

EXP NO: 1

## AZURE DEVOPS ENVIRONMENT SETUP

### AIM

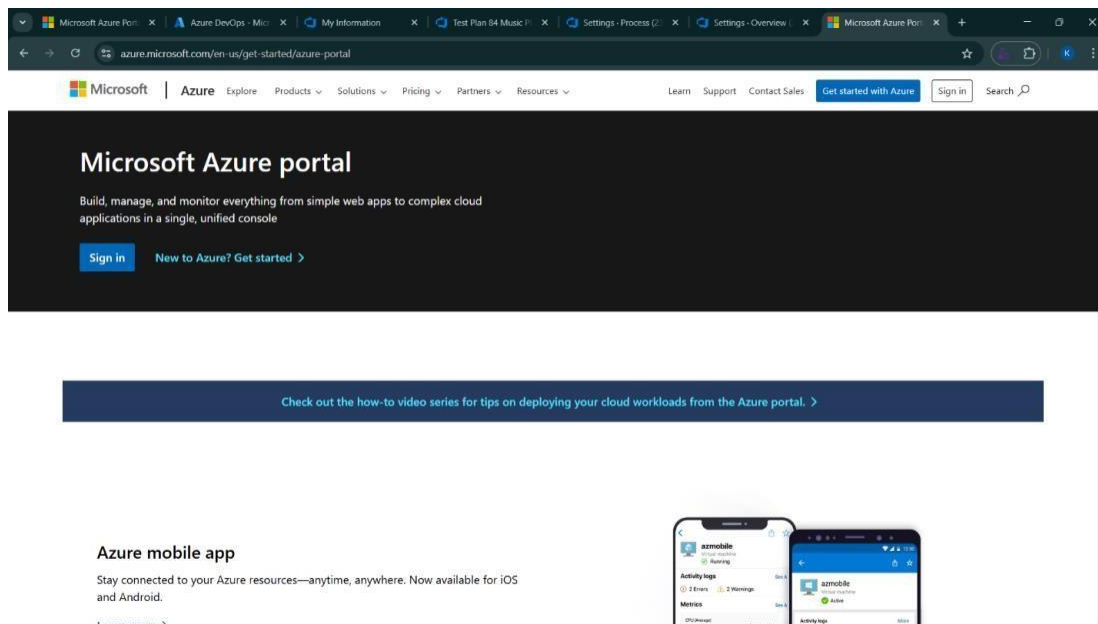
To set up and access the Azure DevOps environment by creating an organization through the Azure portal.

### INSTALLATION

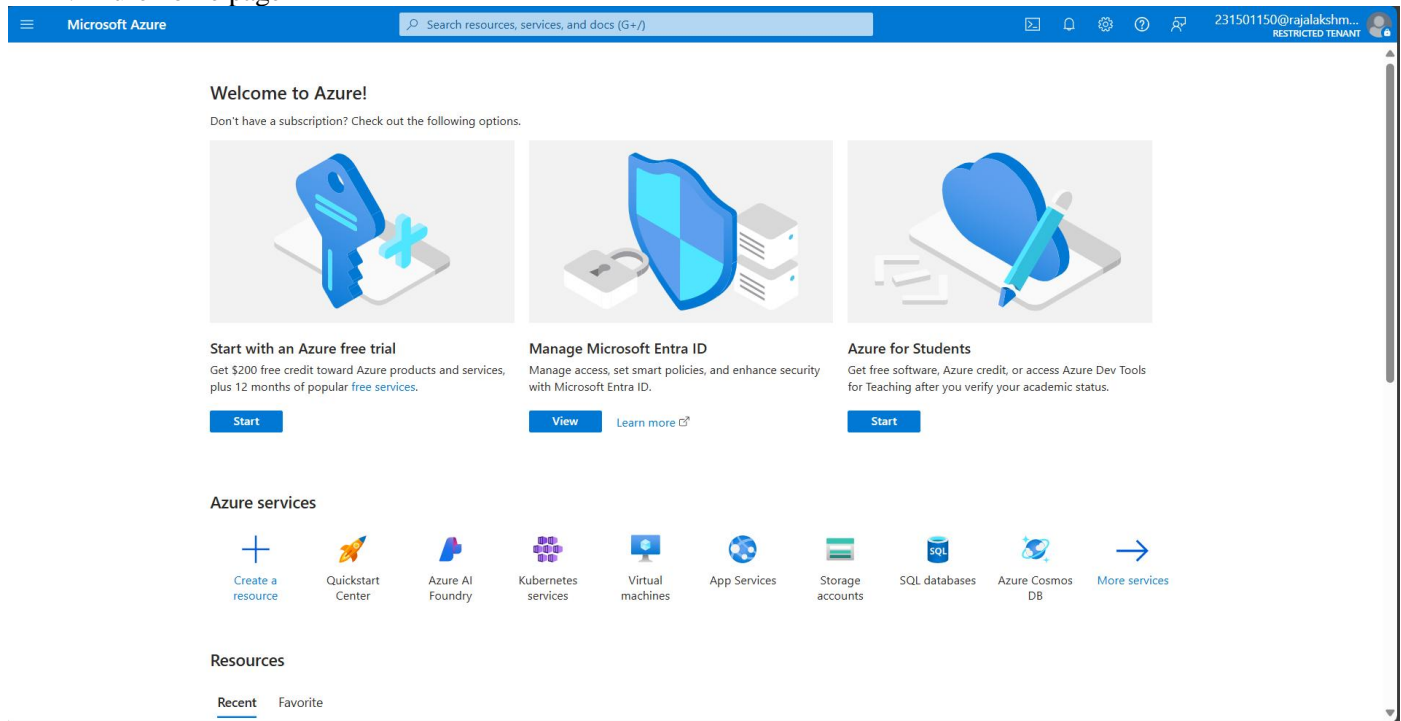
1. Open your web browser and go to the Azure website: <https://azure.microsoft.com/en-us/getstarted/azure-portal>.

Sign in using your Microsoft account credentials.

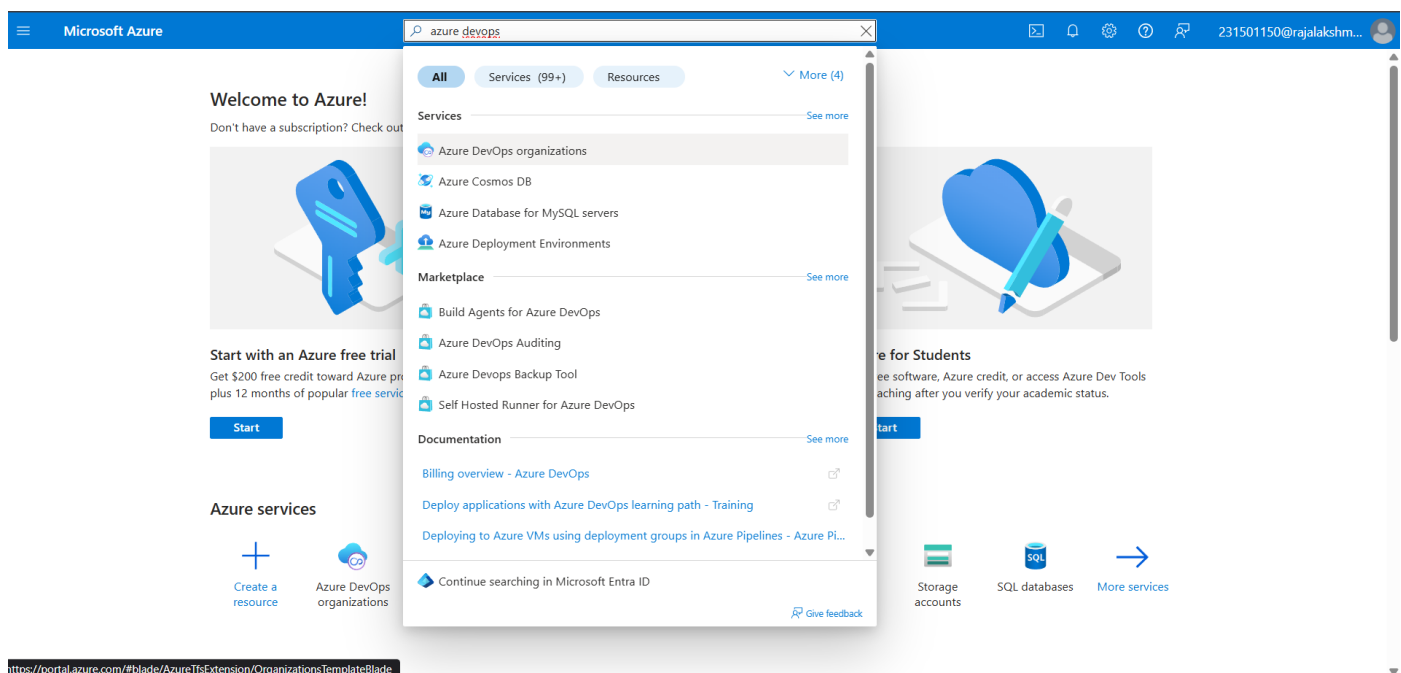
If you don't have a Microsoft account, you can create one here: <https://signup.live.com/?lic=1>



