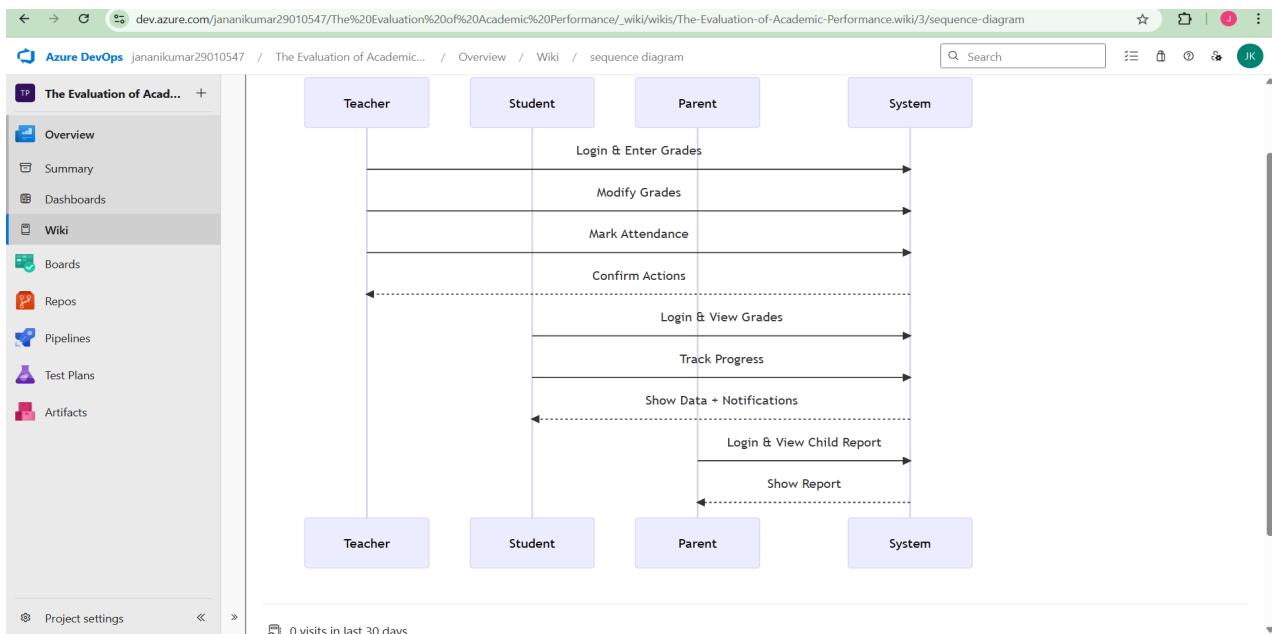
Date: 04/04/2025

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 Evaluation of Academic Performance Project.

