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EXP NO: 1

AZURE DEVOPS ENVIRONMENT SETUP

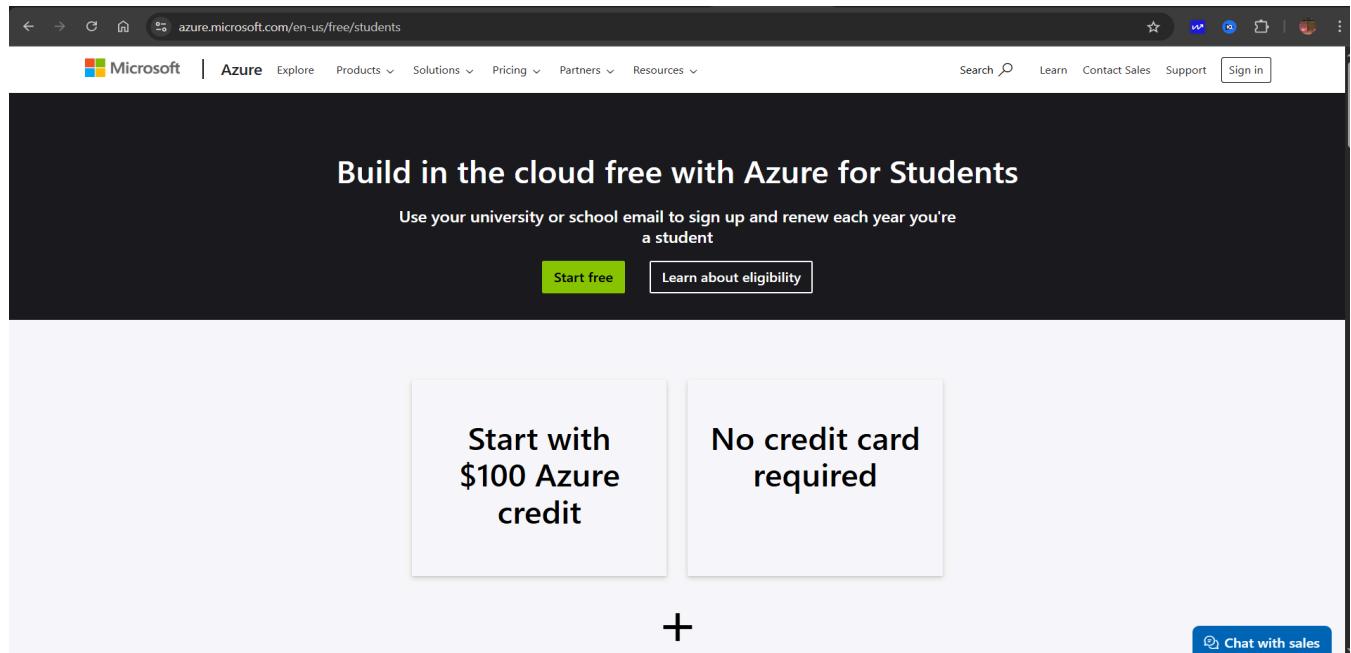
AIM

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/getstarted/azureportal>. 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>



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

2. Azure home page

The screenshot shows the Microsoft Azure home page. At the top, there's a navigation bar with icons for back, forward, refresh, and search, followed by the URL 'portal.azure.com/#home' and the Microsoft Azure logo. A search bar with the placeholder 'Search resources, services, and docs (G+J)' is located next to it. On the right side of the header, there's a user profile icon with the email '231501182@rajalakshm...'.

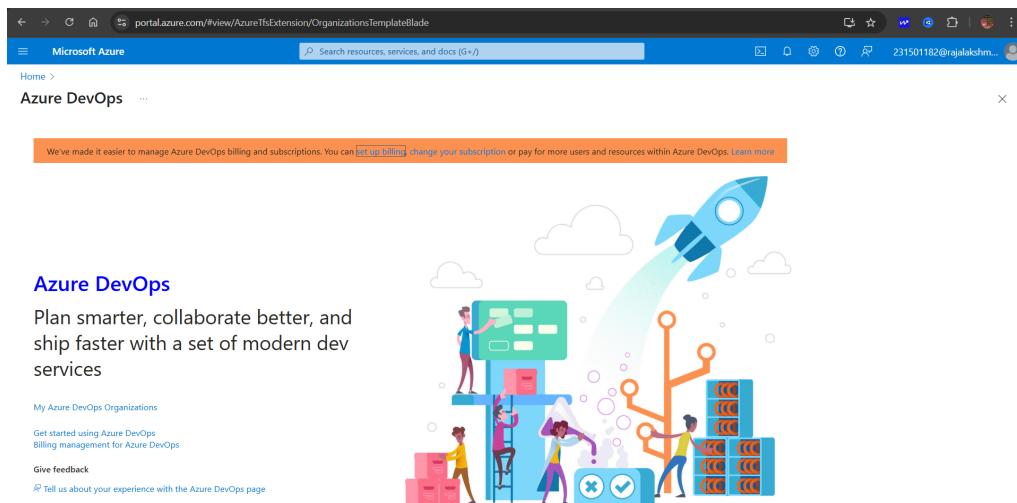
The main content area starts with a 'Welcome to Azure!' message and a note about free trials. It features three large cards: 'Start with an Azure free trial', 'Manage Microsoft Entra ID', and 'Azure for Students'. Below these are sections for 'Azure services' (with icons for Create a resource, Azure DevOps organizations, Quickstart Center, Azure AI foundry, Kubernetes services, Virtual machines, App Services, Storage accounts, and SQL databases) and 'Resources'.

A search bar at the bottom of the page has 'azure devops' typed into it, and a dropdown menu shows suggestions like 'All', 'Services (99+)', 'Resources', 'Azure DevOps organizations', 'Azure Cosmos DB', etc.

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

This screenshot is identical to the one above, but the search bar at the bottom now contains the text 'Azure DevOps Organizations'. The dropdown menu below the search bar is open, showing suggestions such as 'All', 'Services (99+)', 'Resources', 'Azure DevOps organizations', 'Azure Cosmos DB', and 'Azure Deployment Environments'.

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.