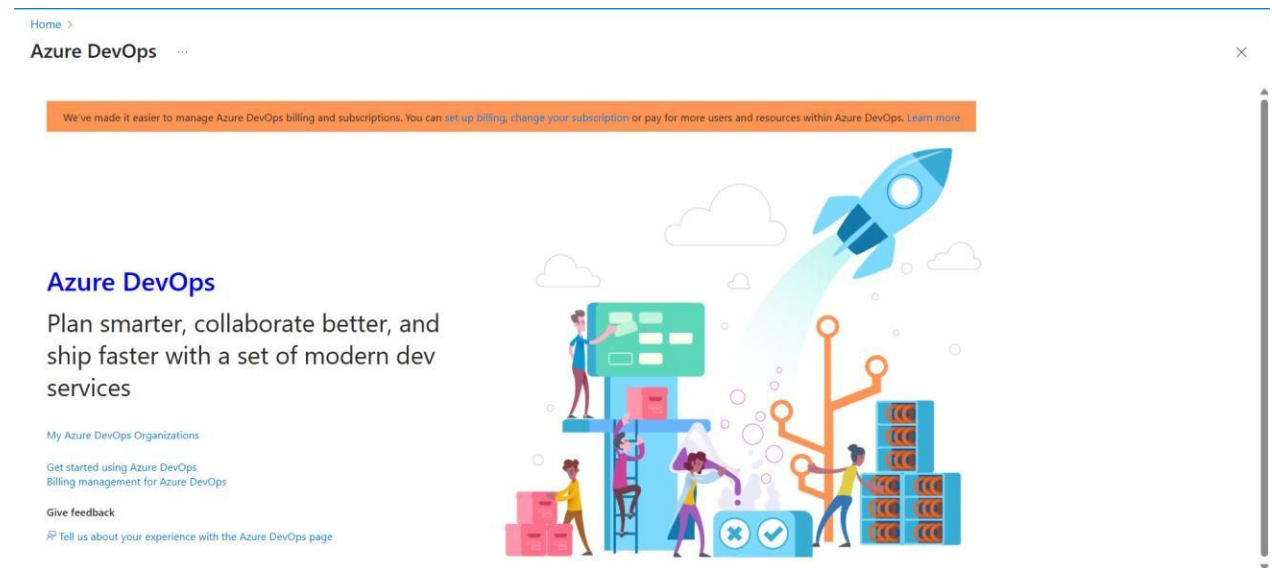
## 2. Azure home page



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



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



## RESULT

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

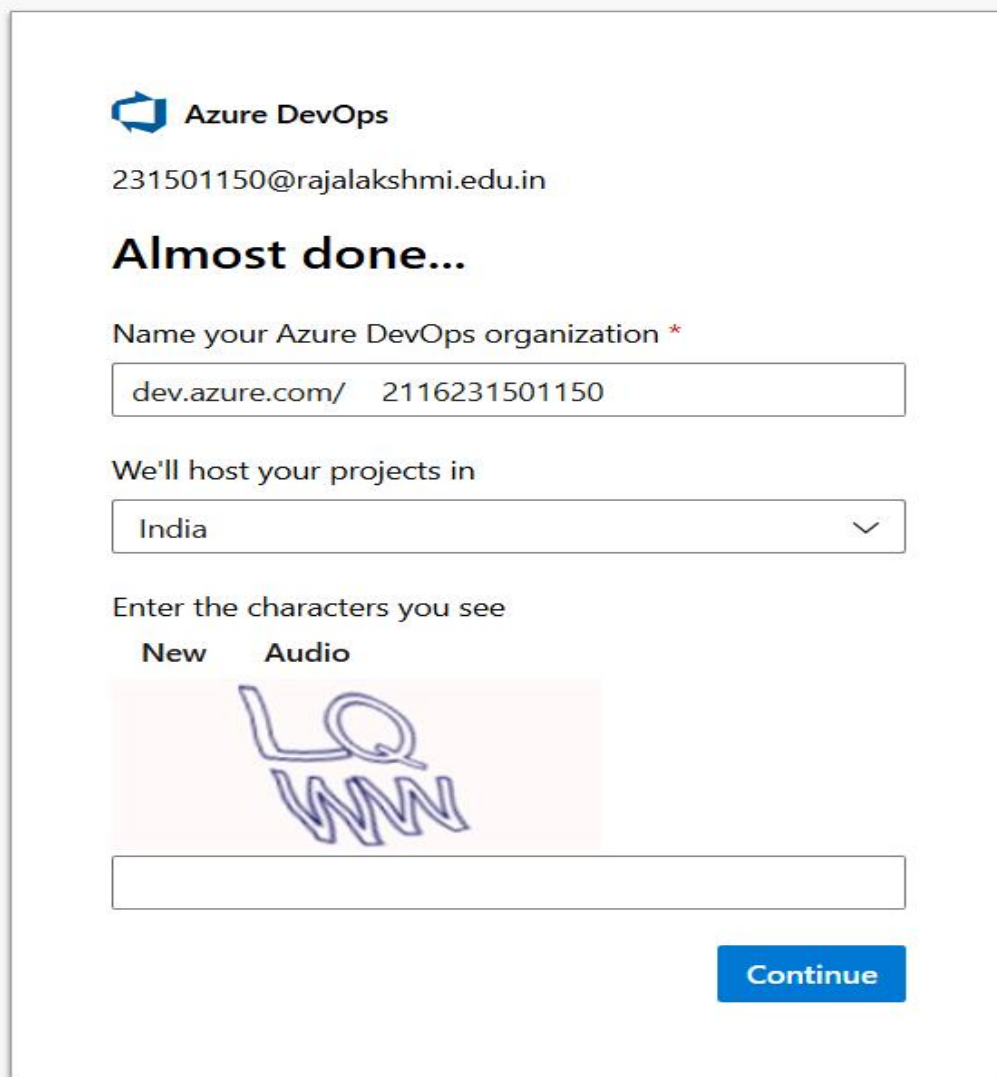
EXP NO: 2

## AZURE DEVOPS PROJECT SETUP AND USER STORY MANAGEMENT

### AIM

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

#### 1. Create An Azure Account



The screenshot shows the 'Almost done...' step of the Azure DevOps account setup. At the top is the Azure DevOps logo and the email address 231501150@rajalakshmi.edu.in. Below this is the heading 'Almost done...'. A label 'Name your Azure DevOps organization \*' is followed by a text input field containing 'dev.azure.com/ 2116231501150'. Below that, a label 'We'll host your projects in' is followed by a dropdown menu showing 'India'. Then, a label 'Enter the characters you see' is followed by a 'New Audio' button and a visual captcha image showing the letters 'LQ' and 'WN' in a stylized font. Below the captcha is an empty text input field for the user to enter the characters. At the bottom right is a blue 'Continue' button.

#### 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 \*

Online Quiz System

Description


Visibility



Public

Anyone on the internet can view the project. Certain features like TFVC are not supported.

☐




Private

Only people you give access to will be able to view this project.


☒

Public projects are disabled for your organization. You can turn on public visibility with [organization policies](#).

^ Advanced

Version control 

Git


Work item process 

Agile

Cancel>Create

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

Microsoft
Shalini Suresh
Sign out



**Shalini Suresh**
[Edit profile](#)

231501150@rajalakshmi.edu.in

India

231501150@rajalakshmi.edu.in

---

**Visual Studio Dev Essentials**

Get everything you need to build and deploy your app on any platform.




[Use your benefits](#)

### Azure DevOps Organizations

[Create new organization](#)

dev.azure.com/231501150 (Owner)

**Projects**

 ATM
 online quizz system
 Shalini

[New project](#)

**Actions**
[Open in Visual Studio](#)


## 4. Project dashboard

Azure DevOps
231501150 / online quizz system / Overview / Summary

online quizz system

Overview
Summary
Dashboards
Wiki
Boards
Repos
Pipelines
Test Plans
Artifacts

Project settings


**online quizz system**

Private
Invite

**About this project**

Like 0

The Online Quiz System is a web-based application designed to facilitate seamless, automated, and interactive assessments for students, employees, or general users. It allows administrators or educators to create quizzes, manage questions, assign tests, and analyze results — all from a centralized platform.


This system eliminates the need for paper-based evaluations and manual grading, offering a convenient and efficient solution for conducting tests anytime, anywhere.

**Project stats**
Period: Last 7 days

0 Work items created

0 Work items completed

**Members** 1



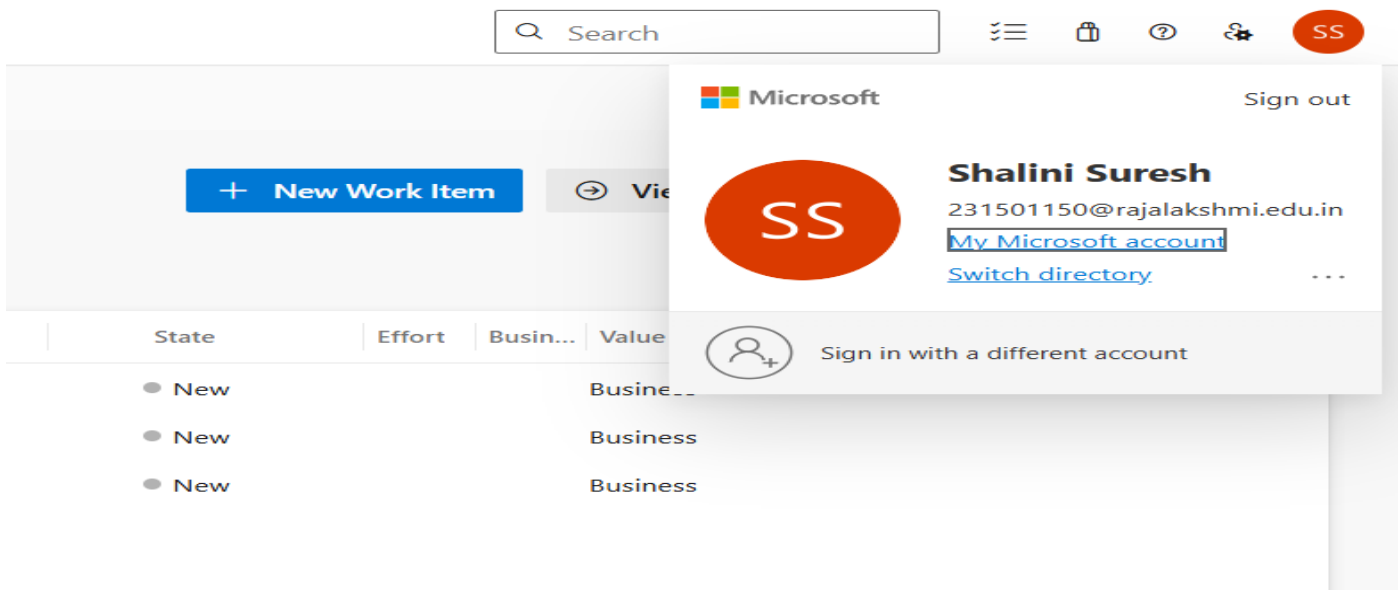
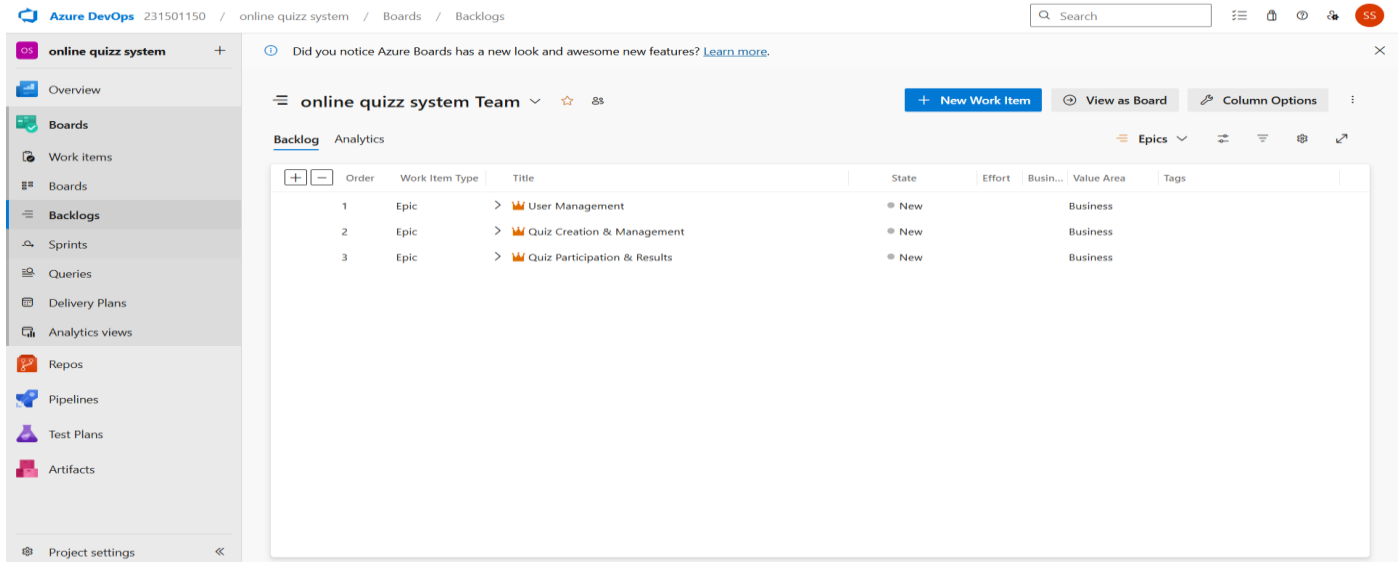
2116231501150