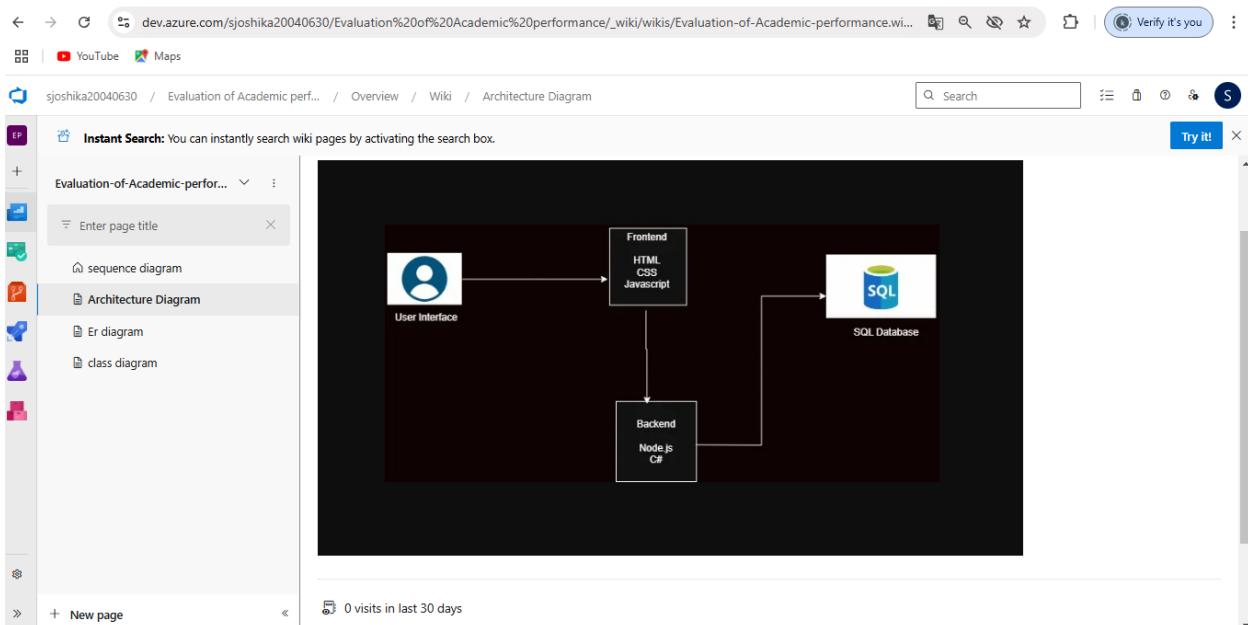
Exp.No: 7

Date: 16/04/2025

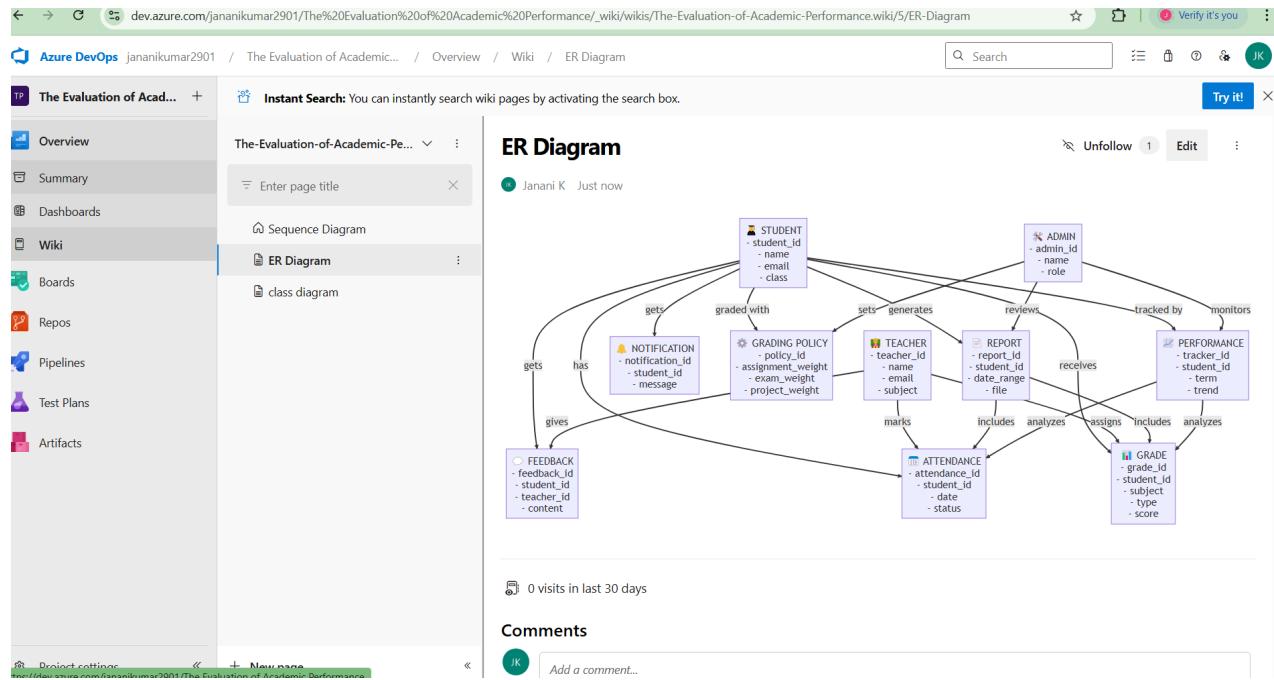
DESIGNING ARCHITECTURAL AND ER DIAGRAMS FOR PROJECT STRUCTURE

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 Evaluation of Academic Performance Project.

Exp.No: 8	TESTING-TEST PLANS AND TEST CASES
Date: 18/04/2025	

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

- Student Authentication (Login, Forgot Password, MFA)
- Grade Entry and Evaluation
- Attendance Monitoring and Reports
- Feedback Management (View/Add/Edit Feedback)
- Report Card Generation (Download/Email)
- Academic Trend Tracking (Graphs/Charts by Term)
- Admin Settings for Grading Policy and Weightage

2. Define User Interactions

Each test case reflects realistic user actions:

- Logging in securely
- Viewing and tracking grades
- Teachers entering grades and attendance
- Students downloading performance reports
- Admins updating grading criteria

3. Design Happy Path Test Cases

- Focused on successful flows where inputs are valid and systems behave as expected.
- Examples:
 - Student logs in with valid credentials
 - Teacher enters grades successfully
 - Student downloads report card with accurate data

4. Design Error Path Test Cases

- Focused on handling invalid, missing, or unexpected inputs.
- Examples:
 - Login fails due to incorrect password
 - Grade entry fails due to missing assessment type
 - Report generation blocked due to incomplete data

5. Break Down Steps and Expected Results

Each test case includes:

- Clear step-by-step actions
- Specific expected results for each step
 - This ensures reproducibility and easy automation later.

6. Use Clear Naming and IDs

- Example:
 - TC01 – Login with Valid Credentials
 - TC05 – Grade Entry Blocked (Missing Weightage)
 - TC11 – Attendance Report Generated Successfully
- Helps trace test cases to user stories and features in Azure DevOps

7. Separate Test Suites

Organize test cases based on functional modules:

- TS01 – StudentAuthentication

- TS02 – Grades & Evaluation
- TS03 – Attendance Monitoring
- TS04 – Feedback & Reports
- TS05 – Admin Settings & Performance Tracking

1.New test plan

 New Test Plan

Name *

Area Path *

Iteration *

Create

Cancel

2. Test suite

The screenshot shows the Azure DevOps interface for a project titled "Evaluation of Academic performance". The left sidebar includes options like Overview, Boards, Repos, Pipelines, Test Plans, Test plans, Progress report, Runs, and Artifacts. The "Test Plans" section is currently selected. A sub-menu for "Boards" is open, showing options such as Work items, Boards, Backlogs, Sprints, Queries, Delivery Plans, and Analytics views. The main content area displays a user story: "11 : As a teacher, I want to mark daily attendance (Present/Absent/Late) for my classes. (ID: 46)". Below this, there are two tabs: "Execute" (selected) and "Chart". Under "Execute", a table lists three test points:

Title	Outcome	Count
TC08 - Mark Attendance for All Students in a Class	Passed	1
TC09 - Attempt to Submit Attendance Without Selecting Status	Failed	2
TC10 -View and Edit Previously Marked Attendance	Passed	3

3. Test case

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

Online Banking System– Test Plans

User Stories – Banking Application

- **US32:** As a Parent, I want to send messages or concerns to teachers or administrators so that I can communicate directly about my child's education.
- **US23:** As an Administrator, I want to manage user roles (student, teacher, parent) so that access is properly controlled.
- **US19:** As a Student, I want to generate a report showing my grades and attendance so that I can share it with my parents or guardians. .
- **US07:** As a teacher, I want to enter grades for assignments, exams, and projects in a centralized system.

