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**EXPNO:1**

## **AZURE DEV OPS ENVIRONMENT SETUP**

### **AIM**

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

### **INSTALLATION**

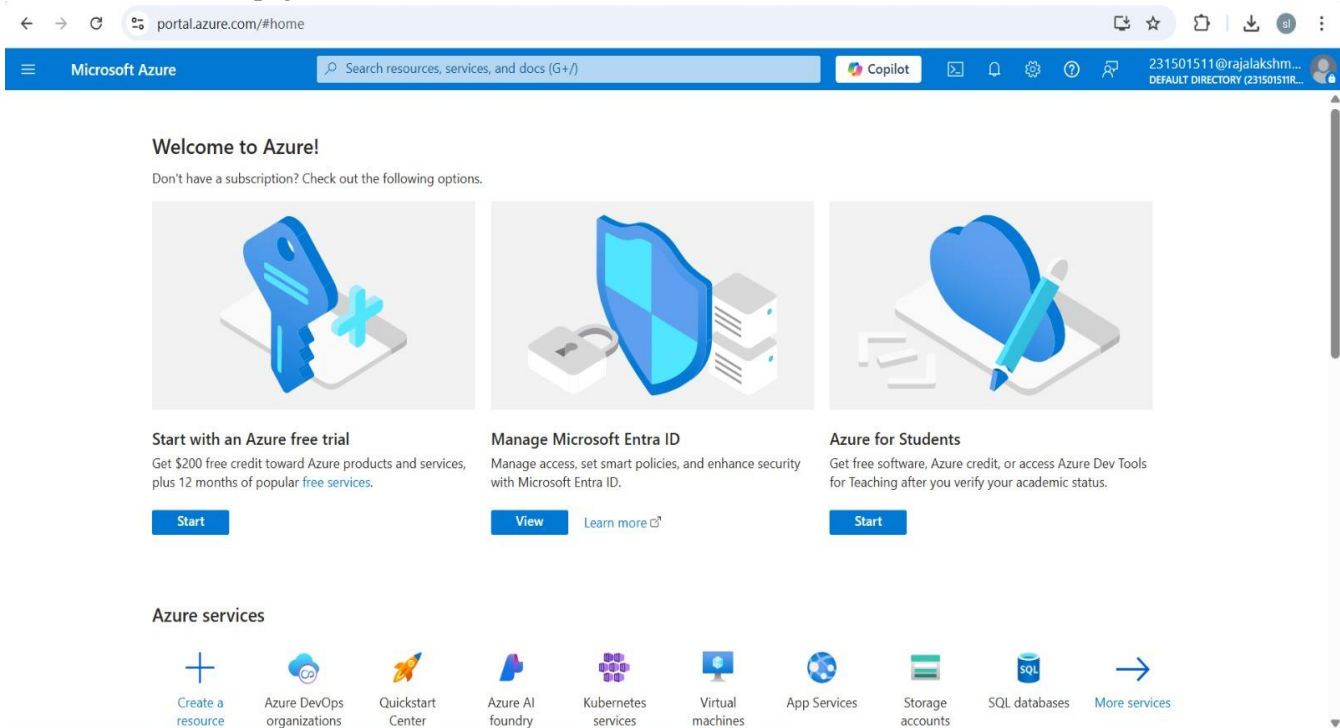
1. Open your web browser and go to the Azure website: <https://azure.microsoft.com/en-us/getstarted/azureportal>.

Sign in using your Microsoft account credentials.

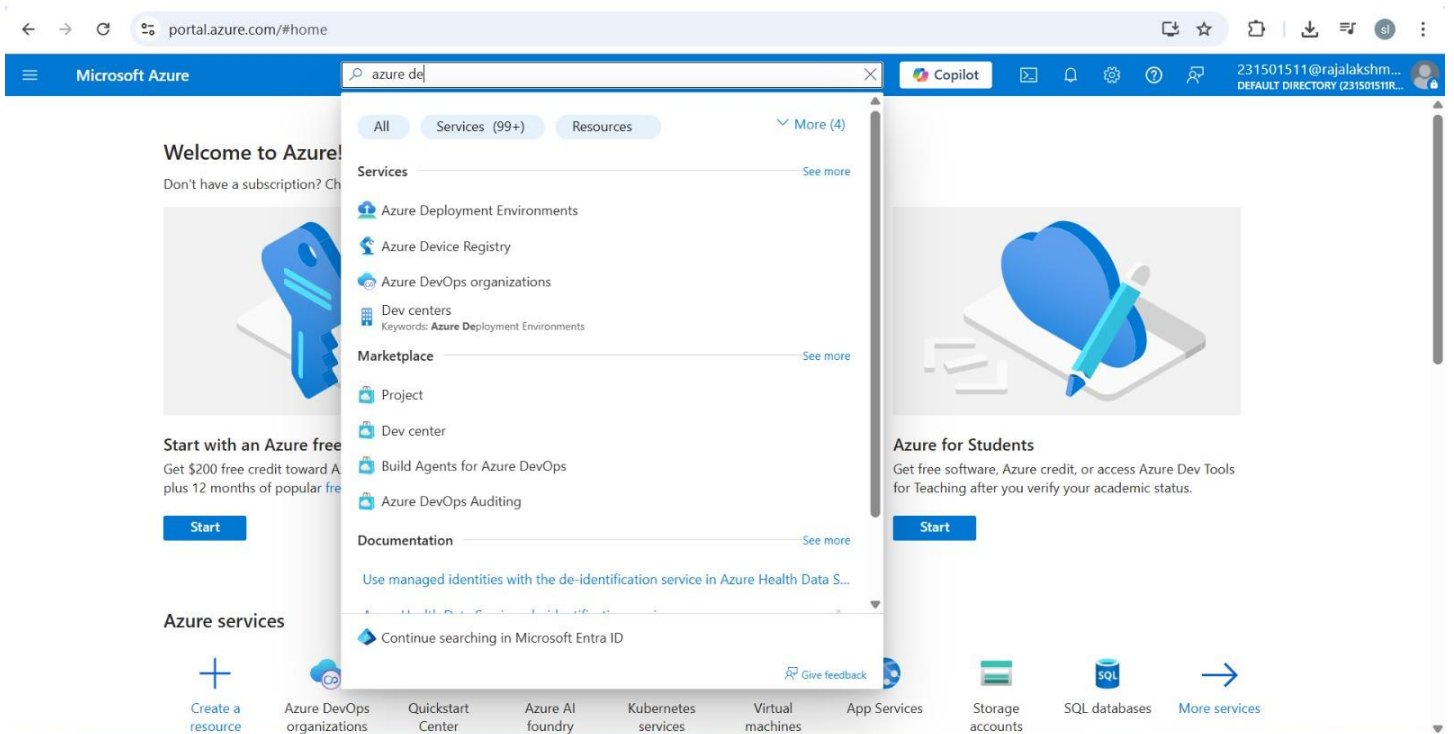
If you don't have a Microsoft account, you can create one here: <https://signup.live.com/?lic=1>

The screenshot shows the Azure for Students sign-up page. The browser address bar displays 'azure.microsoft.com/en-us/free/students'. The page header includes the Microsoft logo, 'Azure' with navigation links (Explore, Products, Solutions, Pricing, Partners, Resources), a search bar, and links for 'Learn', 'Contact Sales', 'Support', and 'Sign in'. The main content area has a dark background with the heading 'Build in the cloud free with Azure for Students'. Below this, it says 'Use your university or school email to sign up and renew each year you're a student'. There are two buttons: 'Start free' (green) and 'Learn about eligibility' (white with black text). At the bottom, there are two white boxes with black text: 'Start with \$100 Azure credit' and 'No credit card required'. A blue 'Chat with sales' button is in the bottom right corner.