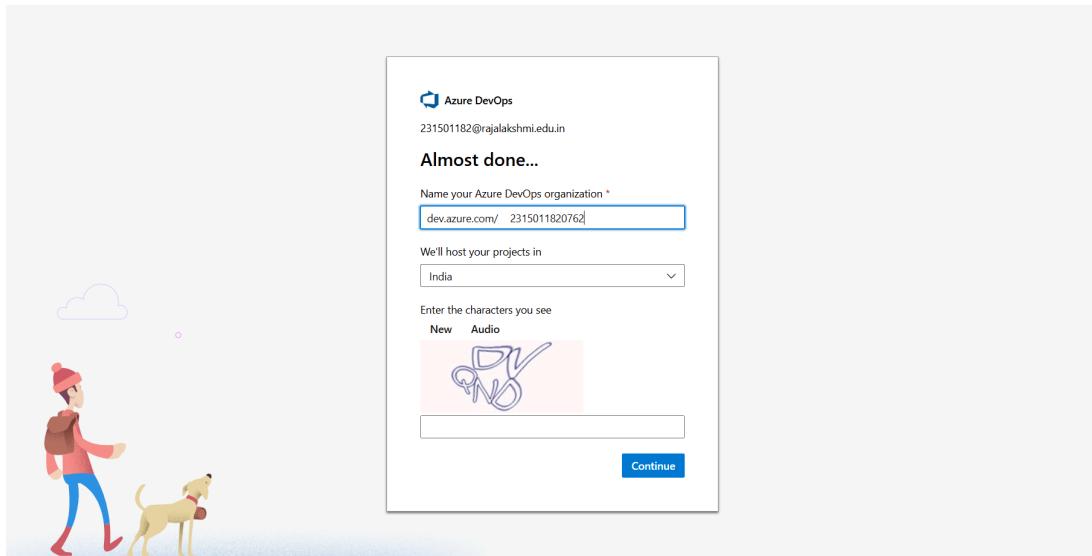
EXP NO: 2

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 *

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

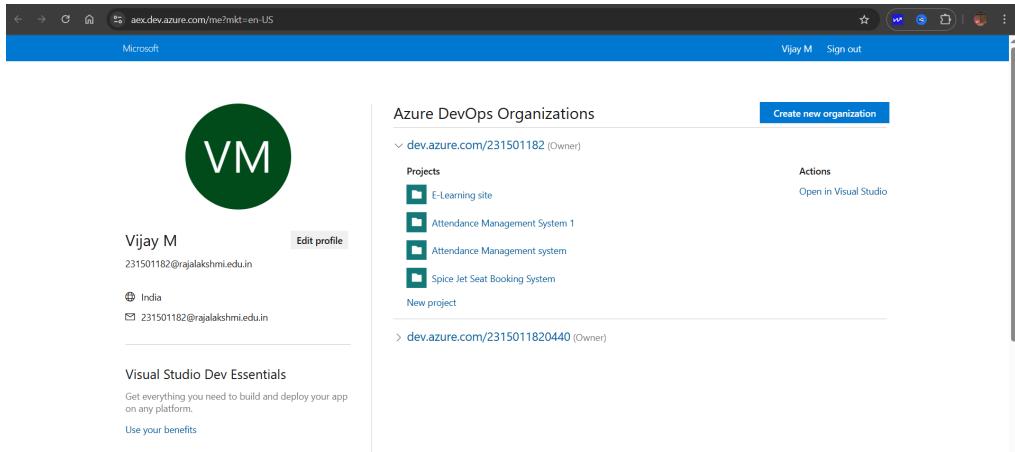
Version control [?](#)
Git

Work item process [?](#)
Basic

Cancel **Create**

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

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.



Azure DevOps Organizations

Vijay M Sign out

VM

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Visual Studio Dev Essentials
Get everything you need to build and deploy your app on any platform.
Use your benefits

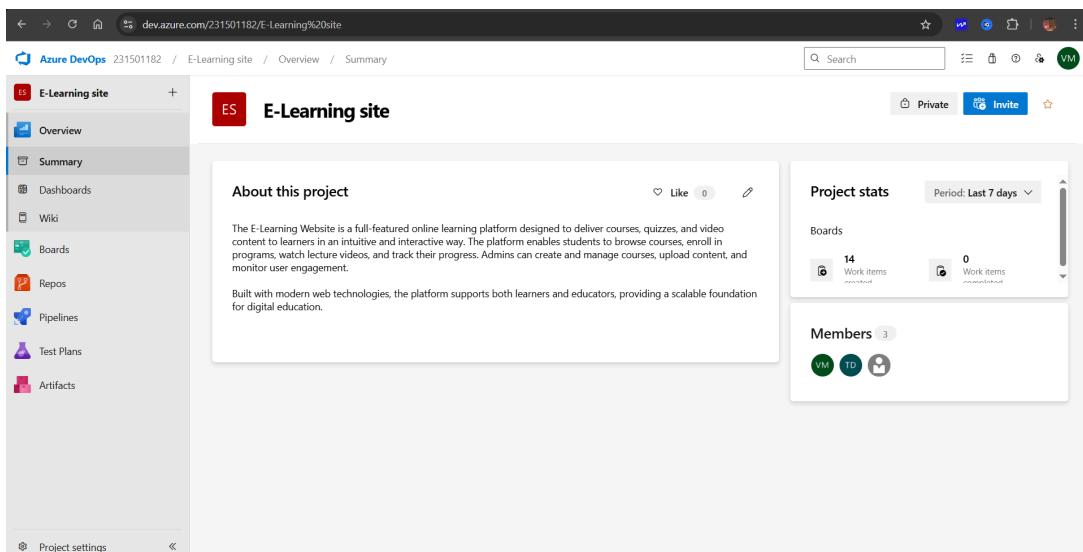
Projects

- E-Learning site
- Attendance Management System 1
- Attendance Management system
- Spice Jet Seat Booking System

New project

Create new organization

4. Project dashboard



dev.azure.com/231501182/E-Learning%20site

Azure DevOps 231501182 / E-Learning site / Overview / Summary

ES E-Learning site

About this project

The E-Learning Website is a full-featured online learning platform designed to deliver courses, quizzes, and video content to learners in an intuitive and interactive way. The platform enables students to browse courses, enroll in programs, watch lecture videos, and track their progress. Admins can create and manage courses, upload content, and monitor user engagement.

Built with modern web technologies, the platform supports both learners and educators, providing a scalable foundation for digital education.

Project stats

Period: Last 7 days

Boards

14 Work items

0 Work items

Members 3

VM TB

Private Invite

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.

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

The screenshot shows the Azure DevOps interface for the 'E-Learning site' project. The left sidebar includes links for Overview, Boards, Work items, Boards, Backlogs, Sprints, Queries, Delivery Plans, Analytics views, Repos, Pipelines, Test Plans, Artifacts, and Project settings. The main area displays the 'Backlog' tab under the 'E-Learning site Team' board. A table lists five Epics: 'User Management', 'Course Management', 'Enrollment and Progress Tracking', 'Assessments and Quizzes', and 'Communication and Support'. The backlog also features a 'Planning' sidebar for the 'E-Learning site Team backlog' with a 'Sprint 3' entry from 5/7/2025 to 5/21/2025. A 'New Sprint' button is visible in the bottom right of the planning sidebar.

Order	Work Item Type	Title	State	Effort	Business Value
1	Epic	> User Management	Active		
2	Epic	> Course Management	New		
3	Epic	> Enrollment and Progress Tracking	New		
4	Epic	> Assessments and Quizzes	New		
5	Epic	> Communication and Support	New		

RESULT

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

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

EXP NO:3

SETTING UP EPICS, FEATURES, AND USER STORIES FOR PROJECT PLANNING

AIM

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

Create Epic, Features, User Stories, Task

The screenshot shows the Azure DevOps Boards Backlog view for the 'E-Learning site' team. The backlog is organized into two main Epics:

- Epic 1: User Management**
 - Feature: User registration and login
 - User Story: As a new user, I want to register using my email and password.
 - Feature: Role-based access (Student, Instructor, Admin)
 - User Story: As a student, I want to update my profile so that I can...
 - User Story: As an instructor, I want to log in securely so that I can...
 - User Story: As an admin, I want to assign roles to users so that they...
- Epic 2: Course Management**
 - Feature: Course creation and editing
 - User Story: As an instructor, I want to create a new course so that...
 - Feature: Module and lesson management
 - Feature: Upload content

A sidebar on the right shows the 'Planning' section for 'Sprint 3' (5/7/2025 - 5/21/2025), which includes a 'New Sprint' button.

1. Fill in Epics

The screenshot shows the details of an epic work item titled 'User Management'. The work item has the following properties:

- State:** Active
- Area:** E-Learning site
- Reason:** Implementation started
- Iteration:** E-Learning site\Sprint 1

The 'Planning' tab is selected, showing the following fields:

- Priority:** 1
- Risk:** None
- Effort:** None
- Business Value:** None
- Time Criticality:** None

The 'Deployment' tab contains a note about tracking releases and deployment status reporting. The 'Development' tab includes a 'Add link' section for linking to Azure Repos or GitHub. The 'Related Work' tab is also visible.

2.Fill in Features

The screenshot shows the Azure DevOps interface for creating a new work item. The title bar indicates 'Azure DevOps 231501182 / E-Learning site / Boards / Backlogs'. The main area displays a 'FEATURE 27' card for 'User registration and login'. The card includes details such as 'Owner: Vijay M', 'Comments: 0', 'Tags: Add Tag', 'State: Active', 'Area: E-Learning site', 'Reason: Implementation started', 'Iteration: E-Learning site\Sprint 1', and 'Priority: 2'. The 'Planning' section shows 'Risk' and 'Business Value' fields. The 'Deployment' section includes a note about tracking releases and a link to 'Releases'. The 'Development' section has an 'Add link' button and a note about linking to Azure Repos. The 'Related Work' section is currently empty. A sidebar on the left lists various project management tools like Boards, Backlogs, Sprints, Queries, Deliverables, Analytics, Repositories, Pipelines, Tests, and Artifacts.

