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

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

**CS23432 – Software Construction**  
**(REGULATION 2023)**

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**EX NO: 1**

**Date:22/01/2025**

## AZURE DEVOPS ENVIRONMENT SETUP

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

### INSTALLATION

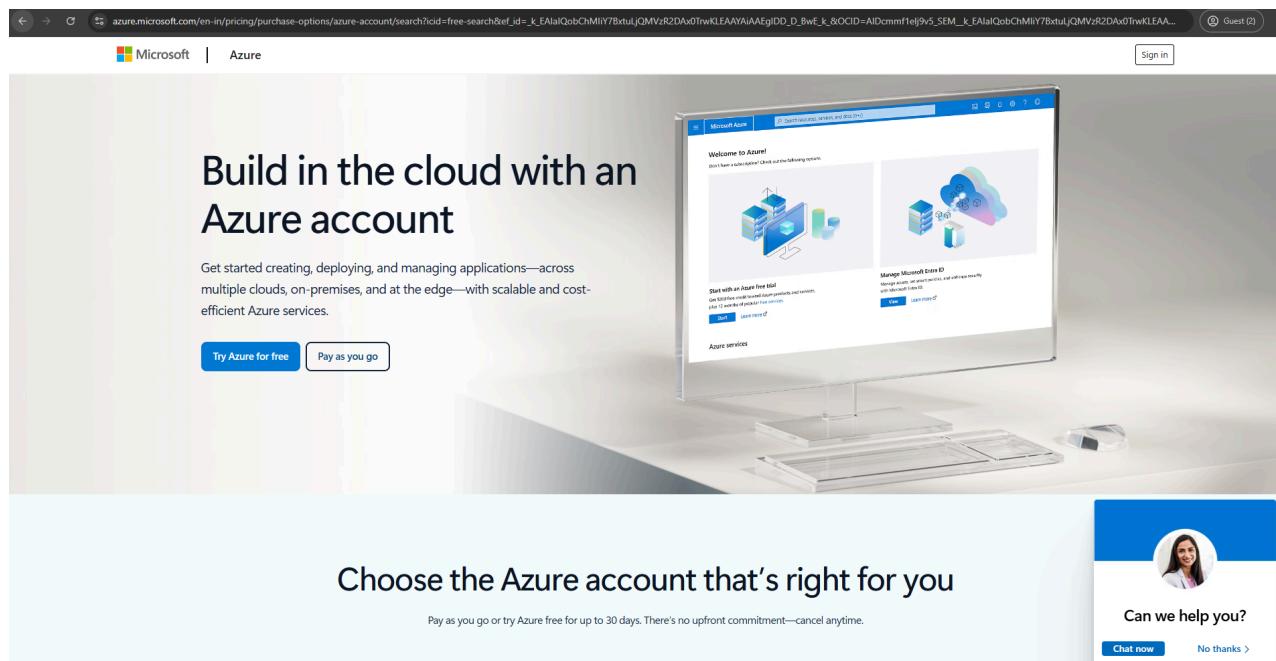
1. Open your web browser and go to the Azure website:

<https://azure.microsoft.com/en-us/get-started/azure-portal>.

Sign in using your Microsoft account credentials.

If you don't have a Microsoft account, you can create one here:

<https://signup.live.com/?lic=1>



## 2. Azure home page

The screenshot shows the Microsoft Azure home page. At the top, there's a navigation bar with the Microsoft Azure logo, a search bar, and a Copilot button. Below the navigation bar is a section titled "Azure services" with icons for creating a resource, Azure DevOps organizations, Cost Management, SQL databases, Quickstart Center, Azure AI Services, Kubernetes services, Virtual machines, and App Services, along with a "More services" link. The main area is titled "Resources" with tabs for "Recent" (which is selected) and "Favorite". It includes columns for "Name", "Type", and "Last Viewed". A message indicates "No resources have been viewed recently" with a "View all resources" button. Below this is a "Navigate" section with links for Subscriptions, Resource groups, All resources, and Dashboard. The "Tools" section contains links for Microsoft Learn, Azure Monitor, Microsoft Defender for Cloud, and Cost Management.

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

This screenshot is similar to the previous one but features a search overlay in the center. The search bar at the top has "Azure DevOps" typed into it. The search results show a list of items under "Services" and "Marketplace". Under "Services", there are links for Azure DevOps organizations, Azure Cosmos DB, Azure Database for MySQL servers, and Azure Deployment Environments. Under "Marketplace", there are links for Build Agents for Azure DevOps, Azure DevOps Auditing, Azure DevOps Backup Tool, and Self Hosted Runner for Azure DevOps. Below the search results, there are sections for "Documentation" (Billing overview - Azure DevOps, Deploying to Azure VMs using deployment groups in Azure Pipelines - Azure Pipelines, Buy Azure DevOps for Cloud Solution Providers - Azure DevOps Services, Use service principals & managed identities - Azure DevOps), "Last Viewed", and "Dashboard". The rest of the page layout, including the "Azure services" section, "Resources" section, "Navigate" section, and "Tools" section, remains visible.

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.

The screenshot shows the Azure DevOps Organization Home page. At the top, there's a navigation bar with 'Microsoft Azure' and a search bar. Below the navigation bar, a banner says '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](#)'. The main heading is 'Azure DevOps'. Below it, a sub-headline says 'Plan smarter, collaborate better, and ship faster with a set of modern dev services'. There are links for 'My Azure DevOps Organizations', 'Get started using Azure DevOps', 'Billing management for Azure DevOps', 'Give feedback', and 'Tell us about your experience with the Azure DevOps page'. To the right, there's a colorful illustration of people working on a rocket launching from a server stack. The rocket has a trail of clouds behind it.

## Result:

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

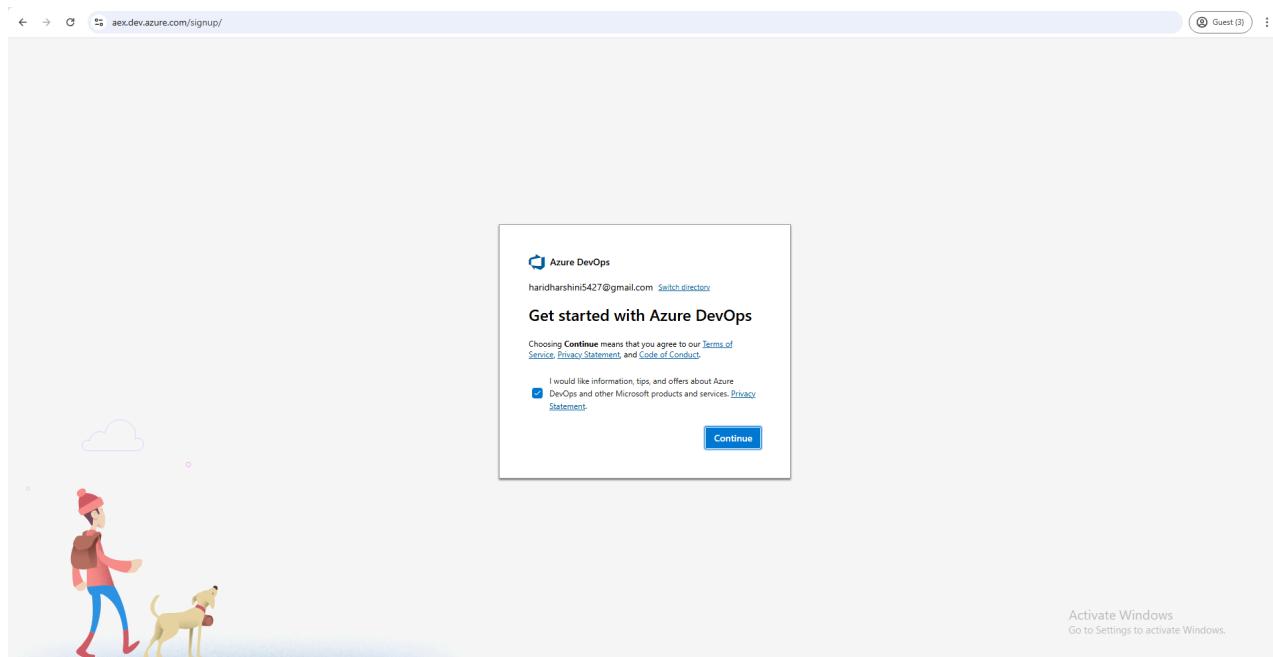
**EX NO:2**

**Date: 07/02/2025**

## **AZURE DEVOPS PROJECT SETUP AND USER STORY MANAGEMENT**

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

### 1.Create An Azure Account



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

- a. After the organization is set up, you'll need to create your first **project**. This is where you'll begin to manage code, pipelines, work items, and more.
- b. On the organization's **Home page**, click on the **New Project** button.
- c. Enter the project name, description, and visibility options:
  - Name:** Choose a name for the project (e.g., **LMS**).
  - Description:** Optionally, add a description to provide more context about the project.
  - Visibility:** Choose whether you want the project to be **Private** (accessible only to those invited) or **Public** (accessible to anyone).
- d. Once you've filled out the details, click **Create** to set up your first project.