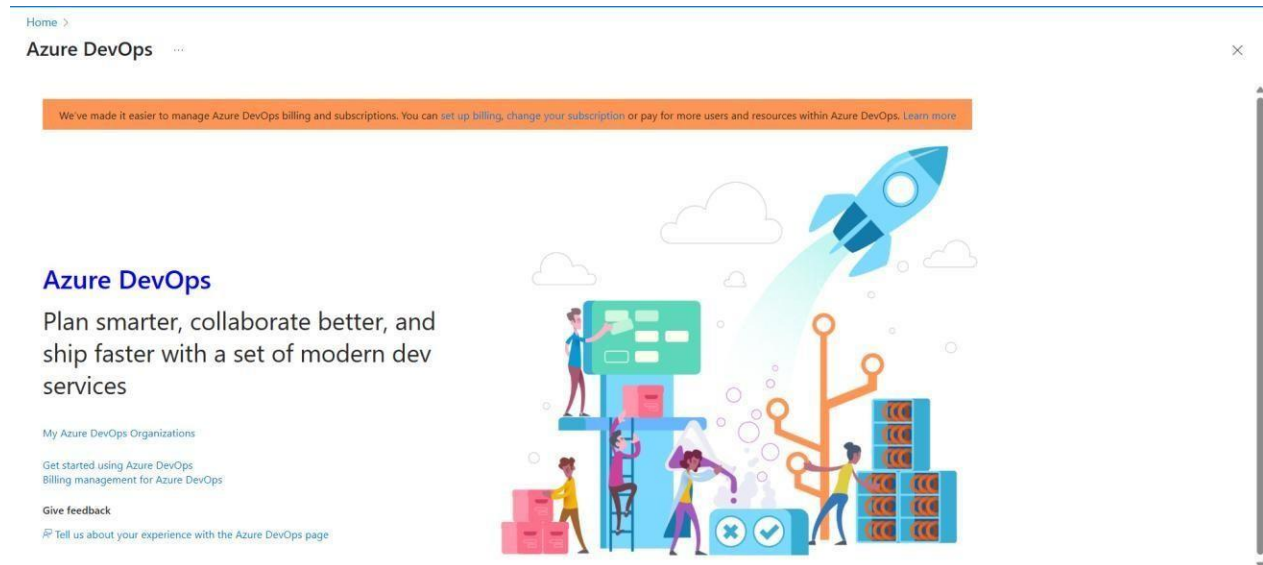
## 2. Azure homepage



## 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.

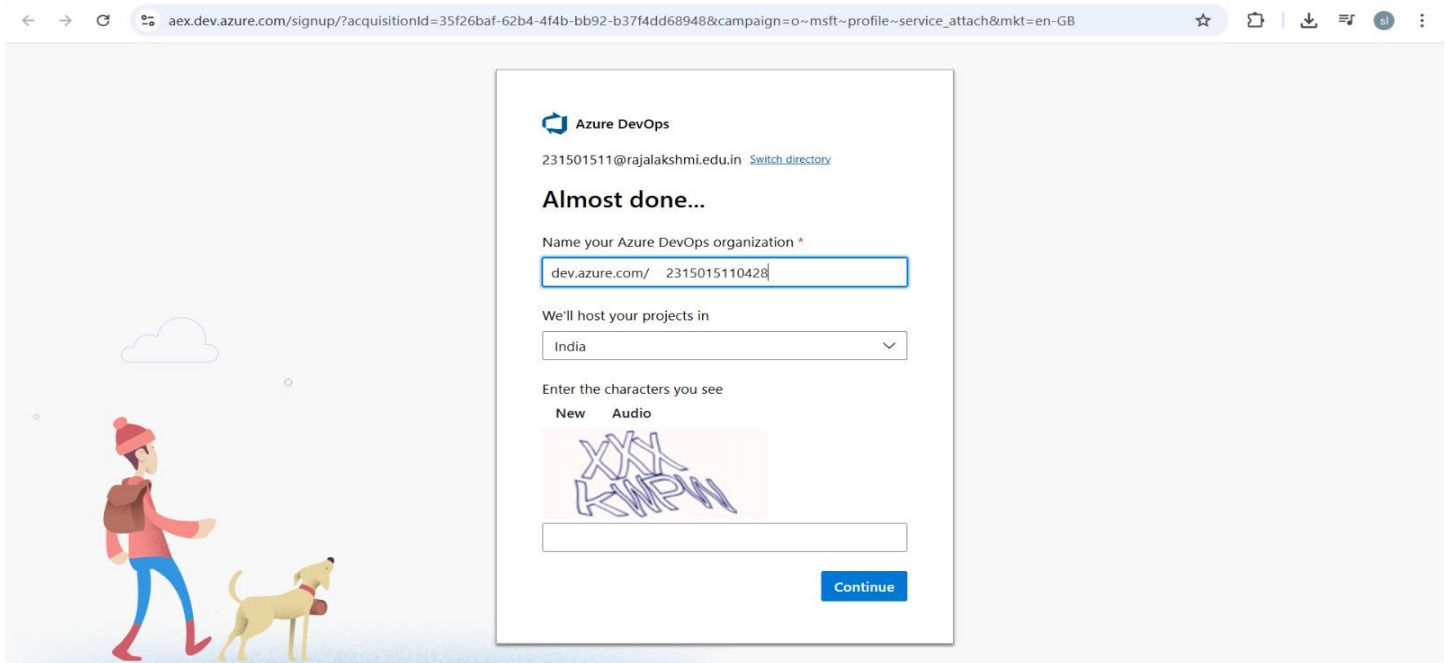
EXPNO:2

# AZURE DEV OPS PROJECT SETUP AND USER STORY MANAGEMENT

## AIM

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

### 1. Create An Azure Account

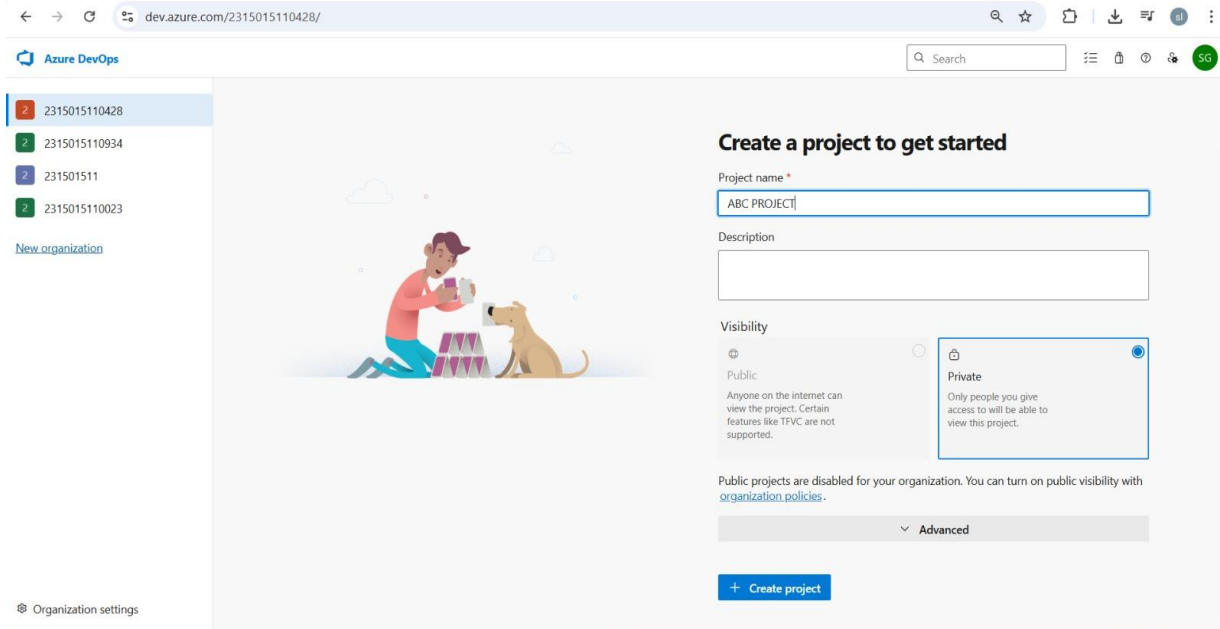


### 2. Create the First Project in Your Organization

- 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 **Homepage**, 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).

