



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

**DEPARTMENT OF INFORMATION TECHNOLOGY**  
**LAB MANUAL**

**CS23432 – Software Construction**

**(REGULATION 2023)**

**RAJALAKSHMI ENGINEERING COLLEGE**  
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<b>Exp.No: 1</b>	<b>AZURE DEVOPS ENVIRONMENT SETUP</b>
<b>Date:22/01/2025</b>	

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

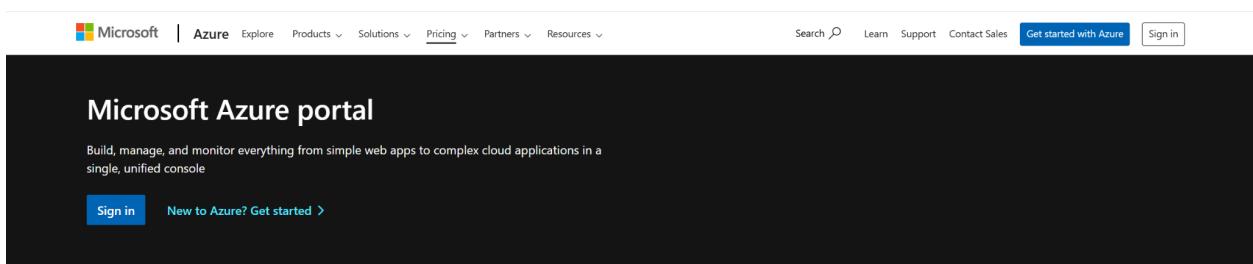
## INSTALLATION

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>



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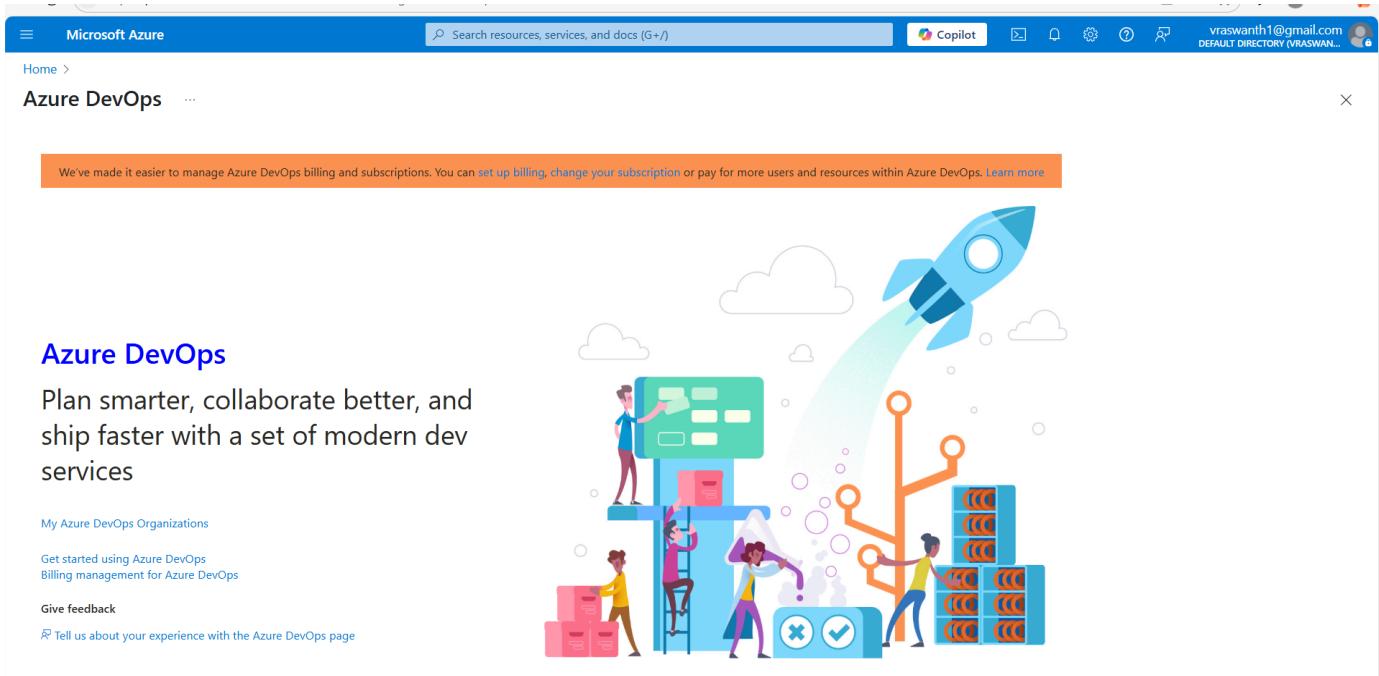
## 2. Azure home page

The screenshot shows the Microsoft Azure home page. At the top, there's a search bar and a user profile for vraswanth1@gmail.com. Below the header, a "Welcome to Azure!" message is displayed, followed by three promotional cards: "Start with an Azure free trial", "Manage Microsoft Entra ID", and "Azure for Students". Under "Azure services", there are icons for Create a resource, Azure DevOps organizations, Azure Cosmos DB, Quickstart Center, Azure AI foundry, Kubernetes services, Virtual machines, App Services, Storage accounts, and More services. A "Resources" section is also present.

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

This screenshot is similar to the previous one, but the search bar at the top contains the text "devops". A dropdown menu appears, listing "Services (7)" under the "All" tab. The "Services" section includes items like Azure Native New Relic Service, Managed DevOps Pools, and Azure DevOps organizations. Other tabs in the dropdown include "Resources", "Marketplace", "Documentation", and "Give feedback". The rest of the page layout remains the same, including the "Welcome to Azure!" section and the "Azure services" grid.

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
Date: 07/02/2025

## AZURE DEVOPS PROJECT SET UP AND USER STORY MANAGEMENT

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

### STEPS:

#### 1.Create An Azure Account

The screenshot shows the final step of creating an Azure DevOps organization. It features a header with the Azure DevOps logo and the user's email address. Below this, a large heading says "Almost done...". The next section asks for the organization name, with a pre-filled input field containing "dev.azure.com/vraswanth1". A dropdown menu for location is set to "India". The following section is for CAPTCHA verification, showing the text "YGVW K4VG" and a blank input field for the user to type it in. At the bottom right is a blue "Continue" button.

Azure DevOps  
vraswanth1@gmail.com [Switch directory](#)

Almost done...

Name your Azure DevOps organization \*

dev.azure.com/vraswanth1

We'll host your projects in

India

Enter the characters you see

New Audio

YGVW K4VG

Continue

## 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 a project to get started**

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.

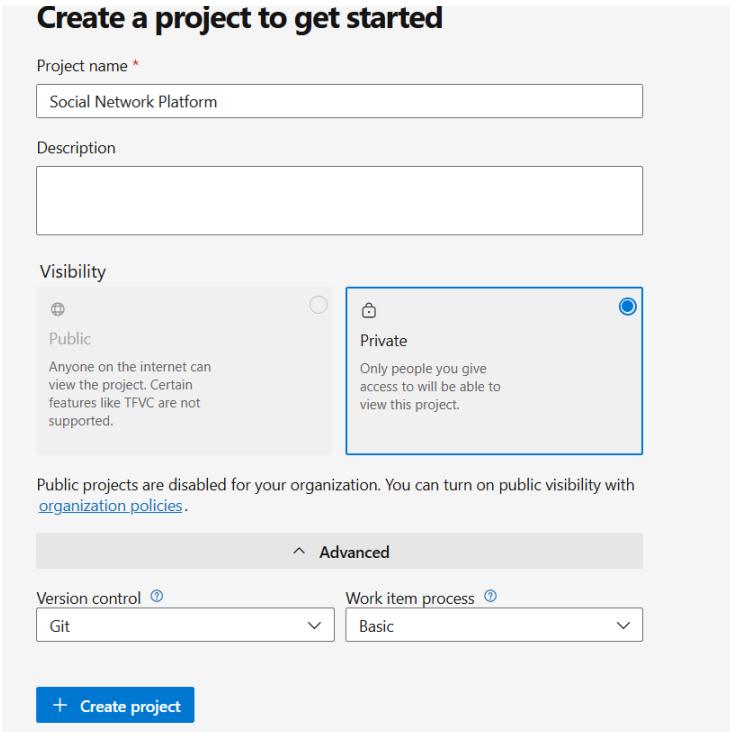
Public projects are disabled for your organization. You can turn on public visibility with [organization policies](#).

Advanced

Version control [?](#) Work item process [?](#)

Git Basic

+ 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.

Microsoft

Aswanth V R Sign out

AR

Aswanth V R [Edit profile](#)

vraswanth1@gmail.com

Microsoft account

India vraswanth1@gmail.com

**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](#)

Projects

- Project 1
- New project

Actions

[Open in Visual Studio](#)

> dev.azure.com/231001002 (Member)

#### 4. Project dashboard

Azure DevOps 231001002 / Social Network Platform / Overview / Summary

Search

Private Invite

**Social Network Platform**

**About this project**

The Social Network Platform is a comprehensive and user-centric design for a modern social networking application. It emphasizes seamless user experience, interactive features, secure content sharing, and robust moderation tools. The platform is organized into five major EPICs that cover the essential functionalities required for a safe and engaging user environment.

The first EPIC, User Management & Authentication, includes features such as account creation via email or social media, secure login processes, two-factor authentication (2FA), and password management. It also offers users control over their profiles, including settings for account deletion and various privacy options. The second EPIC, Content Creation & Sharing, enables users to create, edit, delete, and schedule posts—whether text, images, or videos. It supports interactive features like likes, comments, and shares, along with privacy settings that allow users to control visibility and engagement options on their posts.