CS23432

5. To manage user stories:

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

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



## RESULT

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

2116231501150

CS23432



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

Azure DevOps 231501150 / online quizz system / Boards / Backlogs

Search

online quizz system Team

+ New Work Item View as Board Column Options

Backlog Analytics

	Order	Work Item Type	Title	State	Effort	Busin...	Value Area	Tags
1		Epic	User Management	New			Business	
		Feature	User Registration and Login	New			Business	
		User Story	As an admin, I want to log in to manage quizzes and u...	New			Business	
		User Story	As a player, I want to register and log in so that I can a...	New			Business	
		Feature	Role Management	New			Business	
		User Story	As an admin, I want to give users the right access so th...	New			Business	
		User Story	As a player, I want to see only my quizzes and progres...	New			Business	
2		Epic	Quiz Creation & Management	New			Business	
		Feature	Quiz Creation & Settings	New			Business	
		User Story	As a player, I want to see only my quizzes and progres...	New			Business	
		User Story	As a player, I want to know the quiz instructions and d...	New			Business	
		Feature	Question Management	New			Business	
		User Story	As an admin, I want to manage a question bank so I c...	New			Business	
		User Story	As a player, I want each question to load quickly so I c...	New			Business	

## 1.Fill in Epics

EPIC 2

2 User Management

No one selected 0 Comments Add Tag

Statg New Area online quizz system Reason New Iteration online quizz system\Sprint1

Updated by Shalini Suresh: Apr 16

Details

Description

Click to add Description.

Discussion

Add a comment. Use # to link a work item, @ to mention a person, or ! to link a pull request.

switch to Markdown editor

Planning

Priority 2

Risk

Effort

Business Value

Time Criticality

Start Date Select a date...

Target Date Select a date...

Classification

Value area Business

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

Child

22 Role Management Updated Apr 16 New

3 User Registration and Login

2116231501150

CS23432

## 2.Fill in Features

FEATURE 3

3 User Registration and Login

No one selected0 CommentsAdd Tag

Save and CloseFollow

Updated by Shalini Suresh: Apr 16

Details30

Description

Discussion

35

Add a comment. Use # to link a work item, @ to mention a person, or ! to link a pull request.

switch to Markdown editor

Planning

Priority2RiskEffortBusiness ValueTime CriticalityStart DateSelect a date...Target DateSelect a date...

Classification

Value areaBusiness

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

Parent

2 User ManagementUpdated Apr 16 • New

Child

5 As a player, I want to register and log in so that I...Updated Apr 16 • New

## 3.Fill in User Story Details

USER STORY 4

4 As an admin, I want to log in to manage quizzes and users

No one selected0 CommentsAdd Tag

Save and CloseFollow

Updated by Shalini Suresh: Apr 16

Details10

Description

Acceptance Criteria

Discussion

35

Add a comment. Use # to link a work item, @ to mention a person, or ! to link a pull request.

switch to Markdown editor

Planning

Story PointsPriority2Risk

Classification

Value areaBusiness

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

Parent

3 User Registration and LoginUpdated Apr 16 • New

## RESULT

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

EXP NO: 4

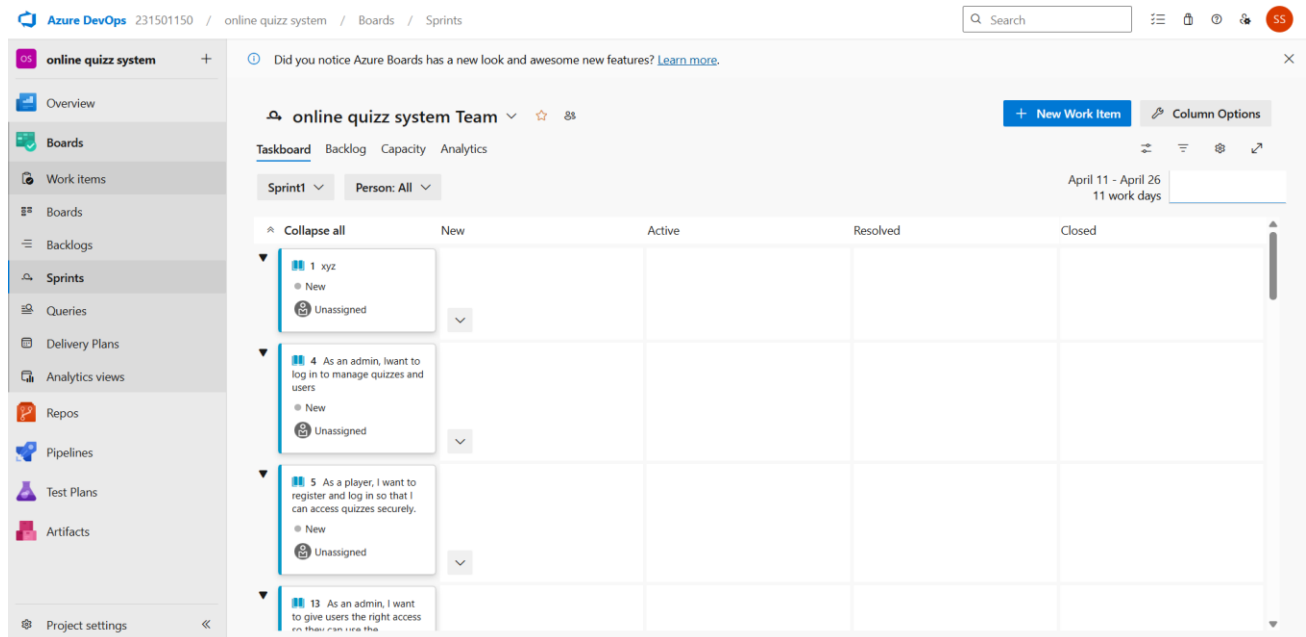
# SPRINT PLANNING

## AIM

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

## Sprint Planning

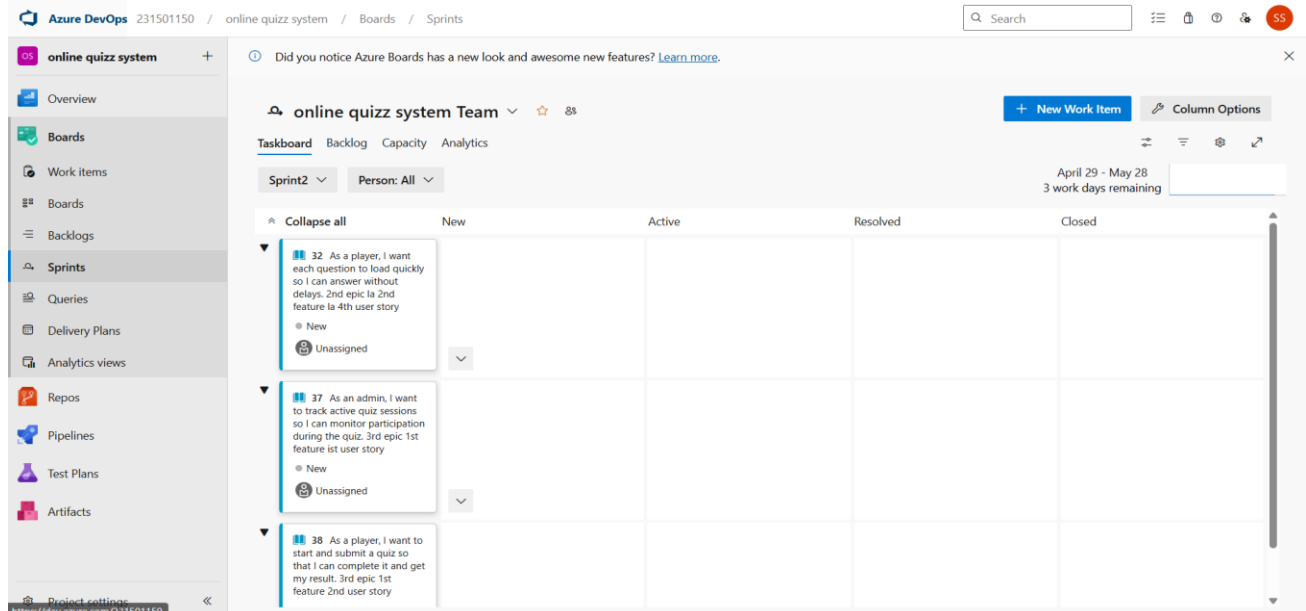
### Sprint 1



The screenshot shows the Azure DevOps interface for the 'online quizz system' project. The left sidebar contains navigation links: Overview, Boards, Work items, Boards, Backlogs, Sprints (selected), Queries, Delivery Plans, Analytics views, Repos, Pipelines, Test Plans, and Artifacts. The main area displays the 'Sprints' board for 'Sprint1' (April 11 - April 26, 11 work days). The board has columns for New, Active, Resolved, and Closed. Four user stories are listed in the 'New' column, all assigned to 'Unassigned':

- 1 xyz
- 4 As an admin, I want to log in to manage quizzes and users
- 5 As a player, I want to register and log in so that I can access quizzes securely.
- 13 As an admin, I want to give users the right access

### Sprint 2



The screenshot shows the Azure DevOps interface for the 'online quizz system' project. The left sidebar contains navigation links: Overview, Boards, Work items, Boards, Backlogs, Sprints (selected), Queries, Delivery Plans, Analytics views, Repos, Pipelines, Test Plans, and Artifacts. The main area displays the 'Sprints' board for 'Sprint2' (April 29 - May 28, 3 work days remaining). The board has columns for New, Active, Resolved, and Closed. Three user stories are listed in the 'New' column, all assigned to 'Unassigned':

- 32 As a player, I want each question to load quickly so I can answer without delays. 2nd epic la 2nd feature la 4th user story
- 37 As an admin, I want to track active quiz sessions so I can monitor participation during the quiz. 3rd epic 1st feature 1st user story
- 38 As a player, I want to start and submit a quiz so that I can complete it and get my result. 3rd epic 1st feature 2nd user story

## Sprint 3

Azure DevOps 231501150 / online quizz system / Boards / Sprints

Search

online quizz system

Overview

Boards

Work items

Boards

Backlogs

Sprints

Queries

Delivery Plans

Analytics views

Repos

Pipelines

Test Plans

Artifacts

Project settings

Did you notice Azure Boards has a new look and awesome new features? [Learn more.](#)

online quizz system Team

+ New Work Item

Column Options

Taskboard Backlog Capacity Analytics

Sprint3 Person: All

May 14 - May 28  
3 work days remaining

Collapse all	New	Active	Resolved	Closed
<div>18 As an admin, I want to give users the right access so they can use the system properly. New Unassigned</div>				
<div>23 As an admin, I want to give users the right access so they can use the system properly New Unassigned</div>				
<div>28 As a player, I want to know the quiz instructions and duration before starting so I can prepare. 2nd feature 2nd user story New</div>				

## RESULT

The Sprints have been created for Online Quiz System.