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

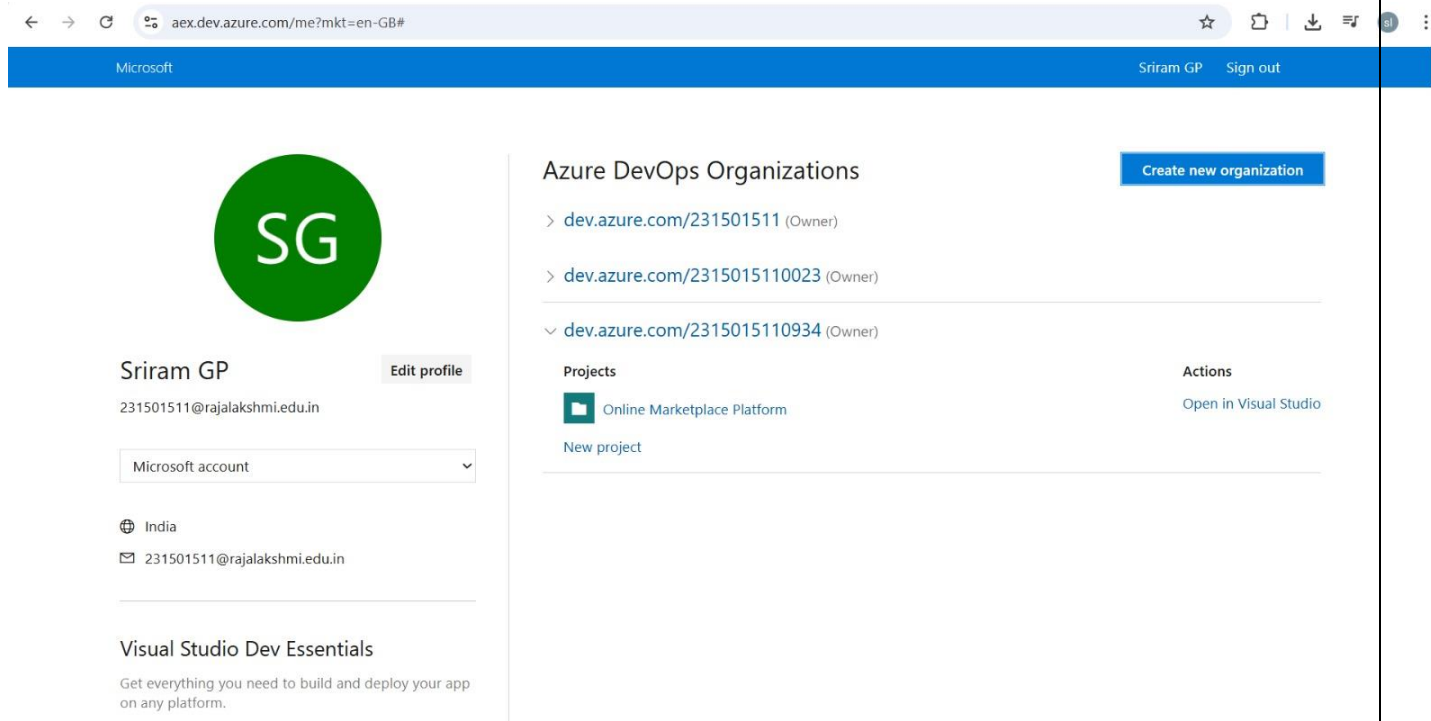


The screenshot shows the Azure DevOps web interface. On the left, a sidebar lists organizations: 2315015110428, 2315015110934, 231501511, and 2315015110023. The main area is titled 'Create a project to get started'. It features a form with the following fields:

- Project name \***: A text box containing 'ABC PROJECT'.
- Description**: An empty text box.
- Visibility**: Two radio buttons. 'Public' is selected, and 'Private' is unselected. The 'Private' option is highlighted with a blue border.

Below the visibility options, a note states: 'Public projects are disabled for your organization. You can turn on public visibility with [organization policies](#).' At the bottom of the form is a blue button labeled '+ Create project'.

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



The screenshot shows the Azure DevOps Organization Home page. The top navigation bar includes the Microsoft logo, the user name 'Sriram GP', and a 'Sign out' button. The main content area is divided into two columns.

**Left Column: User Profile**

- A green circular avatar with the letters 'SG'.
- The name 'Sriram GP' and the email '231501511@rajalakshmi.edu.in'.
- An 'Edit profile' button.
- A dropdown menu showing 'Microsoft account'.
- A location indicator for 'India' and the email '231501511@rajalakshmi.edu.in'.
- A section titled 'Visual Studio Dev Essentials' with the text: 'Get everything you need to build and deploy your app on any platform.'

**Right Column: Azure DevOps Organizations**

- A 'Create new organization' button.
- A list of organizations:
  - > dev.azure.com/231501511 (Owner)
  - > dev.azure.com/2315015110023 (Owner)
  - > dev.azure.com/2315015110934 (Owner)
- A section titled 'Projects' with a 'New project' button.
- A project named 'Online Marketplace Platform' with a 'New project' button.
- An 'Actions' section with a link 'Open in Visual Studio'.

## 4. Project dashboard

The screenshot displays the Azure DevOps interface for a project named 'Online Marketplace Platform'. The browser address bar shows the URL: `dev.azure.com/2315015110934/Online%20Marketplace%20Platform`. The page header includes the Azure DevOps logo, the project name, and navigation links for Overview and Summary. A search bar and utility icons are also present.

**Left Sidebar:**

- Online Marketplace Pl... (+)
- Overview
- Summary (selected)
- Dashboards
- Wiki
- Boards
- Repos
- Pipelines
- Test Plans
- Artifacts
- Project settings

**Main Content Area:**

### Online Marketplace Platform

**About this project** Like 0

This project aims to develop a scalable, secure, and highly available Online Marketplace Platform hosted on Microsoft Azure.

**Project stats** Period: Last 7 days

Category	Count	Description
Boards	17	Work items created
Boards	0	Work items completed
Repos	0	Pull requests opened
Repos	5	Commits by 2 authors
Pipelines	0%	Builds succeeded

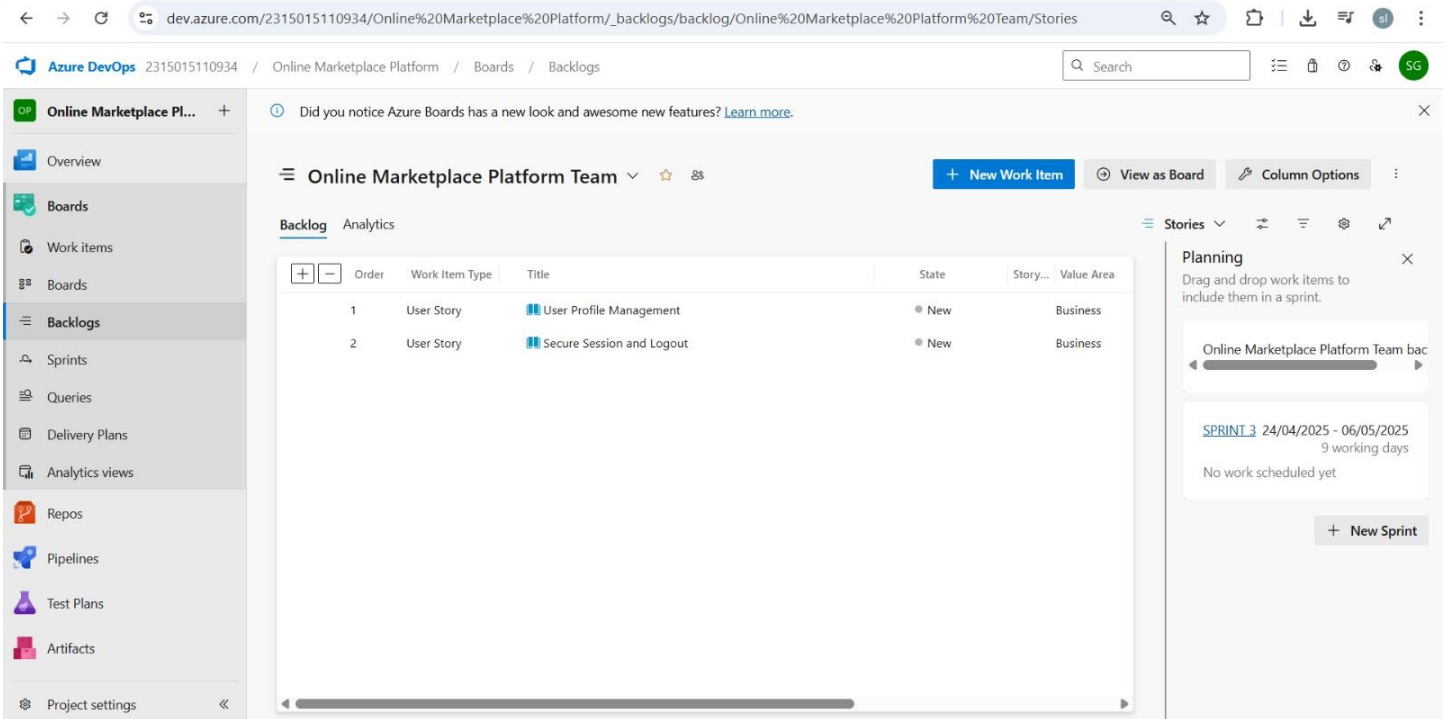
**Members** 5

Five colored circles represent the project members.