The third EPIC, Social Interaction, focuses on building and maintaining connections through friend requests, following features, and real-time interactions. It supports private messaging, group participation, and timely notifications. The fourth EPIC, Notifications & Messaging, ensures users are informed of interactions through real-time alerts and customizable notification settings. It also offers private and group messaging capabilities, complete with reactions and read receipts. The fifth EPIC, Content Moderation & Security, strengthens platform safety by including user reporting, administrative moderation tools (such as ban, unban, and warn), AI-driven detection of inappropriate content, user blocking, and secure access controls like 2FA. Collectively, these EPICs create a secure, interactive, and user-friendly social networking experience.

**Project stats** Period: Last 7 days

Boards

0 Work items

0 Work items

**Members** 5

AB AB A AR

Project settings

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 this user story.

The screenshot shows the Azure DevOps interface for the 'Social Network Platform' project. The left sidebar is the navigation menu with options like Overview, Boards, Work items, Backlogs, Sprints, Queries, Delivery Plans, Analytics views, Repos, Pipelines, Test Plans, and Artifacts. The 'Backlogs' section is currently selected. The main area displays the 'Backlog' for the 'Social Network Platform Team'. At the top right of the backlog grid are buttons for '+ New Work Item', 'View as Board', 'Column Options', and a settings gear icon. The backlog grid has columns for Order, Work Item Type, Title, State, Effort, Business Area, and Tags. There are five backlog items, all labeled 'Epic' and numbered 1 to 5. Each epic item has a title starting with a red exclamation mark and a number. All items are marked as 'New' in the State column and 'Business' in the Business Area column. The backlog items are:

Order	Work Item Type	Title	State	Effort	Business Area	Tags
1	Epic	> ! 1. User Management & Authentication	New		Business	
2	Epic	> ! 2. Content Creation & Sharing	New		Business	
3	Epic	> ! 3. Social Interaction	New		Business	
4	Epic	> ! 4. Notifications & Messaging	New		Business	
5	Epic	> ! 5. Content Moderation & Security	New		Business	

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

<b>Exp.No: 3</b>	<b>SETTING UP EPICS FEATURES AND USER STORIES FOR PROJECT PLANNING</b>
<b>Date: 14/02/2025</b>	

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

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

### **1.Fill in Epics**

The screenshot shows the 'EPIC' creation screen in Microsoft Azure DevOps. At the top, it displays 'EPIC 7' and the title '1. User Management & Authentication'. Below the title, there are fields for 'State' (New), 'Reason' (New), 'Area' (Social Network Platform), and 'Iteration' (Social Network Platform\Iteration 1). On the right, there are buttons for 'Save and Close', 'Follow', and a 'Details' tab. The main area is divided into sections: 'Description', 'Planning', 'Deployment', 'Discussion', 'Development', and 'Related Work'. The 'Description' section contains a note about user account-related functionalities. The 'Planning' section includes fields for Priority (2), Risk, and Effort. The 'Deployment' section provides instructions for tracking releases. The 'Discussion' section has a comment input field and a link to the Markdown editor. The 'Development' section includes fields for Business Value, Time Criticality, Start Date, and Target Date, along with a 'Add link' button. The 'Related Work' section is currently empty.

## 2.Fill in Features

The screenshot shows the 'EPIC 24' creation screen. At the top, it says '24 2. Content Creation & Sharing'. Below that, there's a 'Discussion' section with a comment input field and a 'switch to Markdown editor' link. On the right, there are sections for 'Risk', 'Effort', 'Business Value', 'Time Criticality', 'Start Date', 'Target Date', 'Classification' (Value area: Business), and 'Development' (Add link to Azure Repos). A note about deployment status reporting is also present.

## 3.Fill in User Story Details

The screenshot shows the 'USER STORY 9' creation screen. It includes a 'Description' section with the user story text: 'As a user, I want to sign up using my email and password, so that I can create an account securely.' Below that is an 'Acceptance Criteria' section with three bullet points. To the right, there are sections for 'Planning' (Story Points: 2, Priority: 2, Risk), 'Deployment' (note about tracking releases), 'Classification' (Value area: Business), and 'Development' (Add link to Azure Repos). A 'Gleek' tag is also present.

#### 4.Fill in Task Details

The screenshot shows the Azure DevOps interface for a project titled "Social Network Platform". The left sidebar is visible with various navigation options like Overview, Boards, Work items, and Pipelines. The main area displays a work item titled "TASK 106 User Authentication Module (Frontend + Backend)" created by Aadithya B. The work item details include:

- Description:** Develop a secure and responsive login and registration system for the social network platform. The system should include basic authentication, password validation, and error handling.
- Planning:** Priority: 2, Activity: (empty)
- Deployment:** A note: "To track releases associated with this work item, go to [Releases](#) and turn on deployment status reporting for Boards in your pipeline's Options menu. [Learn more about deployment status reporting](#)"
- Effort (Hours):** Original Estimate: (empty), Remaining: (empty), Completed: (empty)
- Development:** Add link: "Link an Azure Repos [commit](#), [pull request](#) or [branch](#) to see the status of your development. You can also [create a branch](#) to get started."
- Implementation:** Integrated in Build: (empty)
- Related Work:** (empty)

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

<b>Exp.No: 4</b>
<b>Date: 20/03/2025</b>

## **SPRINT PLANNING**

**AIM:** To assign user story to specific sprint for the Social Network Platform.

### **SPRINT PLANNING**

#### **Sprint 1**

The screenshot shows the Azure DevOps Taskboard for the Social Network Platform Team. The left sidebar navigation includes Overview, Boards, Work items, Boards, Backlogs, Sprints (selected), Queries, Delivery Plans, Analytics views, Repos, Pipelines, Test Plans, Artifacts, and Project settings. The main area displays the Taskboard for Sprint 1, which is currently active. The backlog section shows several user stories:

- User Story 9: 1.1.1: Register with Email & Password (New, assigned to Aadithya B)
- User Story 106: User Authentication Module (Frontend + Backend) (New, assigned to Aadithya B)
- User Story 10: 1.1.2: Register with Social Media (New, assigned to AmeenBasith.K)
- User Story 107: Create and Manage Social Feed (Posts CRUD) (New, assigned to AmeenBasith.K)
- User Story 11: 1.1.3: Verify Email after Registration (New, assigned to Aswanth V R)
- User Story 108: User Profile Page with Edit Functionality (New, assigned to Aswanth V R)

The taskboard also shows columns for New, Active, Resolved, and Closed tasks. The timeline at the top right indicates the sprint runs from February 1 to May 31, with 7 work days remaining.

## Sprint 2

The screenshot shows the Azure DevOps Boards interface for the Social Network Platform Team. The left sidebar is collapsed, showing the project navigation. The main area displays a Kanban board for Sprint 2, which spans from May 31 to June 30 over 21 work days. The board has columns for New, Active, Resolved, and Closed. There are four items in the New column:

- Item 17: 1.3.1: Forgot Password & Reset via Email (New, Aswanth V R)
- Item 18: 1.3.2: Change Password from Settings (New, AmeenBasith.K)
- Item 19: 1.3.3: Enable Two-Factor Authentication (2FA) (New, Aadithya B)
- Item 21: 1.4.1: Update Profile Information (New)

## Sprint 3

The screenshot shows the Azure DevOps Boards interface for the Social Network Platform Team. The left sidebar is collapsed, showing the project navigation. The main area displays a Kanban board for Sprint 3, which spans from June 30 to August 31 over 45 work days. The board has columns for New, Active, Resolved, and Closed. There are four items in the New column:

- Item 26: 2.1.1: Create a Text Post (New, Aadithya B)
- Item 27: 2.1.2: Upload and Share Images (New, AmeenBasith.K)
- Item 28: 2.1.3: Upload and Share Videos (New, AmeenBasith.K)
- Item 30: 2.2.1: Edit an Existing Post (New)

## Sprint 4

The screenshot shows the Azure DevOps Boards page for the 'Social Network Platform' project. The left sidebar is visible with options like Overview, Boards, Work items, Backlogs, Sprints, Queries, Delivery Plans, Analytics views, Repos, Pipelines, Test Plans, Artifacts, and Project settings. The main area displays the 'Taskboard' for the 'Social Network Platform Team'. The board is set to 'Sprint 4' and 'Person: All'. The columns are labeled New, Active, Resolved, and Closed. There are four work items listed:

Index	Work Item ID	Description	New	Active	Resolved	Closed
1	48	3.2.1: Send a Private Message	New			
2	49	3.2.2: View Message History	New			
3	50	3.2.3: Delete a Message	New			
4	37	2.4.1: Set Post Visibility	New			

The 'New' column indicates the status of each work item. The 'Person: All' filter is applied to the board.

**RESULT:** The Sprints are created for the Social Network Platform.

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

**AIM:** Create Poker Estimation for the user stories - Social Network Platform Project.

## POKER ESTIMATION

The screenshot shows a detailed view of a User Story card in Azure DevOps. The card has the following details:

- Title:** USER STORY 9  
9 1.1.1: Register with Email & Password
- Owner:** Aadithya B
- Comments:** 0
- Add Tag:** Add Tag
- Buttons:** Save and Close, Follow, Details (with 4 items), and a delete icon.
- Updated:** Updated by Aadithya B: Yesterday
- Planning:**
  - Story Points: 25
  - Priority: 2
  - Risk: 0
- Deployment:** A note about tracking releases associated with this work item, linking to Releases and Boards.
- Development:**
  - Add link: Link an Azure Repos commit, pull request, or branch.
  - A note about development status reporting for Boards.
- Classification:**
  - Value area: Business
- Gleek:** A field containing the text "9|eek\_-".
- Related Work:** A section showing related work items.