3.Fill in User Story Details

The screenshot shows the Azure DevOps interface for creating a new work item. The title bar indicates 'Azure DevOps 231501182 / E-Learning site / Boards / Backlogs'. The main area displays a 'USER STORY 30' card for 'As a new user, I want to register using my email and password so I can access the platform.' The card includes details such as 'Owner: 231501170@rajalakshmi.edu.in', 'Comments: 0', 'Tags: Add Tag', 'State: New', 'Area: E-Learning site', 'Reason: New', 'Iteration: E-Learning site\Sprint 1', and 'Priority: 2'. The 'Planning' section shows 'Story Points' and 'Risk'. The 'Classification' section shows 'Value area: Business'. The 'Deployment' section includes a note about tracking releases and a link to 'Releases'. The 'Development' section has an 'Add link' button and a note about linking to Azure Repos. The 'Related Work' section is currently empty. A sidebar on the left lists various project management tools like Boards, Backlogs, Sprints, Queries, Deliverables, Analytics, Repositories, Pipelines, Tests, and Artifacts.

RESULT

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

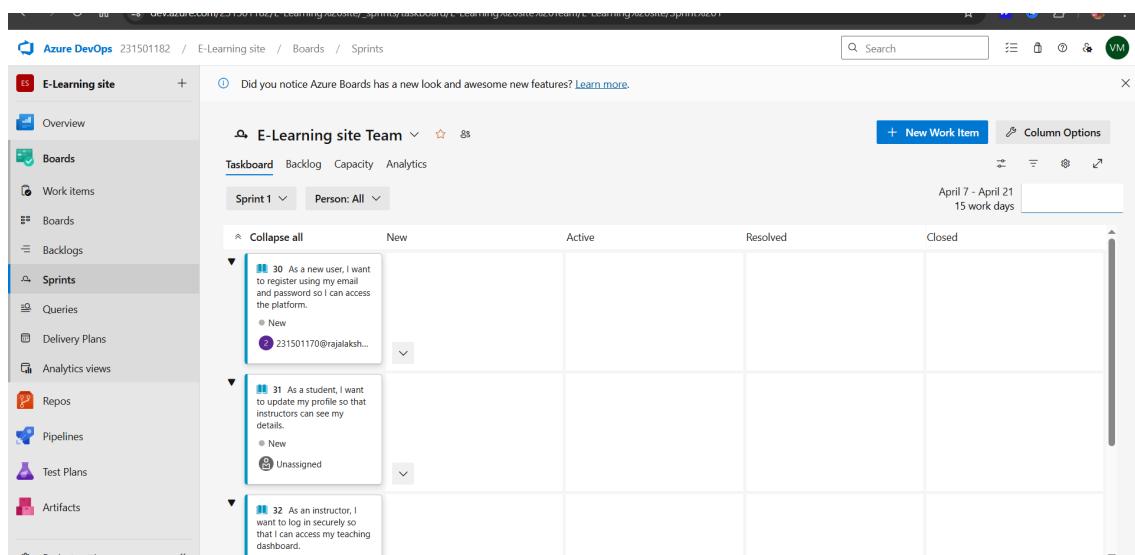
EXP NO:
4

SPRINT PLANNING

AIM

To assign user story to specific sprint for the E-Learning site.

Sprint Planning Sprint 1



The screenshot shows the Azure Boards interface for the 'E-Learning site' project. The left sidebar is collapsed, showing options like Overview, Boards, Work items, Backlogs, Sprints, Queries, Delivery Plans, Analytics views, Repos, Pipelines, Test Plans, and Artifacts. The main area is titled 'E-Learning site Team' and displays a taskboard for 'Sprint 1'. The board has columns for New, Active, Resolved, and Closed. There are three user stories listed under the New column:

- User Story 30:** As a new user, I want to register using my email and password so I can access the platform.
Status: New
Assignee: 231501170@rajalaksh...
- User Story 31:** As a student, I want to update my profile so that instructors can see my details.
Status: New
Assignee: Unassigned
- User Story 32:** As an instructor, I want to log in securely so that I can access my teaching dashboard.
Status: Unassigned

The top right of the board shows the sprint duration: April 7 - April 21, 15 work days. A 'New Work Item' button and 'Column Options' menu are also visible.

Sprint 2

The screenshot shows the Azure DevOps Taskboard for the 'E-Learning site' project. The board is set up for 'Sprint 2' and displays three backlog items under the 'New' column. Each item is a user story:

- Item 37: As an instructor, I want to create a new course so that students can enroll in it. Status: New, Unassigned.
- Item 38: As an instructor, I want to organize lessons into modules so that the course structure is clear. Status: New, Unassigned.
- Item 39: As an instructor, I want to upload videos and PDFs so that students have learning material. Status: New, Unassigned.

Sprint 3

The screenshot shows the Azure DevOps Taskboard for the 'E-Learning site' project. The board is set up for 'Sprint 2' and displays the same three backlog items as in Sprint 2:

- Item 37: As an instructor, I want to create a new course so that students can enroll in it. Status: New, Unassigned.
- Item 38: As an instructor, I want to organize lessons into modules so that the course structure is clear. Status: New, Unassigned.
- Item 39: As an instructor, I want to upload videos and PDFs so that students have learning material. Status: New, Unassigned.

RESULT

The Sprints have been created for E-Learning site.

EXP NO:5

POKER ESTIMATION

AIM

Create Poker Estimation for the user stories –E-Learning site.

Poker Estimation

The screenshot shows a detailed view of a User Story card in the Azure DevOps interface. The card is titled "USER STORY 30" and has the ID "30". The description states: "As a new user, I want to register using my email and password so I can access the platform." The card includes the following details:

- Owner:** 231501170@rajalakshmi.edu.in
- Comments:** 0
- Add Tag:** (button)
- State:** New
- Area:** E-Learning site
- Reason:** New
- Iteration:** E-Learning site\Sprint 1

The card is updated by Vijay M on April 7. It features three main sections: **Description**, **Planning**, and **Deployment**.

- Description:** Click to add Description.
- Planning:** Story Points, Priority (set to 2), Risk.
- Deployment:** A note: "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](#)".

Below the main card, there is a **Discussion** section with a comment input field: "Add a comment. Use # to link a work item, @ to mention a person, or ! to link a pull request." and a "switch to Markdown editor" link.

The **Classification** section lists Value area (Business).

The **Development** section includes an "Add link" button and a note: "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."

The **Related Work** section lists a single item: "User registration and login" (27 comments, updated April 7, active).

RESULT

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

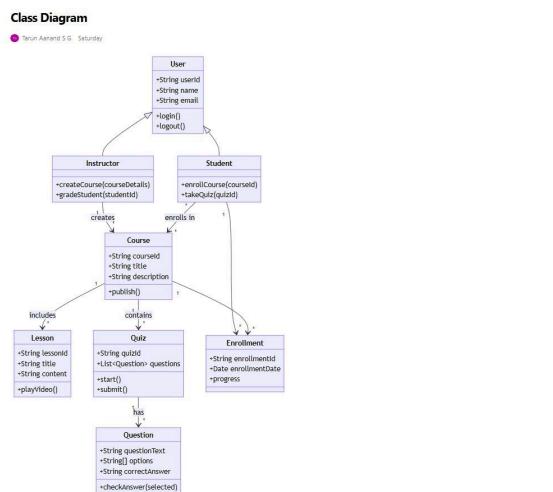
EXP NO: 6

DESIGNING CLASS AND SEQUENCE DIAGRAMS FOR PROJECT ARCHITECTURE

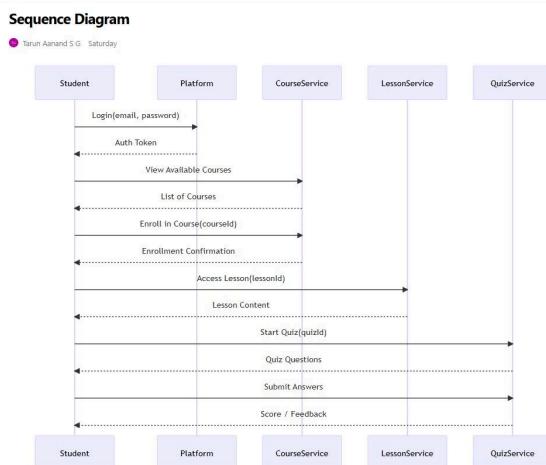
AIM

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 E-Learning site.