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 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 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.



EXPNO:3

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

## AIM

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

## Create Epic, Features, User Stories, Task

dev.azure.com/2315015110934/Online%20Marketplace%20Platform/\_workitems/recentlyupdated/

Azure DevOps 2315015110934 / Online Marketplace Platform / Boards / Work items

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

Work items

Recently updated | + New Work Item | Open in Queries | Column Options | Import Work Items | Recycle Bin

Filter by keyword

ID	Title	Assigned To	State	Area Path	Tags
11	Product Listing and Discovery	Unassigned	New	Online Marketplace Platform	
10	Secure Session and Logout	Unassigned	New	Online Marketplace Platform	
9	User Profile Management	Unassigned	New	Online Marketplace Platform	
8	Order Management	Unassigned	New	Online Marketplace Platform	
7	Product Listing and Management	Unassigned	New	Online Marketplace Platform	
6	Order and Vendor Management	Unassigned	New	Online Marketplace Platform	
5	Shopping Cart and Checkout System	Unassigned	New	Online Marketplace Platform	
4	Product Listing and Discovery	Unassigned	New	Online Marketplace Platform	
3	User Registration and Authentication	Unassigned	New	Online Marketplace Platform	
2	User Account Management	Unassigned	New	Online Marketplace Platform	

## 1. Fill in Epics

dev.azure.com/2315015110934/Online%20Marketplace%20Platform/\_workitems/create/Epic

Azure DevOps 2315015110934 / Online Marketplace Platform / Boards / Work items

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

Work Items | Back to Work Items

NEW EPIC • Field 'Title' cannot be empty.

Enter title

No one selected | 0 Comments | Add Tag

Save | Cancel | Refresh

State: New | Reason: New | Area: Online Marketplace Platform | Iteration: Online Marketplace Platform

Description: Click to add Description.

Discussion

Planning

Priority: 2 | Risk | Effort | Business Value | Time Criticality | Start Date | Select a date... | Target Date

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.

## 2. Fill in Features

The screenshot shows the 'Create Feature' form in Azure DevOps. The browser address bar displays 'dev.azure.com/2315015110934/Online%20Marketplace%20Platform/\_workitems/create/Feature'. The left sidebar contains navigation links: Overview, Boards, Work items (selected), Backlogs, Sprints, Queries, Delivery Plans, Analytics views, Repos, Pipelines, Test Plans, Artifacts, and Project settings. The main content area has a 'Work Items' header with a 'Back to Work Items' link. Below this is a 'NEW FEATURE' section with a red error message: 'Field 'Title' cannot be empty.' The form includes a 'Title' input field, a 'No one selected' tag selector, and a '0 Comments' indicator. The 'State' is set to 'New' and the 'Area' is 'Online Marketplace Platform'. The 'Reason' is also 'New'. The 'Iteration' is 'Online Marketplace Platform'. The 'Description' field has a placeholder 'Click to add Description.' The 'Discussion' field is collapsed. The 'Planning' section includes fields for Priority (2), Risk, Effort, Business Value, Time Criticality, Start Date (with a 'Select a date...' dropdown), and Target Date. The 'Deployment' section has a 'Details' tab and a 'Development' section with an 'Add link' button and a message: '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.'

## 3. Fill in UserStoryDetails

The screenshot shows the 'Create User Story' form in Azure DevOps. The browser address bar displays 'dev.azure.com/2315015110934/Online%20Marketplace%20Platform/\_workitems/create/User%20Story'. The left sidebar is identical to the previous screenshot. The main content area has a 'Work Items' header with a 'Back to Work Items' link. Below this is a 'NEW USER STORY' section with a red error message: 'Field 'Title' cannot be empty.' The form includes a 'Title' input field, a 'No one selected' tag selector, and a '0 Comments' indicator. The 'State' is set to 'New' and the 'Area' is 'Online Marketplace Platform'. The 'Reason' is also 'New'. The 'Iteration' is 'Online Marketplace Platform'. The 'Description' field has a placeholder 'Click to add Description.' The 'Acceptance Criteria' field has a placeholder 'Click to add Acceptance Criteria.' The 'Discussion' field is collapsed. The 'Planning' section includes fields for Story Points, Priority (2), and Risk. The 'Classification' section includes fields for Value area and Business. The 'Deployment' section has a 'Details' tab and a 'Development' section with an 'Add link' button and a message: '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.'

## RESULT

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

**EXPNO:4**

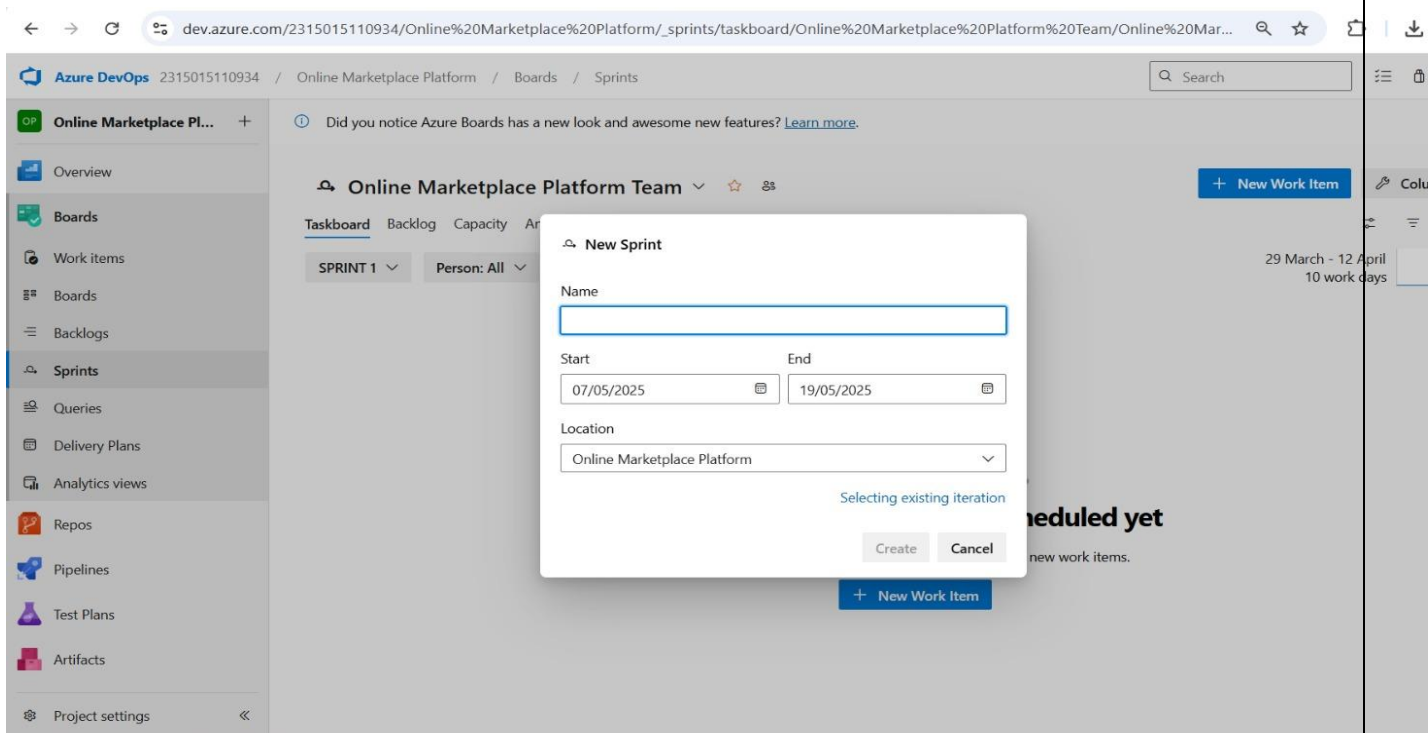
# SPRINTPLANNING

## AIM

To assign userstory to specific sprint for the Online market platform.