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

**Exp.No: 6**

**Date: 04/04/2025**

## **DESIGNING CLASS DIAGRAM AND SEQUENCE DIAGRAMS FOR PROJECT ARCHITECTURE**

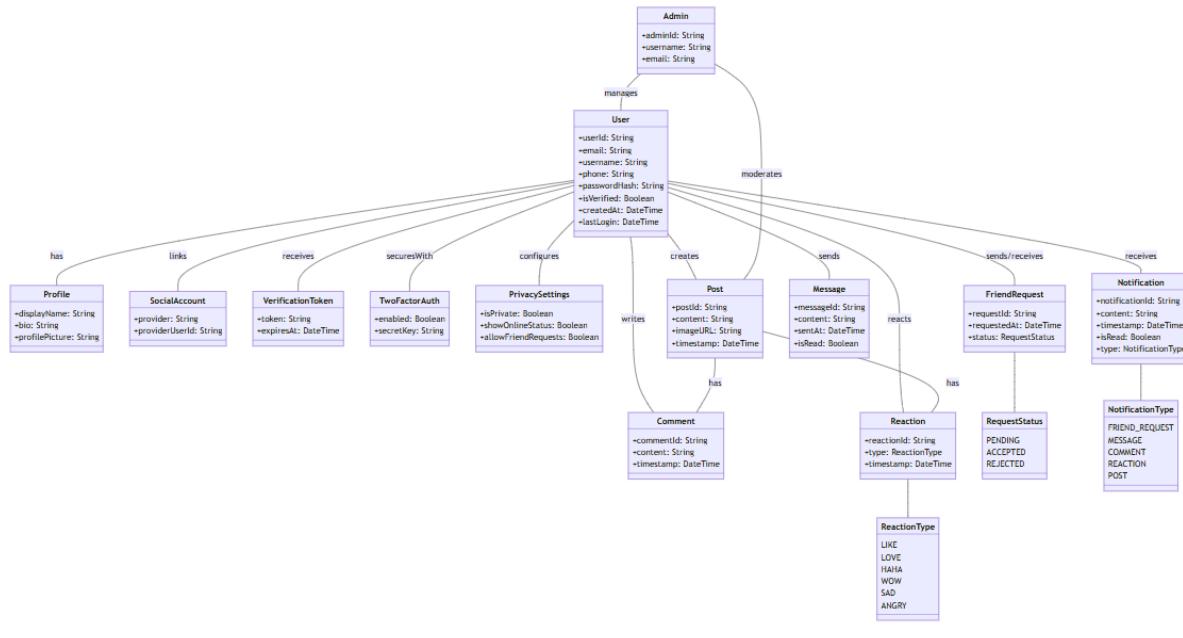
**AIM:** To Design a Class Diagram and Sequence Diagram for the given Project.

