RAJALAKSHMI ENGINEERING COLLEGE

RAJALAKSHMI NAGAR, THANDALAM – 602 105

CS23432
SOFTWARE CONSTRUCTION

Laboratory Record Note Book

Name :	SACHIN K S
Year / Branch / Section :	II / IT / AE
Register No. :	231001171
Semester :	IV
Academic Year :	2024 - 2025

RAJALAKSHMI ENGINEERING COLLEGE (AUTONOMOUS)

RAJALAKSHMI NAGAR, THANDALAM – 602 105

BONAFIDE CERTIFICATE

NAME SACHIN K S REGISTER NO. 231001171

ACADEMIC YEAR 2024-25 **SEMESTER**- IV **BRANCH**: B. Tech Information Technology [AD/AE]. This Certification is the Bonafide record of work done by the above student in the **CS23432- Software Construction** Laboratory during the year 2024-2025.

Signature of Faculty -in – Charge

Submitted for the Practical Examination held on ______________

Internal Examiner External Examiner

LAB PLAN

CS23432-SOFTWARE CONSTRUCTION LAB

Ex No	Date	Topic	Page No	Sign
1	21/01/2025	Study of Azure DevOps		
2	28/01/2025	Problem Statement		
3	04/02/2025	Agile Planning		
4	18/02/2025	Create User stories with Acceptance Criteria		
5	25/02/2025	Designing Sequence Diagrams using Azure DevOps-WIKI		
6	04/03/2025	Designing Class Diagram using Azure DevOps-WIKI		
7	11/03/2025	Designing Use case Diagram using Azure DevOps-WIKI		
8	18/03/2025	Designing Activity Diagrams using Azure DevOps-WIKI		
9	25/03/2025	Designing Architecture Diagram Using Star UML		
10	01/04/2025	Design User Interface		
11	08/04/2025	Implementation – Design a Web Page based on Scrum Methodology		
12	15/04/2025	Testing-Test Plan, Test Case and Load Testing		

EX NO: 1
DATE:21/01/2025

Study of Azure DevOps

AIM:

To study how to create an agile project in Azure DevOps environment.

STUDY:

Azure DevOps is a cloud-based platform by Microsoft that provides tools for DevOps practices, including CI/CD pipelines, version control, agile planning, testing, and monitoring. It supports teams in automating software development and deployment.

1. Understanding Azure DevOps

Azure DevOps consists of five key services:

1.1 Azure Repos (Version Control)

Supports Git repositories and Team Foundation Version Control (TFVC). Provides features like branching, pull requests, and code reviews.

1.2 Azure Pipelines (CI/CD)

Automates build, test, and deployment processes.

Supports multi-platform builds (Windows, Linux, macOS).

Works with Docker, Kubernetes, Terraform, and cloud providers (Azure, AWS, GCP).

1.3 Azure Boards (Agile Project Management)

Manages work using Kanban boards, Scrum boards, and dashboards. Tracks user stories, tasks, bugs, sprints, and releases.

1.4 Azure Test Plans (Testing)

Provides manual, exploratory, and automated testing. Supports test case management and tracking.

1.5 Azure Artifacts (Package Management)

Stores and manages NuGet, npm, Maven, and Python packages. Enables versioning and secure access to dependencies.

Getting Started with Azure DevOps

Step 1: Create an Azure DevOps

Account Visit Azure DevOps.

Sign in with a Microsoft Account.

Create an Organization and a

Project. Step 2: Set Up a Repository

(Azure Repos)

Navigate to Repos.

Choose Git or TFVC for version

control. Clone the repository and

push your code.

Step 3: Configure a CI/CD Pipeline (Azure Pipelines)

Go to Pipelines → New Pipeline.

Select a source code repository (Azure Repos, GitHub, etc.).
Define the pipeline using YAML or the Classic

Editor. Run the pipeline to build and deploy the

application.

Step 4: Manage Work with Azure Boards

Navigate to Boards.

Create work items, user stories, and tasks.

Organize sprints and track progress.

Step 5: Implement Testing (Azure Test

Plans) Go to Test Plans.

Create and run test cases

View test results and track bugs.

RESULT:

The study was successfully completed.

EX NO: 2
DATE:28/01/2025

PROBLEM STATEMENT

AIM:

To develop a social network platform that helps people connect, share content, and communicate easily through a seamless digital experience.

PROBLEM STATEMENT:

People often struggle to stay connected and share meaningful content in one place. Existing platforms are cluttered or lack personalization. There is a need for a simple, user social network that allows users to connect, interact, and share content easily based on their interests.

RESULT:

The problem statement was written successfully.

EX NO: 3
DATE:04/02/2025

AGILE PLANNING

AIM:

To prepare an Agile Plan.

THEORY:

Agile planning is a part of the Agile methodology, which is a project management style with an incremental, iterative approach. Instead of using an in-depth plan from the start of the project—which is typically product-related—Agile leaves room for requirement changes throughout and relies on constant feedback from end users.

With Agile planning, a project is broken down into smaller, more manageable tasks with the ultimate goal of having a defined image of a project's vision. Agile planning involves looking at different aspects of a project's tasks and how they'll be achieved, for example:

· Roadmaps to guide a product's release ad schedule

· Sprints to work on one specific group of tasks at a time

· A feedback plan to allow teams to stay flexible and easily adapt to change

User stories, or the tasks in a project, capture user requirements from the end user's perspective Essentially, with Agile planning, a team would decide on a set of user stories to action at any given time, using them as a guide to implement new features or functionalities in a tool. Looking at tasks as user stories is a helpful way to imagine how a customer may use a feature and helps teams prioritize work and focus on delivering value first.

· Steps in Agile planning process

· Define vision

1. Set clear expectations on goals
2. Define and break down the product roadmap
3. Create tasks based on user stories
4. Populate product backlog
5. Plan iterations and estimate effort
6. Conduct daily stand-ups
7. Monitor and adapt

RESULT:

Thus, the Agile plan was completed successfully.

EX NO: 4
DATE:18/02/2025

CREATE USER STORIES

AIM:
To create User Stories

THEORY:
A user story is an informal, general explanation of a software feature written from the perspective of the end user. Its purpose is to articulate how a software feature will provide value to the customer.

EPIC 1: Stories That Disappear
Users should be able to post short updates that disappear after some time.

FEATURE:
1) 24-hour temporary posts with viewer tracking.

USER STORY 1:
As a user, I want to share short updates that disappear in 24 hours so that I don't clutter my profile.

ACCEPTANCE CRITERIA:
1) Users can post short updates that disappear in 24 hours.
2) Stories support text, images, and videos.
3) Users can see how many people viewed their story.

USER STORY 2:
As a user, I want to react to stories so that I can express my thoughts.

ACCEPTANCE CRITERIA:
1) Users can like or react to stories.
2) Story reactions appear in the viewer list.
3) Users receive notifications for reactions.

USER STORY 3:
As a user, I want to see who viewed my story so that I know who's interested.

ACCEPTANCE CRITERIA:
1) Users can see who viewed their story.

2) Story insights include total views and interactions.

3) Users can hide their story from specific users.

EPIC 2: Easy Post Sharing

Users should be able to share posts quickly and easily.

FEATURE:

1) Quick post creation with text, images, and videos.

USER STORY 1:

As a user, I want to edit my posts so that I can correct mistakes.

ACCEPTANCE CRITERIA:

1) Users can edit a post's text or media after posting.

2) Changes appear in real time without losing engagement.

3) An "Edited" label appears on modified posts

USER STORY 2:

As a user, I want to delete my posts if I change my mind.

ACCEPTANCE CRITERIA:

1) Users can delete posts from their profile and feed.

2) Deleted posts are permanently removed.

3) A confirmation message appears before deletion.

USER STORY 3:

As a user, I want to post text, images, and videos so that I can share my thoughts.

ACCEPTANCE CRITERIA:

1) Users can create posts with text, images, or videos.

2) Posts appear instantly on the user's profile and feed.

3) Users can preview posts before sharing.

EPIC 3: Notification

Users should get alerts about important updates.

FEATURE:

1) Alerts for likes, comments, messages, and events.

USER STORY 1:

As a user, I want to get notifications when someone likes my post so that I can see who interacted with me.

ACCEPTANCE CRITERIA:

1) Users receive notifications for likes, comments, and shares.

2) Notifications appear in the app and as push alerts.

3) Users can disable specific types of notifications.

USER STORY 2:

As a user, I want to be notified when someone comments on my post so that I can reply.

ACCEPTANCE CRITERIA:

1) Users receive alerts for new messages.

2) Clicking the notification opens the chat directly.

3) Users can mute message notifications.

USER STORY 3:

As a user, I want to turn off notifications if I don't want them.

ACCEPTANCE CRITERIA:

1) Users can turn notifications on or off for specific activities.

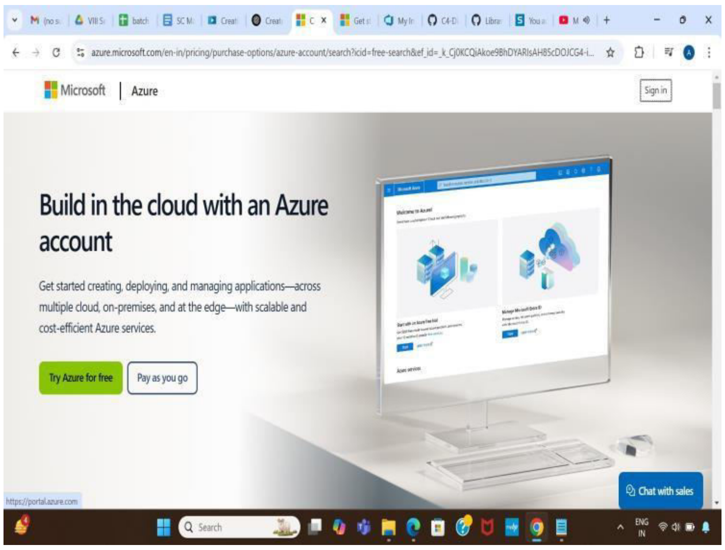
2) Notification preferences are saved automatically.

3) Users can reset notification settings to default.

PROCEDURE:

1) Open your web browser and go to the Azure website: https://azure.microsoft.com/en-in Sign in using your Microsoft account credentials. If you don't have an account, you'll need to create one.

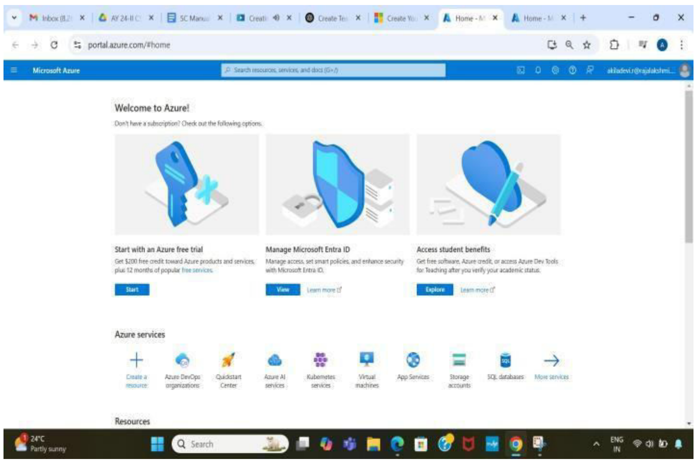
2) If you don’t have a Microsoft account, you can sign up for https://signup.live.com/?lic=1



Build in the cloud with an Azure account

Get started creating, deploying, and managing applications—across multiple cloud, on-premises, and at the edge—with scalable and cost-efficient Azure services.

3) Azure home page



Welcome to Azure!