EXP NO: 5

# POKER ESTIMATION

## AIM

Create Poker Estimation for the user stories – Online Quiz System.

## Poker Estimation

The screenshot displays the Azure DevOps work item interface for a project named 'EPIC 2'. The work item is titled '2 User Management' and has a priority of 2. The interface is divided into several sections:

- Description:** A section for adding a description, currently showing a placeholder text 'Click to add Description.'
- Discussion:** A section for adding comments, currently showing a placeholder text 'Add a comment. Use # to link a work item, @ to mention a person, or ! to link a pull request.'
- Planning:** A section for planning the work item, including fields for Priority (2), Risk, Effort, Business Value, Time Criticality, Start Date, and Target Date.
- Classification:** A section for classifying the work item, including fields for Value area (Business) and Business.
- Deployment:** A section for deployment, including a link to 'Releases' and a button to 'Add link'.
- Development:** A section for development, including a link to 'Add link' and a button to 'Add link'.
- Related Work:** A section for related work, including a link to 'Add link' and a button to 'Add link'.

## RESULT

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

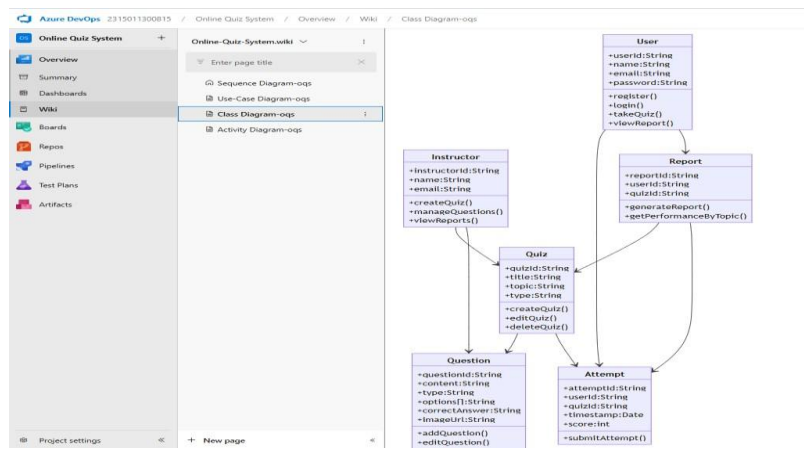
EXP NO: 6

## DESIGNING CLASS AND SEQUENCE DIAGRAMS FOR PROJECT ARCHITECTURE

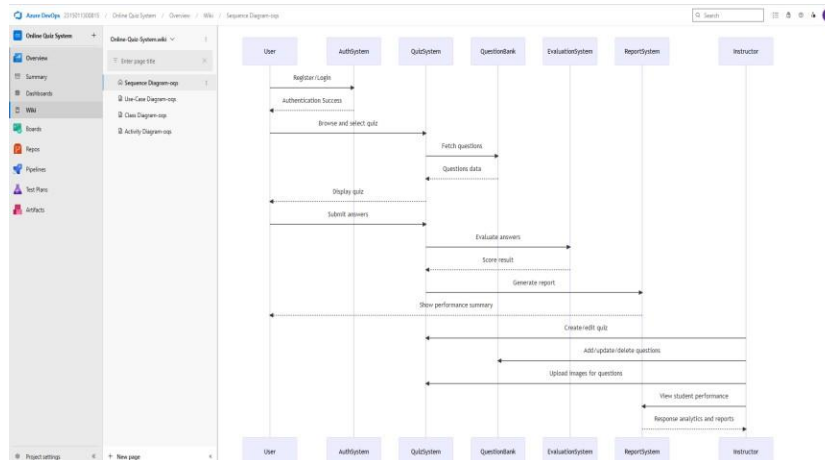
### AIM

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 Online Quiz System.

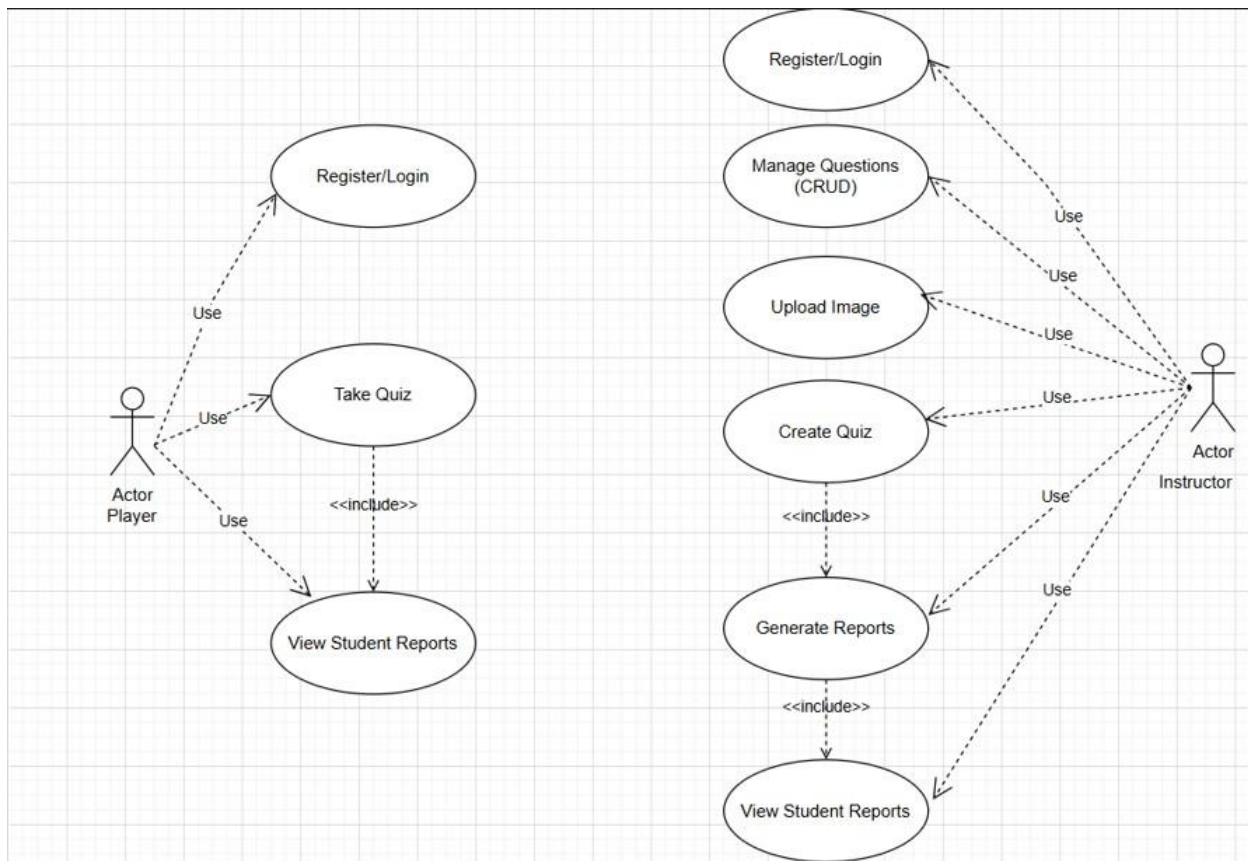
EXP NO: 7

## DESIGNING USE-CASE AND ACTIVITY DIAGRAMS FOR PROJECT STRUCTURE

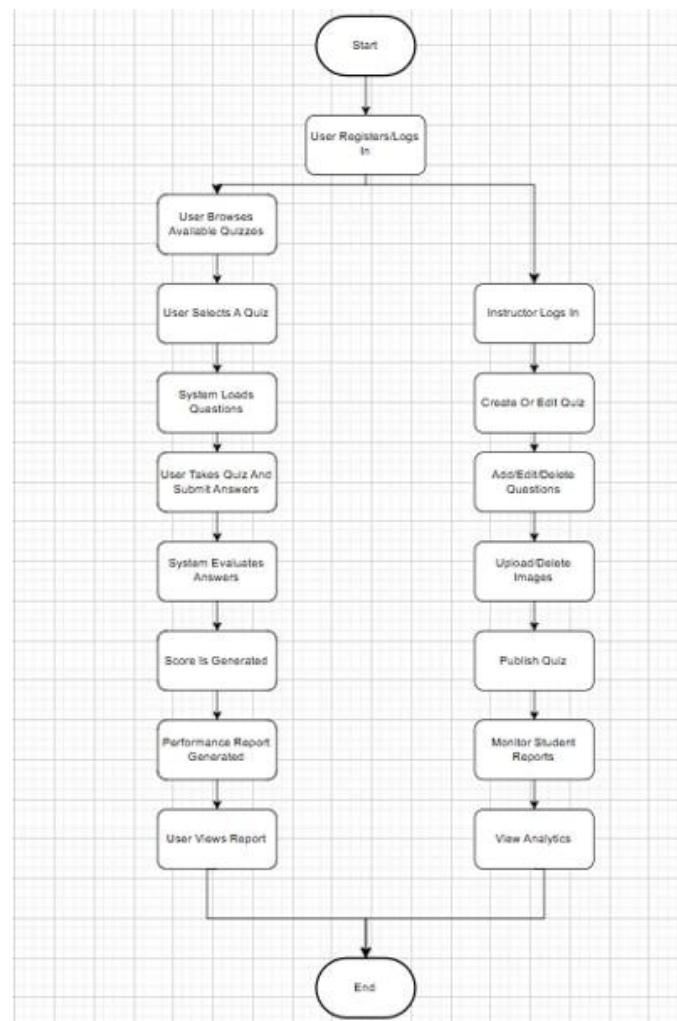
### AIM

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 Online Quiz System.