### **6A. CLASS DIAGRAM**

#### **Class Diagram**

Follow 1 Edit

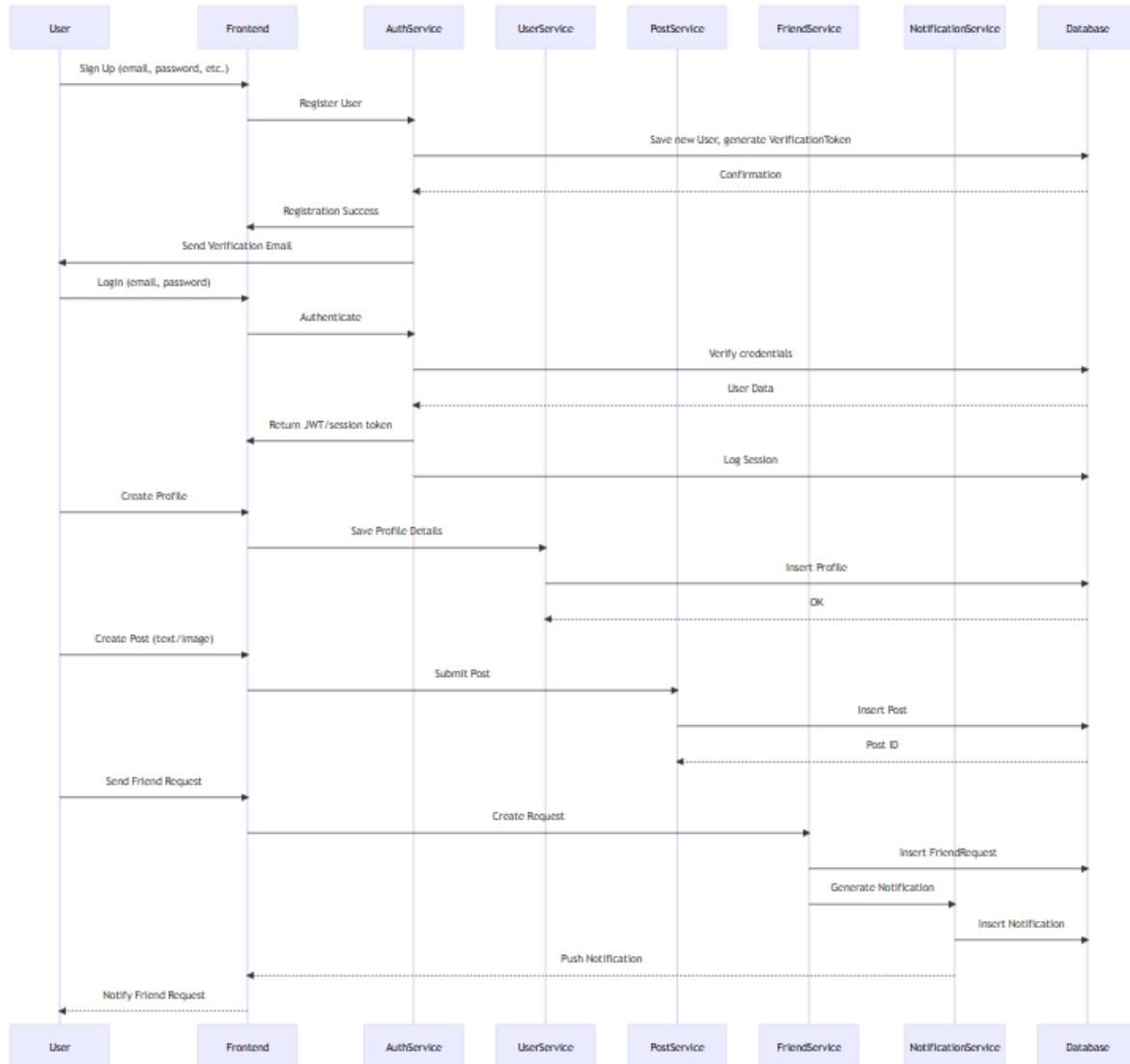
Aadithya B May 5



## 6B. SEQUENCE DIAGRAM

### Sequence Diagram

Adithya B - May 5



**RESULT:** The Class Diagram and Sequence Diagram is designed Successfully for the Social Network Platform.

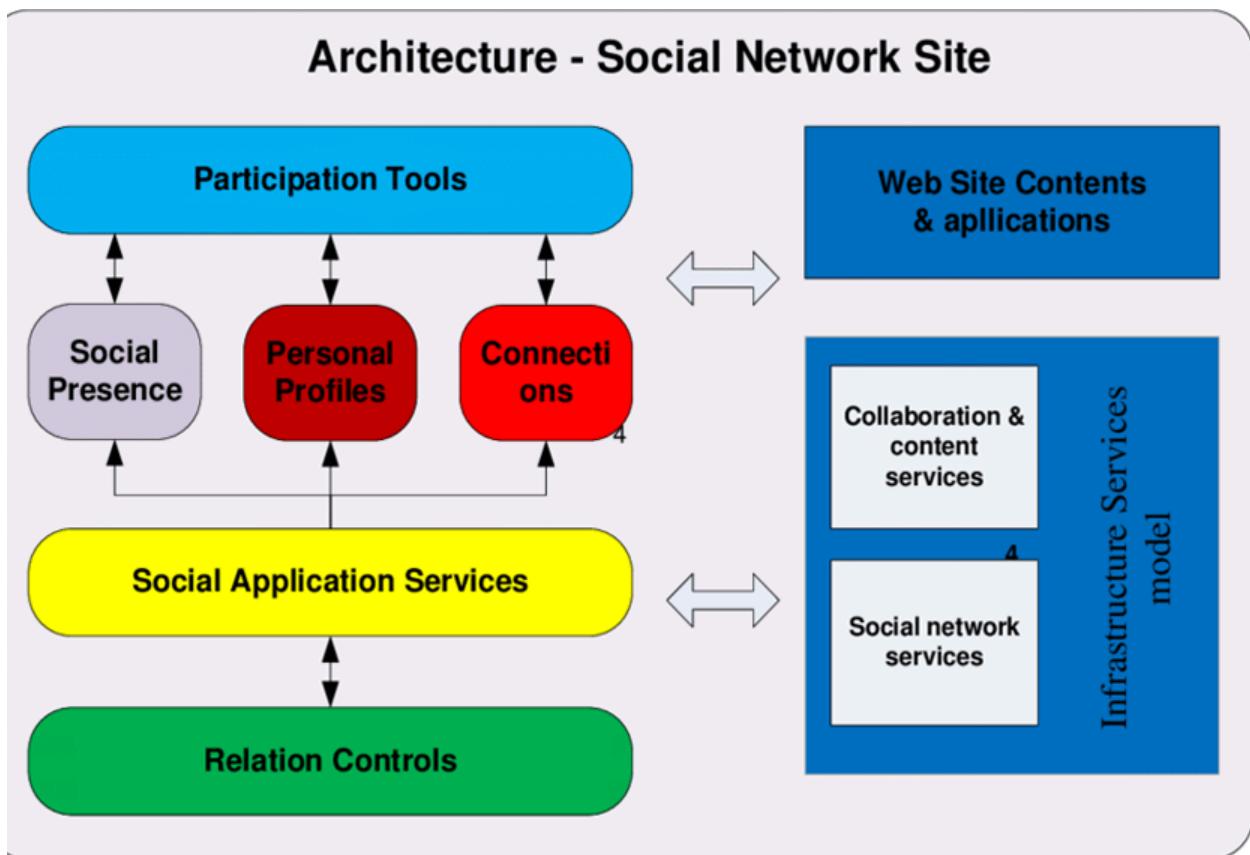
Exp.No: 7

Date: 16/04/2025

## DESIGNING ARCHITECTURAL AND ER DIAGRAMS FOR PROJECT STRUCTURE

**AIM:** To Design an Architectural Diagram and ER Diagram for the given Project.

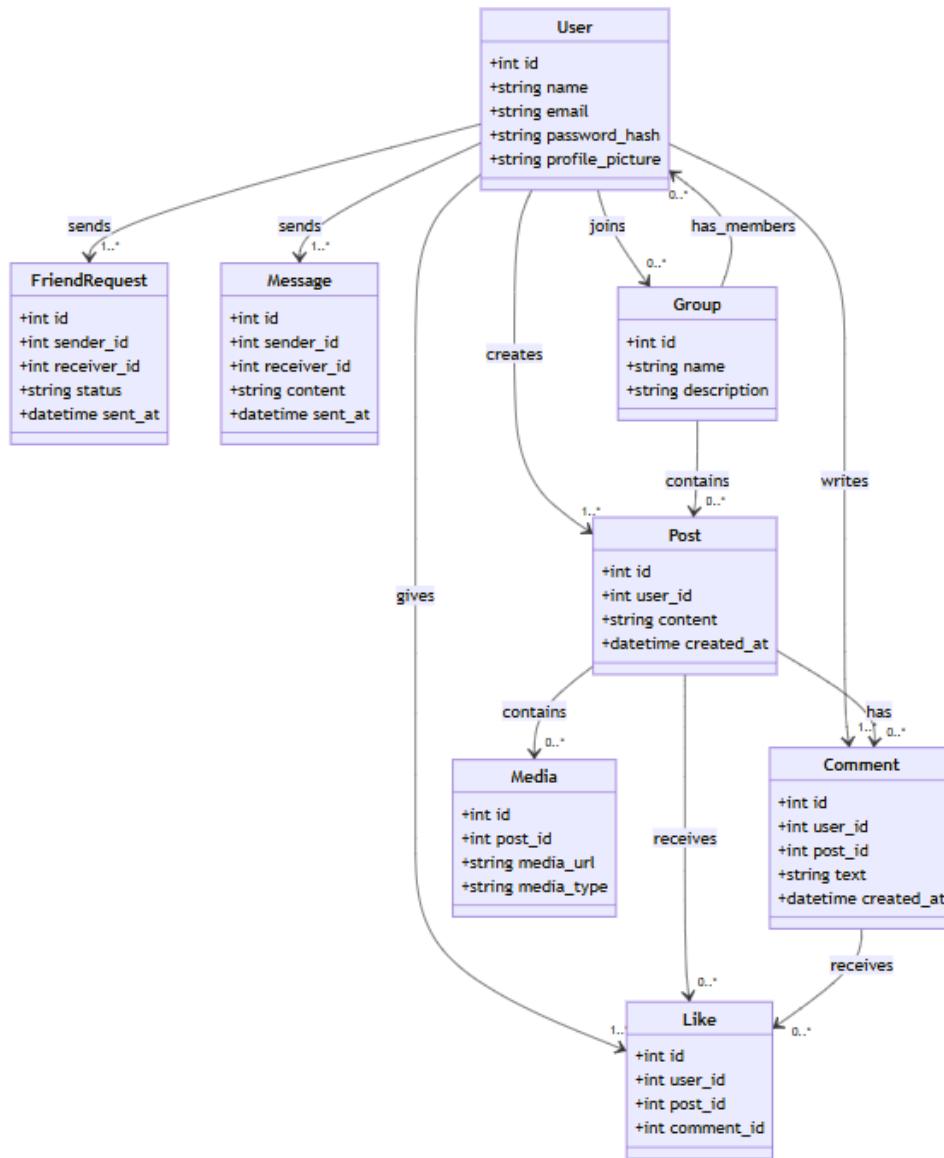
### 7A. ARCHITECTURAL DIAGRAM



## 7B. ER DIAGRAM

### E-R Diagram

 AmeenBasith.K May 5



**RESULT:** The Architecture Diagram and ER Diagram is designed Successfully for the Social Network Platform.

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

**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 Authentication (Login, Registration, Forgot Password)
- Profile Management (View/Edit Profile, Upload Picture)
- Post Feed (Create, View, Edit, Delete Posts)
- Chat Feature (Real-time Messaging)
- Notifications (Post Likes, Comments, Messages)

#### 2. Define User Interactions

Each test case reflects realistic user actions:

- Logging in and out
- Editing profile information
- Creating and managing posts
- Chatting with another user
- Receiving notifications for activities

### 3. Design Happy Path Test Cases

- Focused on successful flows where inputs are valid and systems behave as expected.
- Examples:
  - User signs up successfully
  - Creates a new post
  - Sends message to another user
  - Views notifications for new comments

### 4. Design Error Path Test Cases

- Focused on handling invalid, missing, or unexpected inputs.
- Examples:
  - Registration fails due to existing email
  - Post creation denied due to empty content
  - Message not sent when user is blocked
  - Unauthorized access to another user's profile

### 5. Break Down Steps and Expected Results

Each test case includes:

- Step-by-step actions
- Input values
- Expected results

This ensures reproducibility and easy automation later.

## 6. Use Clear Naming and IDs

- Example:
  - TC01 – Register with Email & Password
  - TC02 – Register with Social Media
  - TC03 – Verify Email after Registration
- Helps trace test cases to user stories and features in Azure DevOps

## 7. Separate Test Suites

Organize test cases based on functional modules:

- TS01 – Register with Email & Password
- TS02 – Register with Social Media
- TS03 – Verify Email after Registration
- TS04 – Log in with Email & Password
- TS05 – Log in with Social Media

### 1. New test plan

 New Test Plan

Name \*

Area Path \*

Iteration \*

Create

Cancel

## 2. Test suite

The screenshot shows the Azure DevOps interface for a project named 'Social Network Platform'. The left sidebar has 'Test Plans' selected under 'Test Plans'. In the main area, a 'Functional Validation Plan' is displayed with a status bar showing 'Feb 1 - May 31', '33% run, 100% passed', and a 'View report' link. Below this is a 'Test Suites' section with a 'New Suite' button highlighted in blue. A dropdown menu for 'New Suite' includes options: 'Static suite', 'Requirement based suite', 'Query based suite', 'Assign configurations', 'Export', 'Assign testers to run all tests', and 'Import test suites'. To the right, there's a cartoon illustration of a person painting on a canvas with a dog watching, and a section titled 'Add a test case' with a 'New Test Case' button.

## 3. Test case

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

Social Network Platform– Test Plans

### User Stories – Social Network Application

- **US09:** As a user, I want to sign up using my email and password, so that I can create an account securely.
- **US10:** As a user, I want to sign up using my Google or Facebook account, so that I can create an account quickly.
- **US11:** As a user, I want to verify my email after registration, so that I can activate my account.
- **US13:** As a user, I want to log in using my registered email and password, so that I can access my account.
- **US14:** As a user, I want to log in using my Google or Facebook account, so that I don't need to remember my password.

## **TEST SUITE: TS01 – USER LOGIN (ID: 113)**

### **Test Case: TC01 – Register with Valid Email & Password**

**User Story:** As a user, I want to sign up using my email and password, so that I can create an account securely.

**Test Type:** Happy Path

#### **Steps and Expected Results:**

- **Action:** Navigate to the registration page  
**Expected Result:** Registration page with email and password fields is displayed
- **Action:** Enter a valid email and strong password  
**Expected Result:** Input is accepted with no validation errors
- **Action:** Click on the "Register" button  
**Expected Result:** User is taken to the email verification screen

#### **Notes:**

Ensure the email is not already registered. Simulates successful email/password registration.

### **Test Case: TC02 – Register with Already Registered Email**

**User Story:** As a user, I want to sign up using my email and password, so that I can create an account securely.

**Test Type:** Error Path

#### **Steps and Expected Results:**

- **Action:** Navigate to the registration page  
**Expected Result:** Registration form is displayed
- **Action:** Enter an email that is already registered  
**Expected Result:** Email field is highlighted or flagged
- **Action:** Click on the "Register" button  
**Expected Result:** Error message “Email already registered” is shown

#### **Notes:**

Ensures the system prevents duplicate accounts.

## **TEST SUITE: Register with Social Media (ID: 112)**

### **Test Case: TC03 – Register with Valid Google Account**

**User Story:** As a user, I want to sign up using my Google or Facebook account, so that I can create an account quickly.