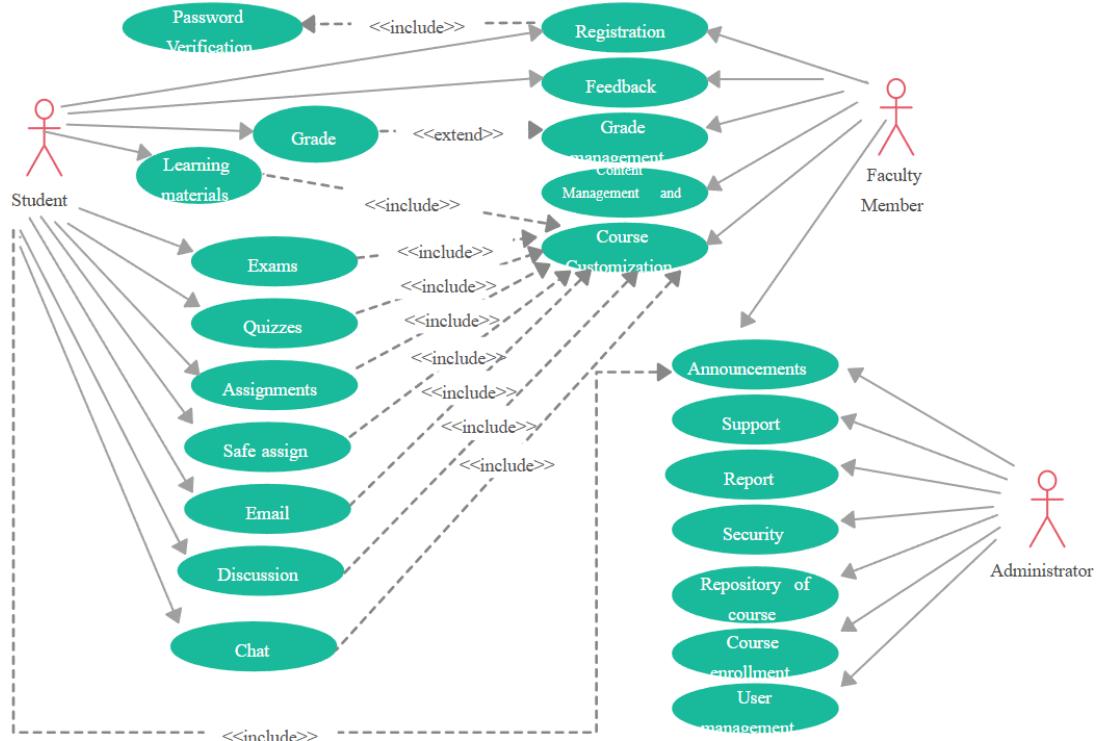
EXP NO: 7

DESIGNING USE-CASE AND ACTIVITY DIAGRAMS FOR PROJECT STRUCTURE

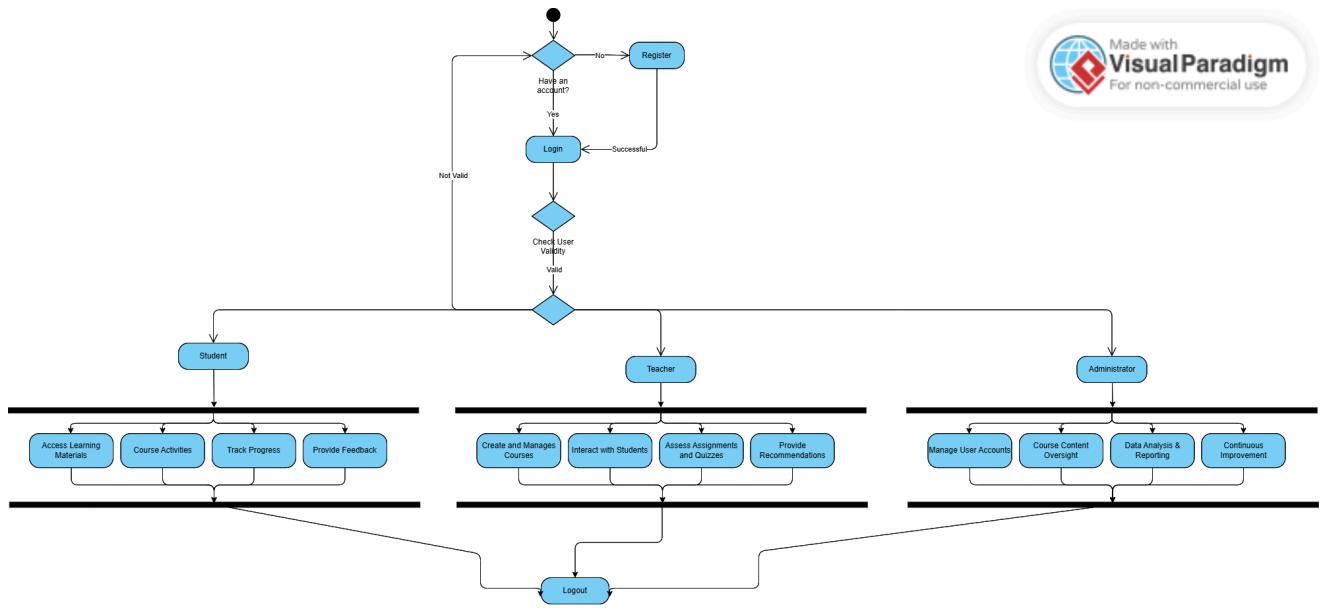
AIM

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

7A. Use-Case Diagram



7B. Activity Diagram



RESULT

The Use-Case Diagram and Activity Diagram is designed Successfully for the E-Learning site.

EXP NO: 8	TESTING TEST PLANS AND TEST CASES
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AIM

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

Test Planning and Test Case Test Case Design Procedure

1. Understand Core Features of the Application

- User Login
-

2. Define User Interactions

- Each test case simulates a real user behaviour (e.g., logging in, submitting quizzes, viewing results)

3. Design Happy Path Test Cases

- Focused on validating that all core functionalities work correctly under normal conditions
- Example: Player registers and logs in, submits quizzes and views results

4. Design Error Path Test Cases

- Simulate invalid inputs, system issues or failed actions to ensure proper error handling.
- Example: Login with invalid credentials, submission without attachments, unauthorized access to admin panel.

5. Break Down Steps and Expected Results

- Each test case includes a clear sequence of actions and expected results. .
- Ensures both manual testers and automation tools can follow the process easily.

6. Use Clear Naming and IDs

- Test cases are uniquely identifies (e.g., TC01 – Valid Login, TC03 – Invalid Password). • Facilities easy mapping to features and tracking in Azure DevOps.

7. Separate Test

- Grouped by functionality such as:
 - Login and Registration
 - Quizzes Submission
 - Viewing

Results

- Admin Functions

• Improves organization and enables focused execution in Azure DevOps.

8. Prioritize and Review

- High-priority assigned to critical workflows like login, quizzes and results.
- Reviewed for completeness, accuracy and alignment with user stories and features definition.

1. New test plan

The screenshot shows the Azure DevOps Test Management interface. On the left, there's a sidebar with project navigation: Overview, Boards, Repos, Pipelines, and Test Plans. Under Test Plans, it lists: Test plans, Progress report, Parameters, Configurations, Runs, and Artifacts. At the bottom of the sidebar is a 'Project settings' link. The main area is titled 'New Test Plan'. It has three input fields: 'Name *' containing 'user authentication', 'Area Path *' containing 'E-Learning site', and 'Iteration *' containing 'E-Learning site\Sprint 2'. Below these fields are two buttons: 'Create' (highlighted in blue) and 'Cancel'. The top of the page shows the URL 'dev.azure.com/231501182/E-Learning%20site/_testManagement/new' and a standard browser header with search and refresh buttons.