The screenshot shows the Azure DevOps interface. On the left, there's a sidebar with user profiles (haridharshini5427, dilshafa7) and a 'New organization' link. The main area displays a project named 'BLOG MANAGEMENT SYSTEM'. A modal window titled 'Create new project' is open, prompting for a 'Project name' (with a red asterisk indicating it's required). Below that is a 'Description' field. Under 'Visibility', the 'Private' option is selected, indicated by a blue border around its radio button. A note states: 'Public projects are disabled for your organization. You can turn on public visibility with organization policies.' At the bottom right of the modal, there are 'Cancel' and 'Create' buttons, with 'Create' being highlighted.

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

The screenshot shows the Azure DevOps Organization Home page for 'dev.azure.com/haridharshini5427'. The top navigation bar includes 'Microsoft', the user's name 'Dharshini Hari', and 'Sign out'. The main content area features a large circular profile picture with initials 'DH'. Below it, the user's name 'Dharshini Hari' and email 'haridharshini5427@gmail.com' are displayed, along with a 'Edit profile' button. A dropdown menu shows 'Microsoft account' and 'India'. The email address is also listed. To the right, there's a section for 'Visual Studio Dev Essentials' with a 'Use your benefits' button. The central part of the page lists 'Azure DevOps Organizations' with two entries: 'dev.azure.com/haridharshini5427 (owner)' and 'dev.azure.com/dilshafa7 (Member)'. For the owner entry, there are 'Projects' (listing 'BLOG MANAGEMENT SYSTEM'), 'Actions' (with 'Open in Visual Studio'), and a 'New project' button. A 'Create new organization' button is located at the top right of this section. At the bottom, there's a footer with links for 'Azure DevOps', 'Visual Studio', 'Related sites', 'Products', and 'Support', along with an 'Activate Windows' message.

## 4. Project dashboard

The screenshot shows the Azure DevOps Project Summary dashboard for 'BLOG MANAGEMENT SYSTEMS'. The left sidebar contains links for Overview, Summary, Dashboards, Wiki, Boards, Repos, Pipelines, Test Plans, and Artifacts. The main content area includes sections for 'About this project' (Project Title: Cloud-Based Blog Management System on Microsoft Azure, Description: This project involves the design and implementation of a scalable Blog Management System hosted on Microsoft Azure. The system enables users to create, edit, publish, and manage blog posts with role-based access controls for authors, editors, and administrators. Core functionalities include user authentication, content categorization, media uploads, comments management, and search capabilities.), 'Project stats' (Boards: 0 Work items created, 0 Work items completed), and 'Members' (5). A message at the bottom right says 'Activate Windows Go to Settings to activate Windows.'

## 5. To manage user stories:

- From the **left-hand navigation menu**, click on **Boards**. This will take you to the main **boards** page, where you can manage work items, backlogs, and sprints.
- On the **work items** page, you'll see the option to **Add a work item** at the top. Alternatively, you can find a + button or **Add New Work Item** depending on the view you're in. From the **Add a work item** dropdown, select **User Story**. This will open a form to enter details for the new User Story.

The screenshot shows the Azure Boards Backlog page for 'BLOG MANAGEMENT SYSTEMS Team'. The left sidebar contains links for Overview, Boards, Work items, Boards, Backlogs, Sprints, Queries, Delivery Plans, Analytics views, Repos, Pipelines, Test Plans, and Artifacts. The main content area shows a backlog table with 18 items and a planning board on the right. The backlog table columns are Order, Work Item Type, Title, State, Effort, Business, Value Area, and Tags. The planning board shows three sprints: Sprint 1 - Login Implementation, Sprint 2 - Basic User Management, and Sprint 3 - Creating Blogging navigation. An iteration bar for Iteration 1 shows a planned effort of 38 hours. A message at the bottom right says 'Activate Windows Go to Settings to activate Windows.'

The screenshot shows the Azure DevOps Boards backlog for the 'BLOG MANAGEMENT SYSTEMS Team'. The backlog table lists 18 new epic items, each with a title, state (New), and business value area (Business). The right sidebar shows the team's iteration board with three sprints and two iterations.

Order	Work Item Type	Title	State	Effort	Business Value Area	Tags
1	Epic	> Admin- Technical Maintenance	New		Business	
2	Epic	> Admin- Site security	New		Business	
3	Epic	> Admin- Comment Moderation	New		Business	
4	Epic	> Admin- Site Customization	New		Business	
5	Epic	> Admin- User Management	New		Business	
6	Epic	> Admin- Content Management	New		Business	
7	Epic	> Admin- Accessibility & User Preferences	New		Business	
8	Epic	> Admin- Subscription & User Engagement	New		Business	
9	Epic	> Admin- Blog Browsing & Discovery	New		Business	
10	Epic	> Admin- User Account Management	New		Business	
11	Epic	> Admin- Blog Creation & Management	New		Business	
12	Epic	> Admin- Blog Customization	New		Business	
13	Epic	> Admin- Blog Security & Content Protection	New		Business	
14	Epic	> Admin- Reader engagement	New		Business	
15	Epic	> Admin- Blog monetization	New		Business	
16	Epic	> Admin- Blog performance tracking	New		Business	
17	Epic	> Admin- Social Media Integration	New		Business	
18	Epic	> Admin- Blog Discoverability	New		Business	

**BLOG MANAGEMENT SYSTEMS Team**

**Sprint 1 - Login Implementation** (5/5) No work scheduled yet

**Sprint 2 - Basic User Management** (5/5) No work scheduled yet

**Sprint 3 - Creating Blogging navigation** (5/5) No work scheduled yet

**Iteration 1** (Planned Effort: 0) Go to Settings to activate Windows.

**Iteration 2**

## Result:

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

**EX NO: 3**

**Date: 14/02/2025**

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

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

### **Create Epic, Features, User Stories, Task**

The screenshot shows the Azure DevOps interface for a 'BLOG MANAGEMENT SYSTEMS Team' backlog. The left sidebar navigation includes 'Overview', 'Boards', 'Work items', 'Backlogs' (selected), 'Sprints', 'Queries', 'Delivery Plans', 'Analytics views', 'Repos', 'Pipelines', 'Test Plans', and 'Artifacts'. The main area displays a hierarchical backlog with the following structure:

Order	Work Item Type	Title	State	Effort	Business Value Area	Tags
1	Epic	> Admin- Technical Maintenance	New		Business	
2	Epic	> Admin- Site security	New		Business	
	Feature	< Security Management	New		Business	
	User Story	As an Admin, I should be able to configure site securit...	New		Business	
3	Epic	> Admin- Comment Moderation	New		Business	
	Feature	< Comment Approval and Moderation	New		Business	
	User Story	As an Admin, I should be able to moderate comments...	New		Business	
	Feature	> Comment Restrictions and Spam Filtering	New		Business	
4	Epic	> Admin- Site Customization	New		Business	
	Feature	< Theme Customization	New		Business	
	User Story	As an Admin, I should be able to customize the theme...	New		Business	
	Feature	> Plugin Management	New		Business	
5	Epic	> Admin- User Management	New		Business	
	Feature	< User Role Management	New		Business	
	User Story	As an Admin, I should be able to manage user accoun...	New		Business	
6	Epic	> Admin- Content Management	New		Business	
7	Epic	> Accessibility & User Preferences	New		Business	
8	Epic	> Subscription & User Engagement	New		Business	

## 1.Fill in Epics

The screenshot shows the Azure DevOps Boards Backlogs page. A work item titled "EPIC 60 Admin- Site security" is selected. The details pane on the right shows the following fields:

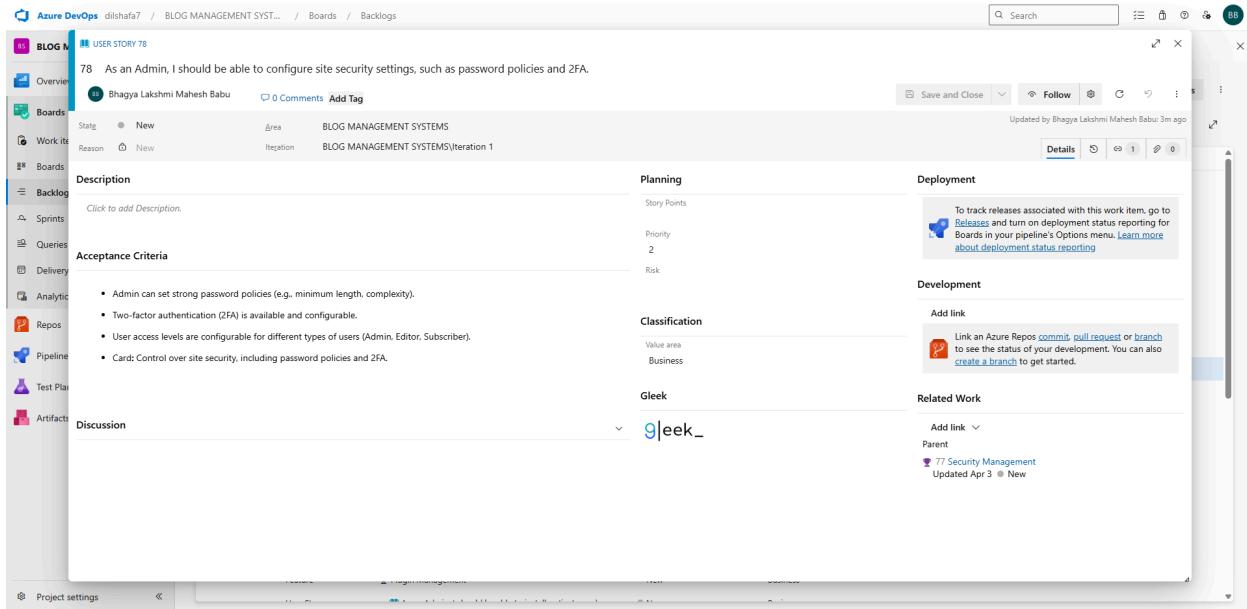
- Description:** Bhagya Lakshmi Mahesh Babu
- Area:** BLOG MANAGEMENT SYSTEMS
- Iteration:** BLOG MANAGEMENT SYSTEMS\Iteration 1
- Planning:**
  - Priority: 2
  - Risk: 1
- Deployment:** To track releases associated with this work item, go to Releases and turn on deployment status reporting for Boards in your pipeline's Options menu. Learn more about deployment status reporting.
- Development:** Add link
- Related Work:** Add link
- Classification:** Value area: Business
- Gleek:** aleek

## 2.Fill in Features

The screenshot shows the Azure DevOps Boards Backlogs page. A work item titled "FEATURE 77 Security Management" is selected. The details pane on the right shows the following fields:

- Description:** Click to add Description.
- Discussion:** Effort: 1
- Planning:**
  - Priority: 2
  - Risk: 1
- 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
- Related Work:** Add link
- Classification:** Value area: Business
- Gleek:** aleek

### 3.Fill in User Story Details



The screenshot shows the Azure DevOps interface for creating a user story. The left sidebar is titled 'BLOG MANAGEMENT SYSTEMS' and includes sections for Overview, Boards, Work items, Boards, Backlog, Sprints, Queries, Delivery, Analytics, Repos, Pipeline, Test Plan, and Artifacts. The main area is titled 'USER STORY 78' and shows the following details:

- Description:** Click to add Description.
- Acceptance Criteria:**
  - Admin can set strong password policies (e.g., minimum length, complexity).
  - Two-factor authentication (2FA) is available and configurable.
  - User access levels are configurable for different types of users (Admin, Editor, Subscriber).
  - Card: Control over site security, including password policies and 2FA.
- Planning:**
  - Story Points: 2
  - Priority: 2
  - Risk: 1
- 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.
- Classification:** Value area: Business
- Gleek:** 9|eek\_-
- Development:** Add link: Link an Azure Repos commit, pull request or branch to see the status of your development. You can also [create a branch](#) to get started.
- Related Work:** Add link: Parent: 77 Security Management Updated Apr 3 New

### Result:

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

**EX NO: 4**

**Date: 20/03/2025**

## SPRINT PLANNING

**Aim:** To assign user story to a specific sprint for the Blog Management System Project.

### Sprint Planning

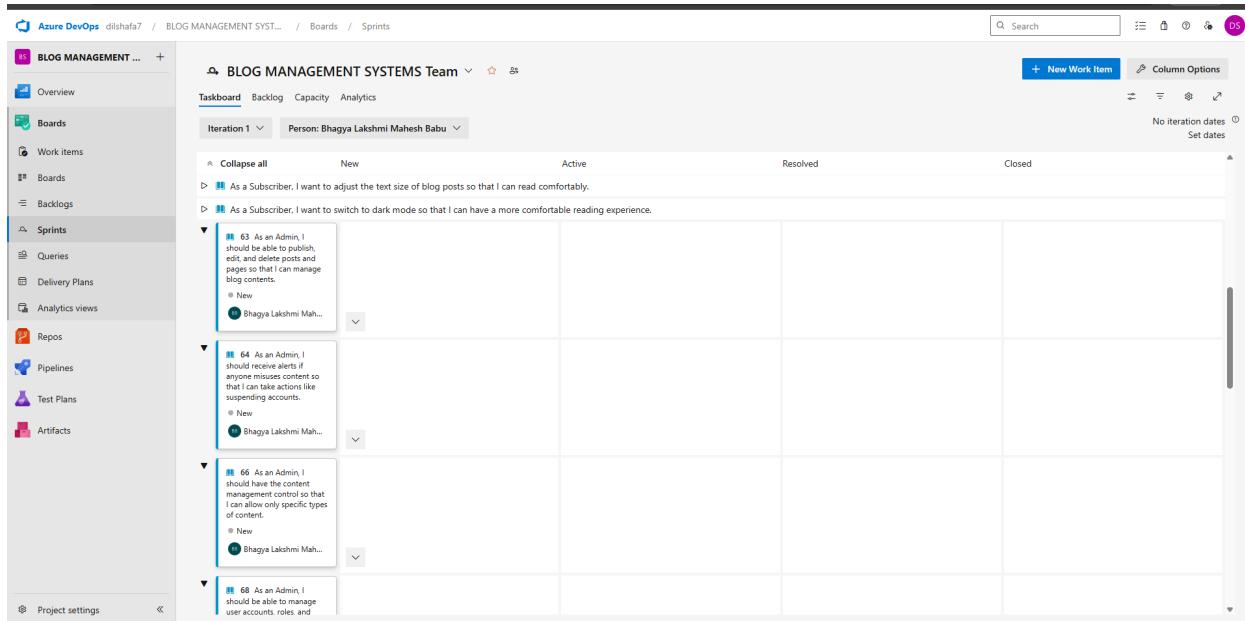
#### Sprint 1

The screenshot shows the Azure DevOps Boards Sprints page for the 'BLOG MANAGEMENT SYSTEMS Team'. The 'Iteration 1' board is displayed with four user stories listed under the 'New' column. Story 12 is assigned to 'Dishith Shafana', Story 13 is assigned to 'Dishith Shafana', Story 14 is unassigned, and Story 15 is unassigned. The columns represent Active, Resolved, and Closed status.

#### Sprint 2

The screenshot shows the Azure DevOps Boards Sprints page for the 'BLOG MANAGEMENT SYSTEMS Team'. The 'Iteration 1' board is displayed with three user stories listed under the 'New' column, all assigned to 'Dharshini Hari'. Story 49 is assigned to 'Dharshini Hari', Story 50 is assigned to 'Dharshini Hari', and Story 51 is assigned to 'Dharshini Hari'. The columns represent Active, Resolved, and Closed status.

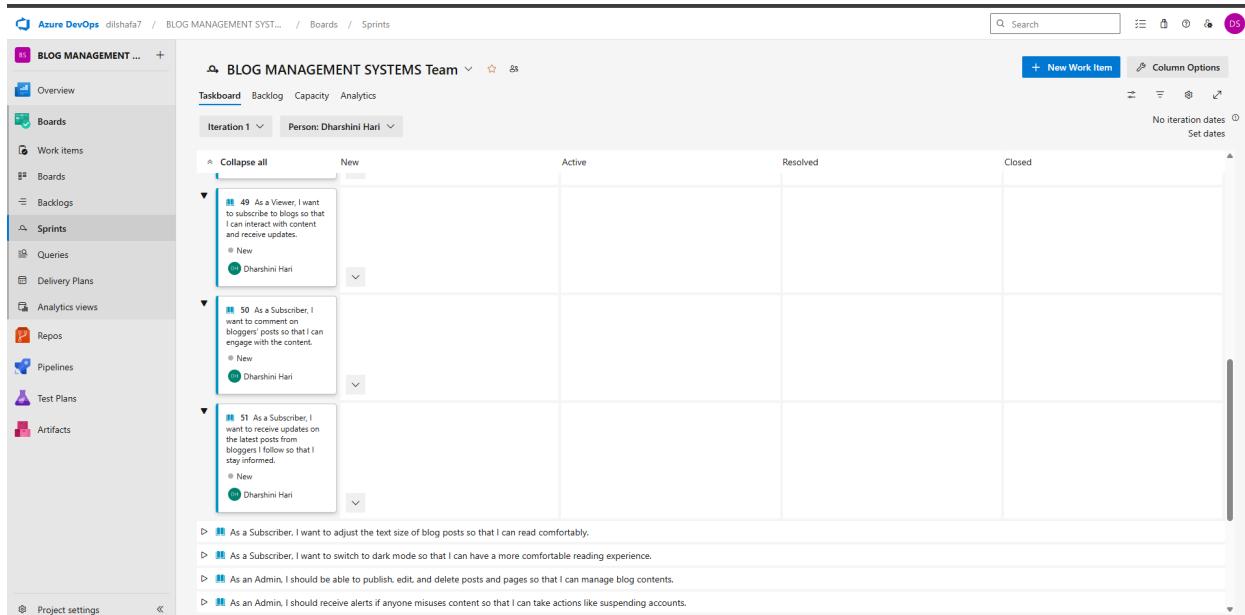
## Sprint 3



Azure DevOps Boards screenshot for Sprint 3. The left sidebar shows the project navigation with 'BLOG MANAGEMENT ...' selected. The main board view is titled 'BLOG MANAGEMENT SYSTEMS Team' under 'Iteration 1'. The backlog table has columns: New, Active, Resolved, and Closed. There are four items in the backlog:

- Item 63: As a Subscriber, I want to adjust the text size of blog posts so that I can read comfortably.
- Item 64: As a Subscriber, I want to switch to dark mode so that I can have a more comfortable reading experience.
- Item 65: As an Admin, I should be able to publish, edit, and delete posts and pages so that I can manage blog contents.
- Item 66: As an Admin, I should receive alerts if anyone misuses content so that I can take actions like suspending accounts.

## Sprint 4



Azure DevOps Boards screenshot for Sprint 4. The left sidebar shows the project navigation with 'BLOG MANAGEMENT ...' selected. The main board view is titled 'BLOG MANAGEMENT SYSTEMS Team' under 'Iteration 1'. The backlog table has columns: New, Active, Resolved, and Closed. There are three items in the backlog:

- Item 49: As a Viewer, I want to subscribe to blogs so that I can interact with content and receive updates.
- Item 50: As a Subscriber, I want to comment on bloggers' posts so that I can engage with the content.
- Item 51: As a Subscriber, I want to receive updates on the latest posts from bloggers' follow so that I stay informed.

At the bottom of the backlog table, there are four collapsed items:

- As a Subscriber, I want to adjust the text size of blog posts so that I can read comfortably.
- As a Subscriber, I want to switch to dark mode so that I can have a more comfortable reading experience.
- As an Admin, I should be able to publish, edit, and delete posts and pages so that I can manage blog contents.
- As an Admin, I should receive alerts if anyone misuses content so that I can take actions like suspending accounts.

## Result:

The Sprints are created for the Blog Management System.

**EX NO: 5**

**Date: 28/03/2025**

## **POKER ESTIMATION**

**Aim:** Create Poker Estimation for the user stories - Blog Management System.

### **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 54\*
- Description:** As a Subscriber, I want to adjust the text size of blog posts so that I can read comfortably.
- Assignee:** Dharshini Hari
- Comments:** 0 Comments
- Tags:** Add Tag
- Status:** Resolved
- Reason:** Code complete and uni...
- Area:** BLOG MANAGEMENT SYSTEMS
- Iteration:** BLOG MANAGEMENT SYSTEMS\Iteration 1

**Planning:**

- Story Points: 3
- Priority: 4
- Risk: 3 - Low

**Classification:**

- Value area: Business

**Gleek:** 9|eek\_-

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

**Development:**

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

**Related Work:**

- Add link
- Parent
- [53 Enhancing Readability and Customization Options](#)