**Test Type:** Happy Path

#### **Steps and Expected Results:**

- **Action:** Navigate to the registration page  
**Expected Result:** Registration options for Google and Facebook are displayed
- **Action:** Click on “Sign up with Google”  
**Expected Result:** Google OAuth login screen appears
- **Action:** Choose a valid Google account and grant permission  
**Expected Result:** User is redirected back and account is created
- **Action:** Confirm successful registration  
**Expected Result:** User is taken to the welcome screen or email verification page (if required)

#### **Notes:**

Ensure OAuth credentials are properly configured. Test account must not already exist in the system.

### **Test Case: TC04 – Register with Denied OAuth Permission (Google/Facebook)**

**User Story:** As a user, I want to sign up using my Google or Facebook account, so that I can create an account quickly.

**Test Type:** Error Path

#### **Steps and Expected Results:**

- **Action:** Navigate to the registration page  
**Expected Result:** Social media sign-up options are shown
- **Action:** Click on “Sign up with Google” or “Sign up with Facebook”  
**Expected Result:** OAuth permission screen is displayed
- **Action:** Click “Cancel” or deny permission  
**Expected Result:** Registration process is halted

#### **Notes:**

System should handle OAuth denial gracefully and allow user to retry or choose another method.

## **TEST SUITE: TS03 - Verify Email after Registration (ID: 118)**

### **Test Case: TC05 – Verify Email After Successful Registration**

**User Story:** As a user, I want to verify my email after registration, so that I can activate my account.

**Test Type:** Happy Path

#### **Steps and Expected Results:**

- **Action:** Complete the registration process using email and password  
**Expected Result:** Registration is successful, and a verification email is sent
- **Action:** Open the email inbox and click the verification link  
**Expected Result:** User is redirected to the verification confirmation page
- **Action:** Attempt to log in after verification  
**Expected Result:** Login is successful, and user is redirected to the dashboard

#### **Notes:**

Ensure the verification link is unique and only usable once. Simulates a typical successful verification flow.

### **Test Case: TC06 – Email Verification with Expired or Invalid Link**

**User Story:** As a user, I want to verify my email after registration, so that I can activate my account.

**Test Type:** Error Path

#### **Steps and Expected Results:**

- **Action:** Complete the registration and receive the verification email  
**Expected Result:** Email with verification link is received
- **Action:** Wait for the link to expire or modify the link manually  
**Expected Result:** The verification link becomes invalid
- **Action:** Click the expired or invalid verification link  
**Expected Result:** Error message “Verification link is invalid or expired” is shown

#### **Notes:**

System should prompt the user to request a new verification link and not activate the account until successful verification.

## **TEST SUITE: TS04 - Log in with Email & Password (ID: 121)**

### **Test Case: TC07 – Login with Valid Email and Password**

**User Story:** As a user, I want to log in using my registered email and password, so that I can access my account.

**Test Type:** Happy Path

#### **Steps and Expected Results:**

- **Action:** Navigate to the login page  
**Expected Result:** Login page is displayed with email and password fields
- **Action:** Enter a valid registered email and correct password  
**Expected Result:** Input is accepted with no validation errors
- **Action:** Click the "Login" button  
**Expected Result:** User is redirected to the account dashboard

#### **Notes:**

Ensure the test account is verified and active before testing. This simulates a successful login.

### **Test Case: TC08 – Login with Invalid Password**

**User Story:** As a user, I want to log in using my registered email and password, so that I can access my account.

**Test Type:** Error Path

#### **Steps and Expected Results:**

- **Action:** Navigate to the login page  
**Expected Result:** Login page is displayed
- **Action:** Enter a valid registered email and incorrect password  
**Expected Result:** Password is flagged as incorrect
- **Action:** Click the "Login" button  
**Expected Result:** Error message “Incorrect password” is displayed, and user remains on login page

#### **Notes:**

System should limit repeated failed attempts and may prompt CAPTCHA or lockout mechanisms after multiple failures.

## **TEST SUITE: TS05 - Log in with Social Media (ID: 124)**

### **Test Case: TC09 – Login with Valid Google Account**

**User Story:** As a user, I want to log in using my Google or Facebook account, so that I don't need to remember my password.

**Test Type:** Happy Path

#### **Steps and Expected Results:**

- **Action:** Navigate to the login page  
**Expected Result:** Login page displays options to log in with Google and Facebook
- **Action:** Click the “Login with Google” button  
**Expected Result:** Google OAuth screen appears
- **Action:** Select a valid Google account and authorize access  
**Expected Result:** User is redirected back and logged into their account dashboard

#### **Notes:**

Ensure the Google account is already linked or matches an existing user profile. OAuth integration must be correctly configured.

### **Test Case: TC10 – Login with Denied OAuth Permission (Google/Facebook)**

**User Story:** As a user, I want to log in using my Google or Facebook account, so that I don't need to remember my password.

**Test Type:** Error Path

#### **Steps and Expected Results:**

- **Action:** Navigate to the login page  
**Expected Result:** Social login options are visible
- **Action:** Click “Login with Google” or “Login with Facebook”  
**Expected Result:** OAuth consent screen appears
- **Action:** Click “Cancel” or deny authorization  
**Expected Result:** User is redirected back with error message “Login cancelled or permission denied”

## Test Cases

TEST CASE 114

114 TC01-Register with Valid Email & Password

Aadithya B 0 Comments Add Tag

State: Design Area: Social Network Platform  
Reason: New Iteration: Social Network Platform\Sprint 1

Save and Close Follow C D Updated by Aadithya B: 3h ago

Steps Summary Associated Automation Steps (1) 0

**Steps**

Steps	Action	Expected result	Attachment
1.	Navigate to the registration page	Registration page with email and password fields is displayed	
2.	Enter a valid email and strong password	Input is accepted with no validation errors	
3.	Click on the "Register" button	User is taken to the email verification screen	

Click or type here to add a step

Parameter values

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

**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

---

TEST CASE 115

115 TC02 – Register with Already Registered Email

Aadithya B 0 Comments Add Tag

State: Design Area: Social Network Platform  
Reason: New Iteration: Social Network Platform\Sprint 1

Save and Close Follow C D Updated by Aadithya B: 3h ago

Steps Summary Associated Automation Steps (1) 0

**Steps**

Steps	Action	Expected result	Attachment
1.	Navigate to the registration page	Registration form is displayed	
2.	Enter an email that is already registered	Email field is highlighted or flagged	
3.	Click on the "Register" button	Error message "Email already registered" is shown	

Click or type here to add a step

Parameter values

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

**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

**TEST CASE 116**

116 TC03 – Register with Valid Google Account

A AmeenBasith.K 0 Comments Add Tag

State: Design Area: Social Network Platform  
Reason: New Iteration: Social Network Platform\Sprint 1 Updated by AmeenBasith.K 1h ago

**Steps**

Steps	Action	Expected result	Attachment
1.	Navigate to the registration page	Registration options for Google and Facebook are displayed	
2.	Click on "Sign up with Google"	Google OAuth login screen appears	
3.	Choose a valid Google account and grant permission	User is redirected back and account is created	
4.	Confirm successful registration	User is taken to the welcome screen or email verification page (if required)	

Click or type here to add a step

**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

**TEST CASE 117**

117 TC04 – Register with Denied OAuth Permission (Google/Facebook)

A AmeenBasith.K 0 Comments Add Tag

State: Design Area: Social Network Platform  
Reason: New Iteration: Social Network Platform\Sprint 1 Updated by AmeenBasith.K 1h ago

**Steps**

Steps	Action	Expected result	Attachment
1.	Navigate to the registration page	Social media sign-up options are shown	
2.	Click on "Sign up with Google" or "Sign up with Facebook"	OAuth permission screen is displayed	
3.	Click "Cancel" or deny permission	Registration process is halted	
4.	Return to registration page	Error message "Permission denied. Registration failed." is shown	

Click or type here to add a step

**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

TEST CASE 126

126 TC10 – Login with Denied OAuth Permission (Google/Facebook)

A AmeenBasith.K 0 Comments Add Tag

Save and Close Follow Updated by AmeenBasith.K 1h ago

State Design Area Social Network Platform  
Reason New Iteration Social Network Platform\Sprint 1

Steps Summary Associated Automation 1 0

**Steps**

Steps	Action	Expected result	Attachments
1.	Navigate to the login page	Social login options are visible	
2.	Click "Login with Google" or "Login with Facebook"	OAuth consent screen appears	
3.	Click "Cancel" or deny authorization	User is redirected back with error message "Login cancelled or permission denied"	
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

14 1.2.2: Log in with Social Media

## 4. Installation of test

### Test and feedback

chrome web store

Discover Extensions Themes

Search extensions and themes

**Test & Feedback**

Featured 4.2★ (175 ratings) Share

Extension Workflow & Planning 200,000 users

Add to Chrome

**CAPTURE**

- 1. Screenshots
- 2. Notes
- 3. Screen recordings
- 4. Images at item log
- 5. Page load data

Overview

## Showing it as an extension

The screenshot shows the Azure DevOps interface for a project titled "Social Network Platform". The left sidebar is open, showing various project management sections like Overview, Boards, Repos, Pipelines, Test Plans, Test plans, Progress report, Parameters, Configurations, Runs, and Artifacts. The "Test plans" section is currently selected. In the main content area, a specific test plan named "Social Network PL..." is selected. A sub-section titled "TS05 - Log in with Social Media (ID: 124)" is displayed. This section includes tabs for "Define", "Execute", and "Chart". Under the "Test Cases (2 items)" tab, there is a table:

Title	Order	Test Case Id	Assigned To	Status
TC09 - Login with Valid Google Account	1	125	AmeenBasith.K	Design
TC10 - Login with Denied OAuth Permission (Google/facebook)	2	126	AmeenBasith.K	Design

## 5. Running the test cases

This screenshot shows the same Azure DevOps interface as the previous one, but the "Execute" tab is now selected for the "TS01 - Register with Email & Password (ID: 113)" test plan. The main content area displays the "Test Points (2 items)" table:

Title	Outcome	Order	Test Case Id	Configuration	Tester
TC01-Register with Valid Email & Password	Failed	1	114	Windows 10	Aadithya B
TC02 - Register with Already Registered Email	Passed	2	115	Windows 10	Aadithya B

Runner - Test Plans - Personal - Microsoft Edge

https://dev.azure.com/231001002/Social%20Network%20Platform/\_testExecution/Index

Save and close Create bug ...