2. Test suite

The screenshot shows the Azure DevOps interface for a project titled 'E-Learning site'. The left sidebar navigation includes 'Overview', 'Boards', 'Repos', 'Pipelines', 'Test Plans', 'Test plans', 'Artifacts', and 'Project settings'. Under 'Test Plans', 'Test suites' are listed. A specific test suite named 'User Registration and Login (4)' is selected. The main content area displays the 'User Registration and Login (ID: 53)' test plan. It has tabs for 'Define', 'Execute' (which is selected), and 'Chart'. The 'Test Points (4 items)' section lists four test points with their outcomes:

Title	Outcome	Order	Test Case Id
Verify user registration with valid data	Passed	1	54
Verify email validation during registration	Passed	2	55
Verify login with valid credentials	Passed	3	56
Verify error message for incorrect password	Failed	4	57

3. Test case

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

E-Learning site— Test Plans

USER STORIES

- **As an admin**, I want to log in to manage courses, videos, and users (ID: 1).
- **As a learner**, I want to register and log in so I can access learning content securely (ID: 2).
- **As an admin**, I want to assign roles (admin/learner) to control platform access (ID: 3).
- **As a learner**, I want to enroll in courses and track my learning progress (ID: 4).
- **As an admin**, I want to upload and manage course materials and videos (ID: 5).
- **As a learner**, I want to take quizzes and view instant feedback to test my knowledge (ID: 6).
- **As an admin**, I want to view reports of learner performance across all courses (ID: 7).
- **As a learner**, I want to download my certificate after completing a course (ID: 8).

✓ TEST SUITES

- ◆ **Test Suite: TS01 – Login & Registration (ID: 101)**

1. TC01 – Valid Registration

Action:

Navigate to the registration page. Fill in valid username, email, and password. Click "Register".

Expected Result:

User is registered successfully and redirected to login page.

Type: Happy Path

2. TC02 – Invalid Email Format

Action:

Enter name and password but use an invalid email format.

Expected Result:

System displays validation error "Enter a valid email address."

Type: Error Path

3. TC03 – Login with Correct Credentials

Action:

Enter registered email and password. Click "Login".

Expected Result:

User is authenticated and redirected to the dashboard.

Type: Happy Path

4. TC04 – Login with Incorrect Password

Action:

Enter valid email and wrong password.

Expected Result:

Error message "Invalid username or password" is shown.

Type: Error Path

- ◆ **Test Suite: TS02 – Course Enrollment (ID: 105)**

1. TC05 – Enroll in a Course

Action:

Log in as learner. Select a course and click "Enroll".

Expected Result:

User is enrolled and course appears on their dashboard.

Type: Happy Path

2. TC06 – Enroll Without Login

Action:

Try enrolling in a course without logging in.

Expected Result:

Redirected to login page or shown "Login required" message.

Type: Negative Path

◆ **Test Suite: TS03 – Video Playback (ID: 110)**

1. TC07 – Start Course Video

Action:

Open an enrolled course and click on a lesson video.

Expected Result:

Video loads and plays correctly.

Type: Happy Path

2. TC08 – Video Controls

Action:

Play, pause, and seek video.

Expected Result:

Controls function as expected with no lag or error.

Type: Happy Path

◆ **Test Suite: TS04 – Quizzes & Assessments (ID: 115)**

1. TC09 – Complete Quiz with All Questions Answered

Action:

Start a quiz, answer all questions, click "Submit".

Expected Result:

Answers are saved, and score is calculated.

Type: Happy Path

2. TC10 – Submit Without Answering

Action:

Start quiz, skip questions, and try to submit.

Expected Result:

Prompt "You have unanswered questions" is shown.

Type: Error Path

3. TC11 – View Quiz Feedback

Action:

After submitting quiz, view results.

Expected Result:

Correct/incorrect answers and score are displayed.

Type: Happy Path

- ◆ **Test Suite: TS05 – Progress Tracking (ID: 120)**

1. TC12 – View Course Progress**Action:**

Navigate to "My Courses". Check progress bar for enrolled course.

Expected Result:

Progress bar reflects modules completed.

Type: Happy Path**2. TC13 – Progress Not Updated After Watching Video****Action:**

Watch a lesson video and return to dashboard.

Expected Result:

Progress should update; otherwise, log error.

Type: Error Path

- ◆ **Test Suite: TS06 – Certificate Generation (ID: 125)**

1. TC14 – Generate Certificate After Course Completion**Action:**

Complete all modules and quiz. Click "Generate Certificate".

Expected Result:

Certificate is created and available for download.

Type: Happy Path**2. TC15 – Certificate Access Before Completion****Action:**

Try to access certificate before completing all requirements.

Expected Result:

System prevents access and shows message "Complete the course to download certificate."

Type: Error Path**Test Cases**

Azure DevOps 231501182 / E-Learning site / Test Plans

E-Learning site

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

Test Plans

Mine All

Filter by title

Title	Test Plan ID	State	Area Path	Iteration	Assigned To	Star
Video Playback & Content Delivery	64	Active	E-Learning site	E-Learning site\Sprint 2	231501170@rajalaks	☆
Course Browsing & Enrollment	58	Active	E-Learning site	E-Learning site\Sprint 2	Vijay M	☆
User Registration and Login	52	Active	E-Learning site	E-Learning site\Sprint 1	Vijay M	☆

Loading completed

This screenshot shows the 'Test Plans' section of the Azure DevOps interface for the 'E-Learning site'. On the left, there's a sidebar with links for Overview, Boards, Repos, Pipelines, Test Plans, Test plans, Progress report, Parameters, Configurations, Runs, Artifacts, and Project settings. The 'Test Plans' link is highlighted. The main area displays a table of test plans with columns for Title, Test Plan ID, State, Area Path, Iteration, Assigned To, and a star icon. Three test plans are listed: 'Video Playback & Content Delivery' (ID 64, Active, Sprint 2), 'Course Browsing & Enrollment' (ID 58, Active, Sprint 2), and 'User Registration and Login' (ID 52, Active, Sprint 1). A 'Loading completed' message is visible at the bottom.

Ops 231501182 / E-Learning site / Test Plans / User Registration and Login

User Registration ... Apr 7 - Apr 21 Past 0% run. View report

Test Suites

Filter suites by name

User Registration and Login (4)

User Registration and Login (ID: 53)

Define Execute Chart

Test Points (4 items)

Title	Outcome	Order	Test C
Verify user registration with valid data	Passed	1	54
Verify email validation during registration	Passed	2	55
Verify login with valid credentials	Passed	3	56
Verify error message for incorrect password	Failed	4	57

This screenshot shows the details of the 'User Registration and Login' test plan (ID 53). It includes a navigation bar with 'User Registration ...' and date range, and a sidebar with 'Test Suites' and a filter. The main content area shows the 'Execute' tab selected, displaying a table of test points with columns for Title, Outcome, Order, and Test C. Four test points are listed: 'Verify user registration with valid data' (Passed, Order 1, Test C 54), 'Verify email validation during registration' (Passed, Order 2, Test C 55), 'Verify login with valid credentials' (Passed, Order 3, Test C 56), and 'Verify error message for incorrect password' (Failed, Order 4, Test C 57).

Quiz Creation (ID: 28)

Define Execute Chart

Test Cases (3 items)

	Order	Test Case Id	Assigned To	State
<input type="checkbox"/> Title	1	29	Ranjan S	Not Started
<input type="checkbox"/> Valid Quiz Creation	2	30	Ranjan S	Not Started
<input type="checkbox"/> Missing Title	3	31	Ranjan S	Not Started
<input type="checkbox"/> Invalid Time Range				

TEST CASE 29

29 Valid Quiz Creation

Ranjan S | 0 Comments | Add Tag

Status: Design | Date: Online Quiz System | Reason: Now | Revision: Online Quiz System/sprint 1 | Updated by Ranjan S on Thursday

Save and Close | Follow | Steps | Summary | Associated Automation | Deployment | Development | Related Work

Steps

1. Login as Admin/instructor.

2. Go to "Create Quiz" page.

3. Add questions with correct answers.

4. Click "Create/Save".

5. Quiz is created and listed.

Click or type here to add a step

Parameter values

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](#)

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.