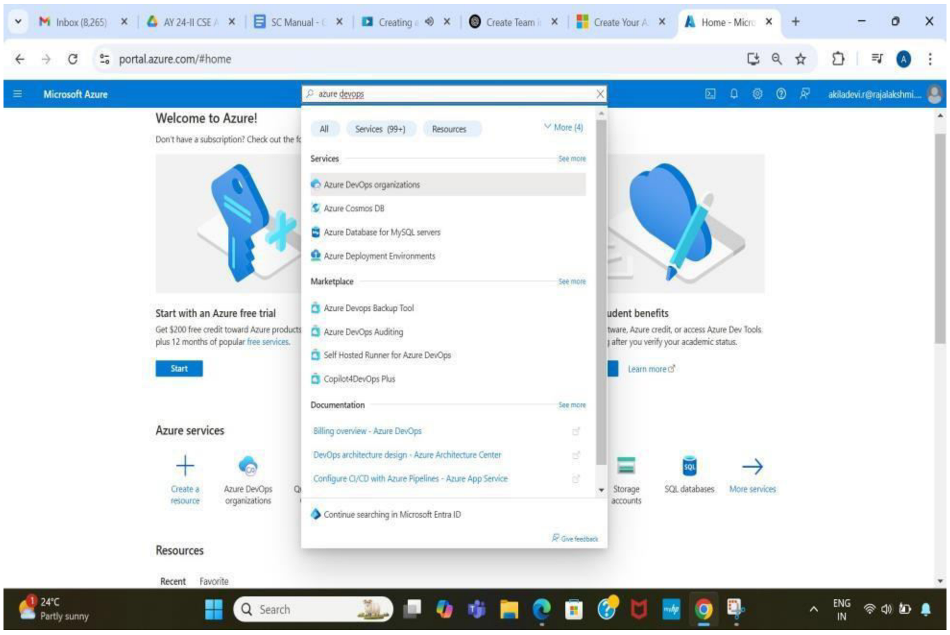
Don't have a subscription? Check out the following options.

Start with an Azure free trial
Get $200 free credit toward Azure products and services, plus 12 months of popular free services.

Manage Microsoft Entra ID
Manage access, set smart policies, and enhance security with Microsoft Entra ID.

Access student benefits
Get free software, Azure credit, or access Azure Dev Tools for Teaching after you verify your academic status.

4) Open DevOps environment in the Azure platform by typing Azure DevOps Organizations in the search bar.


portal.azure.com/#home

Microsoft Azure
azure devops
All
Services (99+)
Resources
More (4)
Services
See more
Azure DevOps organizations
Azure Cosmos DB
Azure Database for MySQL servers
Azure Deployment Environments
Marketplace
Azure Devops Backup Tool
Azure DevOps Auditing
Self Hosted Runner for Azure DevOps
Copilot4DevOps Plus
Documentation
Billing overview - Azure DevOps
DevOps architecture design - Azure Architecture Center
Configure CI/CD with Azure Pipelines - Azure App Service
Continue searching in Microsoft Entra ID
Give feedback
Welcome to Azure!
Start
Azure services
Create a resource
Azure DevOps organizations
Storage accounts
SQL databases
More services
Resources
Recent
Favorite

Don't have a subscription? Check out the f

Start with an Azure free trial

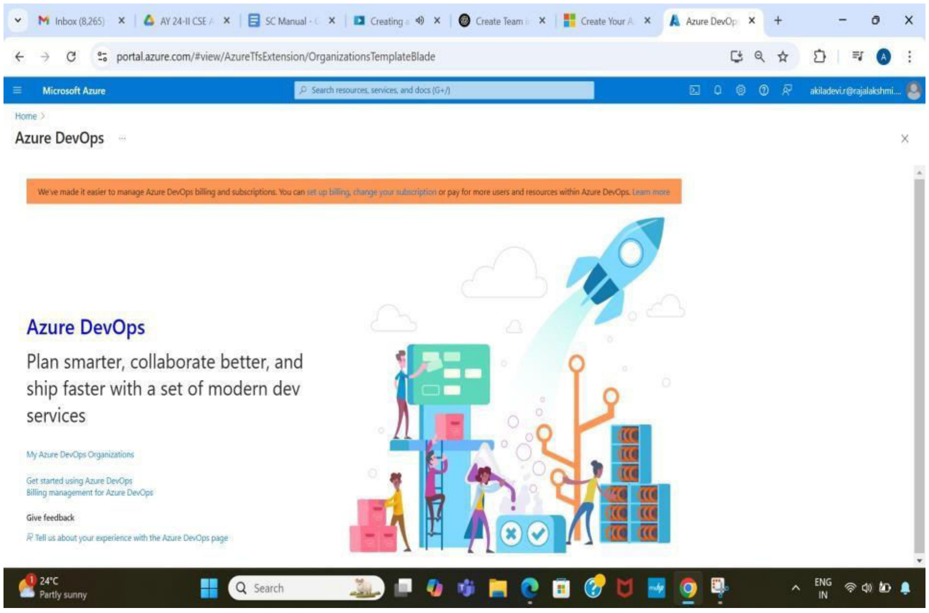
Get $200 free credit toward Azure products plus 12 months of popular free services.

udent benefits

tware, Azure credit, or access Azure Dev Tools after you verify your academic status.

Learn more

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


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

We've made it easier to manage Azure DevOps billing and subscriptions. You can set up billing, change your subscription or pay for more users and resources within Azure DevOps. Learn more

Azure DevOps

Plan smarter, collaborate better, and ship faster with a set of modern dev services

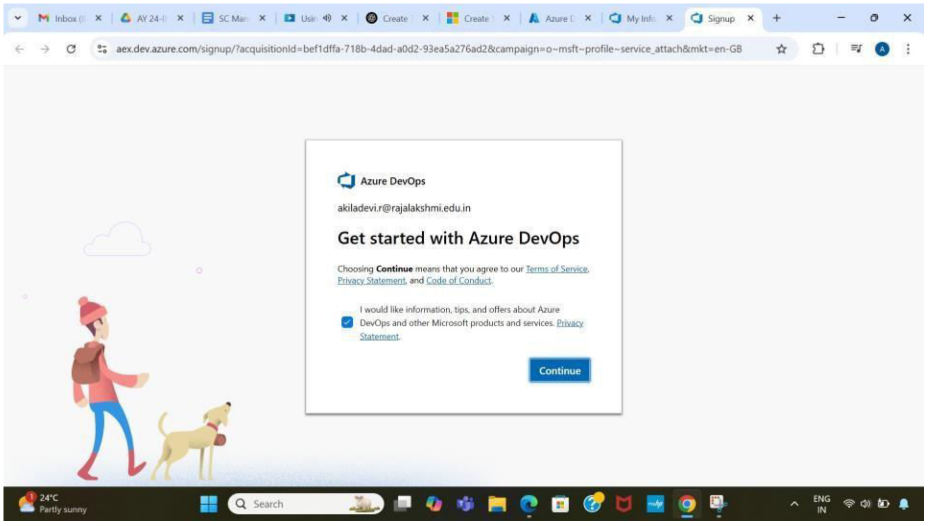
My Azure DevOps Organizations

Get started using Azure DevOps

Billing management for Azure DevOps

Give feedback

Tell us about your experience with the Azure DevOps page


aex.dev.azure.com/signup/?acquisitionId=bef1dffa-718b-4dad-a0d2-93ea5a276ad2&campaign=o~msft~profile~service_attach&mkt=en-GB

Azure DevOps

akiladevi.r@rajalakshmi.edu.in

Get started with Azure DevOps

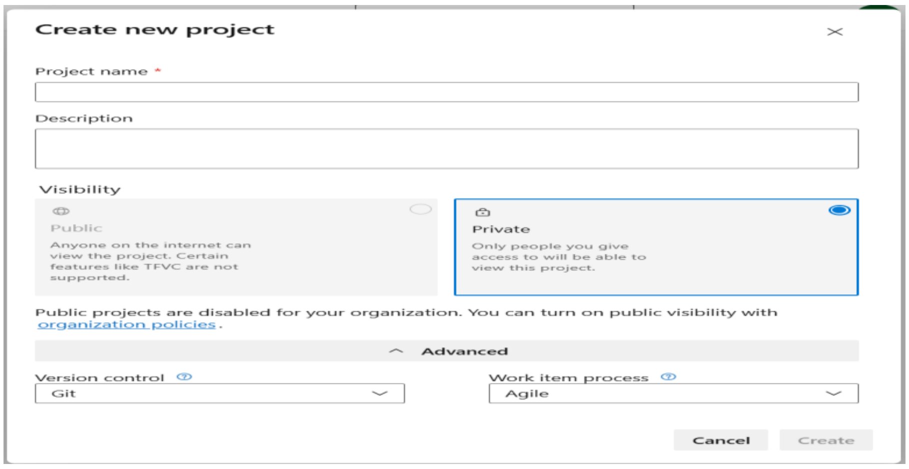
Choosing **Continue** means that you agree to our Terms of Service, Privacy Statement, and Code of Conduct.

☑ I would like information, tips, and offers about Azure DevOps and other Microsoft products and services. Privacy Statement.

6) 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.

i. On the organization's **Home page**, click on the **New Project** button.
ii. 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).
iii. 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.

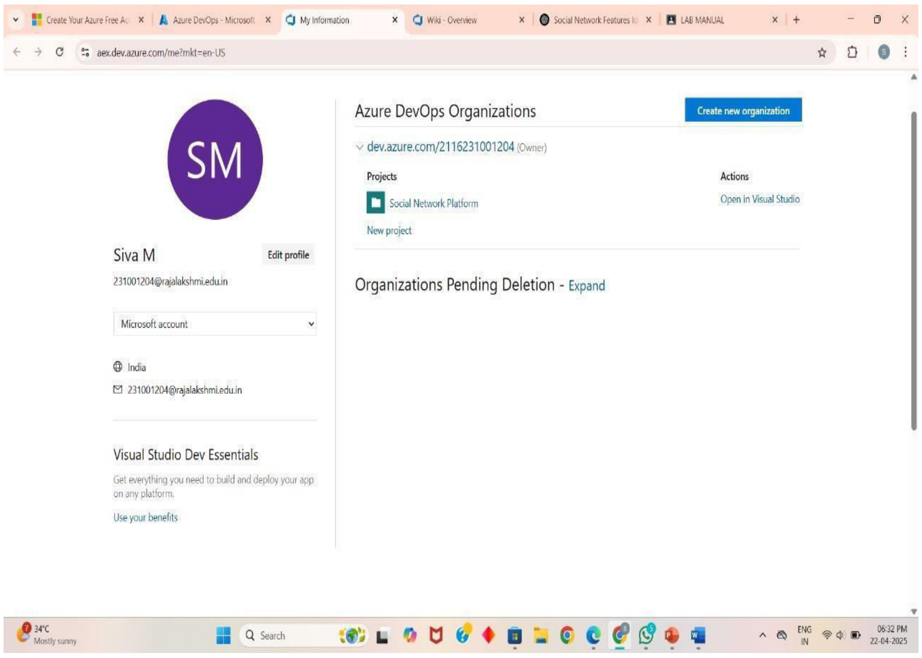
Advanced

Version control: Git

Work item process: Agile

7) 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

8) Organization Home page.



231001204@rajalakshmi.edu.in

dev.azure.com/2116231001204 (Owner)