## Sprint

## CREATING



## Sprint 1 2 3

dev.azure.com/2315015110934/Online%20Marketplace%20Platform/\_sprints/taskboard/Online%20Marketplace%20Platform%20Team/Online%20Mar...

Azure DevOps 2315015110934 / Online Marketplace Platform / Boards / Sprints

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

Online Marketplace Platform Team

Taskboard Backlog Capacity Analytics

SPRINT 1 Person: All

Filter sprints

- SPRINT 1 Past
- SPRINT 2 Past
- SPRINT 3 Current

+ New Sprint

29 March - 12 April  
10 work days

**You do not have any work scheduled yet**

[Schedule Work](#) from your product backlog or create new work items.

+ New Work Item

## RESULT

The Sprints have been created for Online Market Platform

EXPNO:5

# POKERESTIMATION

## AIM

Create Poker Estimation for the user stories – Online Market Platform.

## PokerEstimation

← → ↺

dev.azure.com/2315015110934/Online%20Marketplace%20Platform/\_workitems/create/User%20Story

🔍 ☆ 📄 ⬇️ 📄 📄 📄

Azure DevOps 2315015110934 / Online Marketplace Platform / Boards / Work items

🔍 Search

⋮ 🗑️ 🔒 🧑🏿 🟢

Online Marketplace PL... +

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.](#) ✕

Work Items ⏪ Back to Work Items

NEW USER STORY \* 🔴 Field 'Title' cannot be empty.

Enter title

👤 No one selected 0 Comments Add Tag

Save 🔄 ⋮

State ☒ New Area Online Marketplace Platform

Reason New Iteration Online Marketplace Platform

Details 🕒 0 📄 0

Description

Click to add Description.

Acceptance Criteria

Click to add Acceptance Criteria.

Discussion

▼

Planning

Story Points

Priority

2

Risk

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.

## RESULT

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

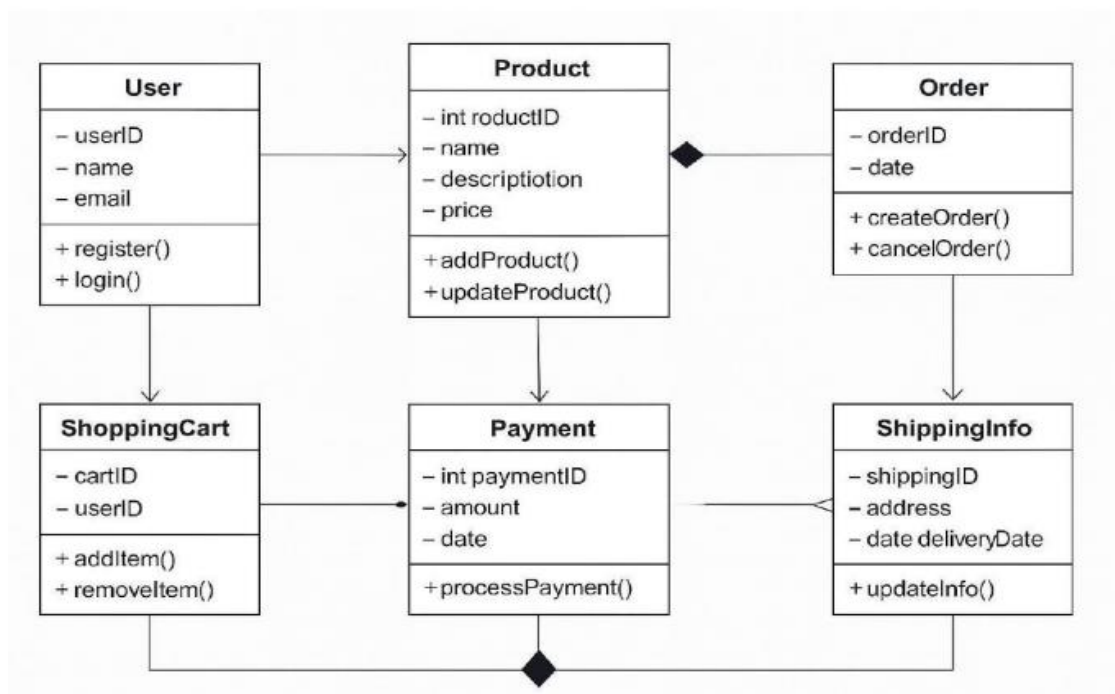
EXPNO:6

## DESIGNING CLASS AND SEQUENCE DIAGRAMS FOR PROJECT ARCHITECTURE

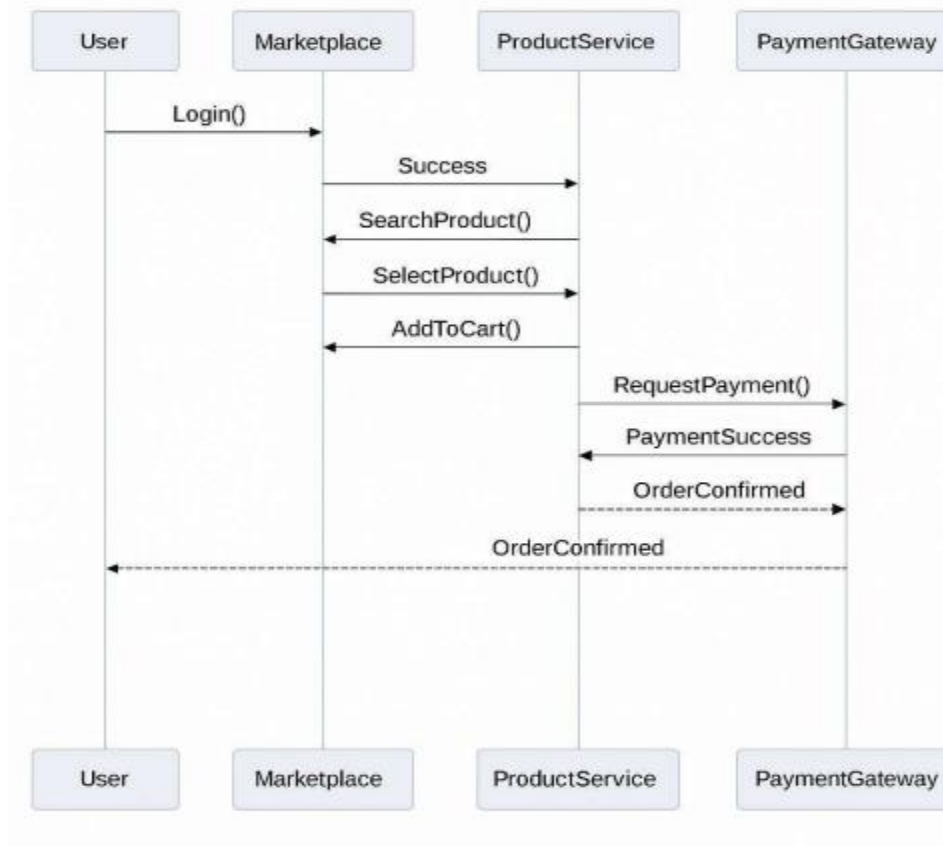
### AIM

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

### 6A. Class Diagram



## 6B.SequenceDiagram



## RESULT

The Class Diagram and Sequence Diagram is designed successfully for the Online Quiz System.