Test 1 of 2

122: TC07 – Login with Valid Email and Password

1. Navigate to the login page

EXPECTED RESULT  
Login page is displayed with email and password fields

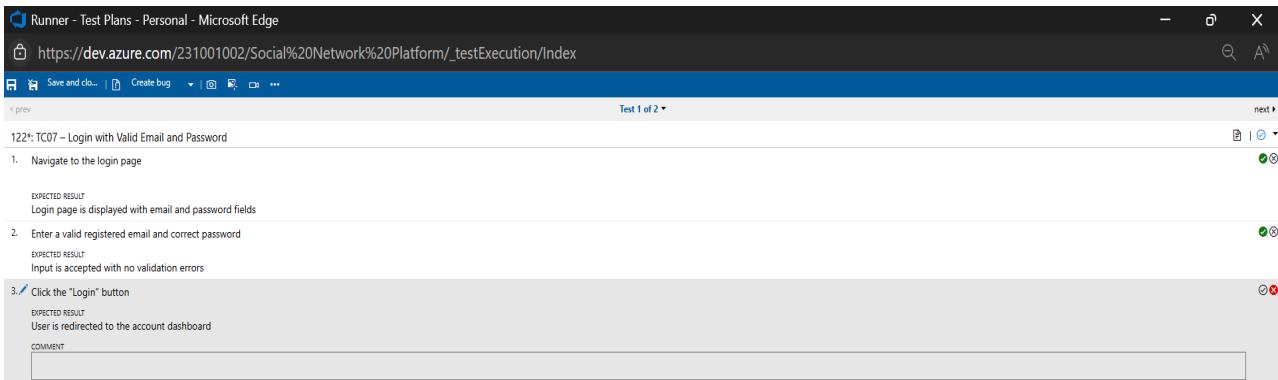
2. Enter a valid registered email and correct password

EXPECTED RESULT  
Input is accepted with no validation errors

3. Click the "Login" button

EXPECTED RESULT  
User is redirected to the account dashboard

COMMENT



## 6.Recording the test case

Runner - Test Plans - Personal - Microsoft Edge

https://dev.azure.com/231001002/Social%20Network%20Platform/\_testExecution/Index

Save and close Create bug ...

Record Screen

Test 1 of 2

122: TC07 – Login with Valid Email and Password

1. Navigate to the login page

EXPECTED RESULT  
Login page is displayed with email and password fields

2. Enter a valid registered email and correct password

EXPECTED RESULT  
Input is accepted with no validation errors

3. Click the "Login" button

EXPECTED RESULT  
User is redirected to the account dashboard

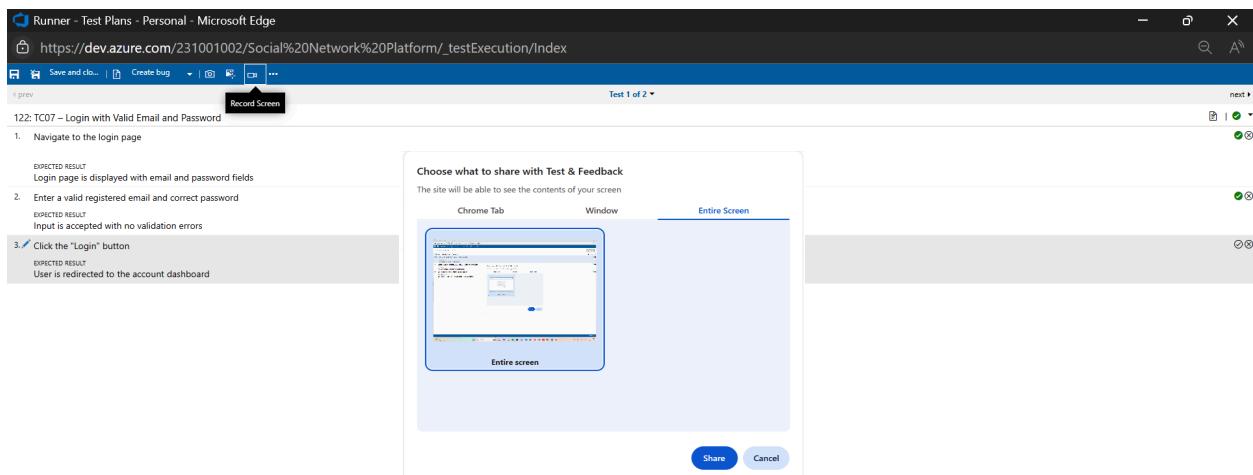
Choose what to share with Test & Feedback

The site will be able to see the contents of your screen

Chrome Tab Window Entire Screen

Entire screen

Share Cancel



## 7. Creating the bug

**Bug - 1**

**Repro Steps**

1. Navigate to the login page
2. Click "Login with Google" or "Login with Facebook"
3. Click "Cancel" or deny authorization

**Test Configuration:** Windows 10

**System Info:** geek\_

**Bug - 2**

**Repro Steps**

1. Navigate to the login page
2. Click the "Login with Google" button
3. Select a valid Google account and authorize access

**Test Configuration:** Windows 10

**System Info:** geek\_

## 8. Test case results

The screenshot shows the Azure DevOps interface for a project named "Social Network Platform". On the left, the navigation bar includes "Overview", "Boards", "Repos", "Pipelines", "Test Plans", "Test plans", "Progress report", "Parameters", "Configurations", "Runs", and "Artifacts". The "Test plans" section is currently selected.

In the center, a "Test Suites" view is displayed for "TS04 - Log in with Email & Password (ID: 121)". It shows a summary for "Feb 1 - May 31" with "100% run, 100% passed". Below this, a list of test points is shown:

- TS04 - Log in with Email & Password (ID: 121)
- TS05 - Log in with Social Media (ID: 122)

To the right, a separate window titled "TC07 - Login with Valid Email and Password" displays the "Test Case Results" for this specific test point. The table shows the following data:

Outcome	TimeSta...	Configuration	Run by	Tester	Test
Failed	5m ago	Windows 10	Aadithya B	AmeenBasith.K	Soc
Passed	5m ago	Windows 10	Aadithya B	AmeenBasith.K	Soc
Passed	32m ago	Windows 10	Aadithya B	AmeenBasith.K	Soc
Passed	36m ago	Windows 10	Aadithya B	AmeenBasith.K	Soc

## 9. Test report summary

The screenshot shows the Azure DevOps interface for a project named "Social Network Platform". The left sidebar includes "Overview", "Boards", "Work items", "Backlogs", "Sprints", "Queries", "Delivery Plans", "Analytics views", "Repos", "Pipelines", "Test Plans", and "Artifacts". The "Work items" section is currently selected.

In the center, a work item details page for "BUG 128" is shown. The title is "128 Bug-2". The work item is labeled as "New" and is associated with the "Social Network Platform" area and "Social Network Platform/Sprint 1" iteration. The "Reason" is also listed as "New".

The "Repro Steps" section contains the following steps:

- Step no.: 1, Result: Failed, Title: Navigate to the login page. Expected Result: Login page displays options to log in with Google and Facebook.
- Step no.: 2, Result: Failed, Title: Click the "Login with Google" button. Expected Result: Google OAuth screen appears.
- Step no.: 3, Result: Passed, Title: Select a valid Google account and authorize access. Expected Result: (No explicit text provided for the expected result).

The "Planning" section includes fields for "Resolved Reason", "Story Points", "Priority" (set to 2), "Severity" (set to 3 - Medium), and "Activity". The "Deployment" section includes a note about tracking releases and a link to "Balances". The "Development" section includes a "Details" button and a note about linking to Azure Repos. The "Effort (Hours)" section shows "Original Estimate" and "Remaining" time. The "Related Work" section lists a parent work item (ID 14) and a child work item (ID 125). The "Gleek" section is also present.