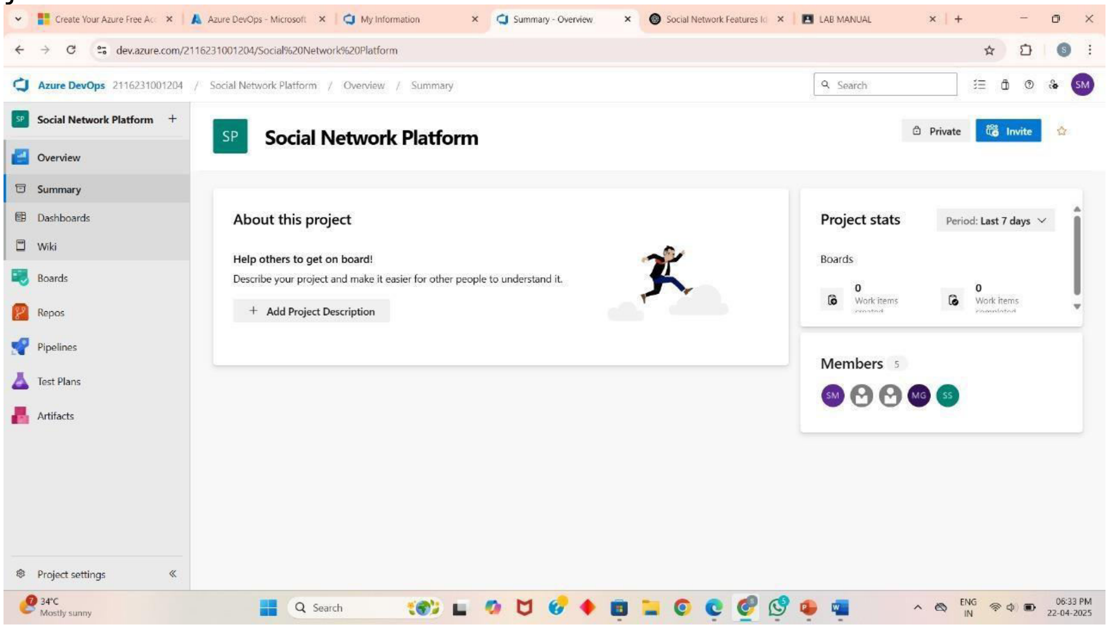
Social Network Platform

Organizations Pending Deletion - Expand

Visual Studio Dev Essentials

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

9) Project dashboard



SP Social Network Platform

About this project

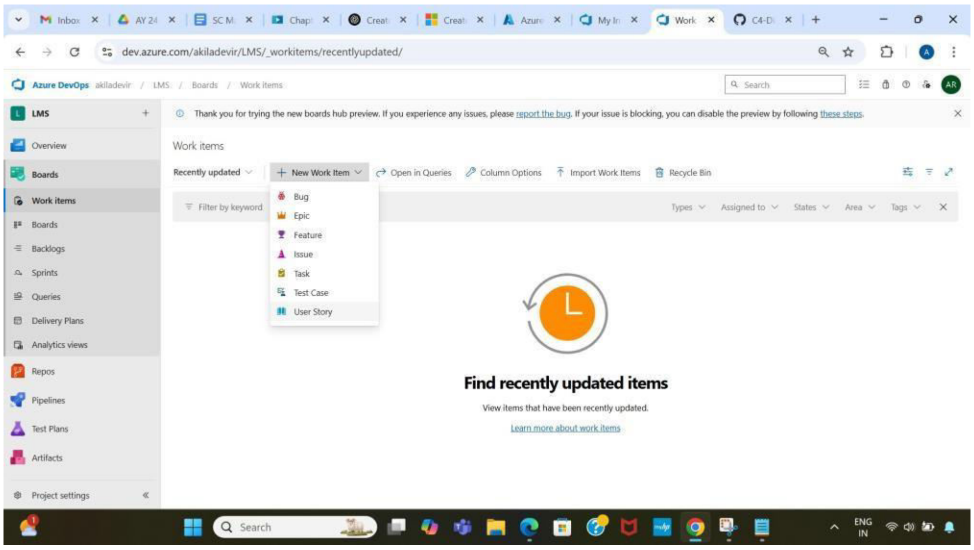
Help others to get on board!

Describe your project and make it easier for other people to understand it.

10) 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.



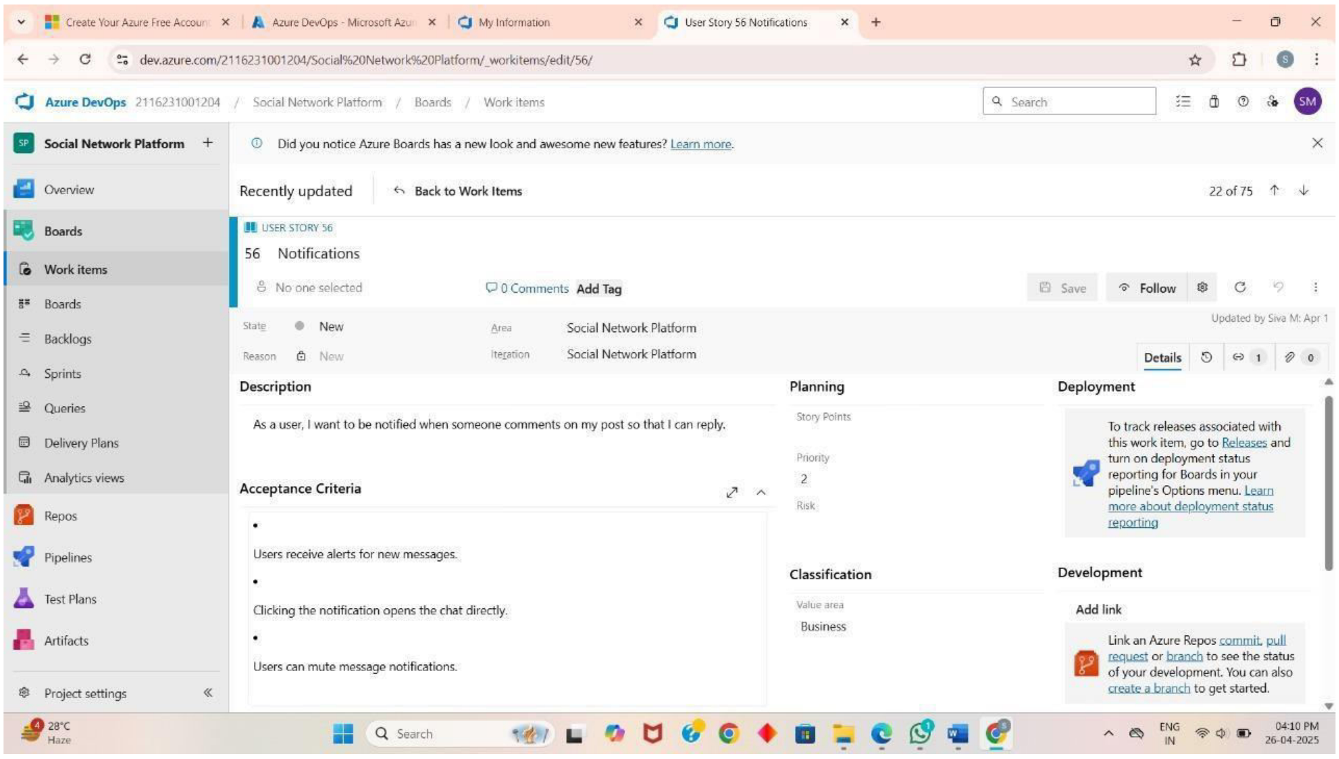
Thank you for trying the new boards hub preview. If you experience any issues, please report the bug. If your issue is blocking, you can disable the preview by following these steps.

Work items

Find recently updated items

View items that have been recently updated.

Learn more about work items



Did you notice Azure Boards has a new look and awesome new features? Learn more.

Recently updated

USER STORY 56

56 Notifications

No one selected 0 Comments Add Tag

Updated by Siva M: Apr 1

State: New Area: Social Network Platform

Reason: New Iteration: Social Network Platform

Description

As a user, I want to be notified when someone comments on my post so that I can reply.

Acceptance Criteria

- Users receive alerts for new messages.
- Clicking the notification opens the chat directly.
- Users can mute message notifications.

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 user story was written successfully.

EX NO:5
DATE:25/02/2025

SEQUENCE DIAGRAM

AIM:

To design a Sequence Diagram by using Mermaid.js

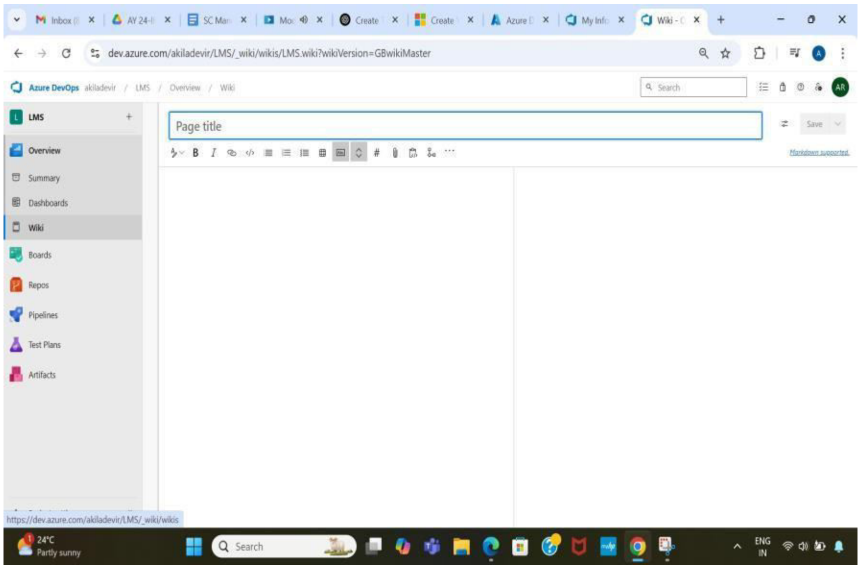
THEORY:

A Sequence Diagram is a key component of Unified Modelling Language (UML) used to visualize the interaction between objects in a sequential order. It focuses on how objects communicate with each other over time, making it an essential tool for modelling dynamic behaviour in a system.

PROCEDURE:

1) Open a project in Azure DevOps Organisations.

2) To design select wiki from menu



Write code for drawing sequence diagram and save the code.

```
::: mermaid
sequenceDiagram
participant User
participant Frontend
participant Backend
participant Database

User->>Frontend: Login with email & password
Frontend->>Backend: Send login request
Backend->>Database: Validate credentials
Database-->>Backend: Send user data
Backend-->>Frontend: Auth success response
Frontend-->>User: Display homepage
```

```
User->>Frontend: Create a new post
Frontend->>Backend: Send post content
Backend->>Database: Save post
Database-->>Backend: Confirm post saved
Backend-->>Frontend: Post success response
Frontend-->>User: Show post on feed


:::
```

Explanation:

User ->> Frontend:
➔ Solid line with arrowhead — User sends a direct message to Frontend.

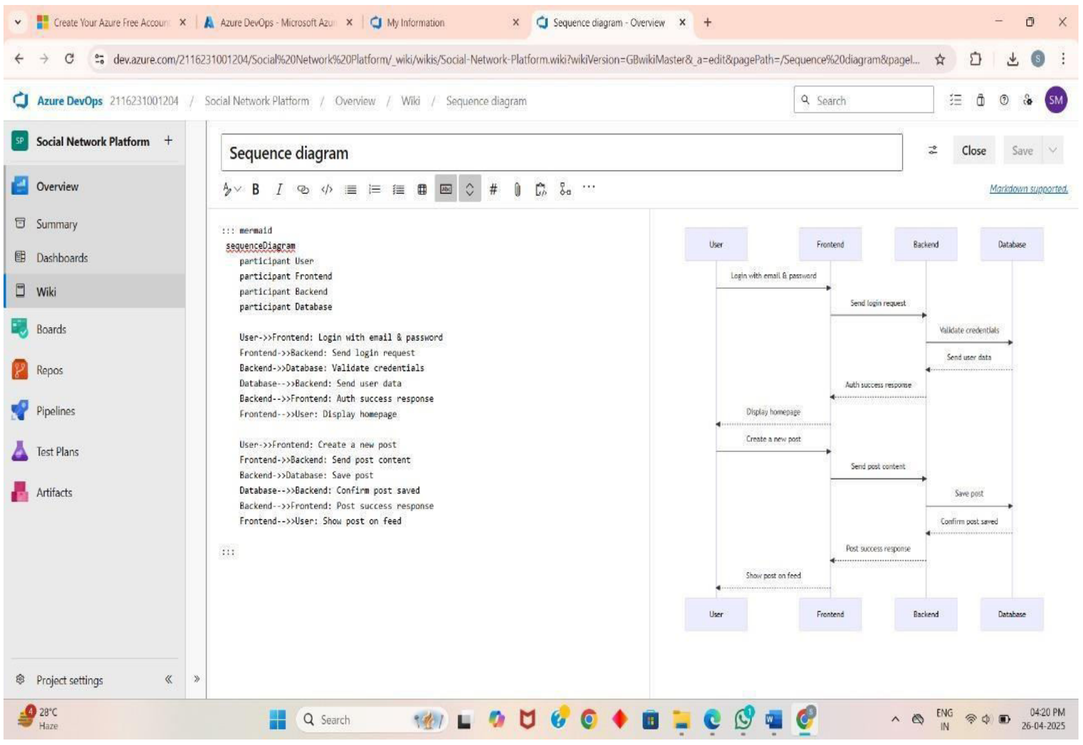
Frontend ->> Backend:
➔ Solid line with arrowhead — Frontend sends a direct message to Backend.

Backend ->> Database:
➔ Solid line with arrowhead — Backend sends a direct message to Database.

Database -->> Backend:
➔ Dotted line with arrowhead — Database responds with a message to Backend.

Backend -->> Frontend:
➔ Dotted line with arrowhead — Backend responds to Frontend.

Frontend -->> User:
➔ Dotted line with arrowhead — Frontend responds to User.