TS01 TEST SUITE:MESSAGE FUNCTIONALITY

User Story: As a Parent, I want to send messages or concerns to teachers or administrators so that I can communicate directly about my child's education.

Test case:TC01-Send a Message to a Teacher

Steps and Expected Results:

- **Action:** Log in as a Parent and navigate to the "Messages" section.
Expected Result: Message interface with list of teachers is displayed.

- **Action:** Select a teacher, type a subject and message body.
Expected Result: Input fields are filled and active, no errors shown.

- **Action:** Click the "Send" button.

Expected Result: Message is sent successfully, confirmation appears: "*Message sent successfully.*"

Test Case: TC02 -Receive a Reply from a Teacher

Steps and Expected Results:

- **Action:** Log in as a Parent and go to the "Inbox" or "Messages" section.
Expected Result: List of message threads is displayed.

- **Action:** Open a message thread with a teacher.
Expected Result: Full conversation history is visible in chronological order.

- **Action:** Check for new message or reply from teacher.
Expected Result: Reply is displayed with timestamp and sender information.

TS02 TEST SUITE: ADMIN ACCESS CONTROL

User story: As an Administrator, I want to manage user roles (student, teacher, parent) so that access is properly controlled.

Test Case: TC01- Assign a Role to a New User

Steps and Expected Results:

- **Action:** Log in as Administrator and navigate to the "User Management" section.
Expected Result: User management dashboard is displayed with options to add users.
- **Action:** Click "Create New User", fill in user details, and select **Student** as role.
Expected Result: All required fields are validated and role dropdown is active.
- **Action:** Click "Save" to create the user.
Expected Result: New user is created with the **Student** role and a success message appears: "*User created and role assigned successfully.*"

Test Case: TC02 - Change Role of an Existing User

Steps and Expected Results:

- **Action:** Log in as Administrator and search for a user with the role **Parent**.
Expected Result: User details are displayed with current role information.
- **Action:** Click "Edit", change the role from **Parent** to **Teacher**.
Expected Result: Role dropdown is active and editable.
- **Action:** Click "Save Changes".
Expected Result: User role is updated successfully and confirmation appears: "*User role updated successfully.*"

TS03 TEST SUITE: Grade Entry and Management

User Story: As a teacher, I want to enter grades for assignments, exams, and projects in a centralized system.

Test Case:TC01- Enter Grades for an Assignment

Steps and Expected Results:

- **Action:** Log in as a Teacher and go to the "Gradebook" section.

Expected Result: A list of classes and grading options is displayed.

- **Action:** Select a class and choose an assignment from the list.

Expected Result: A grading entry form appears with student names.

- **Action:** Enter grades for all students and click "Save."

Expected Result: Grades are saved, and a confirmation message appears: "*Grades saved successfully.*"

Test Case: TC02 - Submit Incomplete Grades

Steps and Expected Results:

- **Action:** Navigate to the exam grading page for a class.

Expected Result: The grade entry screen for the exam is displayed.

- **Action:** Enter grades for some students, leave others blank.

Expected Result: Blank fields are highlighted or flagged.

- **Action:** Click "Save."

Expected Result: Error message appears: "*Please complete all fields or mark as 'Not Submitted'.*"

Grades are not saved

TS04 TEST SUITE: Student Report Generation

User Story: As a Student, I want to generate a report showing my grades and attendance so that I can share it with my parents or guardians.

Test Case: TC01- Generate Grades and Attendance Report

Steps and Expected Results:

- **Action:** Log in as a Student and go to the “Reports” section.

Expected Result: The report generation interface is displayed with options for report type.

- **Action:** Select "Grades & Attendance" and a time period (e.g., Term 1).

Expected Result: A preview or selection confirmation is shown.

- **Action:** Click the “Generate” button.

Expected Result: A report is generated with accurate grade and attendance data and an option to download or share.

Test Case: TC02 - Attempt to Generate Report with No Data

Steps and Expected Results:

- **Action:** Log in as a Student and navigate to the “Reports” section.

Expected Result: Report options are visible.

- **Action:** Select a date range or term with no recorded data.

Expected Result: System indicates no data is available.

- **Action:** Click “Generate.”

Expected Result: Message shown: “*No data available to generate report.*” No report is created.

← → ⌂ dev.azure.com/sjoshika20040630/Evaluation%20of%20Academic%20performance/_boards/board/t/Evaluation%20of%20Academic%20perform... 🔍 ⚡ ☆ Verify it's you

YouTube Maps

Azure DevOps sjoshika20040630 / Evaluation of Academic perf... / Boards / Boards

TEST CASE 33

33 TC01 - Message sending functionality

sjoshika2004 0 Comments Add Tag

State: Design Area: Evaluation of Academic performance

Reason: New Iteration: Evaluation of Academic performance\Iteration 1

Updated by sjoshika2004: 10h ago

Save and Close Follow

Steps Summary Associated Automation

Steps

Steps	Action	Expected result
1.	Log in as a parent	The message is sent successfully, confirmation appears ("Message sent successfully"), and the message appears in the "Sent" section.
2.	navigate to the "Messages" section	
3.	select a teacher, type a message, and click "Send."	