User Registration and Login (ID: 53)

Define Execute Chart

Test Points (4 items)

	Outcome	Order	Test Case Id
<input type="checkbox"/> Title	Passed	1	54
<input type="checkbox"/> Verify user registration with valid data	Passed	2	55
<input type="checkbox"/> Verify email validation during registration	Passed	3	56
<input type="checkbox"/> Verify login with valid credentials	Failed	4	57
<input type="checkbox"/> Verify error message for incorrect password			

TEST CASE 54*

S4 Verify user registration with valid data

Vijay M 0 Comments Add Tag

Save and Close Follow Updated by Vijay M: 14h ago

State: Design Area: E-Learning site Iteration: E-Learning site/Sprint 1

Steps Summary Associated Automation

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

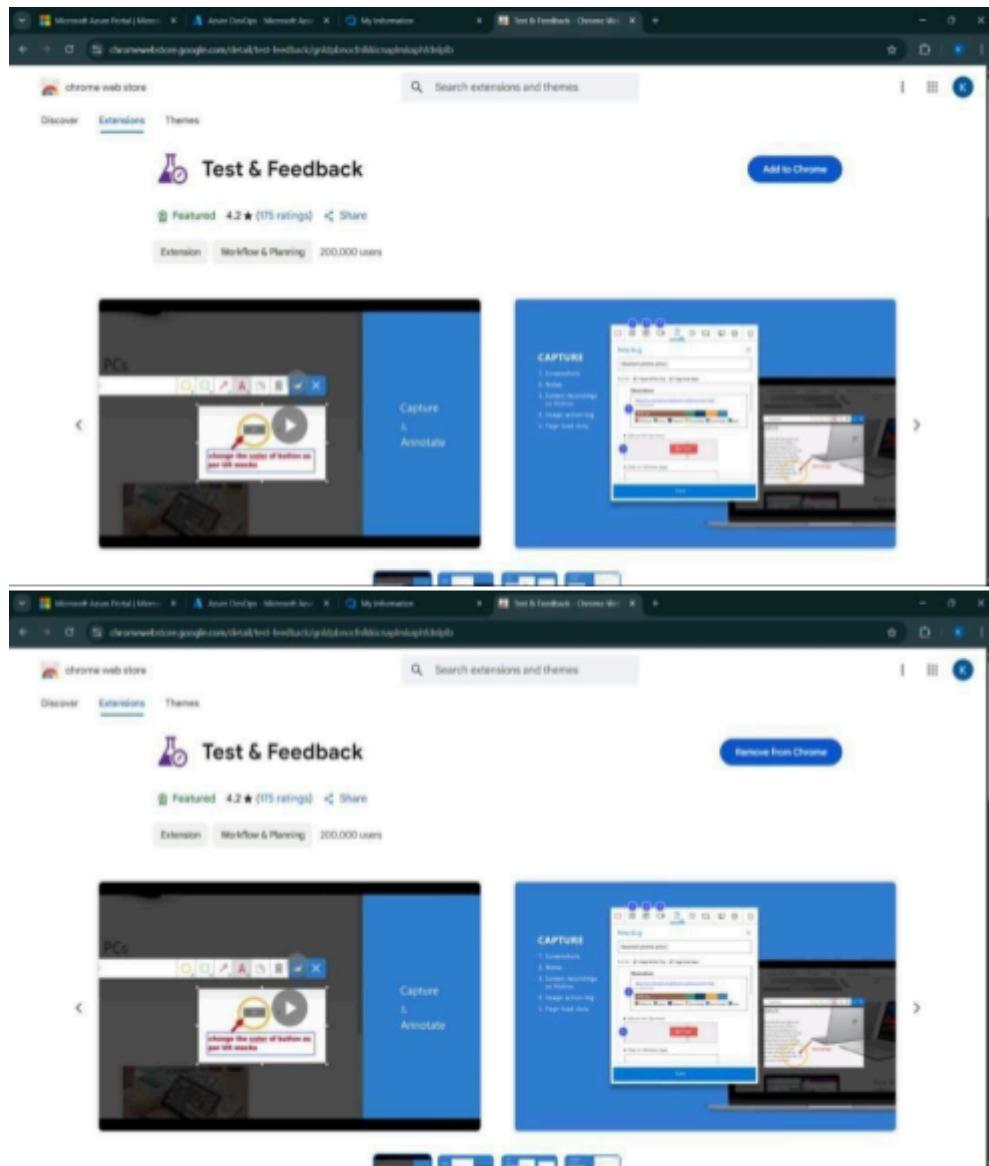
Parameter values

Click or type here to add a step

Steps Action Expected result Attachments

1. verify with the user data

4.Installation of test

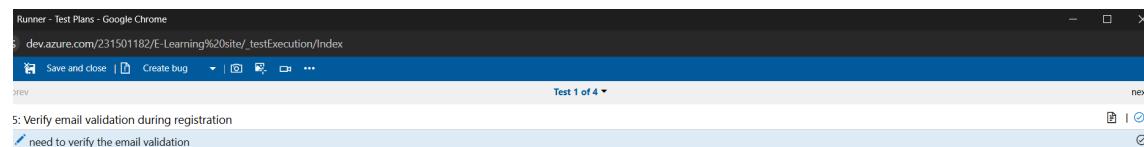


5. Running the test cases

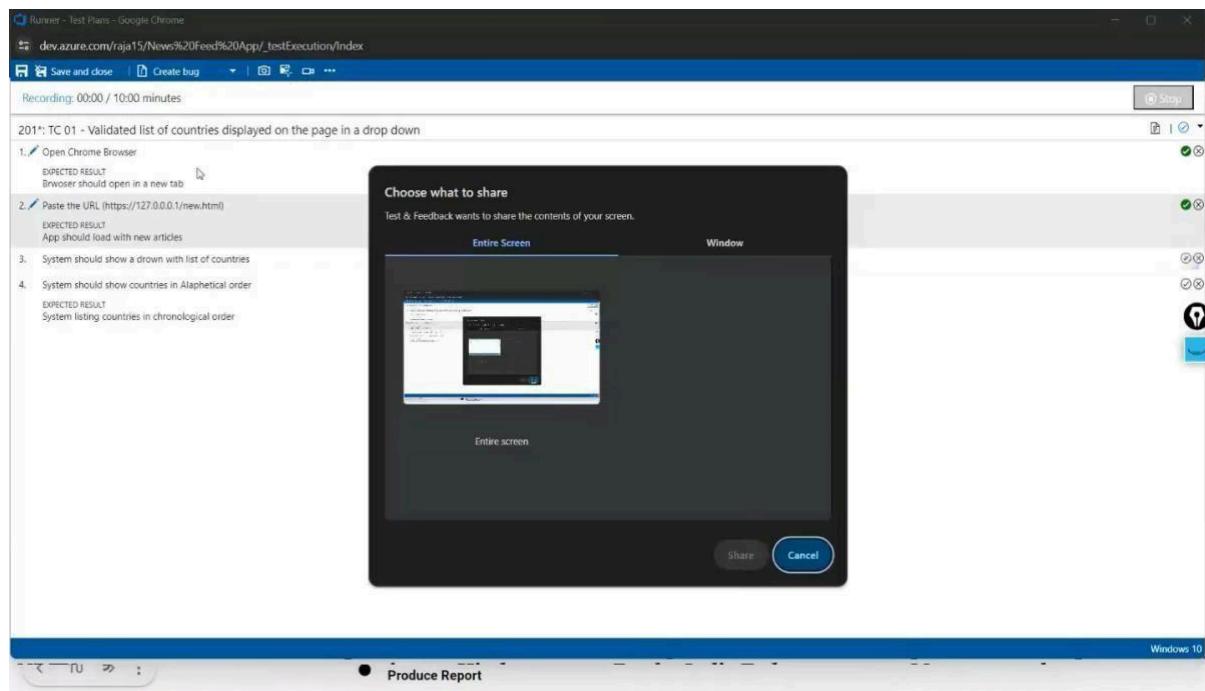
The screenshot shows the Azure DevOps Test Plans interface for the 'Online Quiz System' project. The left sidebar is collapsed, and the main area displays the 'Login Verification' test plan. The 'Execute' tab is selected. The 'Test Suites' section shows 'Login Verification (3)'. The 'Test Points (3 items)' section lists:

Title	Outcome	Order	Test Case Id
Valid Login	Passed	1	24
Invalid Username	Passed	2	25
Invalid Password	Passed	3	26

Contextual actions for the 'Valid Login' test point include: View execution history, Mark Outcome, Run, Reset test to active, Edit test case, Assign tester, and View test result.