**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.

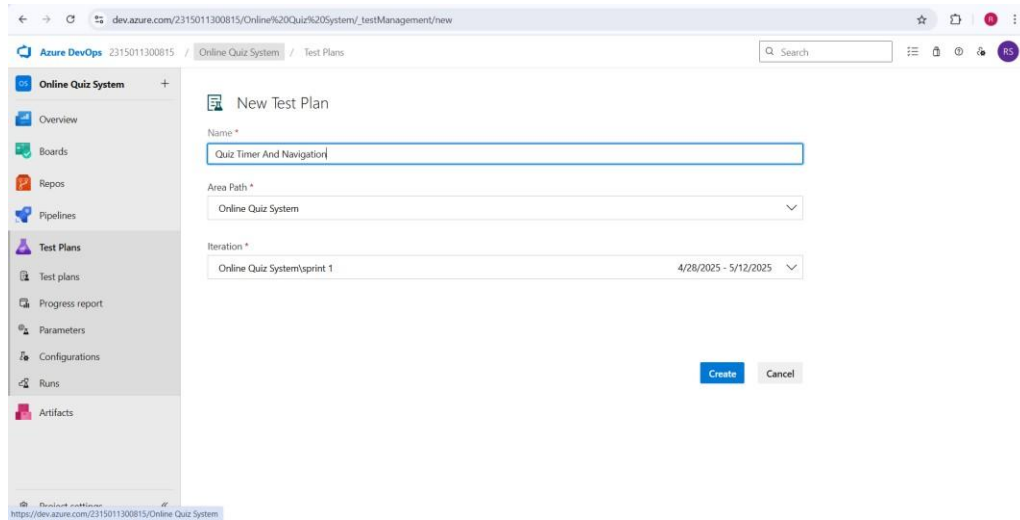
**7. Separate Test**

- Grouped by functionality such as:
  - Login and Registration
  - Quizzes Submission
  - Viewing Results
  - Admin Functions
- Improves organization and enables focused execution in Azure DevOps.

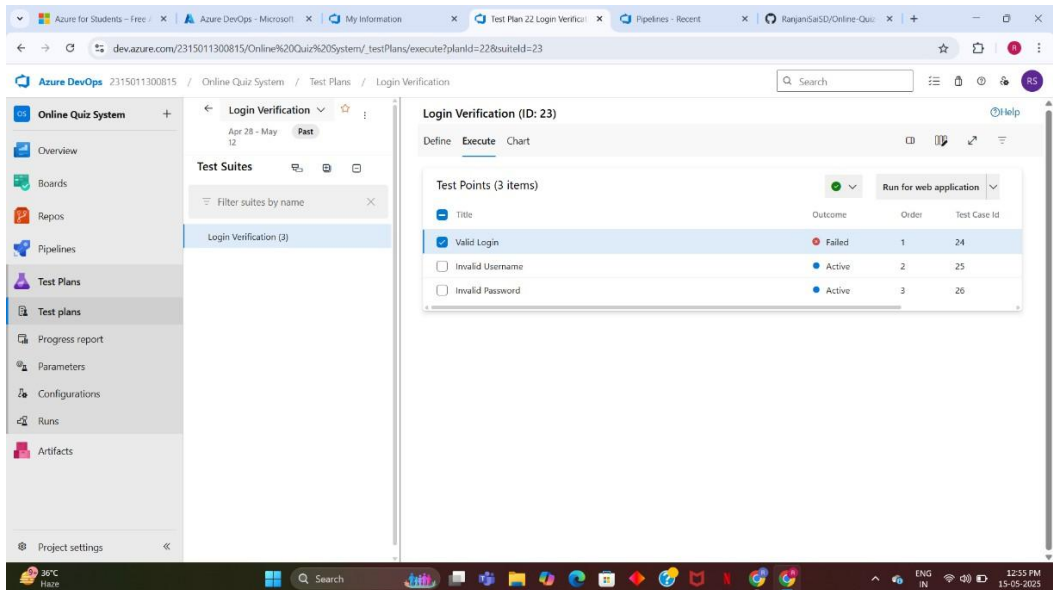
## 8. Prioritize and Review

- 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



### 2. Test suite



### 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 Quiz System– Test Plans

### USER STORIES

- As an admin, I want to log in to manage quizzes and users (ID: 3).
- As a player, I want to register and log in so that I can access quizzes securely (ID: 4).
- As an admin, I want to give users the right access so they can use the system properly (ID: 6).
- As a player, I want to see only my quizzes and progress so that it's easy to use (ID: 7).
- As an admin, I want to create and configure quizzes with time limits so I can control quiz flow (ID: 10).

### TEST SUITES

#### Test Suite: TS01 - Login Verification (ID: 23)

##### 1. TC01 –Valid Login

###### ○ Action:

- Go to the Sign-Up page.
- Enter valid name, email, and password.
- Click “Login” button.

###### ○ Expected Results:

- Login form is displayed.
- Fields accept valid credentials without error.
- Account is successfully logged in and redirected to the dashboard.

###### ○ Type: Happy Path

##### 2. TC02 – Invalid Username

###### ○ Action:

- Go to the Login page.
- Enter invalid or unregistered username.
- Click on "Login" button.

###### ○ Expected Results:

- Login form is displayed.
- System displays an error message like “Invalid username”.
- User is not logged in and remains on the login page.

###### ○ Type: Negative Path

### 3. TC03 – Invalid Password

- **Action:**

- Go to the Login page.
- Enter a valid username or email.
- Enter an incorrect or invalid password.
- Click on "Login" button.

- **Expected Results:**

- Login form is displayed.
- System shows an error message like "Invalid username or password."
- User is not logged in and stays on the login page.

- **Type:** Error Path

### 4. TC04 – Login with Wrong Password

- **Action:**

- Go to the Login page.
- Enter valid email and incorrect password.
- Click on "Login".

- **Expected Results:**

- Input is accepted.
- Error message "Invalid username or password" is shown.

- **Type:** Error Path

## Test Suite: TS02 – Quiz Creation (ID: 28)

### 1. TC05 – Valid Quiz Creation

- **Action:**

- Navigate to the "Create Quiz" page.
- Enter valid quiz details.
- Click the "Create" or "Submit" button.

- **Expected Results:**

- Quiz is successfully saved in the database.

- **Type:** Happy Path

### 2. TC06 – Missing Title

- **Action:**

- Navigate to "Create Quiz" page.
- Leave the title field empty and fill in valid questions and options.
- Click the "Create" or "Submit" button.

- **Expected Results:**
  - System displays a validation error message like “Title is required”.
  - Quiz is not submitted or saved in the database.
- **Type:** Error Path

#### **Test Suite: TS03 – Quiz Results (ID: 32)**

##### **1. TC07 –View Quiz Results As Player**

- **Action:**
  - Log in as a player.
  - Navigate to “My Results” or “Quiz Results” section.
  - Select a completed quiz to view the results.
- **Expected Results:**
  - Player sees their score and correct/incorrect answers for the selected quiz.
- **Type:** Happy Path

##### **2. TC08 – View Quiz Results As Admin**

- **Action:**
  - Log in as an admin.
  - Navigate to the “Quiz Results” or “All Results” section.
  - Select a quiz to view all participants results.
- **Expected Results:**
  - Admin sees a list of participants with their scores and answers.
- **Type:** Happy Path

#### **Test Suite: TS04 – Quiz Attempt (ID: 36)**

##### **1. TC09 –Submit Quiz With All Questions Answered**

- **Action:**
  - Login and start an available quiz.
  - Answer all questions.
  - Click the "Submit" button.
- **Expected Results:**
  - Answers are recorded and score is calculated correctly.
- **Type:** Happy Path

##### **2. TC10 – Submit Quiz without Answering Any Question**

- **Action:**
  - Login and start a quiz.
  - Leave all questions unanswered.
  - Click the "Submit" button.

- **Expected Results:**
  - System displays a warning or prompt (e.g., "You have unanswered questions").
- **Type:** Error Path

## Test Suite: TS05 – Question Navigation (ID: 41)

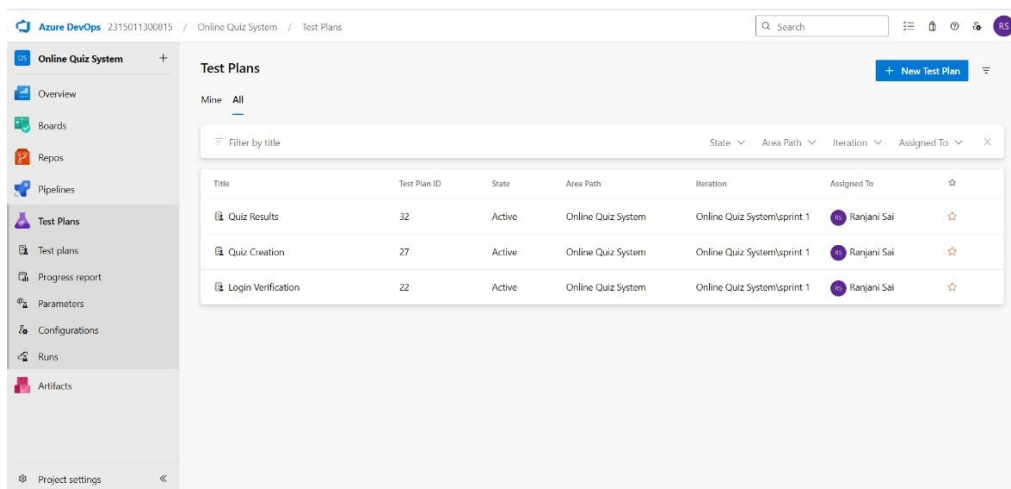
### 1. TC11 – Navigate Between Questions During Quiz

- **Action:**
  - Start a quiz with multiple questions.
  - Click "Next" and "Previous" to move between questions.
  - Return to previously answered question to modify the answer.
- **Expected Results:**
  - User can freely navigate between questions during the quiz.
- **Type:** Happy Path

### 2. TC12 – Attempt to Skip Required question With Navigation

- **Action:**
  - Start a quiz with required questions.
  - Attempt to click "Next" without answering the current question.
  - Try submitting the quiz with unanswered required questions.
- **Expected Results:**
  - Quiz cannot be submitted until required questions are answered.
- **Type:** Error Path

## Test Cases



Title	Test Plan ID	State	Area Path	Iteration	Assigned To
Quiz Results	32	Active	Online Quiz System	Online Quiz System/sprint 1	Ranjani Sai
Quiz Creation	27	Active	Online Quiz System	Online Quiz System/sprint 1	Ranjani Sai
Login Verification	22	Active	Online Quiz System	Online Quiz System/sprint 1	Ranjani Sai

**TEST CASE 24**

24 Valid Login

Ranjani Sai 0 Comments Add Tag

State: Design Area: Online Quiz System Reason: New Iteration: Online Quiz System/sprint 1

Updated by Ranjani Sai: 14m ago

Save and Close Follow

Steps Summary Associated Automation 0 0 0

**Steps**

Steps	Action	Expected result	Artifacts
1.	Navigate to the login page.		
2.	enter a valid username/email.		
3.	enter valid password.		
4.	Click the login button.		
5.		User is redirected to the dashboard/homepage.	