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](#)

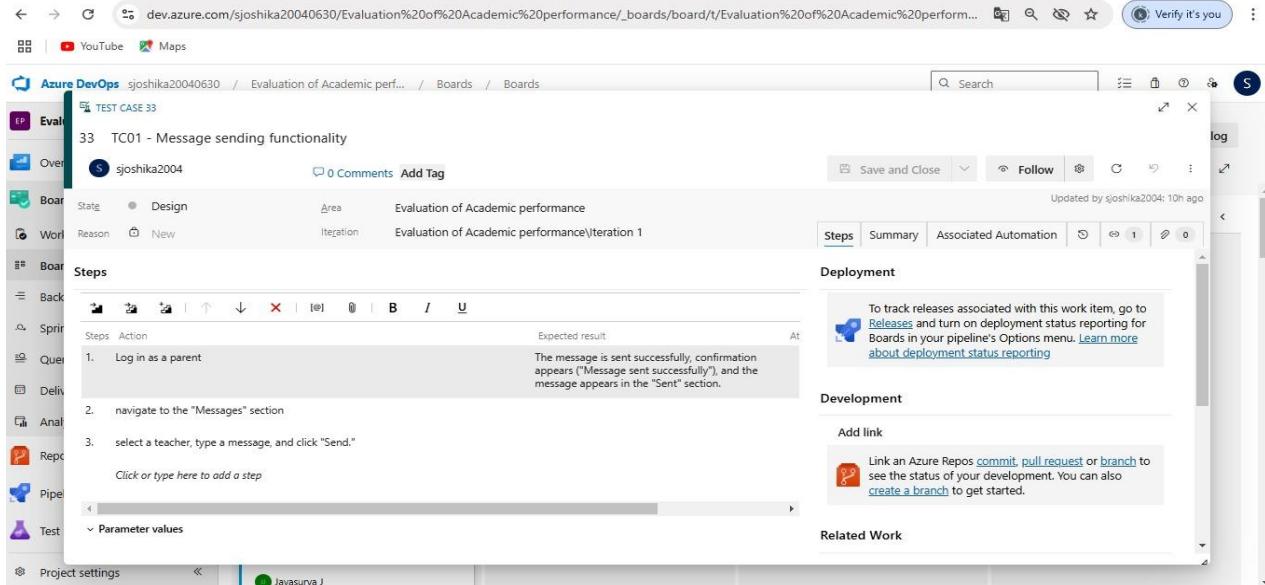
Development

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

Project settings Jayasurya J



← → ⌂ dev.azure.com/sjoshika20040630/Evaluation%20of%20Academic%20performance/_boards/board/t/Evaluation%20of%20Academic%20perform... 🔍 ⚡ ☆ Verify it's you

YouTube Maps

Azure DevOps sjoshika20040630 / Evaluation of Academic perf... / Boards / Boards

TEST CASE 37

37 TC02 - Receiving a Response from Teacher/Admin

sjoshika2004 0 Comments Add Tag

State: Design Area: Evaluation of Academic performance

Reason: New Iteration: Evaluation of Academic performance\Iteration 1

Updated by sjoshika2004: 1h ago

Save and Close Follow

Steps Summary Associated Automation

Steps

Steps	Action	Expected result
1.	Log in as a teacher/admin	The parent receives a notification of the reply and can see the full message thread in their inbox.
2.	open the received message	
3.	type a response, and click "Reply."	

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](#)

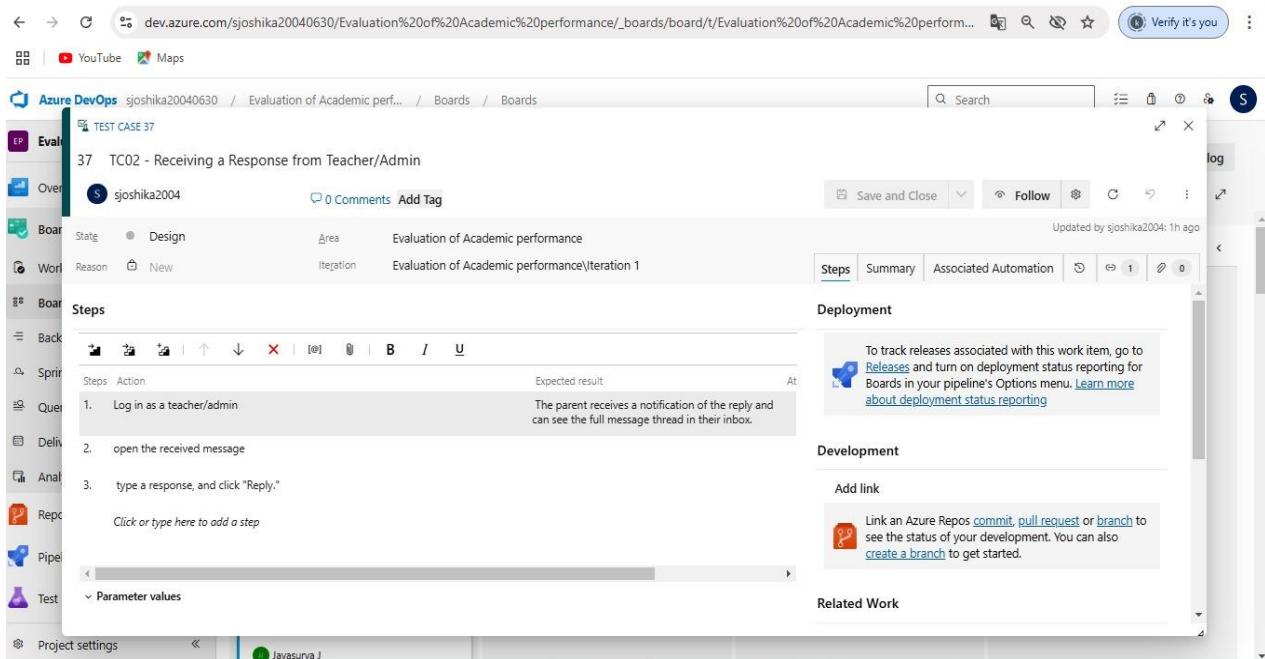
Development

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

Project settings Jayasurya J



TEST CASE 41

41 TC05 -Change Role from Parent to Teacher

sjoshika2004 0 Comments Add Tag

State: Design **Area:** Evaluation of Academic performance

Reason: New **Iteration:** Evaluation of Academic performance\Iteration 1

Steps:

Steps	Action	Expected result
1.	Log in as Administrator.	
2.	Find and open an existing user with role Parent.	
3.	Change role to Teacher and click Save	Role updates to Teacher.