- Assigning bug to the developer and changing state

The screenshot shows the Azure DevOps Work Items page for the 'Social Network Platform' project. A bug titled 'Bug-2' has been assigned to 'Aad'. The bug details include:

- Title:** Bug-2
- Assigned To:** Aad
- Comments:** 0
- Add Tag:** None
- Resolved Reason:** None
- Story Points:** 1
- Priority:** 2
- Severity:** 3 - Medium
- Activity:** None
- Effort (Hours):** None
- Remaining:** None
- Completed:** None
- Deployment:** None
- Development:** None
- Related Work:** None

The bug has a repro step list:

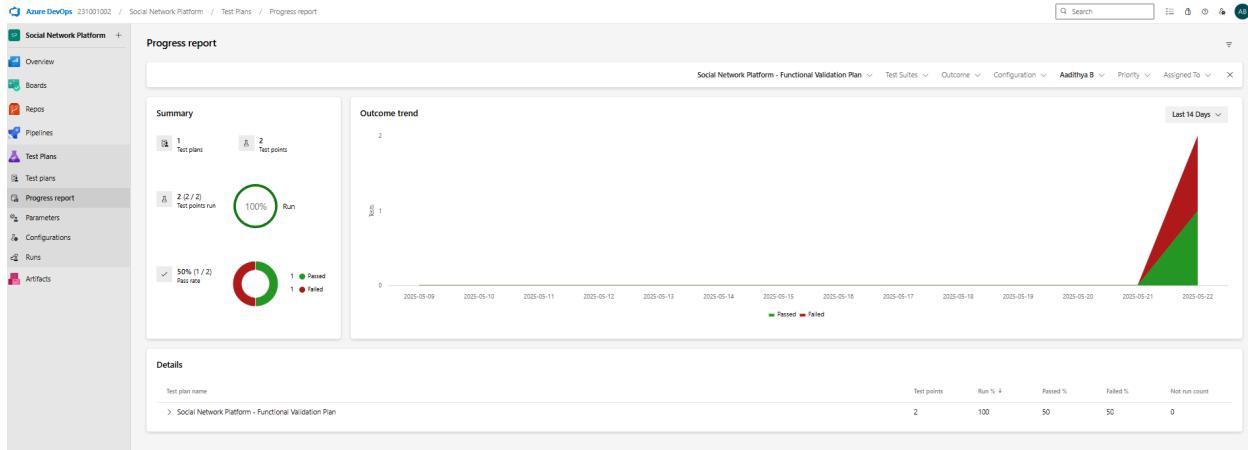
- Step no.**: 1 **Result:** Failed **Title:** Navigate to the login page **Expected Result:** Login page displays options to log in with Google and Facebook
- Step no.**: 2 **Result:** Failed **Title:** Click the "Login with Google" buttons **Expected Result:** Google OAuth screen appears
- Step no.**: 3 **Result:** Passed **Title:** Select a valid Google account and authorize access **Expected Result:** User is redirected back and logged into their account dashboard

**System Info:** Gleek

## 10. Progress report

The screenshot shows the Azure DevOps Test Plans Progress report page for the 'Social Network Platform' project. The progress report includes:

- Summary:** 1 Test plan, 10 Test points, 10 (10 / 10) Test points run, 100% Run, 60% Pass rate, 6 Passed, 3 Failed, 1 Blocked.
- Outcome trend:** A line chart showing the trend of test outcomes from May 9 to May 22. The chart shows a significant increase in passed tests over time.
- Details:** Test plan name: Social Network Platform - Functional Validation Plan. Test points: 10, Run %: 100, Passed %: 60, Failed %: 30, Not run count: 0.



## 11. Changing the test template

**All processes**

Name	Description	Team projects
Basic (default)	This template is flexible for any process and great for teams getting started with Azure DevOps.	0
Agile	This template is flexible and will work great for most teams using Agile planning methods, including those practicing Scrum.	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 improvement and an auditable record of decisions.	0

## 12. View the new test case template

Add a field to Test Case X

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

**Options**

**Use an existing field** Field Acceptance Criteria

**Create a field**

Name

Type

Description

[Learn more](#)

Add field Cancel

Azure DevOps 231001005 / Settings / Process

All processes > 231001005 Agile > Test Case

Layout States Rules

New field New group New page Get extensions

Steps Summary Associated Aut...

Steps	Custom	Add a field ...
Text (multiple lines)	Test Type Text (single line)	
	Recent test results Recent test case results	
	Deployment Deployments	
	Development Links	
	Related Work Links	

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

<b>Exp.No: 9</b>	<b>LOAD TESTING AND PERFORMANCE TESTING</b>
<b>Date: 25/04/2025</b>	

**AIM:** To create an Azure Load Testing resource and run a load test to evaluate the performance of a target endpoint.

## LOAD TESTING

### Steps to Create an Azure Load Testing Resource:

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

1. Sign in to Azure Portal  
Go to <https://portal.azure.com> and log in.
2. Create the Resource o Go to *Create a resource* → Search for “Azure Load Testing”.
  - o Select Azure Load Testing and click Create.
3. Fill in the Configuration Details
  - o *Subscription*: Choose your Azure subscription
  - o *Resource Group*: Create new or select an existing one.
  - o *Name*: Provide a unique name (no special characters).
  - o *Location*: Choose the region for hosting the resource.
4. (Optional) Configure tags for categorization and billing.
5. Click Review + Create, then Create.
6. Once deployment is complete, click Go to resource.

Microsoft Azure Search resources, services, and docs (G+) Copilot 231001002@rajalakshmi...  
DEFAULT DIRECTORY (231001002...)

Home > Azure Load Testing > SocialNetworkPlatform >

## Create a URL-based test

Basics Test plan Parameters Load Monitoring Test criteria Review + create

Get started by creating a test for a URL, or configure an advanced load test for multiple URLs with additional options. [Learn more](#)

**Test details**

Provide a test name and a description. Test name and description will help you identify a test in the list of tests created in this resource.

Test name \*

Test description

Run test after creation

Debug mode   
If this is enabled, the first test run will run in debug mode providing debug logs along with request and response data for failed requests. The test run in debug mode will run with only one engine and up to 10 minutes duration. [Learn more](#)

Enable advanced settings

[Previous](#) [Next](#) [Review + create](#)

Microsoft Azure Search resources, services, and docs (G+) Copilot 231001002@rajalakshmi...  
DEFAULT DIRECTORY (231001002...)

Home > Azure Load Testing >

## Create a load testing resource

Basics Encryption Tags Review + create

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

**Project details**

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

Subscription \*

Resource group \*  [Create new](#)

**Instance details**

Name \*

Region \*

[Previous](#) [Next](#) [Review + create](#)

The screenshot shows the Microsoft Azure CloudNative Testing Overview page for a deployment named "Microsoft.CloudNativeTesting1747924901249". The deployment status is marked as "Your deployment is complete". Deployment details include the name, start time (5/22/2025, 8:12:10 PM), subscription (Azure for Students), and resource group (SocialNetwork). A Correlation ID is also provided. The page includes sections for Deployment details, Next steps, and Go to resource. On the right side, there are promotional cards for Cost management, Microsoft Defender for Cloud, Free Microsoft tutorials, and Work with an expert.

## Steps to Create and Run a Load Test:

Once your resource is ready:

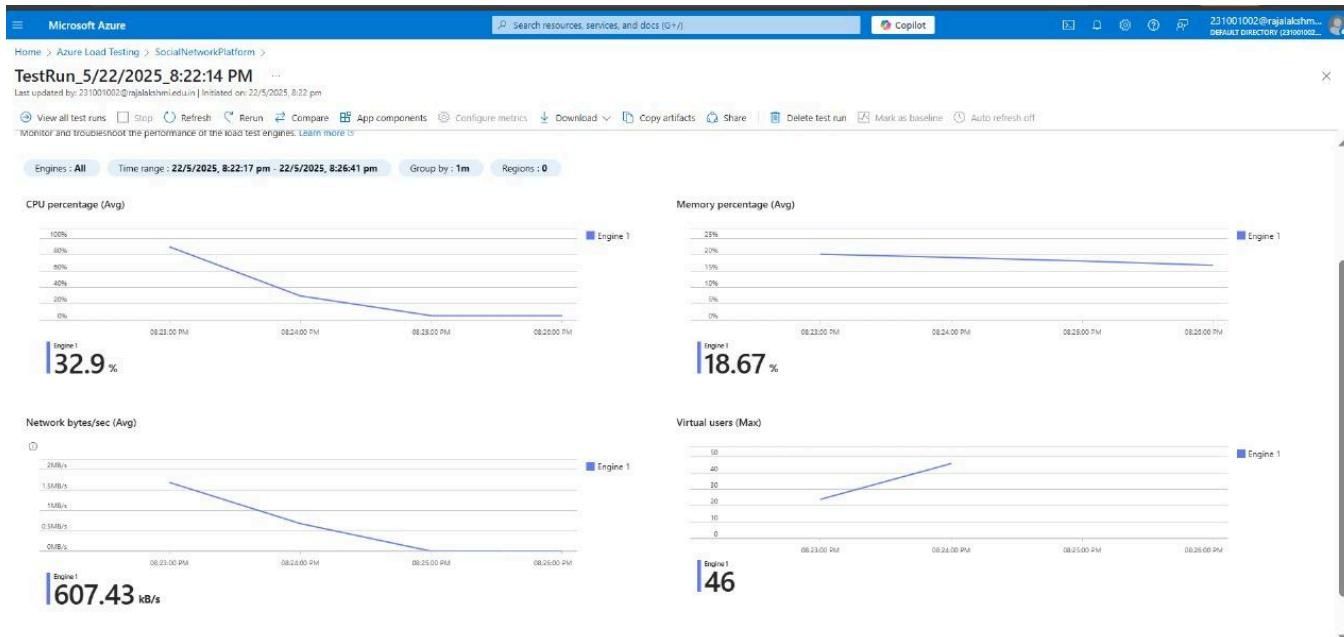
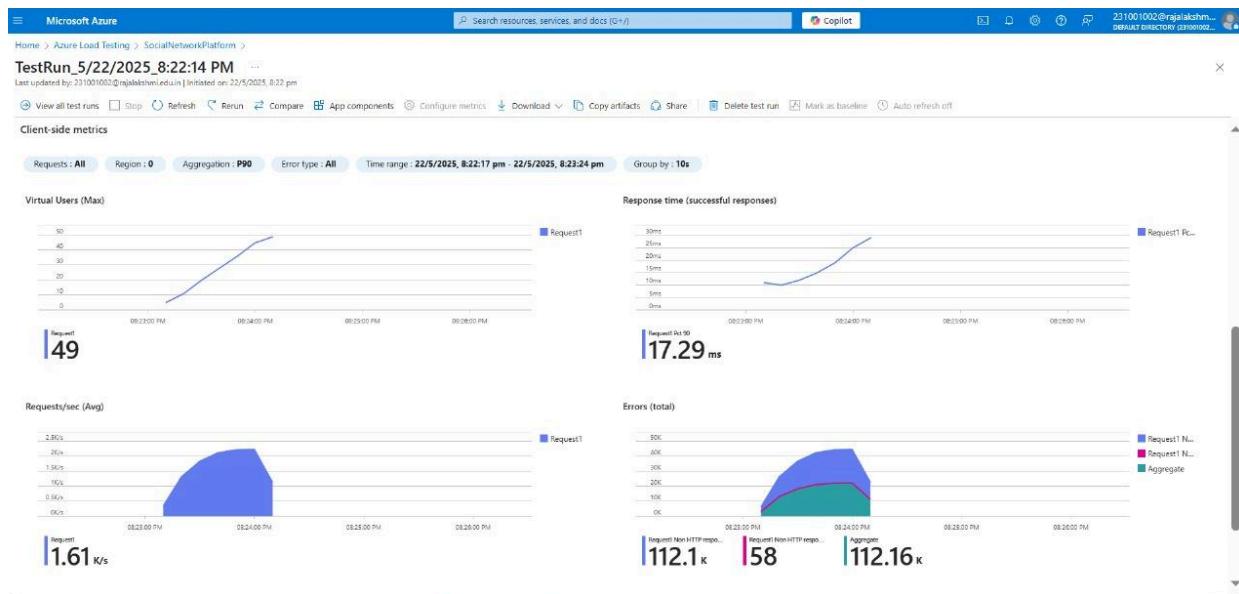
1. Go to your Azure Load Testing resource and click Add HTTP requests > Create.
2. Basics Tab o *Test Name*: Provide a unique name.
  - o *Description*: (Optional) Add test purpose.
  - o *Run After Creation*: Keep checked.
3. Load Settings o *Test URL*: Enter the target endpoint (e.g., <https://yourapi.com/products>).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