Sequence diagram

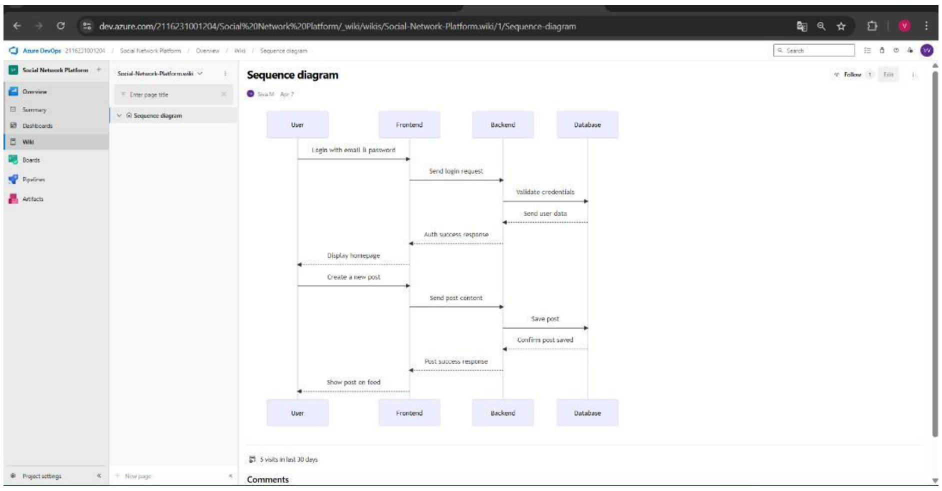
```
::: mermaid
 sequenceDiagram
    participant User
    participant Frontend
    participant Backend
    participant Database

    User->>Frontend: Login with email & password
    Frontend->>Backend: Send login request
    Backend->>Database: Validate credentials
    Database-->>Backend: Send user data
    Backend-->>Frontend: Auth success response
    Frontend-->>User: Display homepage

    User->>Frontend: Create a new post
    Frontend->>Backend: Send post content
    Backend->>Database: Save post
    Database-->>Backend: Confirm post saved
    Backend-->>Frontend: Post success response
    Frontend-->>User: Show post on feed

:::
```

1. click wiki menu and select the page



RESULT:

The sequence diagram was drawn successfully.

EX NO:6

DATE:04/03/2025

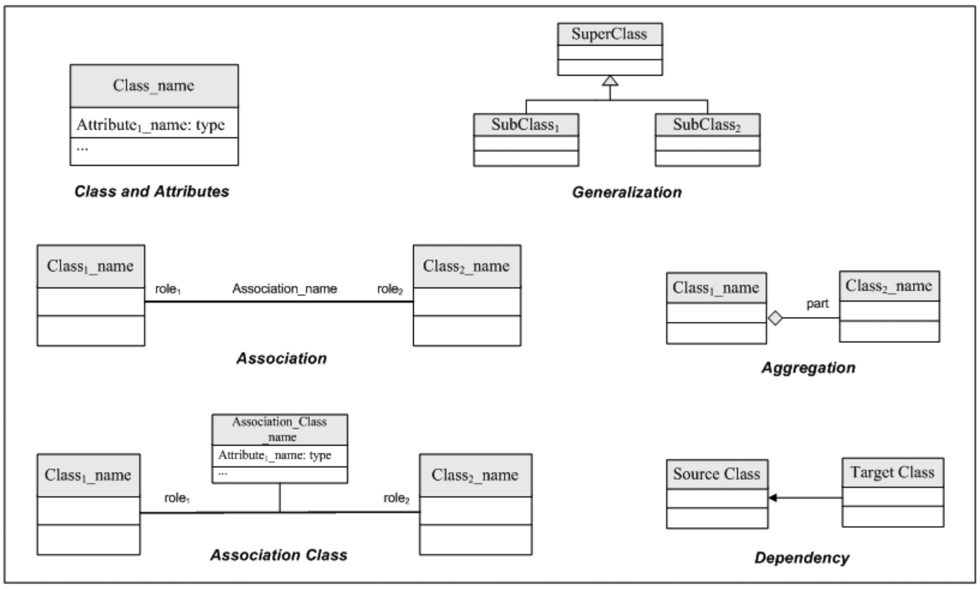
CLASS DIAGRAM

AIM:

To draw a sample class diagram for your project or system.

THEORY:

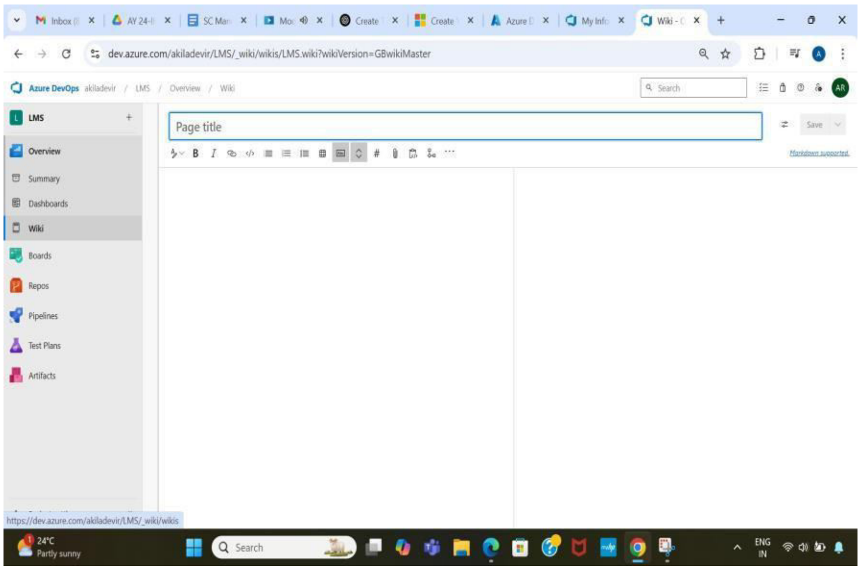
A UML class diagram is a visual tool that represents the structure of a system by showing its classes, attributes, methods, and the relationships between them.



Notations in class diagram

PROCEDURE:

1. Open a project in Azure DevOps Organisations.
2. To design select wiki from menu



3. Write code for drawing class diagram and save the code

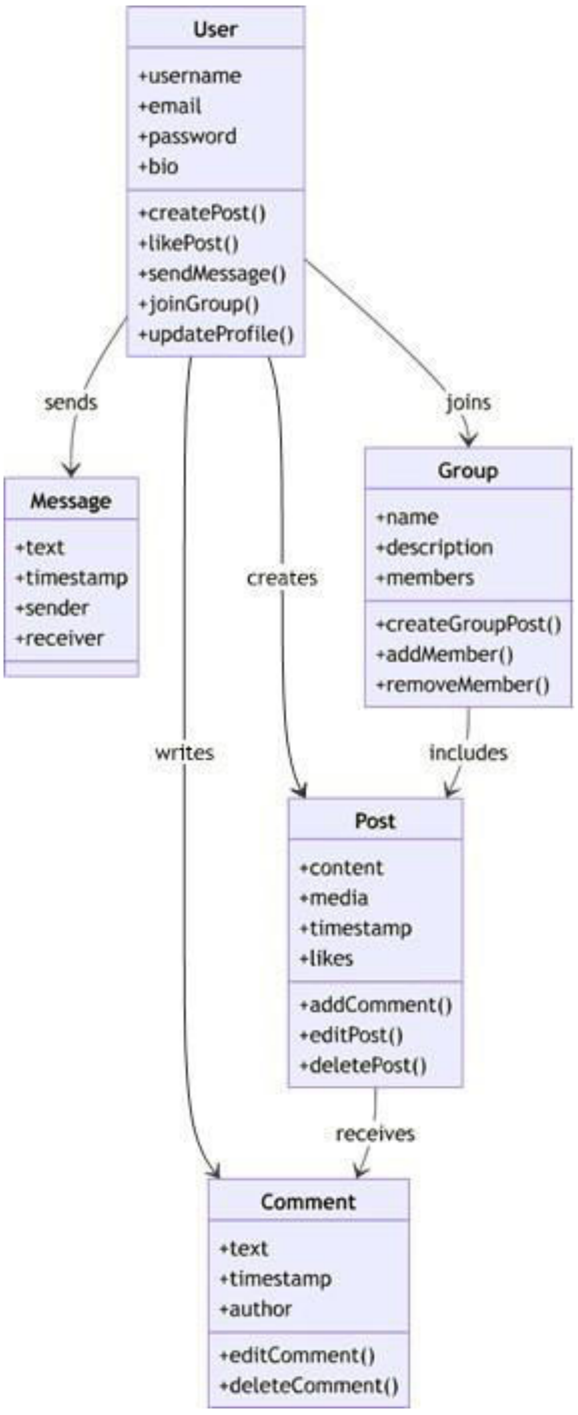
```
::: mermaid
classDiagram

class User {
+username
+email
+password
+bio
+createPost()
+likePost()
+sendMessage()
+joinGroup()
+updateProfile()
}

class Post {
+content
+media
+timestamp
+likes
+addComment()
+editPost()
```

Relationship Types

Type	Description
<|	Inheritance
*	Composition
o	Aggregation
>	Association
<	Association
|>	Realization



RESULT:

The use case diagram was designed successfully.

EX NO: 7
DATE:11/03/2025

USECASE DIAGRAM

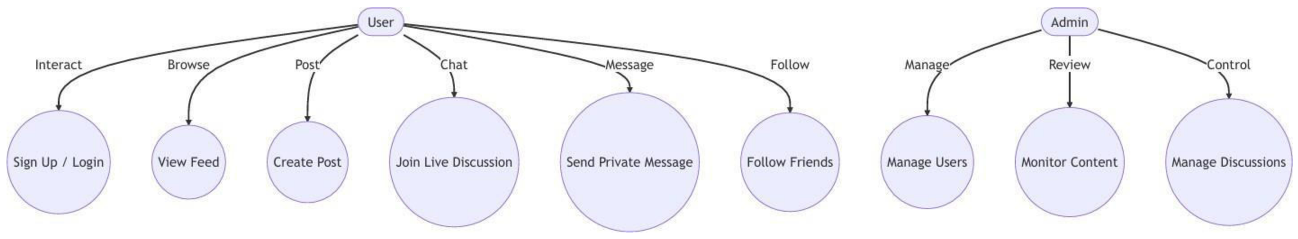
AIM:

Steps to draw the Use Case Diagram using draw.io

THEORY:

- UCD shows the relationships among actors and use cases within a system which Provide an overview of all or part of the usage requirements for a system or organization in the form of an essential model or a business model and communicate the scope of a development project

- **Use Cases**
- **Actors**
- **Relationships**
- **System Boundary Boxes**



PROCEDURE:

Step 1: Create the Use Case Diagram in Draw.io

- Open Draw.io (diagrams.net).
- Click "Create New Diagram" and select "Blank" or "UML Use Case" template.
- Add Actors (Users, Admins, External Systems) from the UML section.
- Add Use Cases (Functionalities) using ellipses.
- Connect Actors to Use Cases with lines (solid for direct interaction, dashed for <<include>> and <<extend>>).
- Save the diagram as .drawio or export as PNG/JPG/SVG.

Step 2: Upload the Diagram to Azure DevOps

Option 1: Add to Azure DevOps Wiki

- Open Azure DevOps and go to your project.
- Navigate to Wiki (Project > Wiki).
- Click "Edit Page" or create a new page.
- Drag & Drop the exported PNG/JPG image.
- Use Markdown to embed the diagram:

Option 2: Attach to Work Items in Azure Boards

- Open Azure DevOps → Navigate to Boards (Project > Boards).
- Select a User Story, Task, or Feature.
- Click "Attachments" → Upload your Use Case Diagram.
- Add comments or descriptions to explain the use case.