Confirmation message: "User role updated successfully."

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:

TEST CASE 42

42 TC06 - Generate Grades and Attendance Report Successfully

sjoshika2004 0 Comments Add Tag

State: Design **Area:** Evaluation of Academic performance

Reason: New **Iteration:** Evaluation of Academic performance\Iteration 1

Steps:

Steps	Action	Expected result
1.	Log in as a Student.	
2.	Navigate to the Reports section and select "Generate Report."	A report is generated showing the student and attendance records.
3.	Choose "Grades & Attendance" and click "Generate."	The report is viewable on screen and (PDF or Excel).

Confirmation message appears: "Report generated successfully."

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.

TEST CASE 39

39 TC04 - Assign Role to a New User

sjoshika2004 0 Comments Add Tag

State: Design **Area:** Evaluation of Academic performance

Reason: New **Iteration:** Evaluation of Academic performance|Iteration 1

Steps

Steps	Action	Expected result	At
1.	Login in as Administrator.	User is created successfully with the Student role assigned.	
2.	Go to User Management and click Create New User.		
3.	Fill in details, select role as Student, and click Save	Confirmation message: "User created and role assigned successfully."	

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

4. Installation of test

Test and feedback

Test & Feedback

Featured 4.2 ★ (175 ratings) Share

Extension Workflow & Planning 200,000 users

CAPTURE

- 1. Screenshots
- 2. Notes
- 3. Screen recordings
- 4. Image action log
- 5. Page load data

Overview

5. Running the test cases

The screenshot displays two windows related to Azure Test Plans.

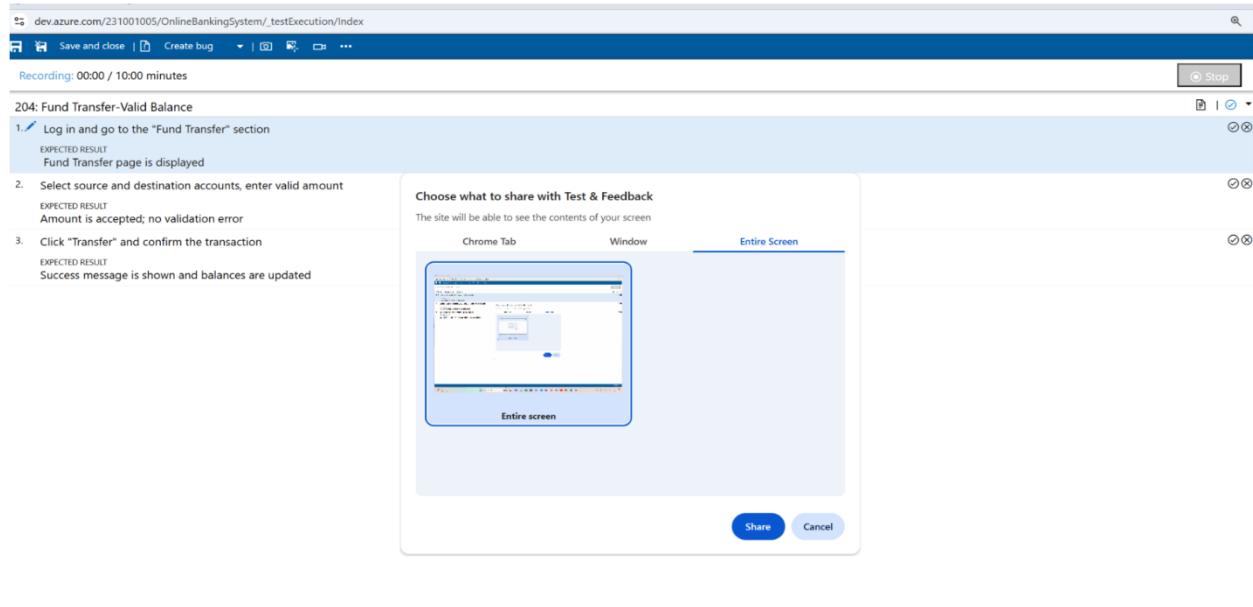
Top Window: A browser window titled "Evaluation of Academic performance" showing the "Test Points (3 items)" for test case ID 46. The table lists three test points:

Title	Outcome	Order	Test Case Id	Configuration	Tester
TC08 - Mark Attendance for All Students in a Class	Passed	1	45	Windows 10	sjoshika2004
TC09 - Attempt to Submit Attendance Without Selecting Status	Failed	2	47	Windows 10	sjoshika2004
TC10 -View and Edit Previously Marked Attendance	Passed	3	48	Windows 10	sjoshika2004

Bottom Window: A "Runner - Test Plans - Google Chrome" window showing a test step for test case 42: "TC06 - Generate Grades and Attendance Report Successfully". The step details are as follows:

- Log in as a **Student**.
- Navigate to the **Reports** section and select "**Generate Report**".
EXPECTED RESULT:
A report is generated showing the student's grades and attendance records.
- Choose "**Grades & Attendance**" and click "**Generate**".
EXPECTED RESULT:
The report is viewable on screen and downloadable (PDF or Excel).
Confirmation message appears: "Report generated successfully."