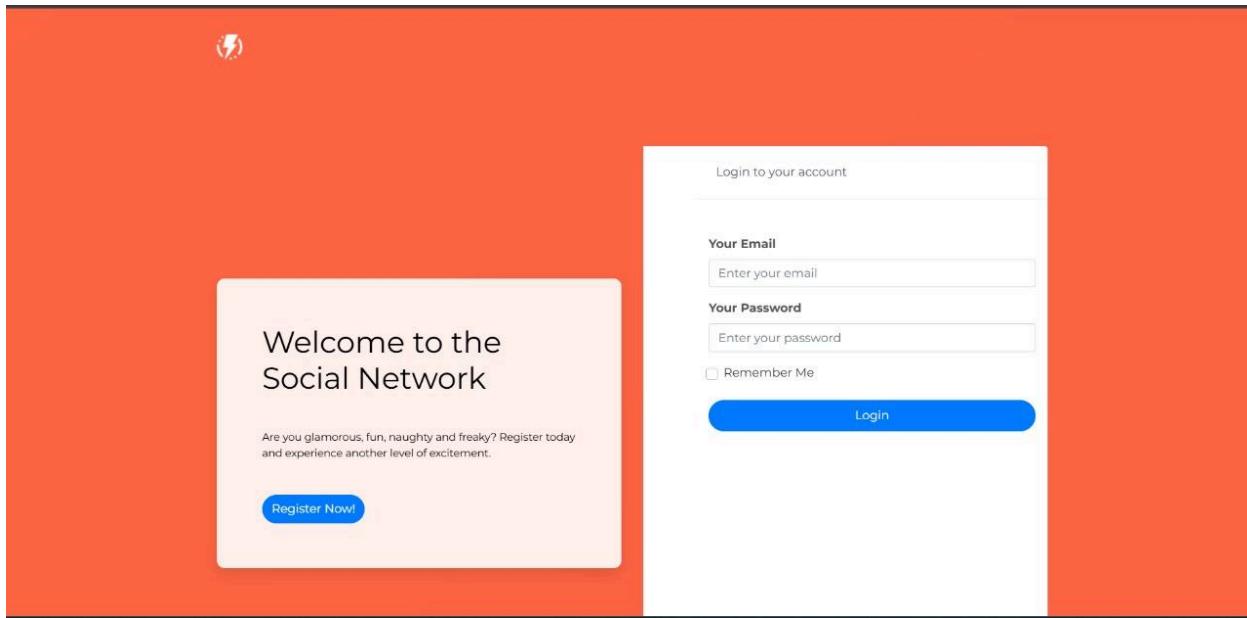
The screenshot shows the "Create a URL-based test" configuration page. The "Review + create" tab is selected. The configuration includes:

- Basics**: Test tool (JMeter), Test name (Test\_5/5/2025\_9:41:40 PM), Test description (Disabled), Debug mode (unchecked).
- Test plan**: Test method (URL), Requests (Request1), Input data files (unchecked).
- Load**: Engine instances (1), Load pattern (Linear), Concurrent users per engine (50), Test duration (minutes) (20), Ramp-up time (minutes) (1).
- Load distribution**: East Asia (1).
- Resources**: Resources (0).

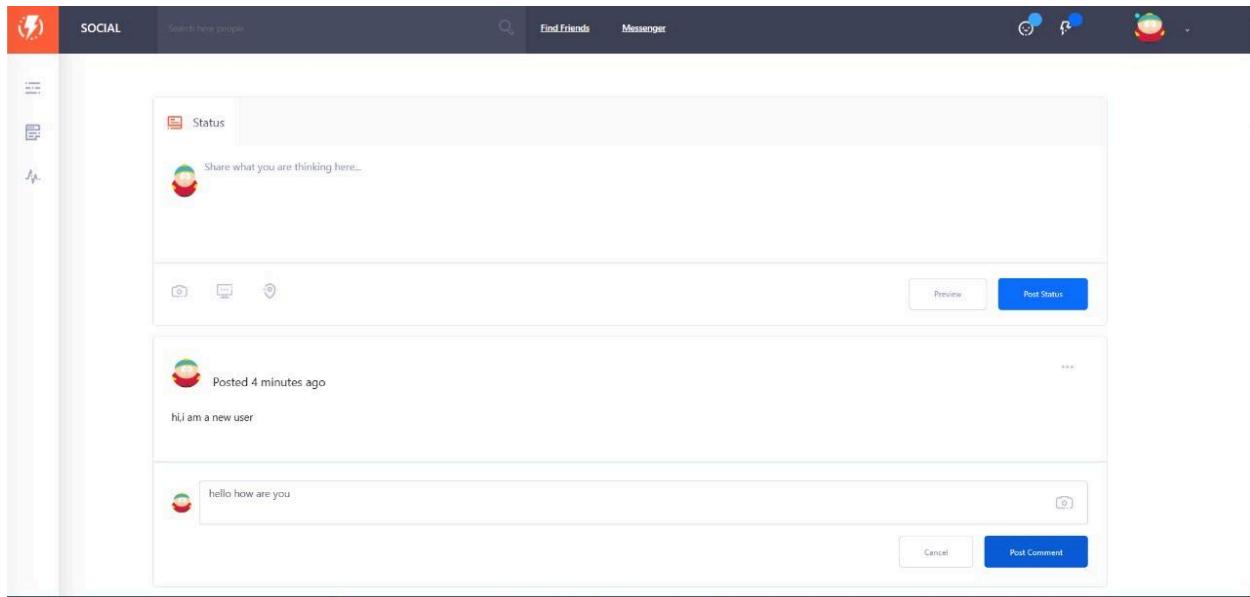
At the bottom, there are "Previous" and "Next" buttons, and a prominent blue "Create" button.

## Load Testing





User	Action
Natalie Cruz	<a href="#">Send Friend Request</a>
Donna Garcia	<a href="#">Send Friend Request</a>
Joanne Ortiz	<a href="#">Send Friend Request</a>
Kyle Reynolds	<a href="#">Send Friend Request</a>
Lisa McCarthy	<a href="#">Send Friend Request</a>
James Lawson	<a href="#">Send Friend Request</a>
Lisa Myers	<a href="#">Send Friend Request</a>



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

**Exp.No: 10**

**Date: 02/05/2025**

## **GITHUB PROJECT STRUCTURE & NAMING CONVENTIONS**

**AIM:** To provide a clear and organized view of the project's folder structure and file naming conventions, helping contributors and users easily understand, navigate, and extend the Social Network Platform project.

### **GITHUB PROJECT STRUCTURE**

The screenshot shows a GitHub repository page for 'Social-Network-Platform'. The repository is private. At the top, there are buttons for 'Watch', 'Fork', 'Star', and a dropdown menu. Below the header, it shows 'main' branch, 1 branch, 0 tags, a search bar, and a 'Code' button. The main content area displays a list of commits from 'aadithya-28' with descriptions like 'Create sample', 'Delete Azure-Account-Pic/sample', etc., and dates ranging from 23 minutes ago to 4 hours ago. To the right, there are sections for 'About' (no description), 'Activity' (1 watching), 'Releases' (no releases), and 'Packages' (no packages). A gear icon at the top right indicates settings.

**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.