**Activation:** Activate Windows  
Go to Settings to activate Windows.

### **Result:**

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

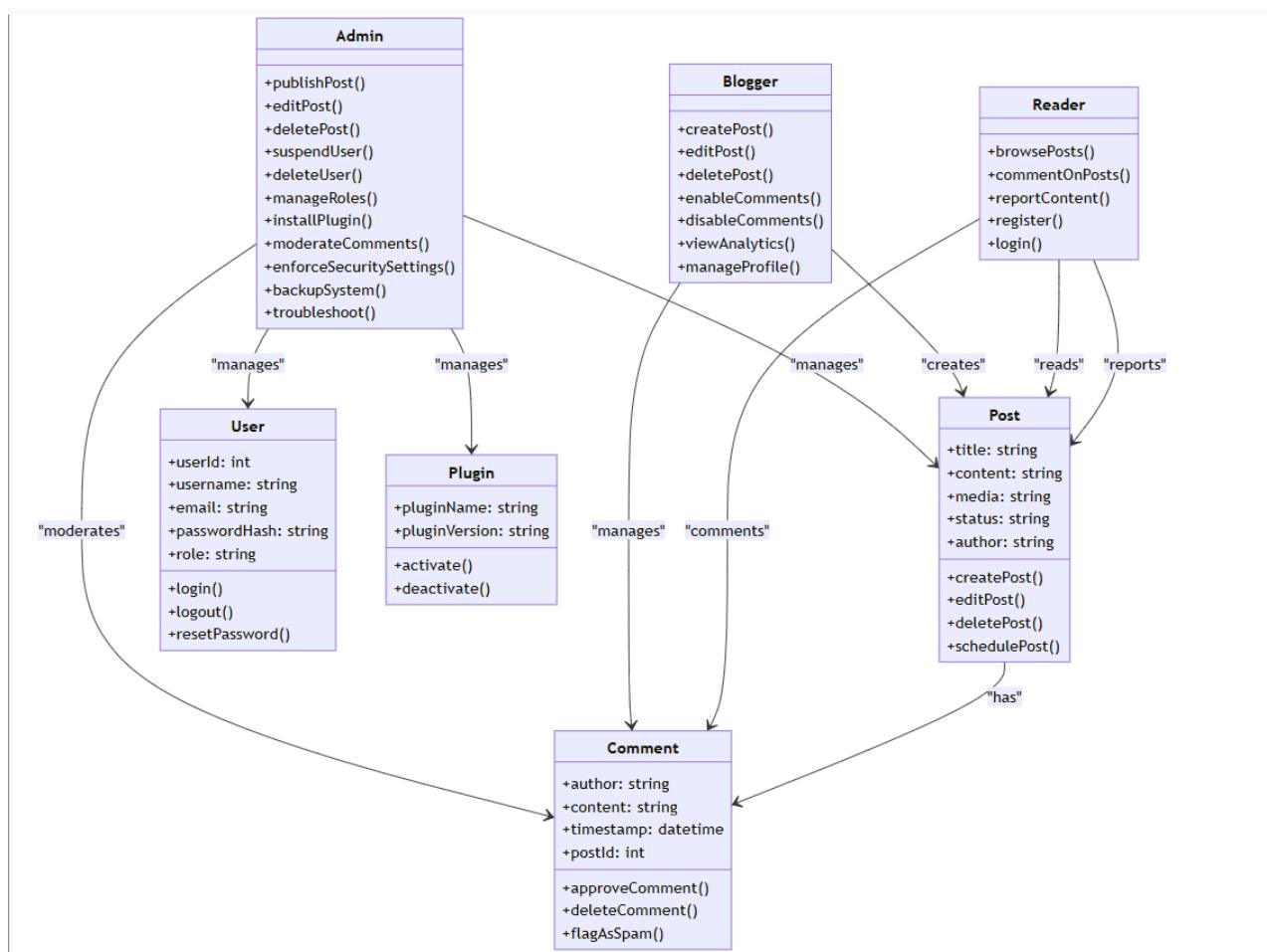
**EX NO: 6**

**Date:04/04/2025**

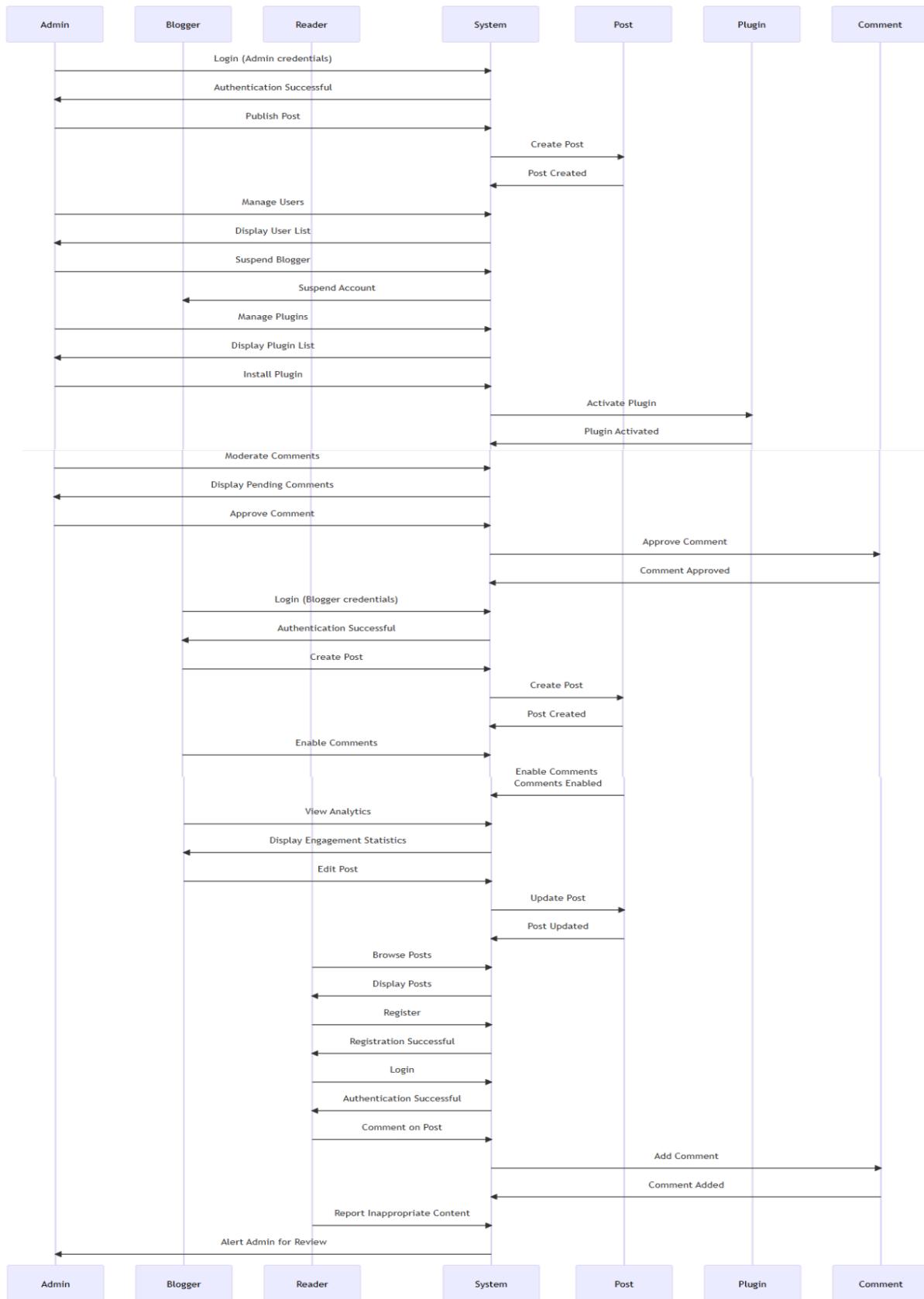
## **DESIGNING CLASS AND SEQUENCE DIAGRAMS FOR PROJECT ARCHITECTURE**

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

### **6A. Class Diagram**



## 6B. Sequence Diagram



**Result:**

The class diagram and sequence diagram is designed successfully for the Blog Management system.

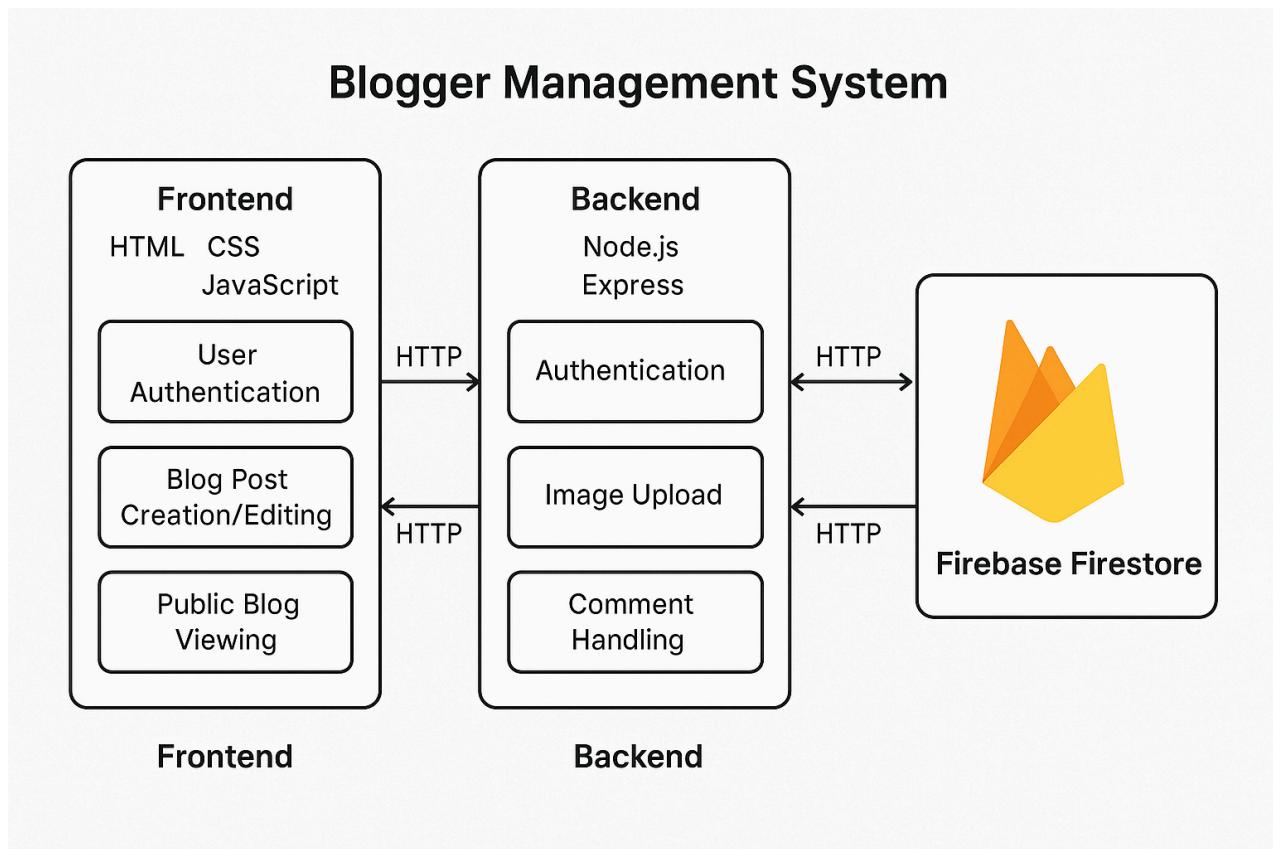
**EX NO: 7**

**Date:16/04/2025**

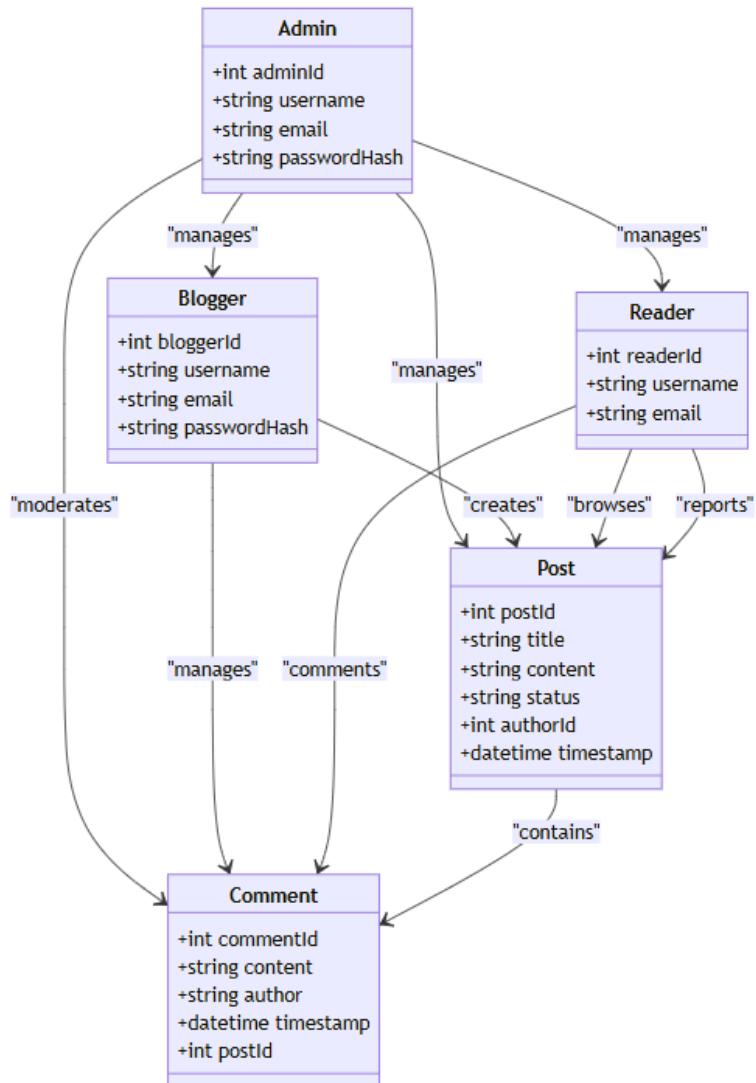
## **DESIGNING ARCHITECTURAL AND ER DIAGRAMS FOR PROJECT STRUCTURE**

**Aim:** To Design an Architectural Diagram and ER Diagram for Blog management system.

### **7A. Architectural Diagram**



## 7B.ER Diagram



### Result:

The Architecture Diagram and ER Diagram is designed Successfully for the Blog management system.