6.Recording the test case



7.Creating the bug

A screenshot of the Azure DevOps 'New Bug' creation interface. The bug title is 'user should not login with invalid details'. The 'Planning' section includes fields for Resolved Reason, Story Points, Priority (set to 2), Severity (set to 3 - Medium), and Activity. The 'Development' section contains a 'Development' section with a '+ Add link' button and a note about tracking releases via Azure Repos. The 'Effort (Hours)' section shows Original Estimate and Remaining. The 'Deployment' section contains a note about tracking releases via Azure DevOps Boards.

NEW BUG *

user should not enter invalid details

Unassigned 0 comments Add tag

State: New Area: Online Quiz System
Reason: New Iteration: Online Quiz System\sprint 1

System Info

Browser - Name	Google Chrome 136
Browser - Language	en-US
Browser - Height	816
Browser - Width	1536
Browser - User agent	Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/136.0.0.0 Safari/537.36
Operating system - Name	Windows NT 10.0; Win64; x64
Operating system - Architecture	x86_64
Operating system - Processor model	12th Gen Intel(R) Core(TM) i5-12450H
Operating system - Number of processors	12
Memory - Available	6998618112
Memory - Capacity	16831893504
Display - Pixels per inch (X axis)	120
Display - Pixels per inch (Y axis)	120

8. Test case results

Azure DevOps 231501182 / E-Learning site / Test Plans / User Registration and Login

User Registration and Login (ID: 53)

Test Suites

Test Points (4 items)

- Verify user registration with valid data
- Verify login with valid credentials
- Verify error message for incorrect password
- Verify email validation during registration

Test Case Results

Outcome	TimeSta...	Configuration	Run by	Tester	Test
Passed	18m ago	Windows 10	Vijay M	Vijay M	User Registration and Login

Open execution history for current test point

9. Test report summary

The screenshot shows a 'NEW BUG' card in a bug tracking system. The card has the following details:

- Title:** User should not enter invalid details
- Status:** Unassigned
- Reason:** New
- Area:** Online Quiz System
- Iteration:** Online Quiz System\sprint 1
- Comments:** 0 comments
- Tags:** Add tag
- Repro Steps:** 5/17/2025 11:09 AM Bug filed on "Valid Login"
- Step no.**: 1. None Navigate to the login page.
- Step no.**: 2. None enter a valid username/email.
- Step no.**: 3. None enter valid password.
- Step no.**: 4. None Click the login button.
- Step no.**: 5. None

Planning: Resolved Reason: None, Story Points: 1, Priority: 2, Severity: 3 - Medium, 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.

Development: + Add link

Effort (Hours): Original Estimate: None, Remaining: None.

Related Work: + Add link

- Assigning bug to the developer and changing state

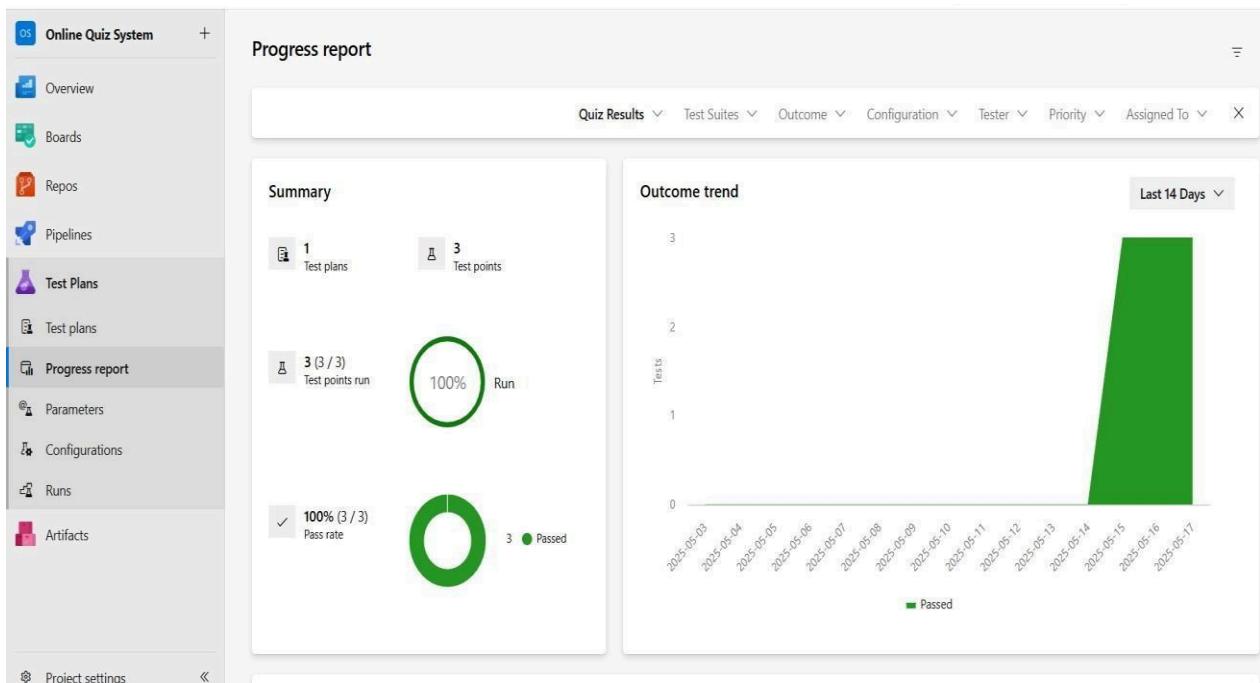
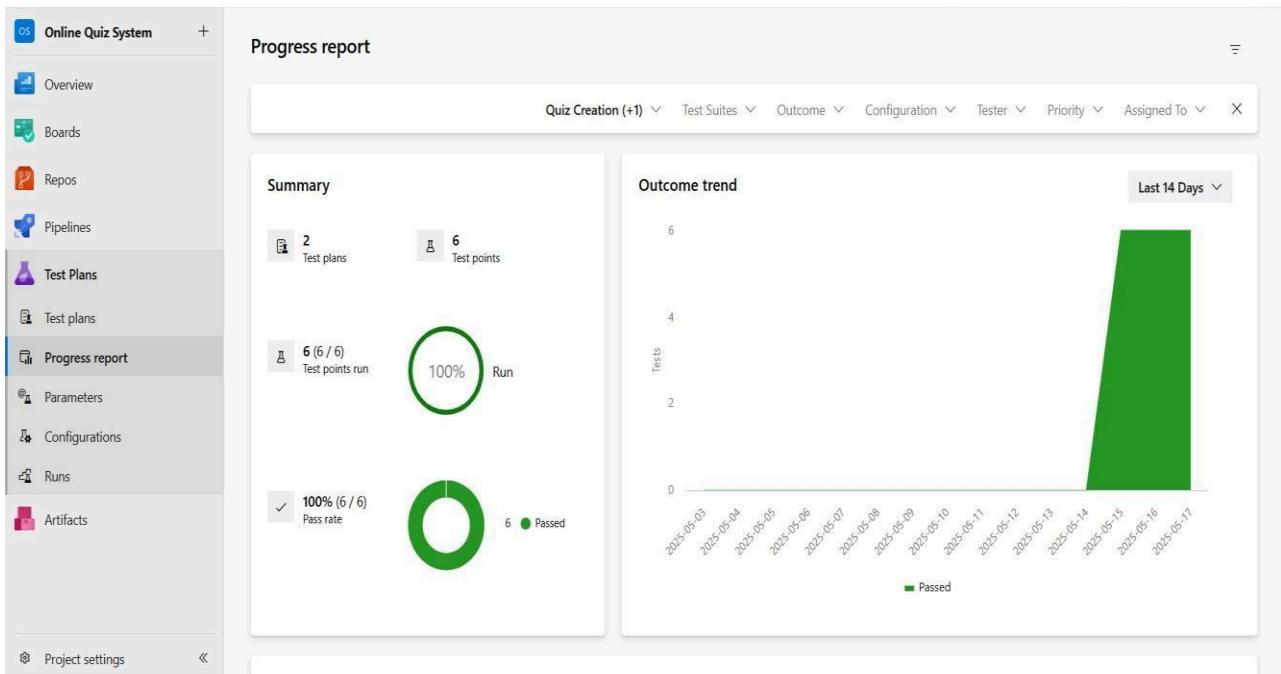
10. Progress report