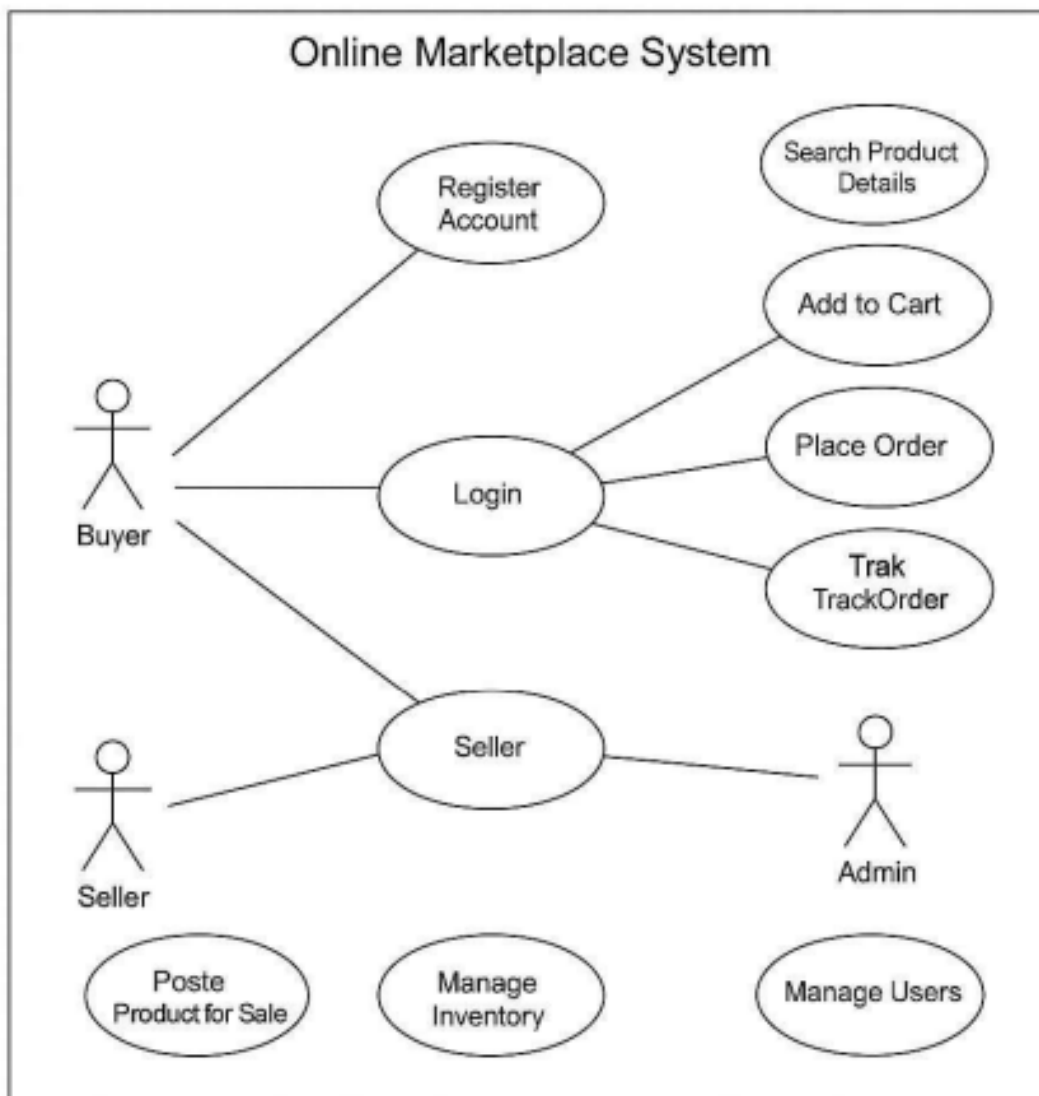
EXPNO:7

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

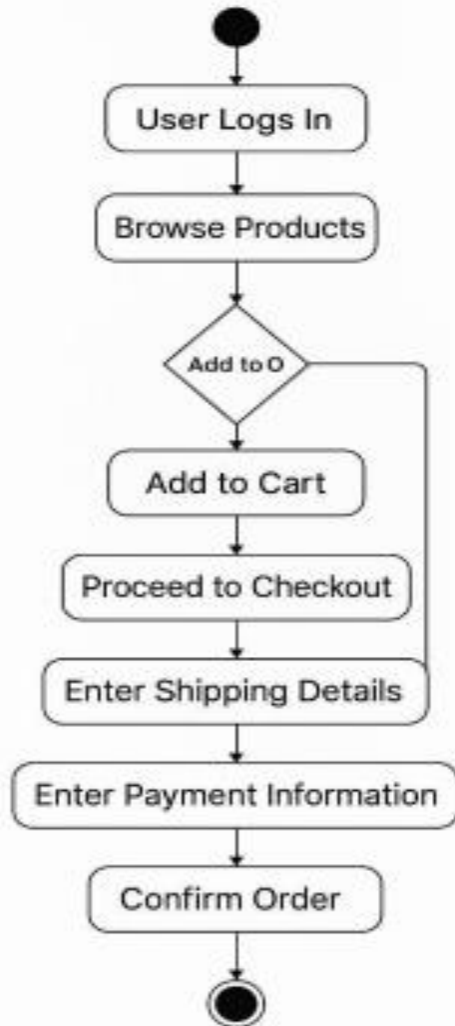
### AIM

To Design a Use-Case Diagram and Activity Diagram for the given Project. 7A.

### Use-Case Diagram



## 7B.ActivityDiagram



## RESULT

The Use-Case Diagram and Activity Diagram are designed successfully for the Online Quiz System.

**EXPNO:8**

## **TESTING TEST PLANS AND TEST CASES**

### **AIM**

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

### **Test Planning and Test Case 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 uniquely identify (e.g., TC01-Valid Login, TC03-Invalid Password). • Facilitates 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

dev.azure.com/2315015110934/Online%20Marketplace%20Platform/\_testManagement/new

Azure DevOps 2315015110934 / Online Marketplace Platform / Test Plans

Search

Online Marketplace Platform

New Test Plan

Name \*

Enter a plan name

Area Path \*

Online Marketplace Platform

Iteration \*

Online Marketplace Platform

Create Cancel

## 2. Test suite

dev.azure.com/2315015110934/Online%20Marketplace%20Platform/\_testPlans/execute?planid=18&suiteid=19

Azure DevOps 2315015110934 / Online Marketplace Platform / Test Plans / Product Catalog & Search

Search

Online Marketplace Platform

Product Catalog & Search (ID: 19)

Define Execute Chart

Test Suites

Filter suites by name

Product Catalog & Search (2)

Test Points (2 items)

Title	Outcome	Order	Test Case Id
Search Product by Name	Passed	1	20
Apply Category Filter	Passed	2	21

### 3. Testcase

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

Online market platform –Test Plans

### USERSTORIES

- 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).

### TESTSUITES

#### TestSuite: TS01

#### -User Registration & Login\*

##### TC01–Register New User

###### ○ Action:

- Navigate to Sign-Up page
- Enter valid details (Name, Email, Password)
- Click "Register"

###### ○ Expected Results:

- User is registered and redirected to Dashboard

###### ○ Type: Happy Path

##### 2. TC02–Login with Valid Credentials

###### ○ Action:

- Navigate to Login page
- Enter valid email and password

###### ○ Expected Results:

- user is logged in and redirected to homepage

## **TestSuite:TS02–**

### **Product Catalog & Search\***

#### **TC03–Search Product by Name**

- o **Action:**
  - Enter product name in search bar
  - Click search icon
- o **ExpectedResults:**
  - Relevant products are displayed

#### **TC04–Apply Category Filter**

- o **Action:**
  - Navigate to product listing
  - Select a category filter<br>3. Observe results
- o **ExpectedResults:**
  - Only products from selected category are shown
  - .

## **TestSuite:TS03–**

### **Cart & Checkout\***

#### **TC05 Add Product to Cart**

- **Action:**
  - Open product detail<br>2. Click "Add to Cart"
- **ExpectedResults:**
  - Product is added to cart, cart count increases.

#### **2. TC06–Complete Checkout with Credit Card**

- **Action:**
  - Add product to cart
  - Proceed to checkout
  - Enter valid credit card details
  - Click Pay
- **ExpectedResults:**
  - Order is placed, confirmation is shown

## **TestSuite:TS04–**

### **API Testing (Using Postman)\***

#### **1. TC07–GET /products**

- **Action:**
  - Send GET request to /api/product

- **ExpectedResults:**
  - 200 OK with product JSON list |.