<b>EX 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 (Signup & Login)
- Blog Post Creation (Create, Edit, Add image)
- Blog Post Publishing
- Category and Tag Management
- User Roles and Permissions
- Search Functionality

#### **2. Define User Interactions**

- Each test case will simulate a real user behavior, such as logging in, creating a blog post, publishing a post and browsing for a post.

#### **3. Design Happy Path Test Cases**

- These test cases will validate that all features function as expected under normal conditions.
- Example: User logs in successfully, creates a new blog post with a title and content, and publishes it successfully.

#### **4. Design Error Path Test Cases**

- These test cases will simulate negative or unexpected scenarios to test the system's robustness and error-handling capabilities.
- Example: Login fails with invalid credentials, post creation fails due to missing title, post fails to publish due to a system error.

## **5. Break Down Steps and Expected Results**

- Each test case will contain step-by-step actions and a corresponding expected outcome.
- This ensures clarity for both testers and automation scripts.

## **6. Use Clear Naming and IDs**

- Test cases will be named clearly (e.g., TC01 - Successful Login, TC10 - Create Post Fails - Missing Title).
- This helps in quick identification and linking to user stories or features in Azure DevOps.

## **7. Separate Test Suites**

- Test cases will be organized within Azure DevOps Test Plans and Test Suites.
- Test Suites will be grouped based on functionality (e.g., "User Authentication," "Blog Post Management," "Commenting").
- This improves organization and test execution flow in Azure DevOps.

## **8. Prioritize and Review**

- Critical user actions and core functionalities will be marked as high-priority in Azure DevOps.
- Test cases will be reviewed for completeness, accuracy, and traceability against feature requirements and user stories.

## 1.New test plan

New Test Plan

Name \*

Area Path \*

Iteration \*

Create

Cancel

## 2.Test suite

Blog Creation Test... May 22 - May 29 Current

Test Suites

Filter suites by name

Blog Creation Test Plan

2 : Blog Creation & Management (ID: 94)

Define Execute Chart

New Suite

- Static suite
- Requirement based suite
- Query based suite

Add a test case

Use this tab to collate, add and manage test cases

New Test Case



### **3. Test case**

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

Blog Management System – Test Plans

#### **USER STORIES**

- As a Blogger, I want to log in with my login credentials so that I can access my dashboard and content.
- As a Viewer, I want to visit the website so that I can browse blogs without signing in.
- As a Blogger, I want to create a blog so that I can share my content.
- As an Admin, I should be able to publish, edit, and delete posts and pages so that I can manage blog contents.
- As a Blogger, I want to sign up using my unique name and password so that I can access my blogging account.

#### **TEST SUITES**

##### **TEST SUITE: TS01 – USER LOGIN**

Test Case: TC01 – Login with Valid Credentials

User Story: As a Blogger, I want to log in with my login credentials so that I can access my dashboard and content.

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 valid email and password

Expected Result: Input is accepted with no errors

- Action: Click the "Login" button

Expected Result: Blogger is redirected to the dashboard

Notes: This test simulates a successful login with valid credentials.

### **Test Case: TC02 – Login with Invalid Password**

User Story: As a Blogger, I want to log in with my login credentials so that I can access my dashboard and content.

Test Type: Error Path

Steps and Expected Results:

- Action: Navigate to the login page

Expected Result: Login page is displayed

- Action: Enter valid email and incorrect password

Expected Result: Password is rejected

- Action: Click the "Login" button

Expected Result: Error message “Incorrect password” is shown

Notes: Ensures failed login attempts are handled properly with informative error messages.

## **TEST SUITE: TS02 – VIEW BLOGS WITHOUT LOGIN**

Test Case: TC01 – Access Blogs as a Viewer

User Story: As a Viewer, I want to visit the website so that I can browse blogs without signing in.

Test Type: Happy Path

Steps and Expected Results:

- Action: Open the website homepage

Expected Result: Homepage with blogs is displayed

- Action: Scroll or navigate through blog posts

Expected Result: Viewer can read blogs without authentication

Notes: Validates open access to content for all visitors.

## **TEST SUITE: TS03 – BLOG CREATION**

Test Case: TC01 – Create a New Blog Successfully

User Story: As a Blogger, I want to create a blog so that I can share my content.

Test Type: Happy Path

Steps and Expected Results:

- Action: Log in to the dashboard

Expected Result: Dashboard with "Write a blog" option is displayed

- Action: Click on "Write a Blog", enter title and content

Expected Result: Fields accept inputs with no validation errors

- Action: Click "Publish"

Expected Result: Blog is successfully created and visible in public feed

Notes: Tests standard functionality for creating a new blog.

## **TEST SUITE: TS04 – USER REGISTRATION**

Test Case: TC01 – Sign Up with Valid Details

User Story: As a Blogger, I want to sign up using my unique email and password so that I can access my blogging account.

Test Type: Happy Path

Steps and Expected Results:

- Action: Navigate to the sign-up page

Expected Result: Registration form is displayed

- Action: Enter a unique email and password

Expected Result: Inputs are accepted and no validation errors occur

- Action: Click "Sign Up"

Expected Result: Account is created and Blogger is redirected to dashboard

Notes: Validates successful registration for new users.

## **Test Case: TC02 – Sign Up with Existing email and password**

User Story: As a Blogger, I want to sign up using my unique email and password so that I can access my blogging account.

Test Type: Error Path

Steps and Expected Results:

- Action: Navigate to the sign-up page

Expected Result: Registration form is displayed

- Action: Enter a email that already exists

Expected Result: Form accepts input

- Action: Click "Sign Up"

Expected Result: Error message “Email invalid” is shown

Notes: Ensures duplicates are not allowed.

## **TEST SUITE: TS05 – CONTENT MANAGEMENT BY ADMIN**

Test Case: TC01 – Admin Manages Blog Posts

User Story: As an Admin, I should be able to publish, edit, and delete posts and pages so that I can manage blog contents.

Test Type: Happy Path

Steps and Expected Results:

- Action: Log in to the admin panel

Expected Result: Admin dashboard is displayed

- Action: Choose an existing blog post and select “Delete”

Expected Result: The Blog gets deleted

Notes: Tests core content control actions available to Admin.

## Test Cases

NEW TEST CASE \*

Verify that user can create a new blog with title and text content

Dilshath Shafana 0 Comments Add Tag

Save and Close

State: Design Area: BLOG MANAGEMENT SYSTEMS  
Reason: New Iteration: BLOG MANAGEMENT SYSTEMS\Iteration 1

Steps Summary Associated Automation

Steps

Steps	Action	Expected result
1.	Login as an authenticated user	User is logged in and redirected to dashboard
2.	Click on "Blog"	Blog editor page is displayed
3.	Enter a valid title	Title field accepts input
4.	Enter content in the text area	Content entered
5.	Click on Publish	Blog is saved

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

NEW TEST CASE \*

Verify that user can insert an image into a blog post

Dilshath Shafana 0 Comments Add Tag

Save and Close

State: Design Area: BLOG MANAGEMENT SYSTEMS  
Reason: New Iteration: BLOG MANAGEMENT SYSTEMS\Iteration 1

Steps Summary Associated Automation

Steps

Steps	Action	Expected result
1.	Login and go to "Blog"	Blog editor opens
2.	Enter blog title and text	Title and content are added
3.	Click on "Insert Image"	File picker dialog opens
4.	Select an image file from system	Image preview is shown in blog editor