Click or type here to add a step

Parameter values

**Recent test results**

- Passed by [Avatar] with Windows 10 Completed 7:26 AM, 5/15/2025
- Failed by [Avatar] with Windows 10 Completed 7:25 AM, 5/15/2025

[View all test result history](#)

**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

Azure DevOps 2315011300815 / Online Quiz System / Test Plans / Login Verification

Search

**Online Quiz System**

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

**Login Verification (ID: 23)**

Define Execute Chart

Test Suites

Filter suites by name

Login Verification (3)

**Test Points (3 items)**

Title	Outcome	Order	Test Case Id
<input checked="" type="checkbox"/> Valid Login	Passed	1	24
<input type="checkbox"/> Invalid Username	Active	2	25
<input type="checkbox"/> Invalid Password	Active	3	26

Run for web application

Azure DevOps 2315011300815 / Online Quiz System / Test Plans / Quiz Creation

Search

**Online Quiz System**

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

**Quiz Creation (ID: 28)**

Define Execute Chart

Test Suites

Filter suites by name

Quiz Creation (3)

**Test Cases (3 items)**

Title	Order	Test Case Id	Assigned To	Status
<input type="checkbox"/> Valid Quiz Creation	1	29	Ranjani Sai	De
<input type="checkbox"/> Missing Title	2	30	Ranjani Sai	De
<input type="checkbox"/> Invalid Time Range	3	31	Ranjani Sai	De

New Test Case

**TEST CASE 29**

## 29 Valid Quiz Creation

Ranjani Sai 0 Comments Add Tag

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

Updated by Ranjani Sai: Thursday

Steps Summary Associated Automation 1 0

**Steps**

Steps	Action	Expected result	Attach
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

**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

Azure DevOps 2315011300815 / Online Quiz System / Test Plans / Quiz Results

Search

**Online Quiz System**

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

**Quiz Results**

Apr 28 - May 12 Past

100% run, 100% passed. [View report](#)

**Test Suites**

Filter suites by name

Quiz Results (3)

**Quiz Results (ID: 33)**

Define Execute Chart

Test Cases (3 items)

Title	Order	Test Case Id	Assigned To	Status
<input type="checkbox"/> View Quiz Results As Player	1	35	Ranjani Sai	Done
<input type="checkbox"/> View Quiz Results As Admin	2	36	Ranjani Sai	Done
<input type="checkbox"/> Automatic Result Generation	3	37	Ranjani Sai	Done

**TEST CASE 35**

## 35 View Quiz Results As Player

Ranjani Sai 0 Comments Add Tag

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

Updated by Ranjani Sai: Thursday

Steps Summary Associated Automation 1 0

**Steps**

Steps	Action	Expected result	Attach
1.	Login as player.		
2.	Navigate to m "My Results" or "Completed Quizzes".		
3.	Click on completed quiz.		
4.		Quiz result with score, correct/wrong answers is displayed.	

Click or type here to add a step

Parameter values

**Deployment**

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

**Development**

Add link

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

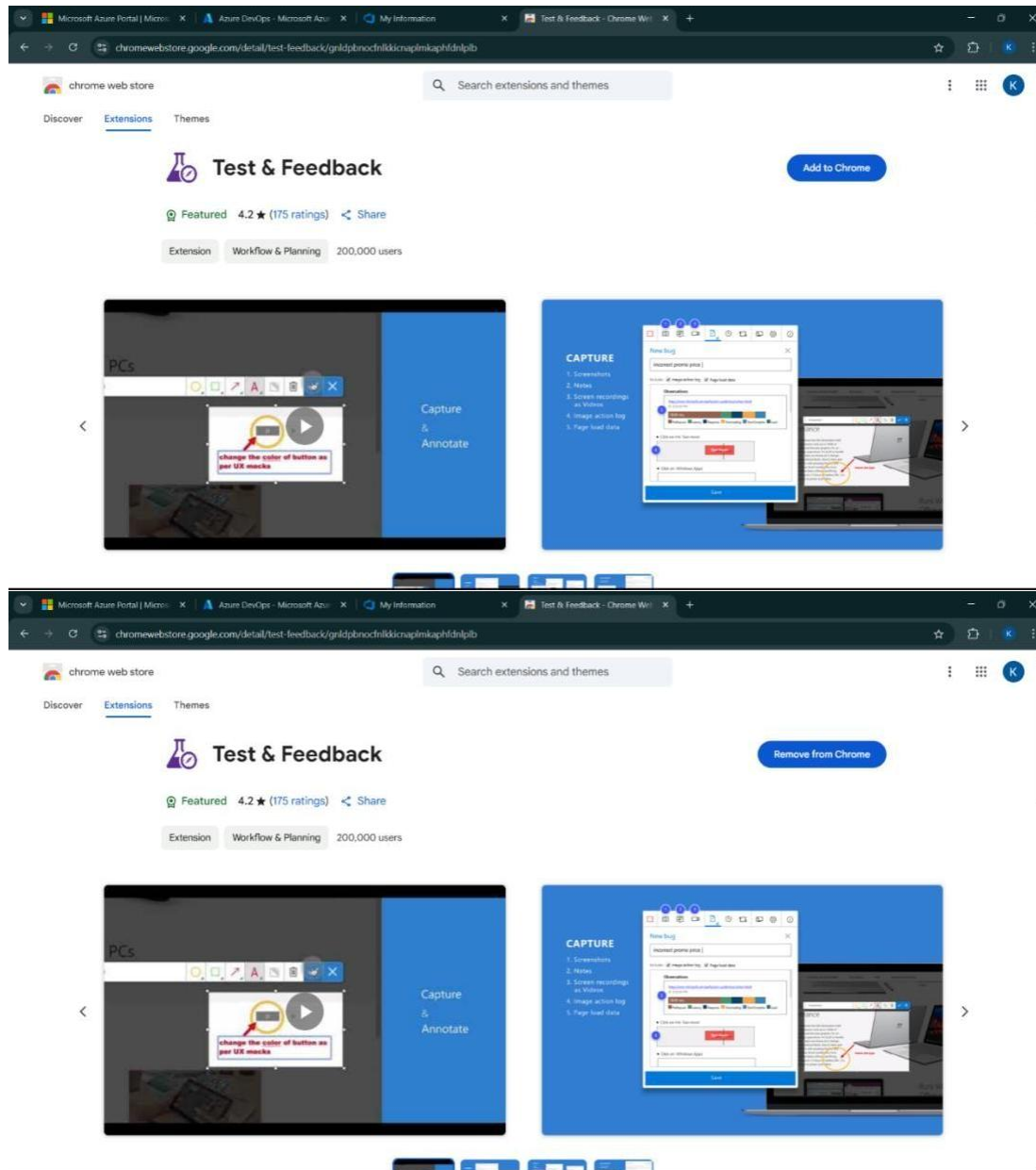
**Related Work**

Add link

Add an existing work item as a parent



## 4. Installation of test



## 5. Running the test cases

**Online Quiz System** / Login Verification (ID: 23)

Apr 28 - May 12  
100% run, 100% passed. [View report](#)

**Test Suites**  
Filter suites by name

Login Verification (3)

**Test Points (3 items)**

Title	Outcome	Order	Test Case Id
<input checked="" type="checkbox"/> Valid Login	Passed	1	24
<input type="checkbox"/> Invalid Username	Passed	2	25
<input type="checkbox"/> Invalid Password	Passed	3	26

Context menu options for 'Valid Login':

- View execution history
- Mark Outcome
- Run
- Reset test to active
- Edit test case
- Assign tester
- View test result

Runner - Test Plans - Google Chrome

dev.azure.com/2315011300815/Online%20Quiz%20System/\_testExecution/Index

Save and close | Create bug

24: Valid Login

1. Navigate to the login page.	<input checked="" type="checkbox"/>
2. enter a valid username/email.	<input checked="" type="checkbox"/>
3. enter valid password.	<input checked="" type="checkbox"/>
4. Click the login button.	<input checked="" type="checkbox"/>
5. EXPECTED RESULT User is redirected to the dashboard/homepage.	<input checked="" type="checkbox"/>

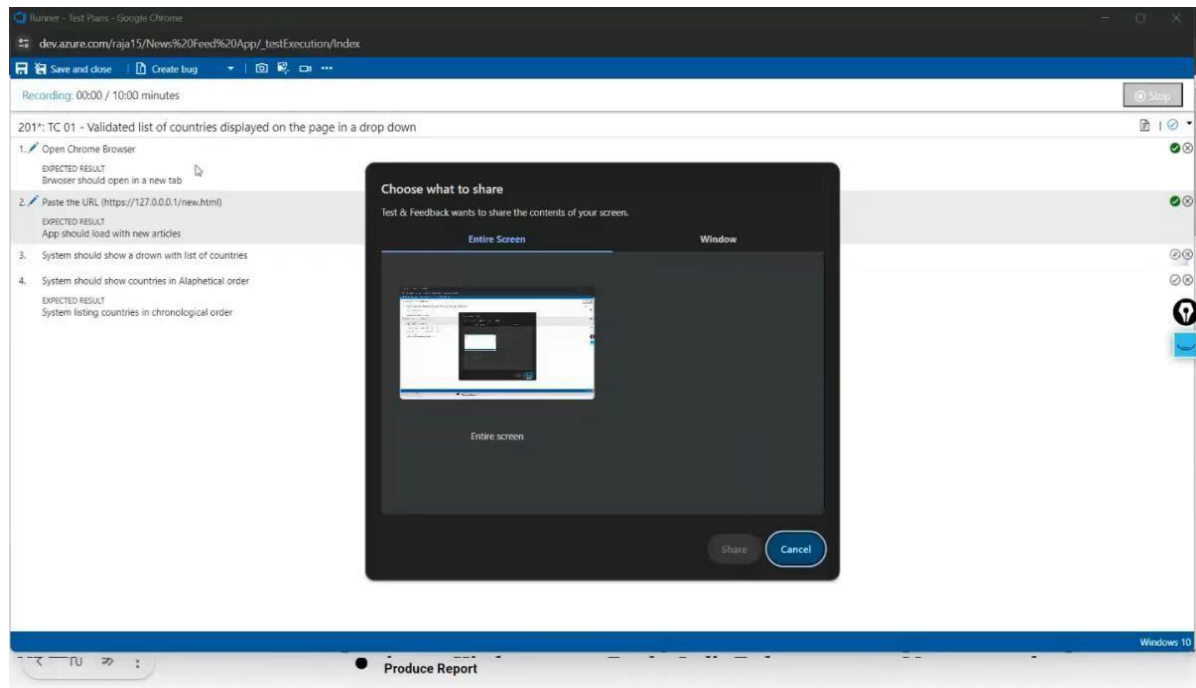
Windows 10

35°C Haze

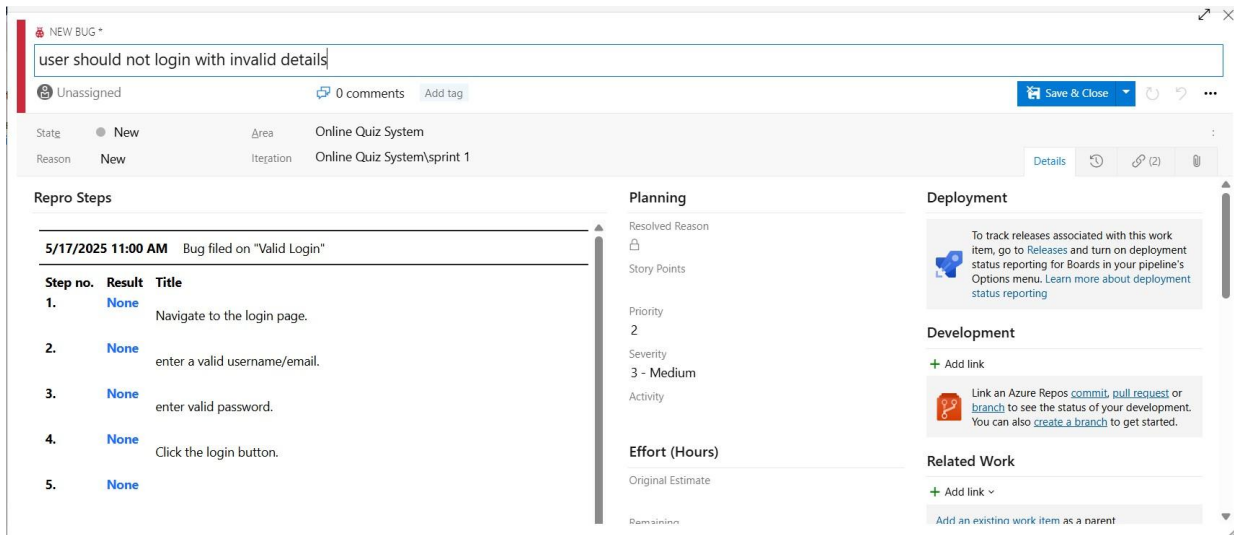
Search

12:51 PM 15-05-2025

## 6. Recording the test case



## 7. Creating the bug



NEW BUG \*

user should not enter invalid details

Unassigned0 commentsAdd tag

Save & Close

StateNewAreaOnline Quiz SystemReasonNewIterationOnline Quiz System\sprint 1

Details

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 DevOps2315011300815 / Online Quiz System / Test Plans / Login Verification