6.Recording the test case



Recording: 00:00 / 10:00 minutes

204: Fund Transfer-Valid Balance

1. Log in and go to the "Fund Transfer" section
EXPECTED RESULT
Fund Transfer page is displayed

2. Select source and destination accounts, enter valid amount
EXPECTED RESULT
Amount is accepted; no validation error

3. Click "Transfer" and confirm the transaction
EXPECTED RESULT
Success message is shown and balances are updated

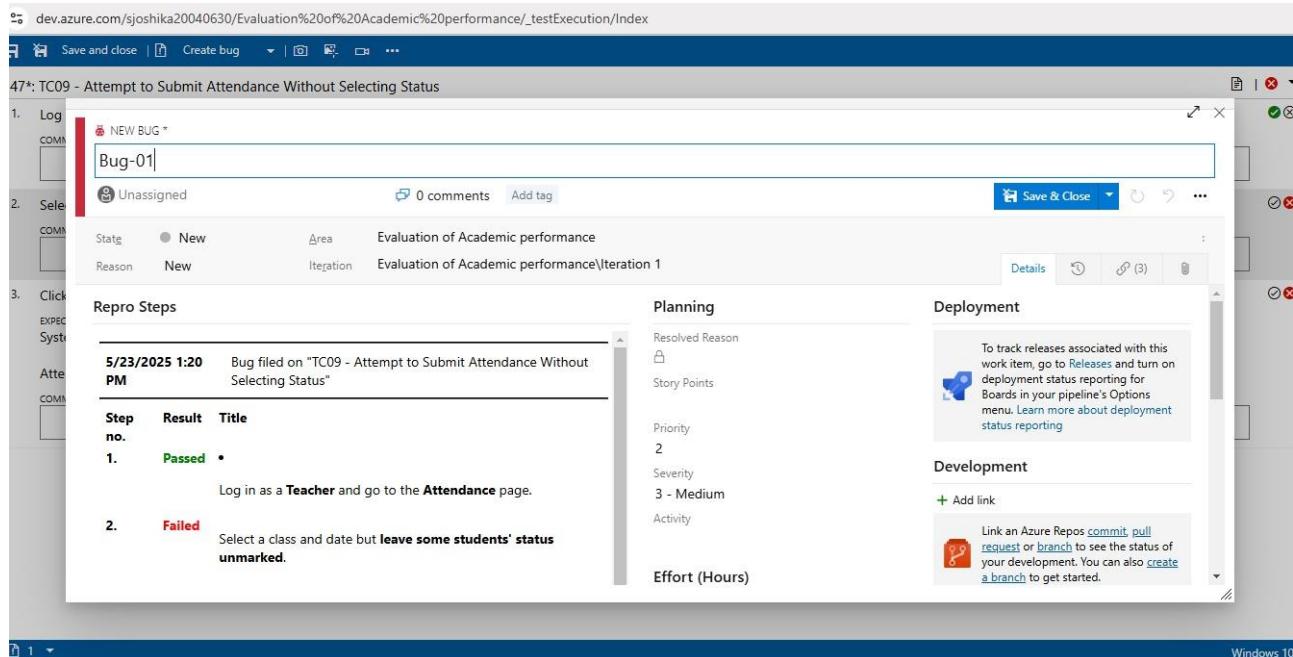
Choose what to share with Test & Feedback
The site will be able to see the contents of your screen

Chrome Tab Window Entire Screen

Entire screen

Share Cancel

7.Creating the bug



Save and close | Create bug

47*: TC09 - Attempt to Submit Attendance Without Selecting Status

1. Log COMM
2. Select COMM
3. Click EXPED System
Atte COMM

NEW BUG *

Bug-01

Unassigned

0 comments Add tag

Save & Close

1. Step no. Result Title
1. Passed •
Log in as a Teacher and go to the Attendance page.

2. Failed
Select a class and date but leave some students' status unmarked.

5/23/2025 1:20 Bug filed on "TC09 - Attempt to Submit Attendance Without PM Selecting Status"

Planning

Resolved Reason
Story Points
Priority 2
Severity 3 - Medium
Activity

Effort (Hours)

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.

Runner - Test Plans - Google Chrome

dev.azure.com/sjoshika20040630/Evaluation%20of%20Academic%20performance/_testExecution/Index

44*: TC07 - Attempt to Generate Report Without Data

1. Log NEW BUG *

2. Navi

3. Click

EXPEC
Syst
Rep

State: New Area: Evaluation of Academic performance

Reason: New Iteration: Evaluation of Academic performance\Iteration 1

Repro Steps

5/23/2025 1:22 Bug filed on "TC07 - Attempt to Generate Report Without PM"

Step no.	Result	Title
1.	Passed	Log in as a Student who has no grades or attendance records.
2.	Passed	Navigate to the Reports section and click " Generate Grades & Attendance ".

Planning

Resolved Reason: Unassigned

Story Points: 0

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.

8. Test case results

← → ⌂ dev.azure.com/sjoshika20040630/Evaluation%20of%20Academic%20performance/_testPlans/charts?planId=34&suitId=46

YouTube Maps

Azure DevOps sjoshika20040630 / Evaluation of Academic perf... / Test Plans / Evaluation of Academic perf...

Evaluation of Academic performance

Overview Boards Repos Pipelines Test Plans Test plans Progress report Runs Artifacts Project settings

Evaluation of Academic performance

May 23 - May 30 Current

100% run, 75% passed. View report

Test Suites

Filter suites by name

Evaluation of Academic performance Team_S...