RESULT:

The use case diagram was designed successfully

EX NO. 8

DATE:18/03/2025

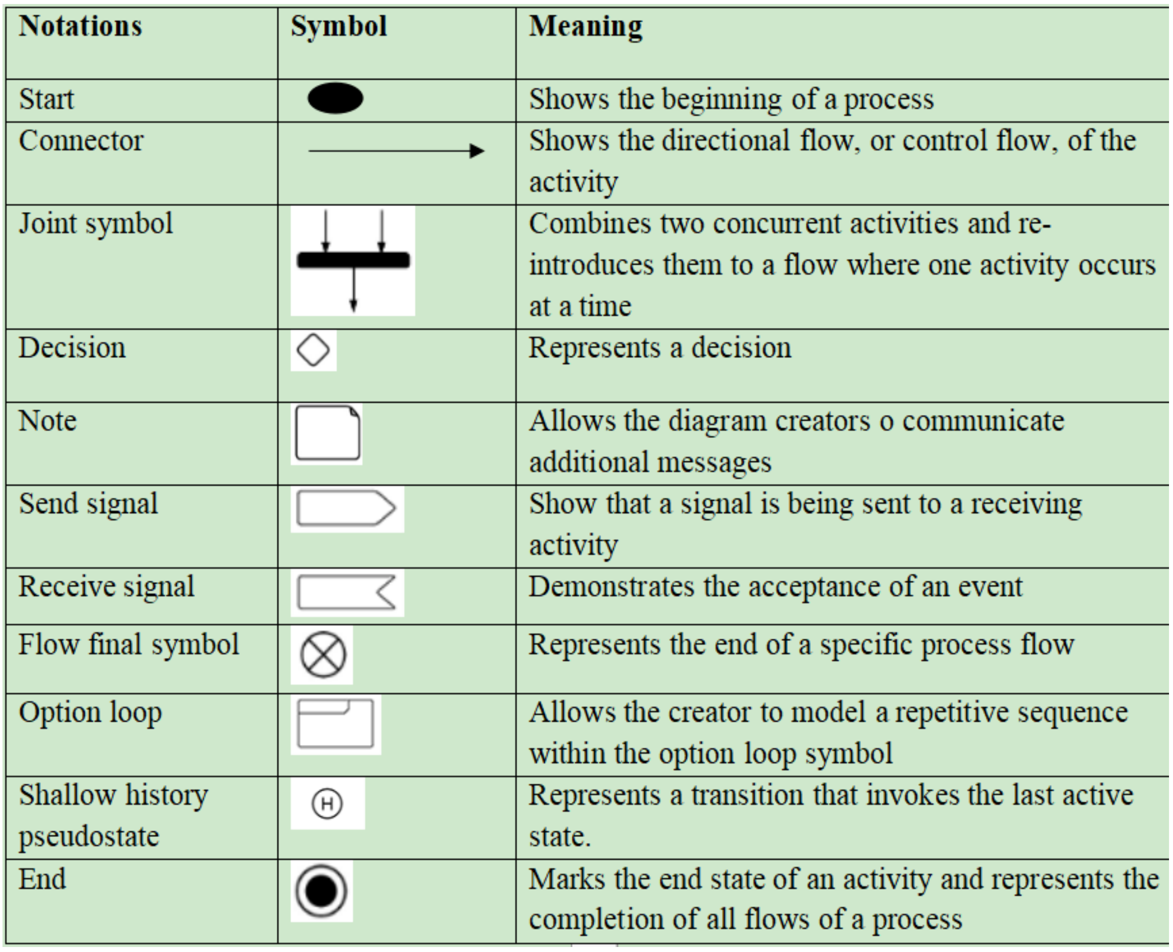
ACTIVITY DIAGRAM

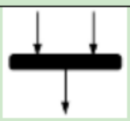
AIM:

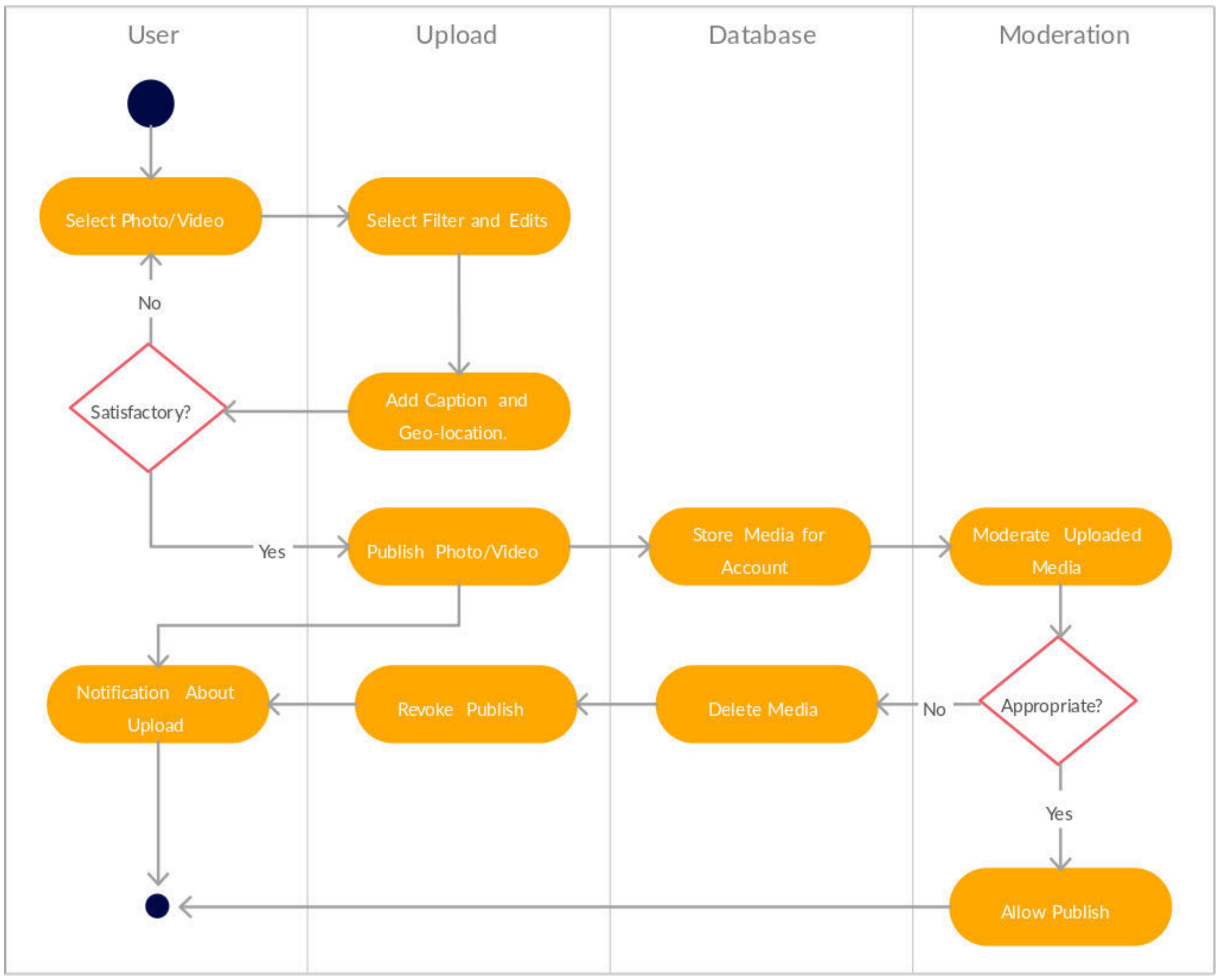
To draw a sample activity diagram for your project or system.

THEORY:

Activity diagrams are an essential part of the Unified Modelling Language (UML) that help visualize workflows, processes, or activities within a system. They depict how different actions are connected and how a system moves from one state to another.



Notations	**Symbol**	**Meaning**
Start	⬬	Shows the beginning of a process
Connector	→	Shows the directional flow, or control flow, of the activity
Joint symbol		Combines two concurrent activities and re-introduces them to a flow where one activity occurs at a time
Decision	◇	Represents a decision
Note	▭	Allows the diagram creators o communicate additional messages
Send signal	⭆	Show that a signal is being sent to a receiving activity
Receive signal	▭	Demonstrates the acceptance of an event
Flow final symbol	⊗	Represents the end of a specific process flow
Option loop	▭	Allows the creator to model a repetitive sequence within the option loop symbol
Shallow history pseudostate	Ⓗ	Represents a transition that invokes the last active state.
End	◉	Marks the end state of an activity and represents the completion of all flows of a process



PROCEDURE:

1. Draw diagram in draw.io
2. Upload the diagram in Azure DevOps wiki

RESULT:

The activity diagram was designed successfully

EX NO. 9
DATE:25/03/2025

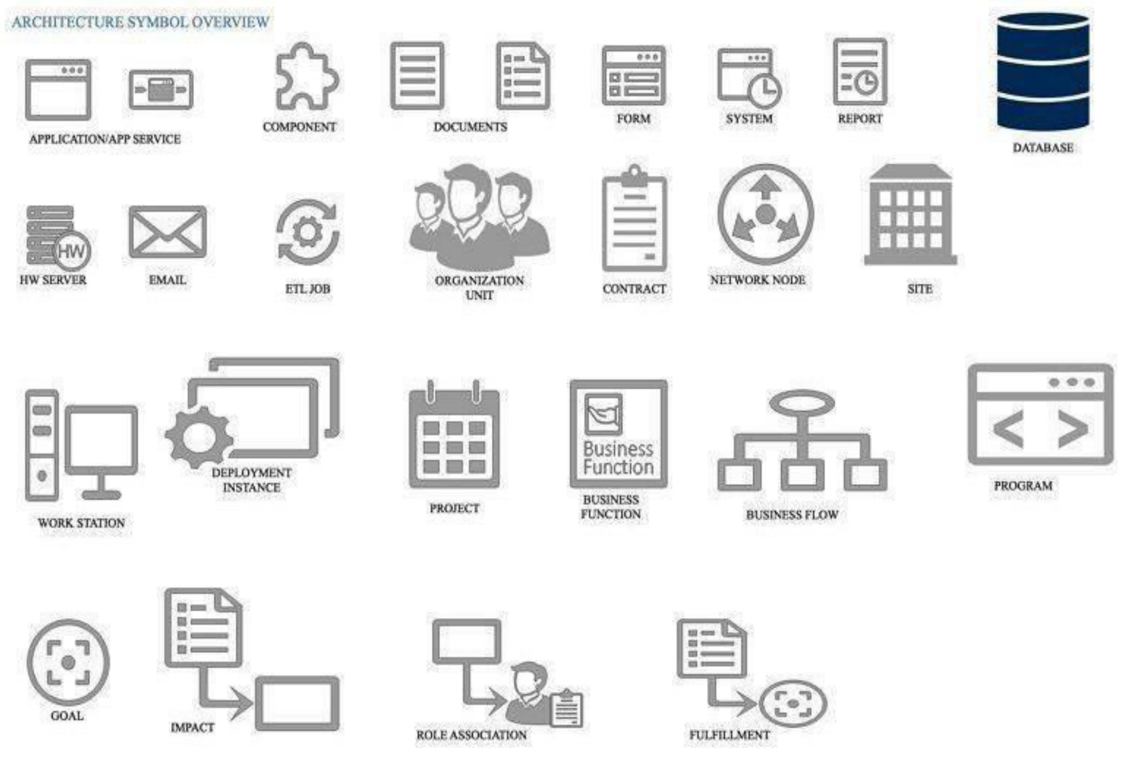
ARCHITECTURE DIAGRAM

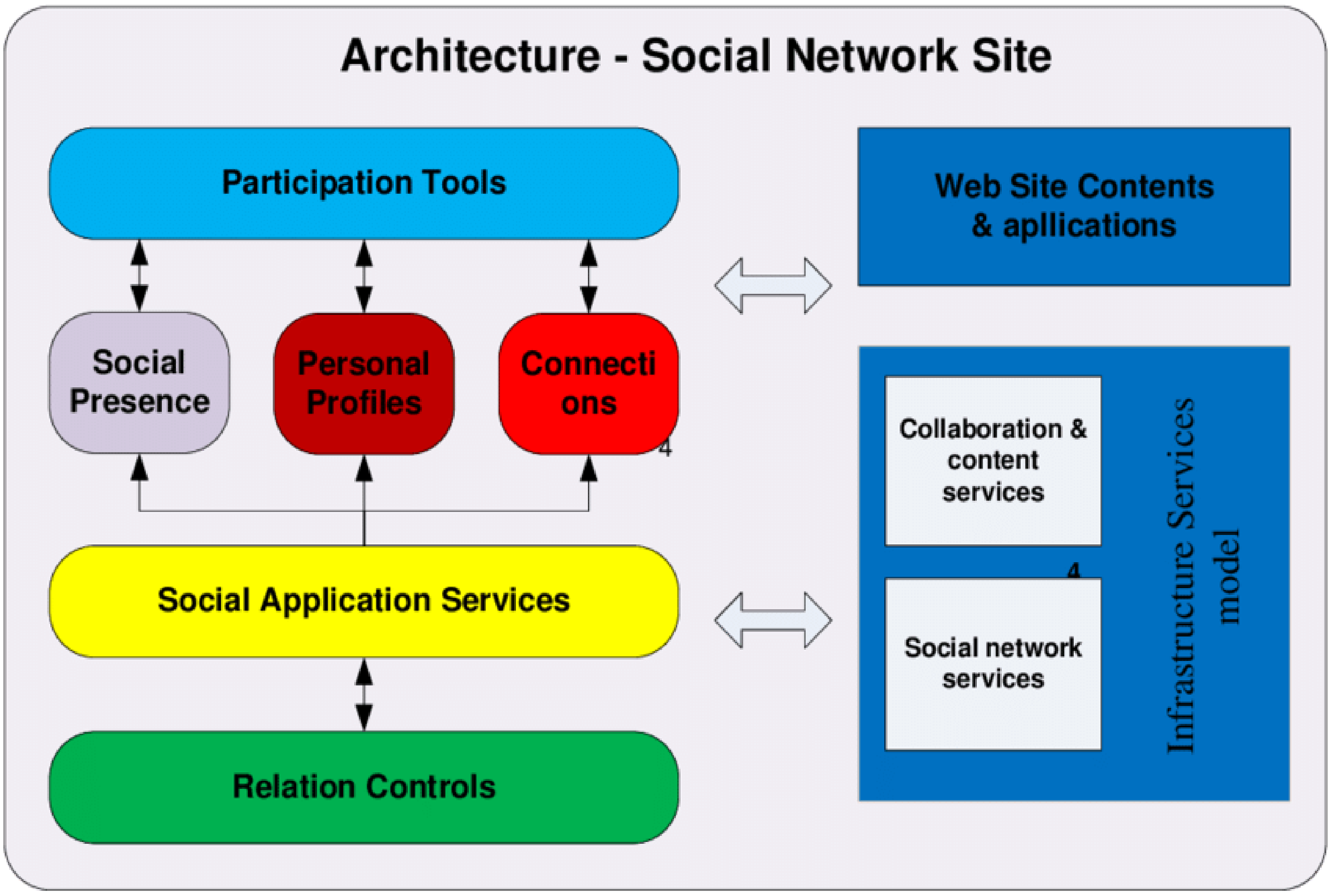
AIM:

Steps to draw the Architecture Diagram using draw.io.

THEORY:

An architectural diagram is a visual representation that maps out the physical implementation for components of a software system. It shows the general structure of the software system and the associations, limitations, and boundaries between each element.




Architecture - Social Network Site
Participation Tools
Social Presence
Personal Profiles
Connecti ons
4
Social Application Services
Relation Controls
Web Site Contents & apllications
Collaboration & content services
4
Social network services
Infrastructure Services model

PROCEDURE:

1. Draw diagram in draw.io
2. Upload the diagram in Azure DevOps wiki

RESULT:

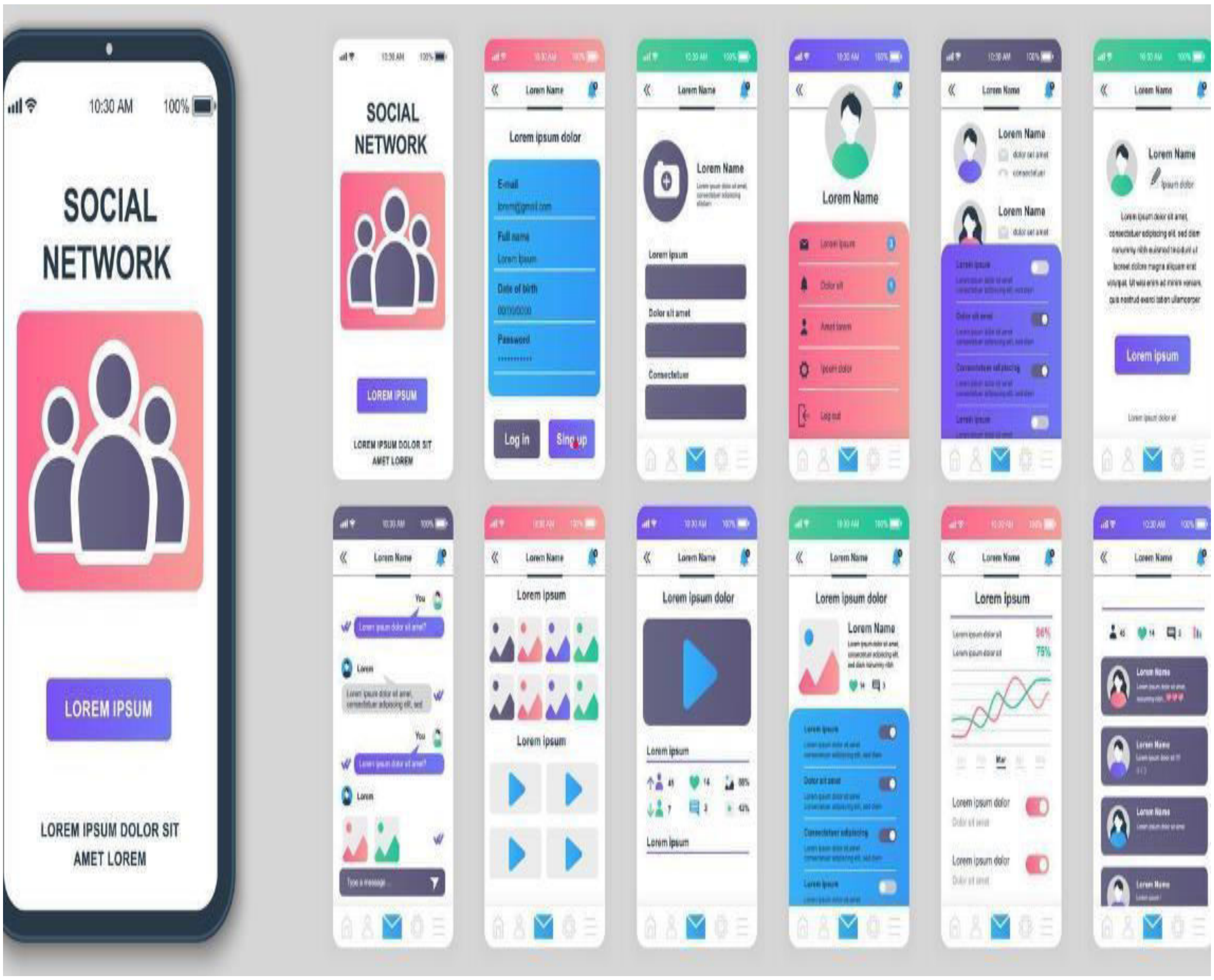
The architecture diagram was designed successfully

EX NO. 10
DATE:01/04/2025

USER INTERFACE

AIM:

Design User Interface for the given project



RESULT:

The UI was designed successfully.

EX NO. 11
DATE: 08/04/2025

IMPLEMENTATION

AIM:

To implement the given project based on Agile Methodology.

PROCEDURE:

Step 1: Set Up an Azure DevOps Project

- Log in to Azure DevOps.
- Click "New Project" → Enter project name → Click "Create".
- Inside the project, navigate to "Repos" to store the code.

Step 2: Add Your Web Application Code

- Navigate to Repos → Click "Clone" to get the Git URL.
- Open Visual Studio Code / Terminal and run:

```
git clone <repo_url>
cd <repo_folder>
```

- Add web application code (HTML, CSS, JavaScript, React, Angular, or backend like Node.js, .NET, Python, etc.).
- Commit & push:

```
git add .
git commit -m "Initial commit"
git push origin main
```

Step 3: Set Up Build Pipeline (CI/CD - Continuous Integration)

- Navigate to Pipelines → Click "New Pipeline".
- Select Git Repository (Azure Repos, GitHub, or Bitbucket).
- Choose Starter Pipeline or a pre-configured template for your framework.
- Modify the azure-pipelines.yml file (Example for a Node.js app):

```
trigger:
  - main
pool:
  vmImage: 'ubuntu-latest'

steps:
  - task: UseNode@1
    inputs:
      version: '16.x'

  - script: npm install
    displayName: 'Install dependencies'

  - script: npm run build
    displayName: 'Build application'

  - task: PublishBuildArtifacts@1
    inputs:
      pathToPublish: 'dist'
      artifactName: 'drop'
```

Click "Save and Run" → The pipeline will start building app.

Step 4: Set Up Release Pipeline (CD - Continuous Deployment)

- Go to Releases → Click "New Release Pipeline".
- Select Azure App Service or Virtual Machines (VMs) for deployment.
- Add an artifact (from the build pipeline).
- Configure deployment stages (Dev, QA, Production).
- Click "Deploy" to push your web app to Azure.

RESULT:

Thus, the application was successfully implemented.

EX.NO: 12

DATE: 15/04/2025

TESTING-TEST PLAN, TEST CASE AND LOAD TESTING

AIM:

To design and manage structured test plans and test cases in Azure DevOps for validating core user stories through both happy path and error scenarios and evaluate the performance of the application's endpoint by creating and executing load tests using Azure Load Testing.

PROCEDURE:

TEST CASE DESIGN PROCEDURE

1. Understand Core Features of the Application

- Review requirement documents and user stories.
- Identify all main functionalities of the application.
- Ensure complete coverage of modules before test case creation.

2. Define User Interactions

- Determine common user behaviours based on application flow.
- Translate user actions into testable scenarios.
- Ensure each test case mimics a real user operation.

3. Design Happy Path Test Cases

- Create test cases for expected and correct user actions.
- Ensure each functionality works under normal conditions.
- Add these cases under the relevant Test Suite in Azure DevOps.

4. Design Error Path Test Cases

- Identify edge cases, invalid inputs, and system failures.
- Test how the system handles incorrect or unexpected behavior.
- Add these test cases to the same or a separate Test Suite in Azure DevOps.

5. Break Down Steps and Expected Results

- Write step-by-step instructions in the "Steps" section of the test case.
- Provide expected results for each action.

- Ensure clarity for both manual execution and automation mapping.

6. Use Clear Naming and IDs

- Name test cases clearly using a defined naming convention (e.g., TC01, TC02, etc.).
- Ensure titles reflect the purpose of the test case.
- Azure DevOps auto-generates test case IDs for tracking.

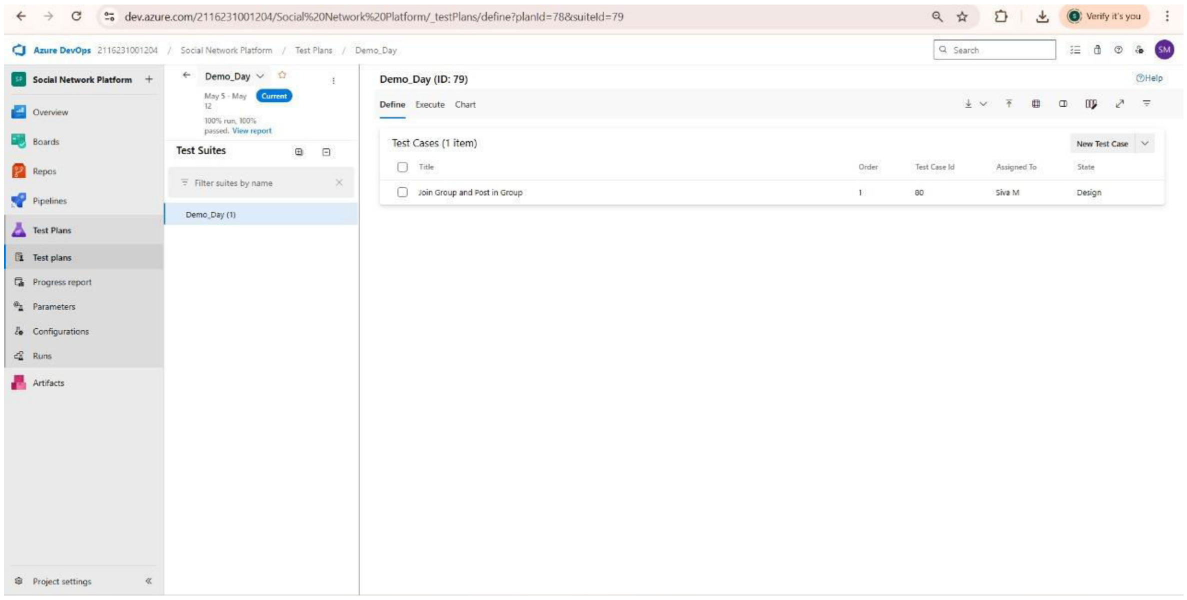
7. Separate Test Suites

- Group test cases based on functionality (e.g., Login, Playlist, Recommendations).
- Use Static, Requirement-based, or Query-based suites in Azure DevOps.
- Improves traceability and execution flow.