## **TestSuite:TS05–**

### **Performance Testing**

#### **1. TC08–Homepage Load Test**

- **Action:**
  - Simulate 1000 users accessing homepage concurrently
- **ExpectedResults:**
  - Load time under 3 seconds, no crashes



TestCases

← → ↺

dev.azure.com/2315015110934/Online%20Marketplace%20Platform/\_testManagement/all?showFilters=true

🔍 ☆ 📄 ⬇️ 📋 ⌵ ⋮

Azure DevOps

2315015110934 / Online Marketplace Platform / Test Plans

🔍 Search

☰ 🗑️ ⌚ ⚙️ SG

Online Marketplace Pl... +

Overview

Boards

Repos

Pipelines

**Test Plans**

Test plans

Progress report

Parameters

Configurations

Runs

Artifacts

⚙️ Project settings ⏪

Test Plans

+ New Test Plan

Mine All

Filter by title

State Area Path Iteration Assigned To

Title	Test Plan ID	State	Area Path	Iteration	Assigned To	☆
API Testing (Using Postman)	26	Active	Online Marketplace Platform	Online Marketplace Platform	SG Sriram GP	☆
Cart & Checkout	22	Active	Online Marketplace Platform	Online Marketplace Platform	SG Sriram GP	☆
Product Catalog & Search	18	Active	Online Marketplace Platform	Online Marketplace Platform	SG Sriram GP	☆
User Registration & Login	12	Active	Online Marketplace Platform	Online Marketplace Platform	SG Sriram GP	☆

Loading all test plans

## Installation of test

dev.azure.com/231501511/ATTENDANCE%20MANAGEMENT/\_testManagement/mine

Azure DevOps 231501511 / ATTENDANCE MANAGEM... / Test Plans

ATTENDANCE MANAG... +

- Overview
- Boards
- Repos
- Pipelines
- Test Plans**
- Test plans
- Progress report
- Runs
- Artifacts

You are currently logged in as a user with **basic access** and you are seeing this page as you don't have any test plans and test suites created for the selected team.

### Welcome to Test hub

A central location where your team can coordinate all your manual test activities, track progress, and get critical insights. As a user with basic access level, here is how you can get started right away.

#### Create, run and track tests directly from the cards

As a basic user, you can now create tests for your user stories and run tests right on your Kanban board. [Learn more.](#)

#### Use Test & Feedback to test web applications and submit feedback

You can now capture findings, create issues, and collaborate with team directly from the browser across all platforms. [Learn more.](#) [Install](#)

Stories

Backlog Board

New Active 1/5 Resolved

New item

Hello World Web Site

Chloe Church

0/4

Customer address form

Raisa Pokrovskaya

2

Open

Edit title

Add Task

Add Test

Delete

New branch...

Do exploratory testing

Customer welcome page

Jamal Hartnett

Slow response on form

Chloe Church

1

Add Test

Calibrate response

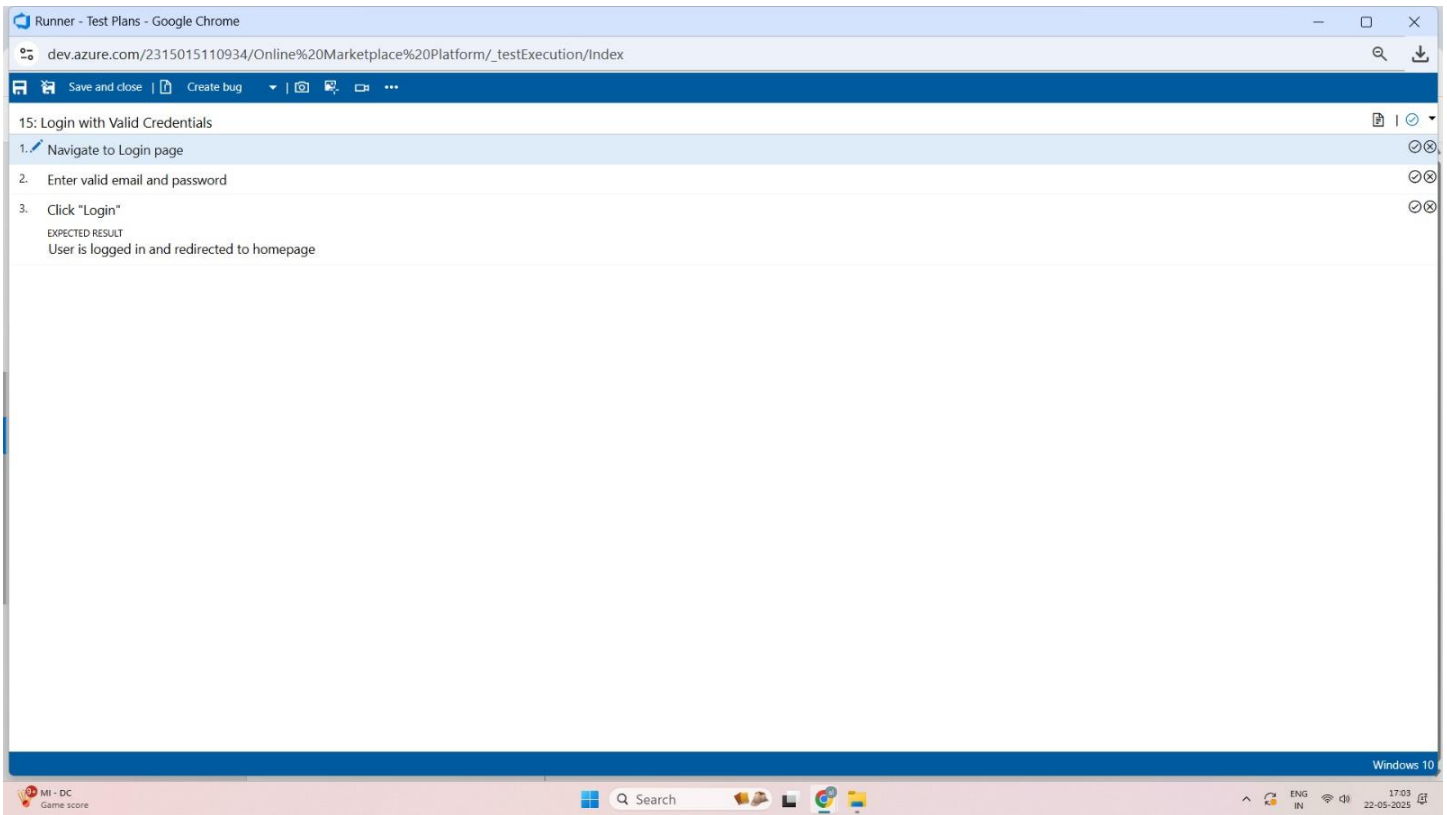
TEST & FEEDBACK

0:00 / 1:43

#### Upgrade to Test Manager extension to get full test management capabilities

Use the paid Test Manager extension to get access to advanced test management capabilities like assign configurations, assign testers, centralized parameters, authoring tests in grid view, exporting test results etc. in your account. [Buy or try Basic + Test Plans](#) access to create your first test plan.

## Running the test cases



## Creating the bug

Runner - Test Plans - Google Chrome

dev.azure.com/2315015110934/Online%20Marketplace%20Platform/\_testExecution/Index

Save and close | Create bug

15: Login with Valid Credentials

1. Navig  
2. Enter  
3. Click  
EXPECT  
User)

NEW BUG • Field 'Title' cannot be empty.

Enter title

Unassigned 0 comments Add tag

Save & Close

State: New Reason: New Area: Online Marketplace Platform Iteration: Online Marketplace Platform

Details

Repro Steps

22/05/2025 11:33 Bug filed on "Login with Valid Credentials"

Step no.	Result	Title
1.	None	Navigate to Login page
2.	None	Enter valid email and password
3.	None	Click "Login"

Expected Result  
User is logged in and redirected to homepage

Test Configuration: Windows 10

Planning

Resolved Reason

Story Points

Priority 2

Severity 3 - Medium

Activity

Effort (Hours)

Original Estimate

Remaining

Deployment

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

Development

+ Add link

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

Related Work

+ Add link

[Add an existing work item](#) as a parent

Windows 10

MI - DC Game score

Search

ENG IN 17:03 22-05-2023

# Testcaseresults

dev.azure.com/2315015110934/Online%20Marketplace%20Platform/\_testPlans/execute?planId=22&suiteId=23

Search

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Cart & Checkout

May 22 - May 29

Current

100% run, 100% passed. View report

Test Suites

Filter suites by name

Cart & Checkout (2)

Cart & Checkout (ID: 23)