- 7 : As a teacher, I want to enter grades...
- 11 : As a teacher, I want to mark daily ...
- 19 : As a Student, I want to generate a...
- 23 : As an Administrator, I want to ma...
- 32 : As a Parent, I want to send messa...

11 : As a teacher, I want to mark daily attendance (Present/Absent/Late) for my classes. (ID: 46)

Execute Chart

+ New

11 : As a teacher, I want to mark dail...

3

1

2

Passed Failed

9. Test report summary

The screenshot shows the Azure DevOps Work Items page for a bug titled 'Bug-02'. The bug was filed by 'Janani G' and is currently 'New'. It is assigned to 'Evaluation of Academic performance' and 'Iteration 1'. The 'Repro Steps' section details the steps to reproduce the bug, which failed at step 3. The 'Planning' section includes fields for Resolved Reason, Story Points, Priority (2), Severity (3 - Medium), Activity, and Effort (Hours). The 'Deployment' and 'Development' sections provide links to deployment status reporting and development tools.

- Assigning bug to the developer and changing state

The screenshot shows the same bug report after changes have been made. The developer 'Janani G' has been assigned to the task, and the state has been changed to 'In Progress'. The rest of the information, including repro steps, planning details, and deployment status, remains the same as in the previous screenshot.

10. Progress report

The screenshot shows the 'Evaluation of Academic performance' project in Azure DevOps. The left sidebar has 'Test Plans' selected. The main area displays a 'Progress report' for the 'Evaluation of Academic performance Team_Stories_1...' test plan. It includes a summary card with metrics like 1 Test plan, 12 Test points, and a 100% pass rate, and a donut chart showing 75% passed. To the right is a 'Outcome trend' chart for the last 14 days, showing a sharp increase in tests run from May 22nd to May 23rd.

11. Changing the test template

The screenshot shows the 'Organization Settings' page for project '231001005'. The left sidebar lists 'General', 'Security', and 'Boards' sections. The main area shows a list of 'All processes' under the 'Processes' tab. It includes 'Basic (default)', 'Agile' (selected, showing '231001005 Agile'), 'Scrum', and 'CMMI'. A 'Fields' tab is also visible.

12. View the new test case template

Add a field to Test Case X

Definition

Add a field to store custom, queryable data about your work items.

Use an existing field
Field

Create a field
Name
Type

Description

[Learn more](#)

Add field Cancel

Azure DevOps 231001005 / Settings / Process Search AM

Organization Settings 231001005

Search Settings

General

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

Security

- Security overview
- Policies
- Permissions

Boards

Process

All processes > 231001005 Agile > Test Case

Layout States Rules

New field New group New page Get extensions

Steps	Custom	Recent test results
<input type="text" value="Text (multiple lines)"/>	<input type="text" value="Test Type"/> Text (single line)	<input type="text" value="Recent test case results"/>
	<input type="text" value="Deployment"/>	<input type="text" value="Deployments"/>
	<input type="text" value="Development"/>	<input type="text" value="Links"/>
	<input type="text" value="Related Work"/>	

Add a field ...

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
Date: 25/04/2025	

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.

Azure Load Testing is a fully managed load-testing service that makes it easy to generate high-scale load and identify performance bottlenecks. [Learn more](#)

Project details

Select the subscription to manage deployed resources and costs. Use resource groups like folders to organize and manage all your resources.

Subscription *: Azure for Students

Resource group *: (New) Evaluation_of_Academic_performance

Instance details

Name *: ACADEMICAPP

Region *: East Asia

Buttons: Previous, Next, Review + create

Validation passed.

Basics

Subscription	Azure for Students
Resource group	Evaluation_of_Academic_performance
Name	ACADEMICAPP
Region	East Asia

Encryption

Encryption type	MMK
-----------------	-----

Buttons: Previous, Next, Create

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.

The screenshot shows two Microsoft Azure portals. The top portal displays the 'Overview' of a deployment named 'Microsoft.CloudNativeTesting1748010570474'. A success message indicates 'Deployment succeeded' for the deployment to 'Evaluation_of_Academic_performance'. The bottom portal shows the 'Create a URL-based test' step, where validation has passed. The 'Review + create' tab is selected, and the 'Create' button is visible at the bottom.

Deployment Details:

- Deployment name: Microsoft.CloudNativeTesting1748010570474
- Subscription: Azure for Students
- Resource group: Evaluation_of_Academic_performance
- Start time: 23/5/2025, 7:59:59 pm
- Correlation ID: ca13a218-740b-42a9-8b85-0946760c4...

Next steps:

- Go to resource
- Go to resource group

Create a URL-based test

Validation passed.

Basics

Test tool	JMeter
Test name	Test_5/23/2025_8:03:57 PM
Test description	https://yourapi.com/products
Debug mode	Disabled