8. Prioritize and Review

- Mark test cases with priority (High, Medium, Low).
- Review test cases for completeness and correctness.
- Ensure alignment with associated user stories or features.

1. New test plan

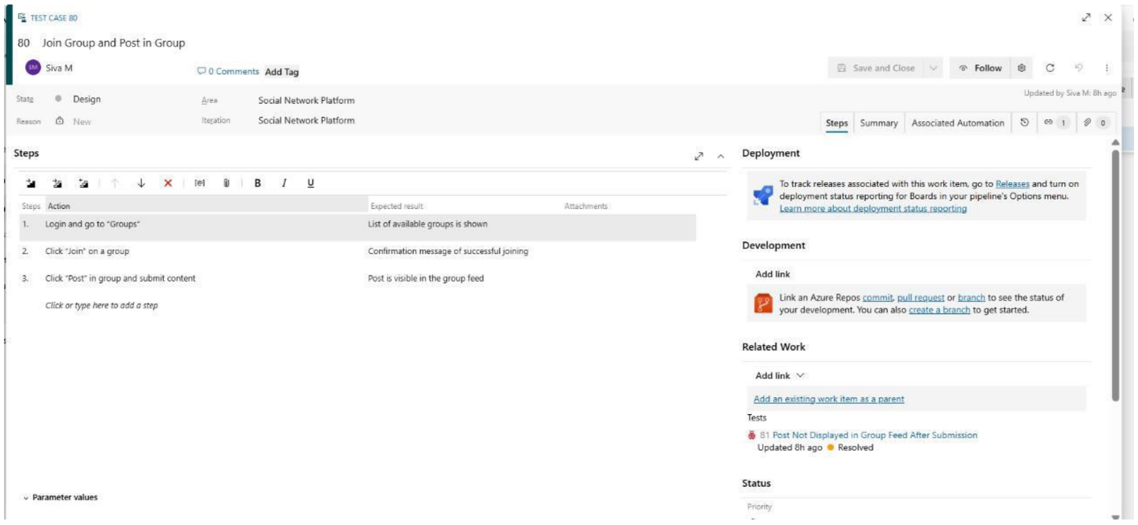

dev.azure.com/2116231001204/Social%20Network%20Platform/_testPlans/define?planId=78&suiteId=79

Demo_Day (ID: 79)

Test Cases (1 item)

Title	Order	Test Case Id	Assigned To	State
Join Group and Post in Group	1	80	Siva M	Design

2. Test case



TEST CASE 80

80 Join Group and Post in Group

Siva M 0 Comments Add Tag

Save and Close Follow

Updated by Siva M: 8h ago

State	Design	Area	Social Network Platform
Reason	New	Iteration	Social Network Platform

Steps Summary Associated Automation

Steps

Steps	Action	Expected result	Attachments
1.	Login and go to "Groups"	List of available groups is shown	
2.	Click "Join" on a group	Confirmation message of successful joining	
3.	Click "Post" in group and submit content	Post is visible in the group feed	
	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

Tests

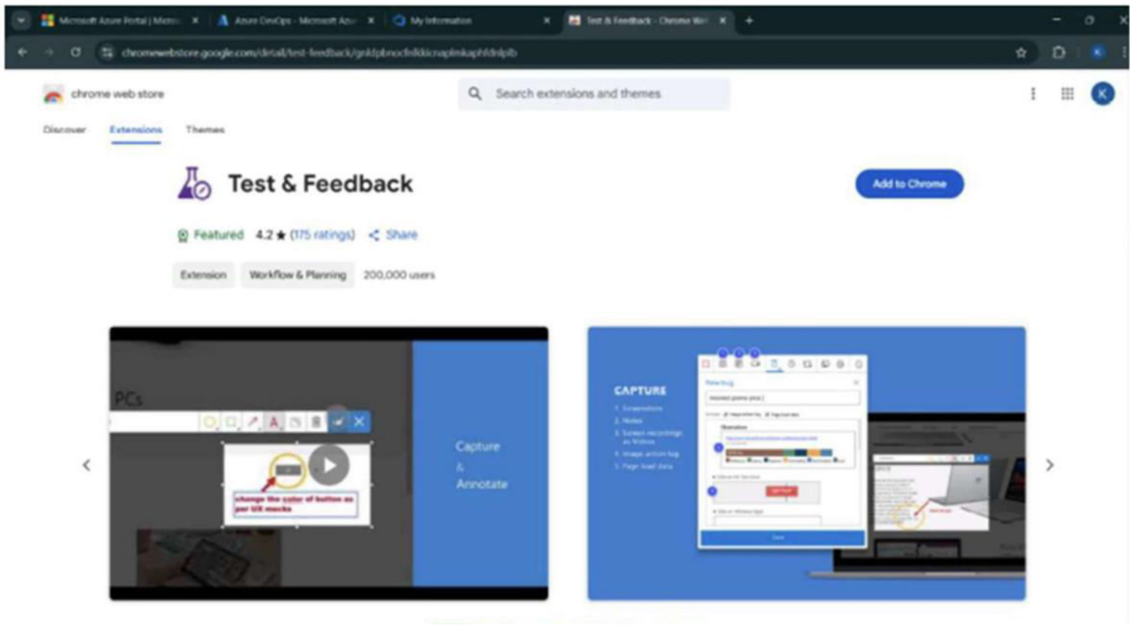
81 Post Not Displayed in Group Feed After Submission

Updated 8h ago ● Resolved

Status

Priority

3. Installation of Test



Microsoft Azure Portal | Micro Azure DevOps - Microsoft Azu My Information Test & Feedback - Chrome We

chromewebstore.google.com/detail/test-feedback/gnldpbnocfnlkkicnaplmkaphfdnlplb

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Discover Extensions Themes

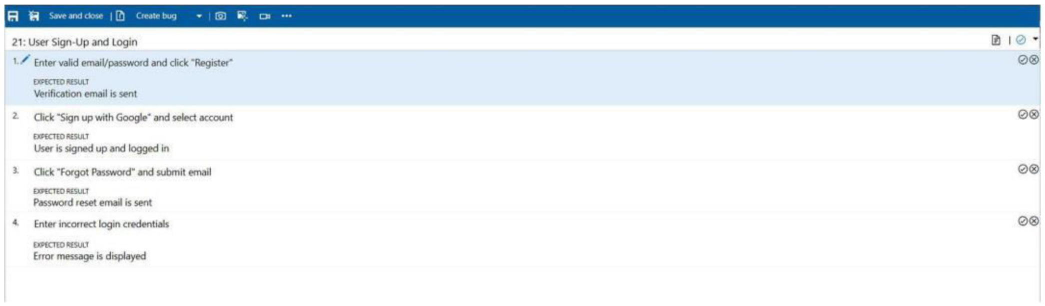
Test & Feedback

Add to Chrome

Featured 4.2★ (175 ratings) Share

Extension Workflow & Planning 200,000 users

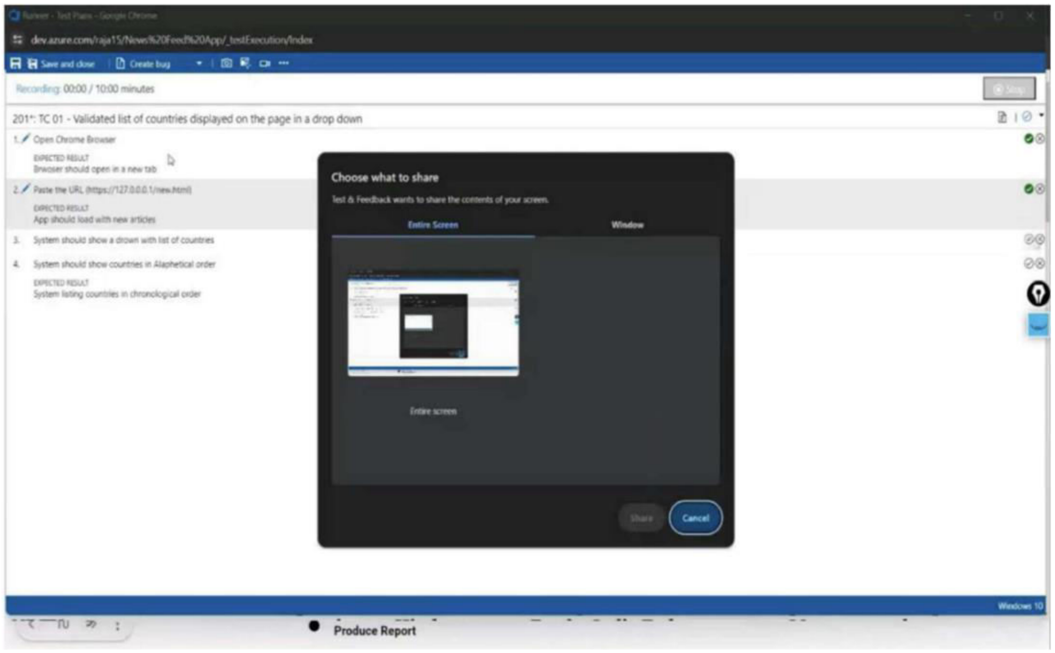
4. Running the Test Cases



21: User Sign-Up and Login

1. Enter valid email/password and click "Register"
   EXPECTED RESULT
   Verification email is sent
2. Click "Sign up with Google" and select account
   EXPECTED RESULT
   User is signed up and logged in
3. Click "Forgot Password" and submit email
   EXPECTED RESULT
   Password reset email is sent
4. Enter incorrect login credentials
   EXPECTED RESULT
   Error message is displayed

5. Recording the Test Cases



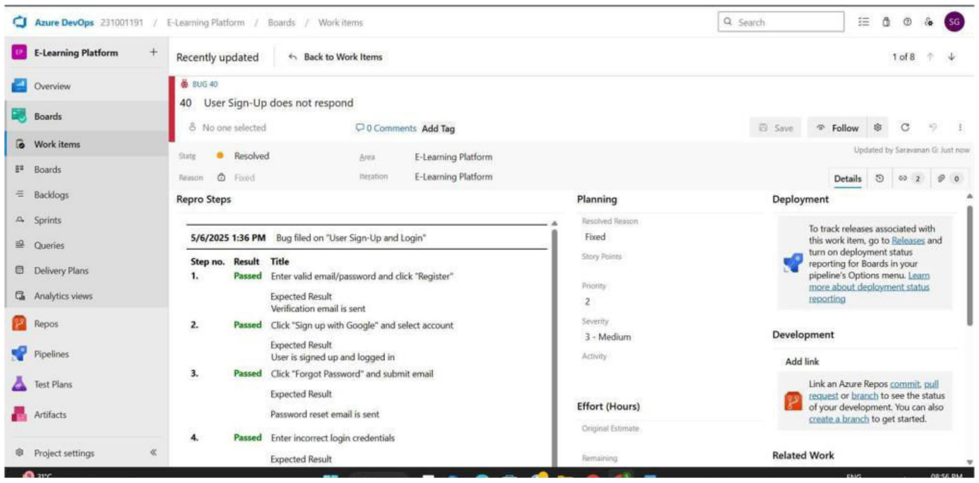
Recording: 00:00 / 10:00 minutes

201*: TC 01 - Validated list of countries displayed on the page in a drop down

1. Open Chrome Browser
   EXPECTED RESULT
   Browser should open in a new tab
2. Paste the URL (https://127.0.0.1/new.html)
   EXPECTED RESULT
   App should load with new articles
3. System should show a drown with list of countries
4. System should show countries in Alaphetical order
   EXPECTED RESULT
   System listing countries in chronological order

Test & Feedback wants to share the contents of your screen.