Online Quiz System

Overview

Boards

Repos

Pipelines

Test Plans

Test plans

Progress report

Parameters

Configurations

Runs

Artifacts

Project settings

Login Verification

Apr 28 - May 12

Past

100% run, 100% passed. View report

Test Suites

Filter suites by name

Login Verification (3)

Login Verification (ID: 23)

DefineExecuteChart

Test Points (3 items)

Title

Valid Login

Invalid Username

Invalid Password

Valid Login

Test Case Results

Outcome	TimeSta...	Configuration	Run by	Tester	Test Plan
Passed	Just now	Windows 10	Ranjani Sai	Ranjani Sai	Login V
Passed	4m ago	Windows 10	Ranjani Sai	Ranjani Sai	Login V
Paused	4m ago	Windows 10	Ranjani Sai	Ranjani Sai	Login V
Failed	6m ago	Windows 10	Ranjani Sai	Ranjani Sai	Login V
Passed	Thursd...	Windows 10	Ranjani Sai	Ranjani Sai	Login V
Failed	Thursd...	Windows 10	Ranjani Sai	Ranjani Sai	Login V

Open execution history for current test point

## 9. Test report summary

The screenshot shows a 'NEW BUG' form in Azure DevOps. The title is 'User should not enter invalid details'. The bug is currently 'Unassigned' with 0 comments. The state is 'New' and the area is 'Online Quiz System'. The reason is 'New' and the iteration is 'Online Quiz System\sprint 1'. The repro steps are as follows:

Step no.	Result	Title
1.	None	Navigate to the login page.
2.	None	enter a valid username/email.
3.	None	enter valid password.
4.	None	Click the login button.
5.	None	

The right sidebar contains sections for 'Planning' (Resolved Reason, Story Points, Priority 2, Severity 3 - Medium, Activity, Effort in Hours), 'Deployment' (instructions on tracking releases), 'Development' (link to Azure Repos), and 'Related Work' (link to add a parent item).

- Assigning bug to the developer and changing state

## 10. Progress report

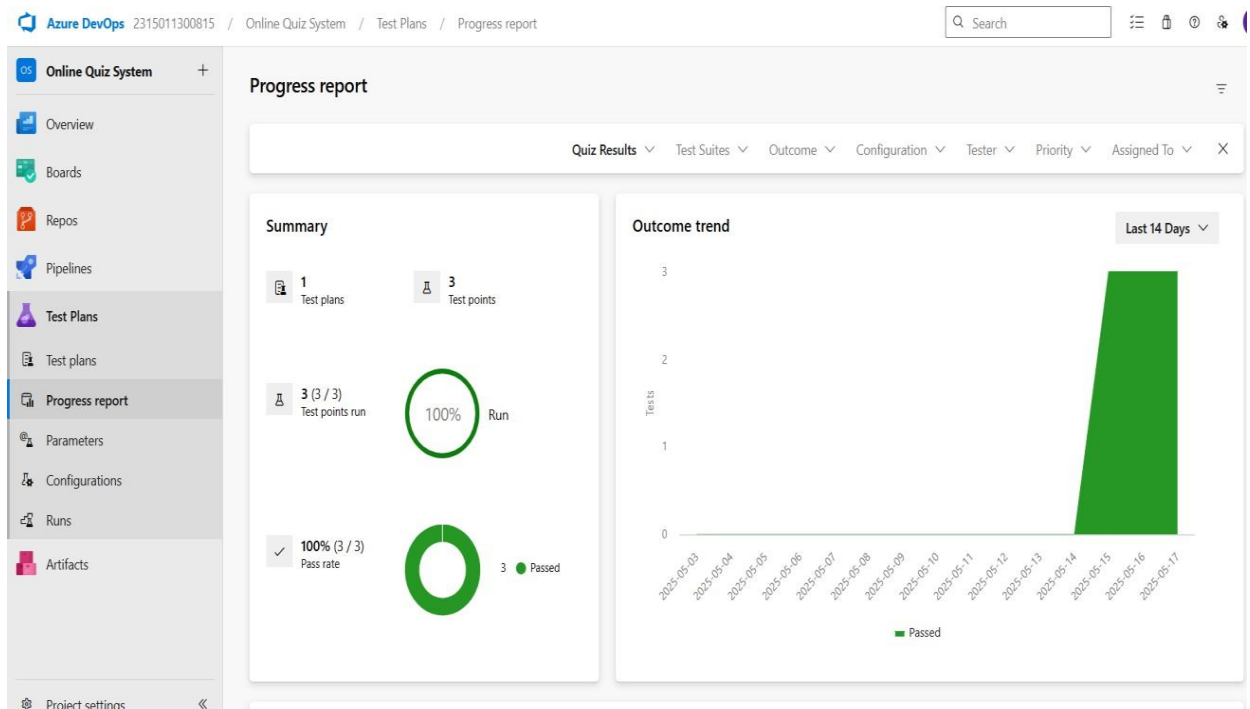
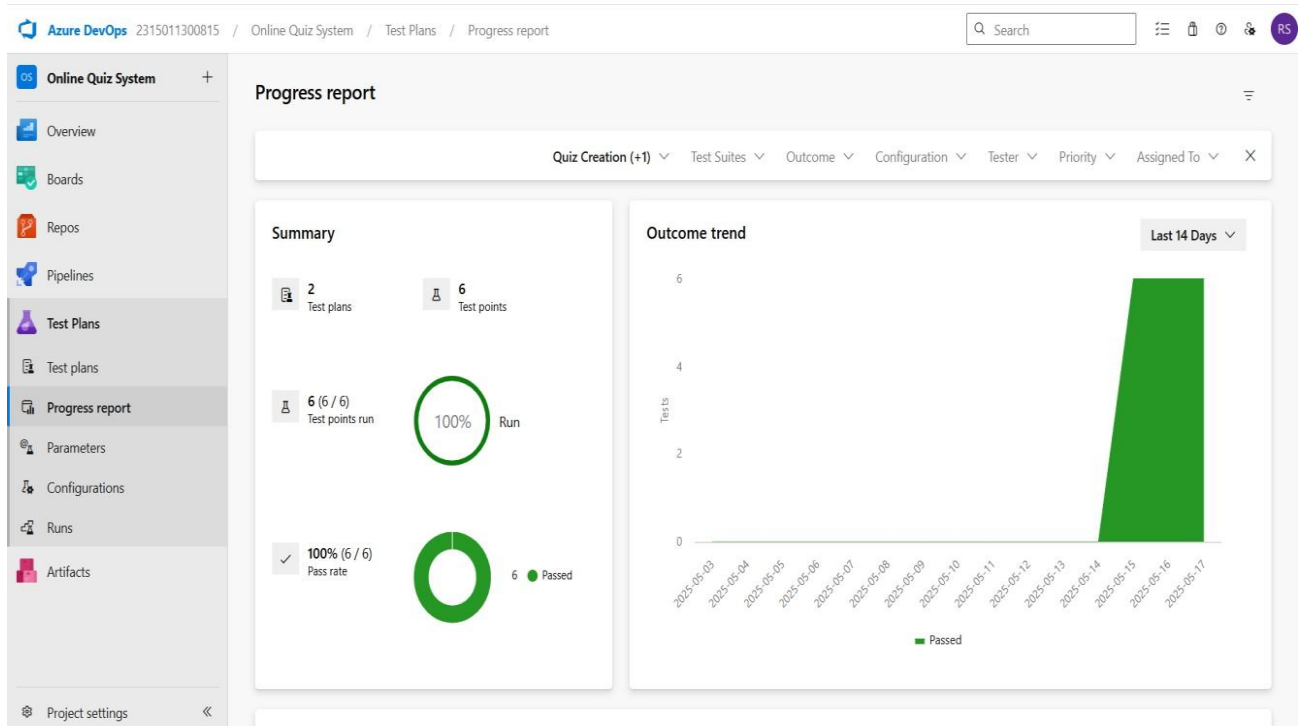
The screenshot shows a 'Progress report' for the 'Online Quiz System' project. The left sidebar lists various project components, with 'Test Plans' and 'Progress report' highlighted. The main content area shows a summary of test plans and points, along with a chart of the outcome trend over the last 14 days.