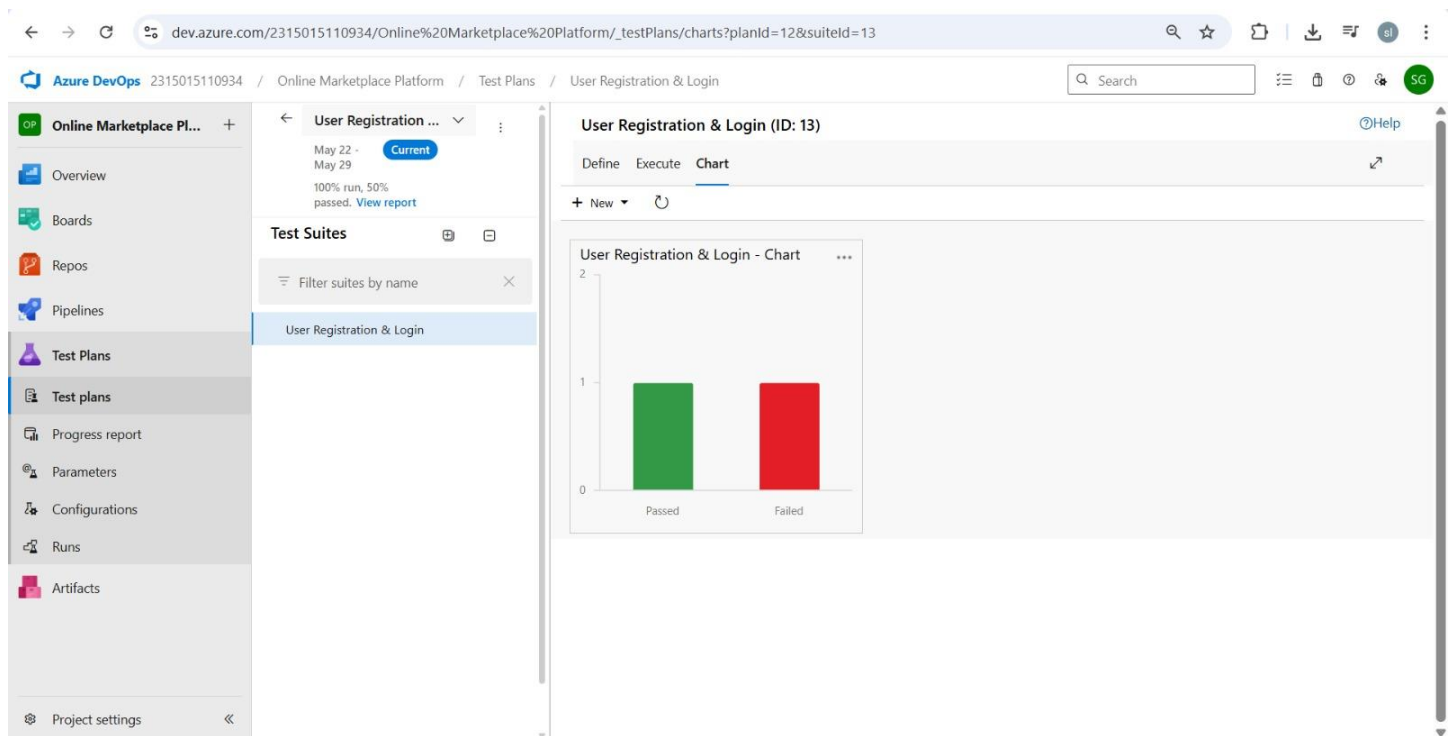
DefineExecuteChart

Test Points (2 items)

Run for web application

Title	Outcome	Order	Test Case Id
Add Product to Cart	Passed	1	24
Complete Checkout with Credit Card	Passed	2	25

## Progress report



## RESULT

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

**EXPNO: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 Student Management System, ensuring faster delivery and improved software quality.

### **PROCEDURE**

#### **Steps to Create and implement pipelines in Azure:**

1. **Sign into Azure DevOps and Navigate to Your Project**  
Log into [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.



dev.azure.com/2315015110934/Online%20Marketplace%20Platform/\_build

Azure DevOps 2315015110934 / Online Marketplace Platform / Pipelines

Online Marketplace Platform +

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- Artifacts



Project settings

### Pipelines

Recent All Runs

Filter pipelines

#### Recently run pipelines

Pipeline	Last run
 Online Marketplace Platform-ASP.NET C...	#20250522.1 • Update package.json Manually triggered for  master 1h ago <1s

dev.azure.com/2315015110934/Online%20Marketplace%20Platform/\_build/results?buildId=1&view=results

Azure DevOps 2315015110934 / Online Marketplace Platform / Pipelines / Online Marketplace Platform... / 20250522.1

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Project settings


### #20250522.1 • Update package.json


Online Marketplace Platform-ASP.NET Core-CI

Rerun failed jobs Run new

This run will be cleaned up after 1 month based on your project settings.


#### Summary

Manually run by  Sriram GP

Repository and version	Time started and elapsed	Related	Tests and coverage
 Online Marketplace Platform master d3b57a39	Today at 3:56 PM <1s	0 work items 1 consumed	<a href="#">Get started</a>

[View 5 changes](#)

#### Errors 1

 No hosted parallelism has been purchased or granted. To request a free parallelism grant, please fill out the following form <https://aka.ms/azpipelines-parallelism-request>

[View documentation for troubleshooting failed runs](#)

#### Jobs

Name	Status	Duration
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## RESULT

Thus, the pipelines for the given project “Online Market Platform” has been executed successfully.

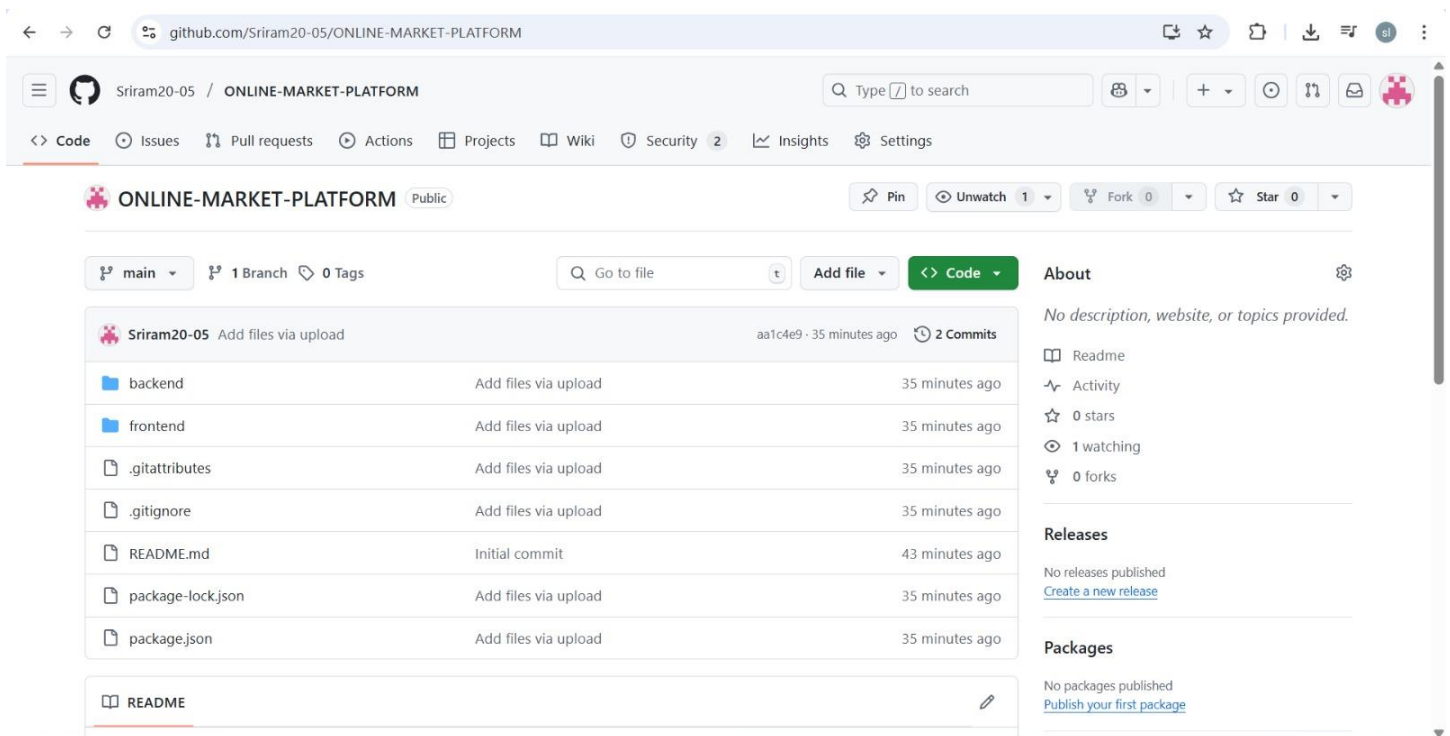
EXPNO:10

# GITHUB:PROJECTSTRUCTURE&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 market platform

## 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.