The screenshot shows the 'Progress report' dashboard for the 'Online Quiz System' project. The left sidebar includes links for Overview, Boards, Repos, Pipelines, Test Plans, Test plans, Progress report (which is selected), Parameters, Configurations, Runs, and Artifacts. The Project settings link is at the bottom.

The main area displays the 'Progress report' for the 'Login Verification' test plan. The 'Summary' section shows:

- 1 Test plans
- 3 Test points
- 3 (3 / 3) Test points run (100% completion)
- 100% (3 / 3) Pass rate (3 Passed)

The 'Outcome trend' chart shows the number of tests over time from May 13 to May 17, with a green bar representing 'Passed' tests.



11.Changing the test template

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

Name	Description	Team projects
Basic (default)	This template is flexible for any process and great for teams getting started with Az...	1
Agile	This template is flexible and will work great for most teams using Agile planning me...	3
Scrum	This template is for teams who follow the Scrum framework.	0
CMMI	This template is for more formal projects requiring a framework for process improv...	0

The screenshot shows the 'Agile' work item types list in the Azure DevOps Settings - Process page. The list includes:

Name	Description
Bug	Describes a divergence between required and actual behavior, and tracks the work done to correct the defect and verify the correct...
Epic	Epics help teams effectively manage and groom their product backlog
Feature	Tracks a feature that will be released with the product
Issue	Tracks an obstacle to progress.
Task	Tracks work that needs to be done.
Test Case	Server-side data for a set of steps to be tested.
Test Plan	Tracks test activities for a specific milestone or release.
Test Suite	Tracks test activities for a specific feature, requirement, or user story.
User Story	Tracks an activity the user will be able to perform with the product

RESULT

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

EXP NO: 9

CI/CD PIPELINES IN AZURE

AIM

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

PROCEDURE

Steps to Create and implement pipelines in Azure:

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

7. Build the application (dotnet build, npm run build).
 8. Run unit tests (dotnet test, npm test).
 9. Publish build artifacts to be used in the release stage.
-
10. Save and Run the Pipeline for the First Time
Save the YAML or build definition and click “Run”.
Azure will fetch the latest code and execute the defined build and test stages.
-
11. Configure Continuous Deployment (CD)
Navigate to the Releases tab under Pipelines and click “New Release Pipeline”. Add an Artifact (from the build stage) and create a new Stage (e.g., Development, Production).
-
12. Configure the CD stage with deployment tasks such as deploying to Azure App Service, running database migrations or scripts, and restarting services using the Azure App Service Deploy task linked to your subscription and app details.
-
13. Set Triggers and Approvals
Enable continuous deployment trigger so the release pipeline runs automatically after a successful build. For production environments, configure pre-deployment approvals to ensure manual verification before release.
-
14. Monitor Pipelines and Manage Logs
View all pipeline runs under the Runs section.
Check logs for build/test/deploy stages to debug any errors.
You can also integrate email alerts or Microsoft Teams notifications for build failures.
-
15. Review and Maintain Pipelines
Regularly update your pipeline tasks or YAML configurations as your application grows.
Ensure pipeline runs are clean and artifacts are stored securely.
Integrate quality gates and code coverage policies to maintain code quality.

Pipeline	Last run	
Online Quiz System (4) #20250517.2 • Set up CI with Azure Pipelines	Just now 7s	Green checkmark
Online Quiz System (3) #20250516.2 • Set up CI with Azure Pipelines	Yesterday 19s	Green checkmark
Online Quiz System #20250515.1 • Set up CI with Azure Pipelines	Thursday 1s	Red X
Online Quiz System-ASP.NET Core-Cl #20250515.1 • Add files via upload	Thursday 1s	Red X

#20250517.1 • Set up CI with Azure Pipelines

This run is being retained as one of 3 recent runs by main (Branch).

Summary **Code Coverage**

Individual CI by Ranjanji Sai

Repository and version

Online Quiz System
1' main ④ 06a981f7

Time started and elapsed Just now
9s

Related 0 work items
0 artifacts

Tests and coverage & Get started

Jobs

Name	Status	Duration
Job	Success	2s

#20250517.2 • Set up CI with Azure Pipelines

This run is being retained as one of 3 recent runs by main (Branch).

Summary **Code Coverage**

Manually run by Ranjanji Sai

Repository and version

Online Quiz System
1' main ④ 06a981f7

Time started and elapsed Just now
7s

Related 0 work items
0 artifacts

Tests and coverage & Get started

Jobs

Name	Status	Duration
Job	Success	2s

RESULT

Thus, the pipelines for the given project “E-Learning site” has been executed successfully.

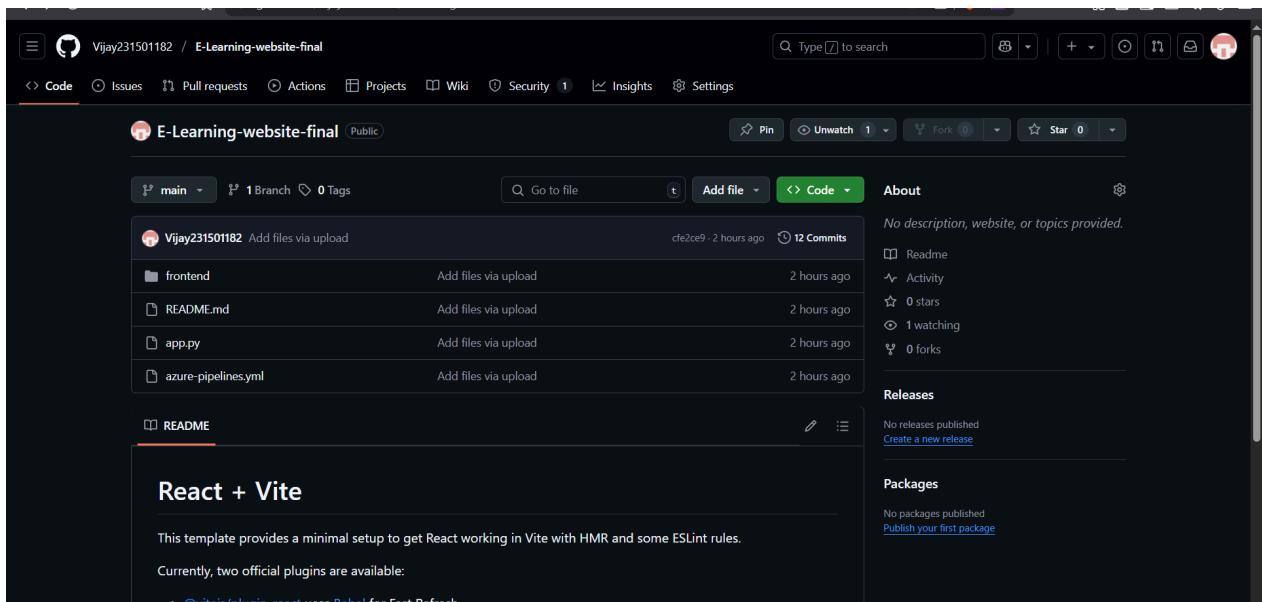
EXP NO: 10

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 E-Learning site.

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.