6. Creating Bugs



BUG 40

40 User Sign-Up does not respond

No one selected 0 Comments Add Tag

Updated by Saravanan G: Just now

State Resolved Area E-Learning Platform
Reason Fixed Iteration E-Learning Platform

Repro Steps

5/6/2025 1:36 PM Bug filed on "User Sign-Up and Login"

Step no.	Result	Title
1.	Passed	Enter valid email/password and click "Register" Expected Result Verification email is sent
2.	Passed	Click "Sign up with Google" and select account Expected Result User is signed up and logged in
3.	Passed	Click "Forgot Password" and submit email Expected Result Password reset email is sent
4.	Passed	Enter incorrect login credentials Expected Result

Planning

Resolved Reason: Fixed
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

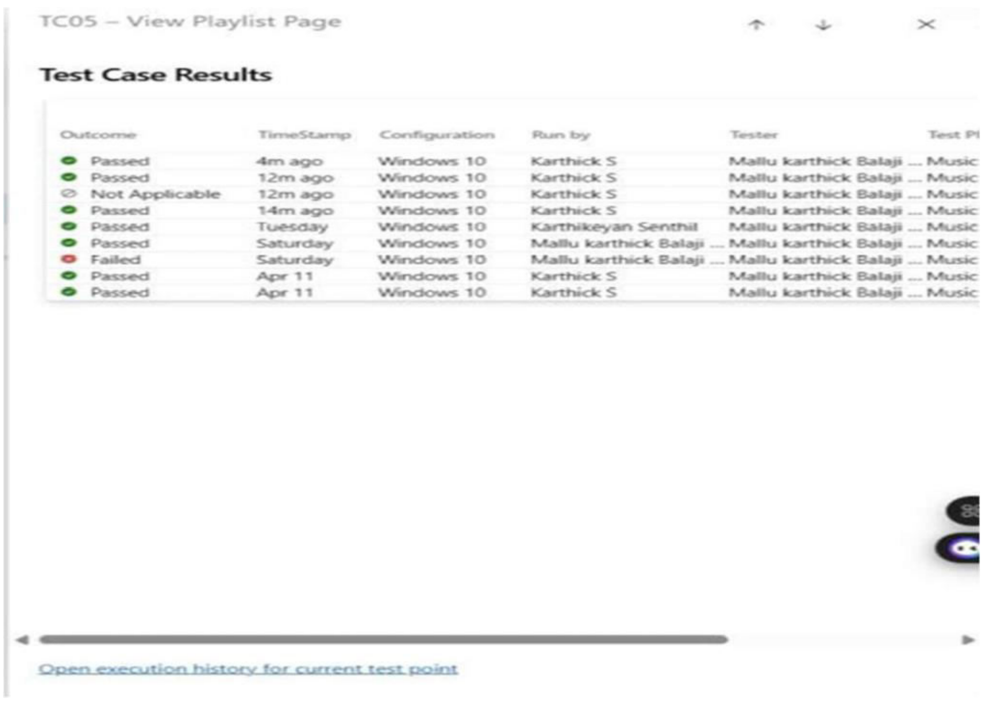
Development

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

7. Test Case Results



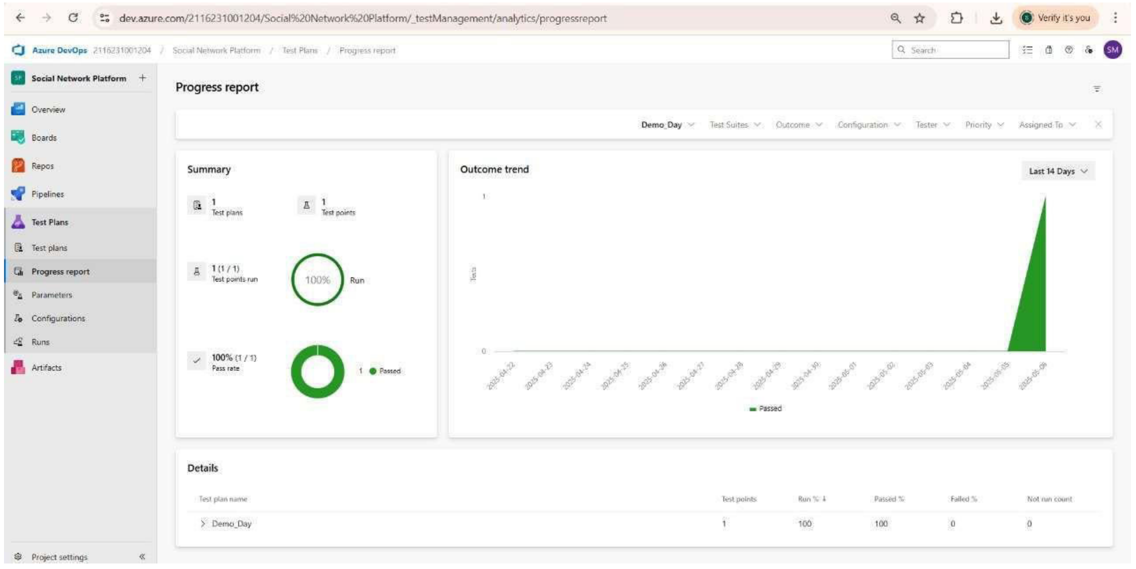
TC05 – View Playlist Page

Test Case Results

Outcome	TimeStamp	Configuration	Run by	Tester	Test Pl
● Passed	4m ago	Windows 10	Karthick S	Mallu karthick Balaji ...	Music
● Passed	12m ago	Windows 10	Karthick S	Mallu karthick Balaji ...	Music
⊘ Not Applicable	12m ago	Windows 10	Karthick S	Mallu karthick Balaji ...	Music
● Passed	14m ago	Windows 10	Karthick S	Mallu karthick Balaji ...	Music
● Passed	Tuesday	Windows 10	Karthikeyan Senthil	Mallu karthick Balaji ...	Music
● Passed	Saturday	Windows 10	Mallu karthick Balaji ...	Mallu karthick Balaji ...	Music
● Failed	Saturday	Windows 10	Mallu karthick Balaji ...	Mallu karthick Balaji ...	Music
● Passed	Apr 11	Windows 10	Karthick S	Mallu karthick Balaji ...	Music
● Passed	Apr 11	Windows 10	Karthick S	Mallu karthick Balaji ...	Music

Open execution history for current test point

8. Progress Report



dev.azure.com/2116231001204/Social%20Network%20Platform/_testManagement/analytics/progressreport

Azure DevOps / 2116231001204 / Social Network Platform / Test Plans / Progress report

Progress report

Filters: Demo_Day | Test Suites | Outcome | Configuration | Tester | Priority | Assigned To

Summary

1 Test plans

1 Test points

1 (1 / 1) Test points run — 100% Run

100% (1 / 1) Pass rate — 1 ● Passed

Outcome trend (Last 14 Days)

Details

Test plan name	Test points	Run %	Passed %	Failed %	Not run count
Demo_Day	1	100	100	0	0

LOAD TESTING PROCEDURE :

Steps to Create an Azure Load Testing Resource:

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

1. Sign in to Azure Portal

   Go to https://portal.azure.com and log in.

2. Create the Resource

   - Go to Create a resource — Search for "Azure Load Testing".
   - Select Azure Load Testing and click Create.

3. Fill in the Configuration Details

   - Subscription: Choose your Azure subscription.
   - Resource Group: Create new or select an existing one.
   - Name: Provide a unique name (no special characters).
   - Location: Choose the region for hosting the resource.

4. (Optional) Configure tags for categorization and billing.

5. Click Review + Create, then Create.

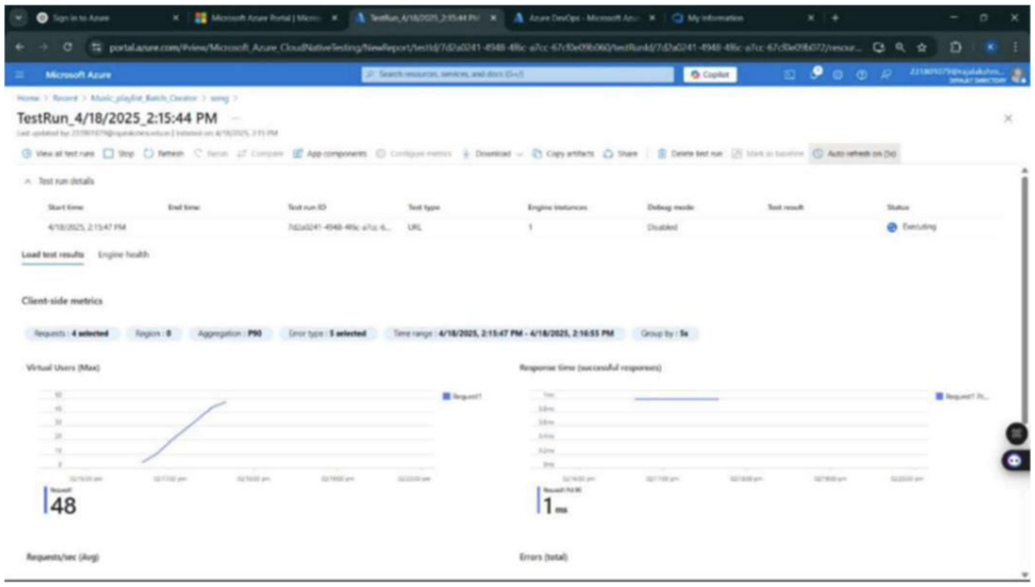
6. Once deployment is complete, click Go to resource.

Steps to Create and Run a Load Test:

Once your resource is ready:

1. Go to your Azure Load Testing resource and click Add HTTP requests > Create.
2. Basics Tab
   - Test Name: Provide a unique name.
   - Description: (Optional) Add test purpose.
   - Run After Creation: Keep checked.
3. Load Settings
   - Test URL: Enter the target endpoint (e.g., https://yourapi.com/products).
4. Click Review + Create — Create to start the test.

Load Testing



Home > Recent > Music_playlist_Batch_Creator > song >

TestRun_4/18/2025_2:15:44 PM

Test run details

Start time	End time	Test run ID	Test type	Engine instances	Debug mode	Test result	Status
4/18/2025, 2:15:47 PM		7d2a0241-4948-4f6c-a7cc-6...	URL	1	Disabled		Executing

Load test results | Engine health

Client-side metrics

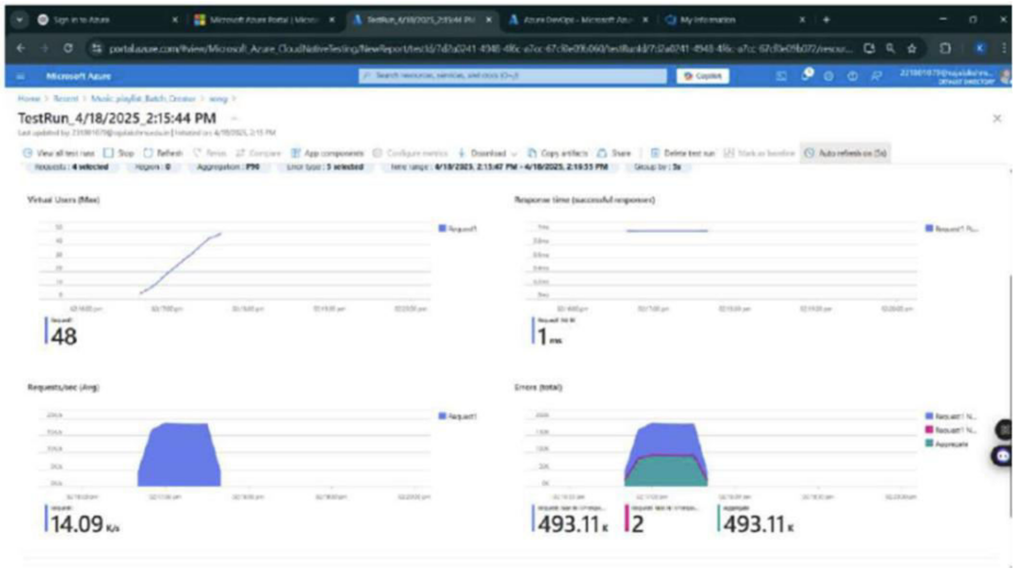
Requests : 4 selected | Region : 0 | Aggregation : P90 | Error type : 5 selected | Time range : 4/18/2025, 2:15:47 PM - 4/18/2025, 2:16:55 PM | Group by : 5s

Virtual Users (Max): 48

Response time (successful responses): 1 ms

Requests/sec (Avg)

Errors (total)



TestRun_4/18/2025_2:15:44 PM

Virtual Users (Max): 48

Response time (successful responses): 1 ms

Requests/sec (Avg): 14.09 K/s

Errors (total): 493.11 K | 2 | 493.11 K

RESULT:

Test plans and test cases for selected user stories were created in Azure DevOps, covering both happy and error paths and an Azure Load Testing resource was also set up, and a load test was successfully run to evaluate the performance of the target endpoint.