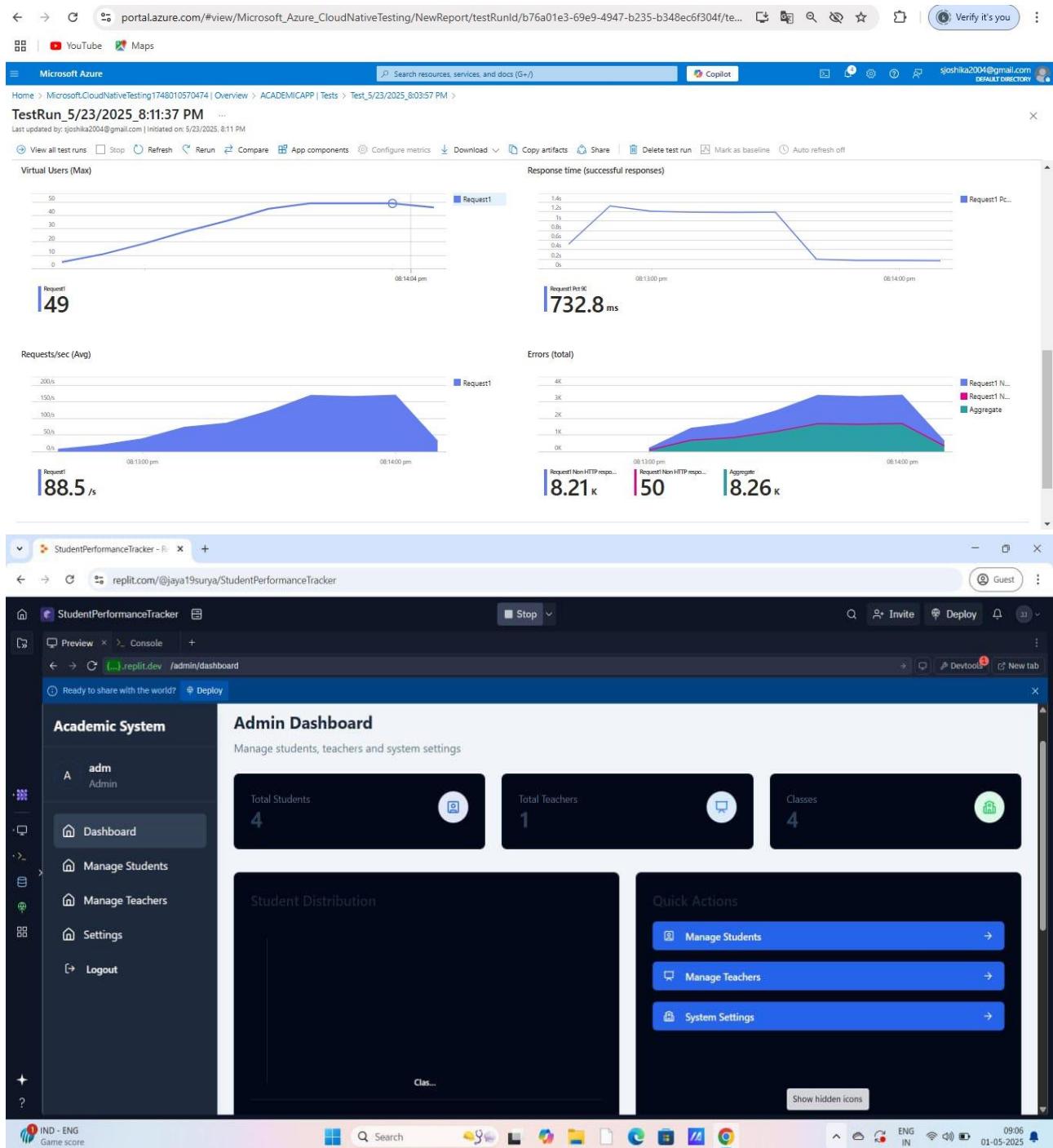
Test plan

Test method	URL
Requests	Request1
Input data files	

Load

Previous Next **Create**

Load Testing



The screenshot shows the 'StudentPerformanceTracker' application running on a Windows desktop. The main window title is 'StudentPerformanceTracker - Replit'. The dashboard features a dark blue header with the text 'Welcome, kavi' and 'Manage your class and student performance'. On the left, a sidebar menu includes 'Dashboard' (selected), 'Manage Marks', 'Attendance', 'Announcements', 'Schedule Meetings', and 'Logout'. The central area has three cards: 'Total Students' (4), 'Pending Evaluations' (8), and 'Parent Meetings' (0). Below these are two sections: 'Students Overview' (listing students by ID, name, class, and status) and 'Upcoming Meetings' (showing 'No upcoming meetings' with a 'Schedule Meeting' button). The taskbar at the bottom shows various pinned icons and the date/time: 01-05-2025, 09:05.

The screenshot shows the 'Manage Student Marks' page within the 'StudentPerformanceTracker' application. The main window title is 'StudentPerformanceTracker - Replit'. The page title is 'Manage Student Marks' with the sub-instruction 'Add, edit, and view student performance marks'. The sidebar menu is identical to the dashboard. The central area displays a table of student marks for the subject 'Physics'. The table columns are STUDENT ID, NAME, MARKS, ASSIGNMENT, and ACTIONS. The data rows are:

STUDENT ID	NAME	MARKS	ASSIGNMENT	ACTIONS
ST001	John Doe	87/100	80	
1	surya	85/100	50	
surya(1)	surya(1)	Not set	Not set	
ST002	jay	Not set	Not set	

The taskbar at the bottom shows various pinned icons and the date/time: 01-05-2025, 09:05.

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

Exp.No: 10

Date: 02/05/2025

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 Evaluation of Academic Performance project.

GITHUB PROJECT STRUCTURE

The screenshot shows a GitHub repository page for 'Evaluation-of-Academic-Performance'. The repository is public and has 1 branch and 0 tags. The main branch has 2 commits. The commits are listed as follows:

File / Action	Description	Time
README.md	Create README.md	2 minutes ago
SC PROJECT REPORT (1).pdf	Add files via upload	now
StudentPerformanceTracker (1).zip	Add files via upload	now
azure account pics.zip	Add files via upload	now
diagrams.zip	Add files via upload	now
load testing.zip	Add files via upload	now
poker estimation.zip	Add files via upload	now
progress report.zip	Add files via upload	now
sprint planning.zip	Add files via upload	now
testing and test cases.zip	Add files via upload	now

The repository has 0 stars, 0 forks, and 0 watching. There are no releases or packages published.

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.