**Summary**

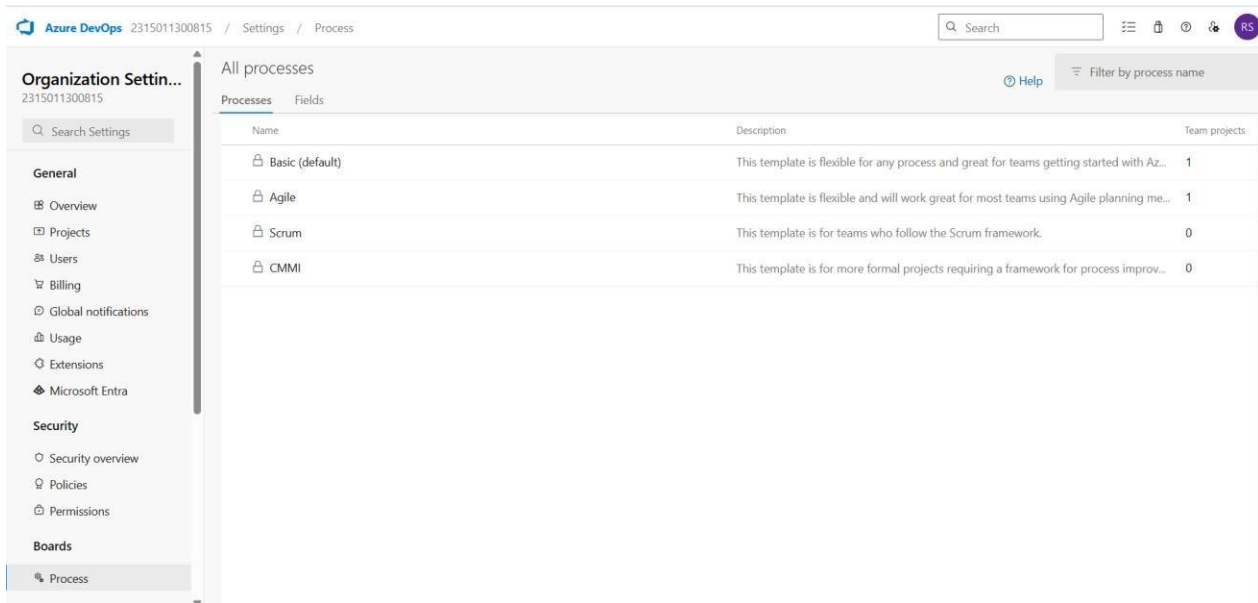
- 1 Test plans
- 3 Test points
- 3 (3 / 3) Test points run
- 100% Run
- 100% (3 / 3) Pass rate
- 3 Passed

**Outcome trend** (Last 14 Days)

Date	Tests
2025-05-03	0
2025-05-04	0
2025-05-05	0
2025-05-06	0
2025-05-07	0
2025-05-08	0
2025-05-09	0
2025-05-10	0
2025-05-11	0
2025-05-12	0
2025-05-13	0
2025-05-14	0
2025-05-15	3
2025-05-16	3
2025-05-17	3

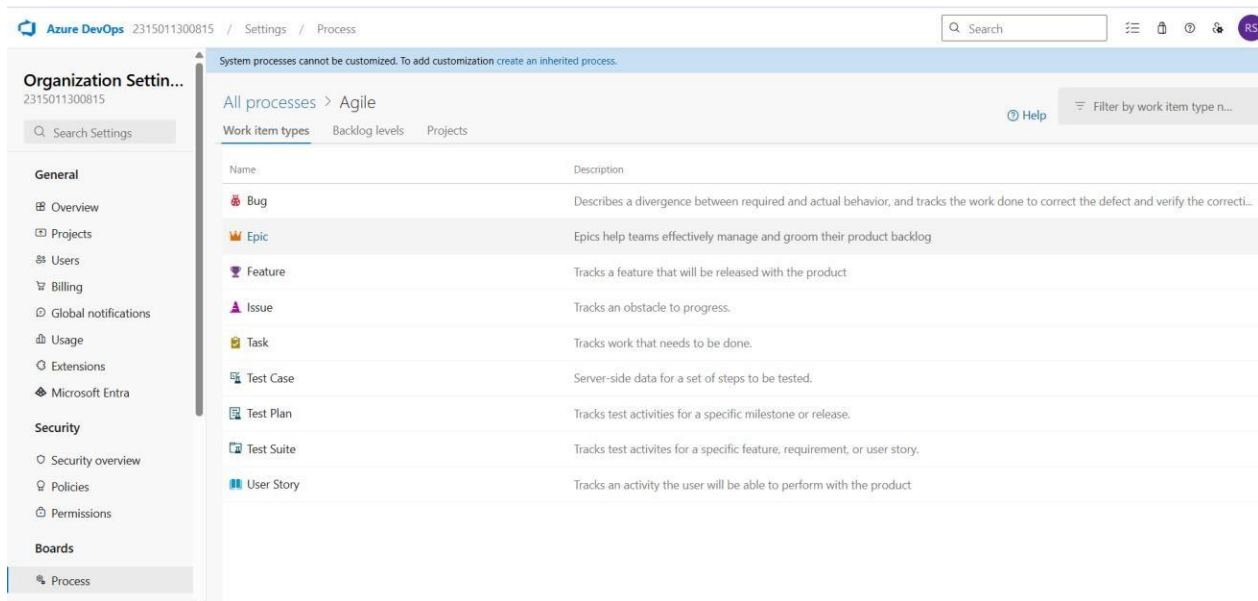


## 11. Changing the test template



The screenshot shows the Azure DevOps Settings page for a process. The left sidebar contains the 'Organization Settings' menu with options like Overview, Projects, Users, Billing, Global notifications, Usage, Extensions, Microsoft Entra, Security, and Boards. The 'Process' option is selected. The main content area is titled 'All processes' and shows a table of available process templates.

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...	1
Scrum	This template is for teams who follow the Scrum framework.	0
CMMI	This template is for more formal projects requiring a framework for process improv...	0



The screenshot shows the Azure DevOps Settings page for Agile work item types. The left sidebar is the same as the previous screenshot. The main content area is titled 'All processes > Agile' and shows a table of available work item types.

Name	Description
Bug	Describes a divergence between required and actual behavior, and tracks the work done to correct the defect and verify the correcti...
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.

**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 Student Management System, 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](https://dev.azure.com), select your organization, and open the project where your Student Management System 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.

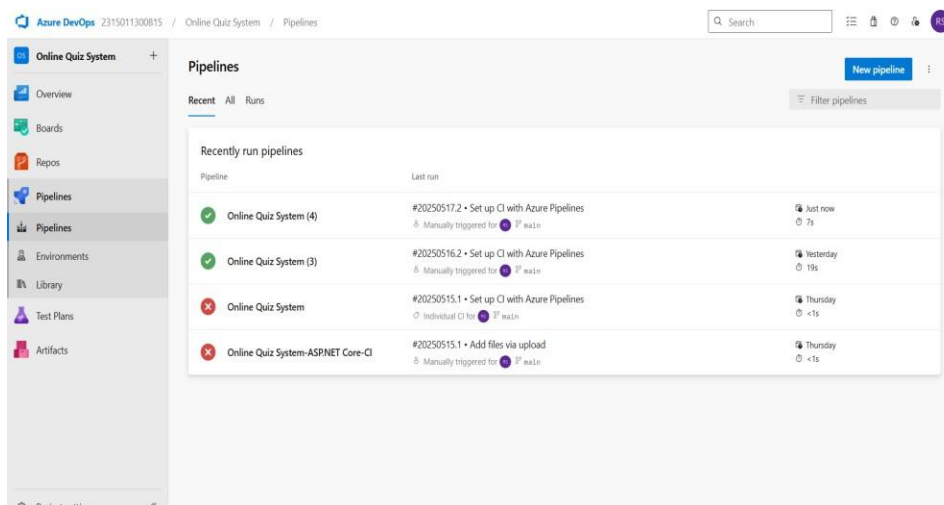
You can also integrate email alerts or Microsoft Teams notifications for build failures.

## 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.



Azure DevOps 2315011300815 / Online Quiz System / Pipelines / Online Quiz System (4) / 20250517.1

Search

Online Quiz System +

Overview

Boards

Repos

Pipelines

Pipelines

Environments

Library

Test Plans

Artifacts

Project settings

#20250517.1 • Set up CI with Azure Pipelines

Online Quiz System (4)

Run new

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

View retention leases

Summary Code Coverage

Individual CI by Ranjani Sai

Repository and version

Online Quiz System

main 06a981f7

Time started and elapsed

Just now

9s

Related

0 work items

0 artifacts

Tests and coverage

Get started

View 5 changes

Jobs

Name	Status	Duration
Job	Success	2s

Azure DevOps 2315011300815 / Online Quiz System / Pipelines / Online Quiz System (4) / 20250517.2

Search

Online Quiz System +

Overview

Boards

Repos

Pipelines

Pipelines

Environments

Library

Test Plans

Artifacts

Project settings

#20250517.2 • Set up CI with Azure Pipelines

Online Quiz System (4)

Run new

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

View retention leases

Summary Code Coverage

Manually run by Ranjani Sai

Repository and version

Online Quiz System

main 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 “**Online Quiz System**” has been executed successfully.

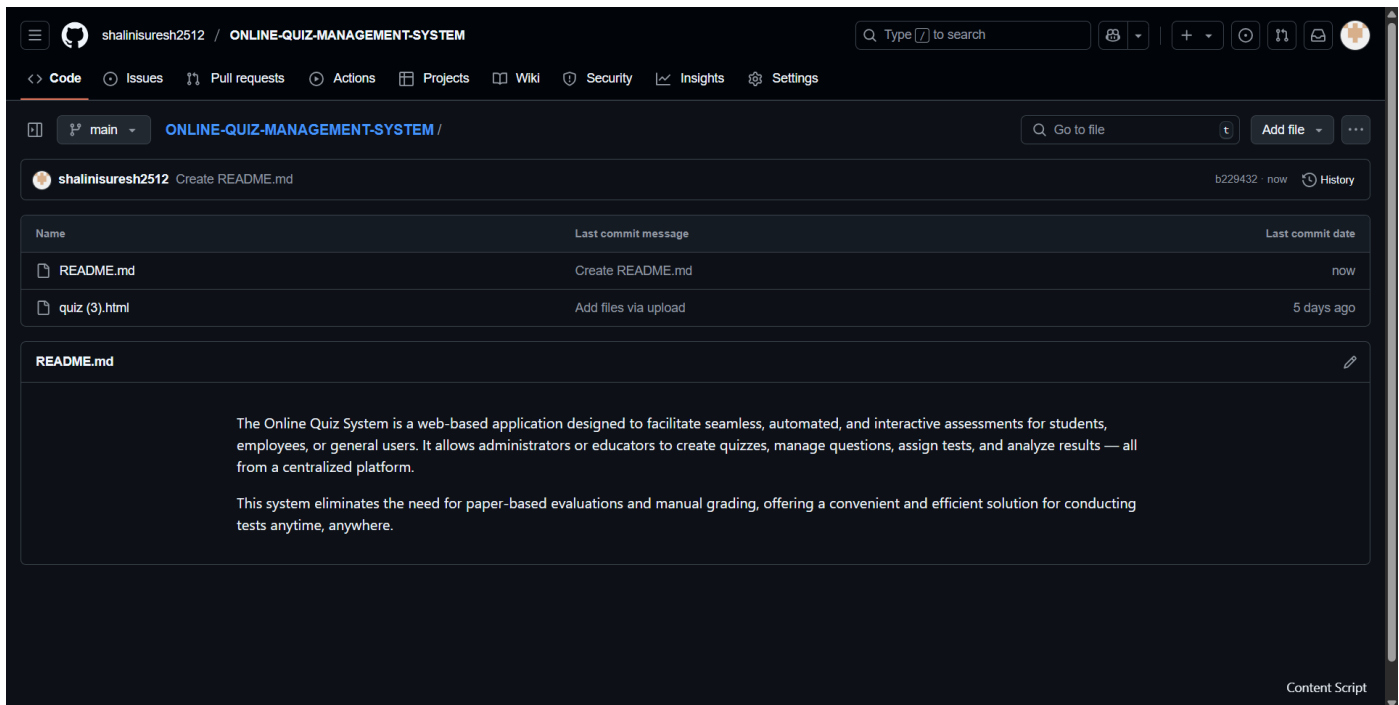
**EXP NO: 10**

## **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 Online Quiz System.

### **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.