Parameter values

Add a shared parameter set | Convert to shared parameters

Deployment

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

Development

Add link

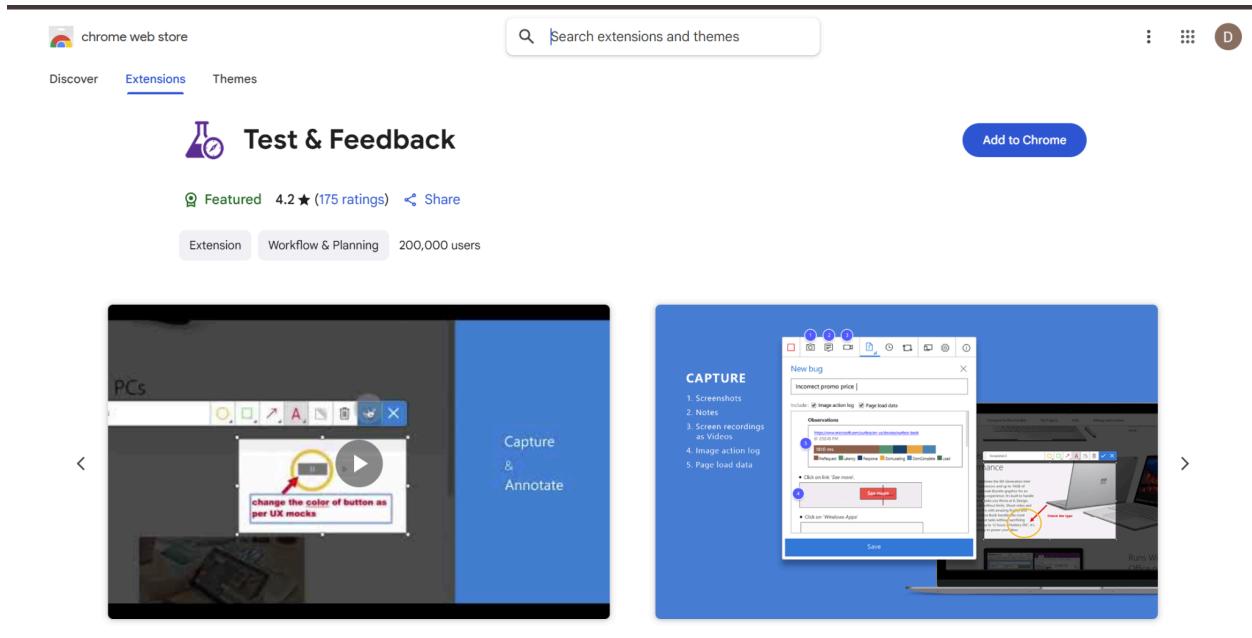
Link an Azure Repos [commit](#), [pull request](#) or [branch](#) to see the status of your development. You can also [create a branch](#) to get started.

Related Work

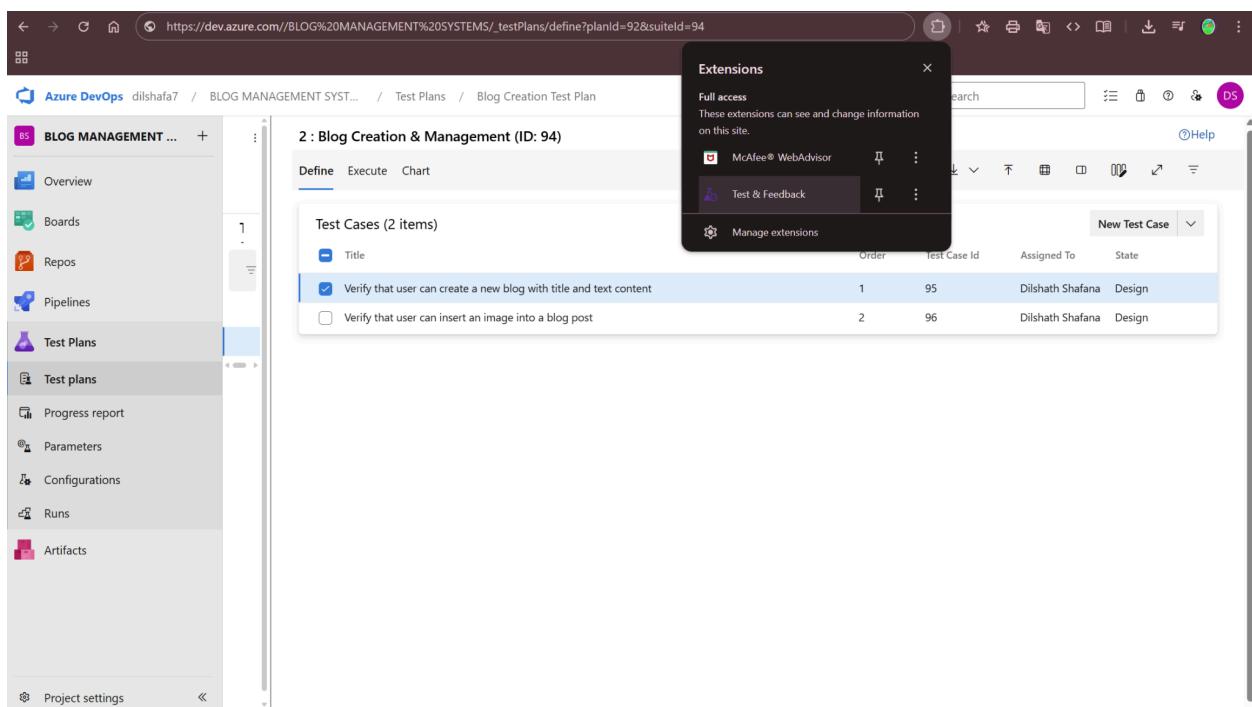
Add link

Add an existing work item as a parent

## 4. Installation of test



The screenshot shows the Test & Feedback extension page on the Chrome Web Store. The extension has a rating of 4.2 stars from 175 reviews and over 200,000 users. It is categorized under Extension and Workflow & Planning. The page features two main images: one showing a screenshot of a mobile device with annotations, and another showing a laptop screen displaying a bug tracking interface with annotations.



The screenshot shows the Azure DevOps interface, specifically the Test Plans section. A modal window titled "Extensions" is open, listing "Test & Feedback" as an installed extension. The main area shows a "Test Cases (2 items)" list:

Title	Order	Test Case Id	Assigned To	State
<input checked="" type="checkbox"/> Verify that user can create a new blog with title and text content	1	95	Dilshath Shafana	Design
<input type="checkbox"/> Verify that user can insert an image into a blog post	2	96	Dilshath Shafana	Design

Test and feedback

Showing it as an extension

## 5. Running the test cases

The screenshot shows the Azure Test Plans interface. At the top, there's a header bar with tabs for "Define", "Execute" (which is selected), and "Chart". Below the header, a section titled "Test Points (2 items)" lists two entries:

Title	Outcome	Order	Test Case Id	Configuration	Tester
Verify that user can create a new blog with title and text content	Passed	1	95	Windows 10	Dilshath Shafana
Verify that user can insert an image into a blog post	Active	2	96	Windows 10	Dilshath Shafana

On the right side of the interface, there's a "Run for web application" button. Below the table, there's a large, empty white area.

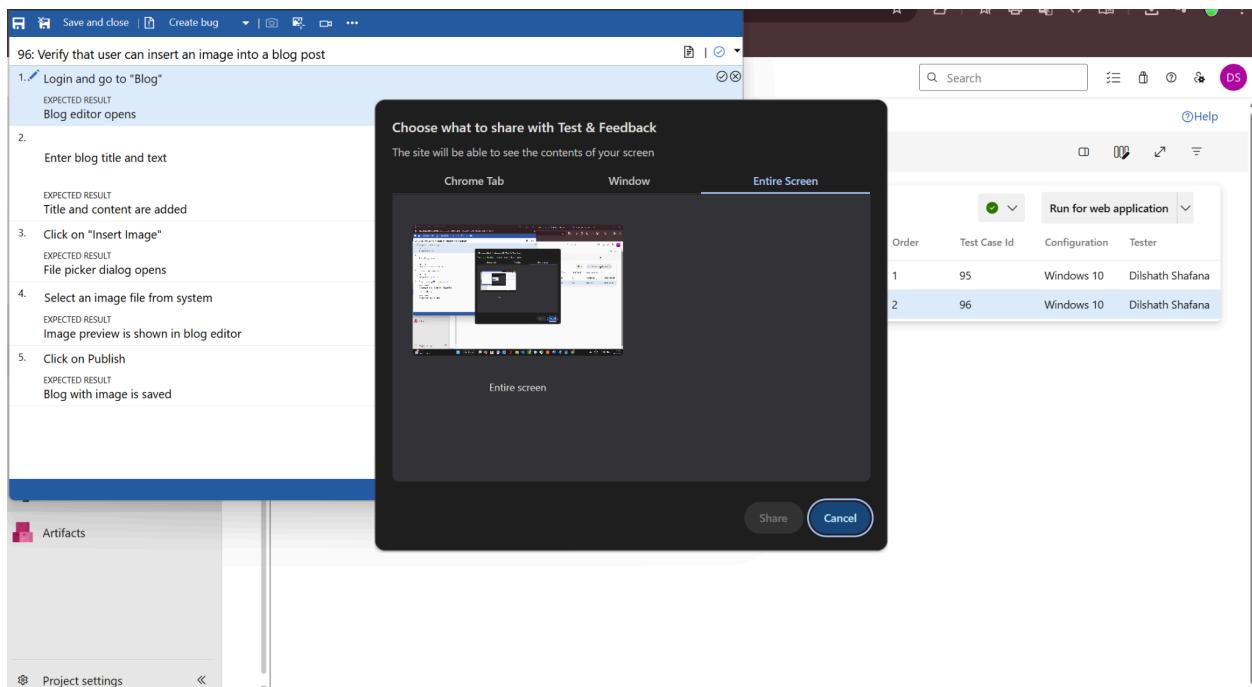
The screenshot shows a browser window titled "Runner - Test Plans - Google Chrome" with the URL "dev.azure.com/dilshafa7/BLOG%20MANAGEMENT%20SYSTEMS/\_testExecution/Index". The page displays a test case step:

**95\*: Verify that user can create a new blog with title and text content**

1. Login as an authenticated user  
EXPECTED RESULT  
User is logged in and redirected to dashboard
2. Click on "Blog"  
EXPECTED RESULT  
Blog editor page is displayed
3. Enter a valid title  
EXPECTED RESULT  
Title field accepts input
4. Enter content in the text area  
EXPECTED RESULT  
Content entered
5. Click on Publish  
EXPECTED RESULT  
Blog is saved

The status of each step is indicated by a green checkmark icon with a circled "X".

## 6.Recording the test case



## 7.Creating the bug

The screenshot shows the "NEW BUG" page in Azure DevOps. The title of the bug is "Image upload fails with valid image file during blog creation".

Details of the bug:

- State: Unassigned
- Reason: New
- Area: BLOG MANAGEMENT SYSTEMS
- Iteration: BLOG MANAGEMENT SYSTEMS\Iteration 1

Repro Steps:

5/22/2025 1:30 PM Bug filed on "Verify that user can insert an image into a blog post"

Step no.	Result	Title
1.	None	Login and go to "Blog" Expected Result Blog editor opens
2.	None	

Planning:

- Resolved Reason:
- Story Points:
- Priority: 2
- Severity: 3 - Medium
- Activity:

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](#)

## 8. Test case results

2 : Blog Creation & Management (ID: 94)

Define Execute Chart Help

Search Title, Test case id and Tags columns Outcome Tester Configuration Assigned To State X

Test Points (2 items) Run for web application

Title	Outcome	Order	Test Case Id	Configuration	Tester
Verify that user can create a new blog with title and text content	Passed	1	95	Windows 10	Dilshath Shafana
Verify that user can insert an image into a blog post	Passed	2	96	Windows 10	Dilshath Shafana

## 9. Test report summary

BLOG MANAGEMENT ... + Overview Boards Repos Pipelines Test Plans Test plans Progress report Parameters Configurations Runs Artifacts

Enter Run ID... Go Recent test runs Test runs Filter

Recent test runs

State	Run I...	Title	Completed Date	Build Number
Completed	17	2 : Blog Creation & Management (Manual)	5/22/2025 1:32:27 PM	
Completed	16	2 : Blog Creation & Management (Manual)	5/22/2025 1:32:23 PM	
In progress	15	2 : Blog Creation & Management (Manual)	5/22/2025 1:30:42 PM	
Completed	13	2 : Blog Creation & Management (Manual)	5/22/2025 1:28:07 PM	
Completed	11	2 : Blog Creation & Management (Manual)	5/22/2025 1:24:28 PM	
Completed	5	2 : Blog Creation & Management (Manual)	5/22/2025 1:11:12 PM	
Completed	3	1 : User Account Management (Manual)	5/22/2025 12:19:00 PM	
Completed	2	1 : User Account Management (Manual)	5/22/2025 12:14:03 PM	

## 10. Progress report

### Progress report

Blog Creation Test Plan ▾ Test Suites ▾ Outcome ▾ Configuration ▾ Tester ▾ Priority ▾ Assigned To ▾ X

#### Summary

1 Test plans 2 Test points

2 (2 / 2) Test points run 100% Run

✓ 100% (2 / 2) Pass rate 2 Passed

#### Outcome trend

Last 14 Days ▾

2025-05-20  
Passed : 0

#### Details

### Progress report

Blog Creation Test Plan (+1) ▾ Test Suites ▾ Outcome ▾ Configuration ▾ Tester ▾ Priority ▾ Assigned To ▾ X

#### Summary

2 Test plans 4 Test points

4 (4 / 4) Test points run 100% Run

✓ 100% (4 / 4) Pass rate 4 Passed

#### Outcome trend

Last 14 Days ▾

2025-05-20  
Passed : 0

#### Details

Test plan name	Test points	Run % ↓	Passed %	Failed %	Not run count
> Login & Signup Testing - Sprint 1	2	100	100	0	0
> Blog Creation Test Plan	2	100	100	0	0

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## 11.Changing the test template

The screenshot shows the 'Organization Settings' page with the 'Process' tab selected in the sidebar. The main area displays a table titled 'All processes' with columns for 'Name', 'Description', and 'Team projects'. The table includes rows for 'Basic', 'Agile (default)', 'Scrum', and 'CMMI'. The 'Agile (default)' row is currently selected.

Name	Description	Team projects
Basic	This template is flexible for any process and great for teams getting started ...	0
Agile (default)	... This template is flexible and will work great for most teams using Agile plann...	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 i...	0

## 12.View the new test case template

The screenshot shows the 'Test Case' template configuration page under 'All processes > 231001038 Agile'. The left sidebar shows the 'Process' tab is selected. The main area has tabs for 'Layout', 'States', and 'Rules'. The 'Layout' tab is active, showing sections for 'Steps', 'Recent test results', 'Deployment', 'Development', 'Related Work', and 'Status'. A 'New field' button is available at the top of the layout section.

Add a field to Test Case

**Definition**

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

**Use an existing field**  
Field      Acceptance Criteria

**Create a field**

Name	Test type
Type	Text (single line)
Description	Optionally provide a description for the field

[Learn more](#)

**Add field** **Cancel**

All processes > 231001038 Agile > Test Case

Layout States Rules

New field New group New page Get extensions

**Steps** ... **Summary** ... **Associated Aut...** ...

<b>Steps</b> Text (multiple lines)	<b>Recent test results</b> Recent test case results	<b>Custom</b> <b>Test type</b> ... Text (single line)
<b>Deployment</b> Deployments	<b>Development</b> Links	<b>Related Work</b> Links
<b>Status</b> <b>Priority</b> Integer <b>Automation status</b> Text (single line)		

**Result:**

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

<b>EX NO: 09</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

- 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.

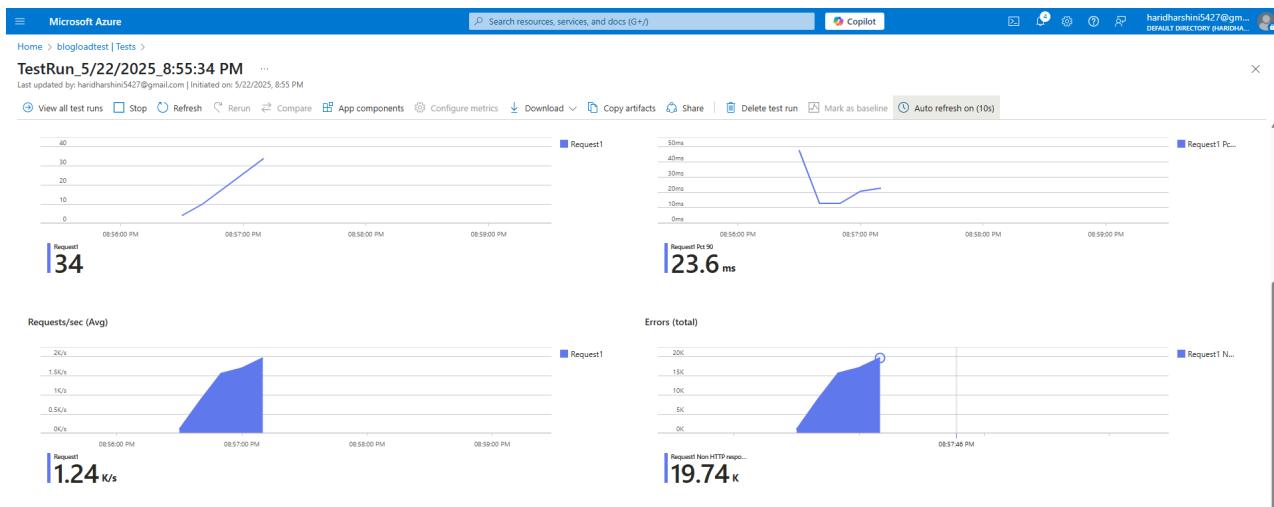
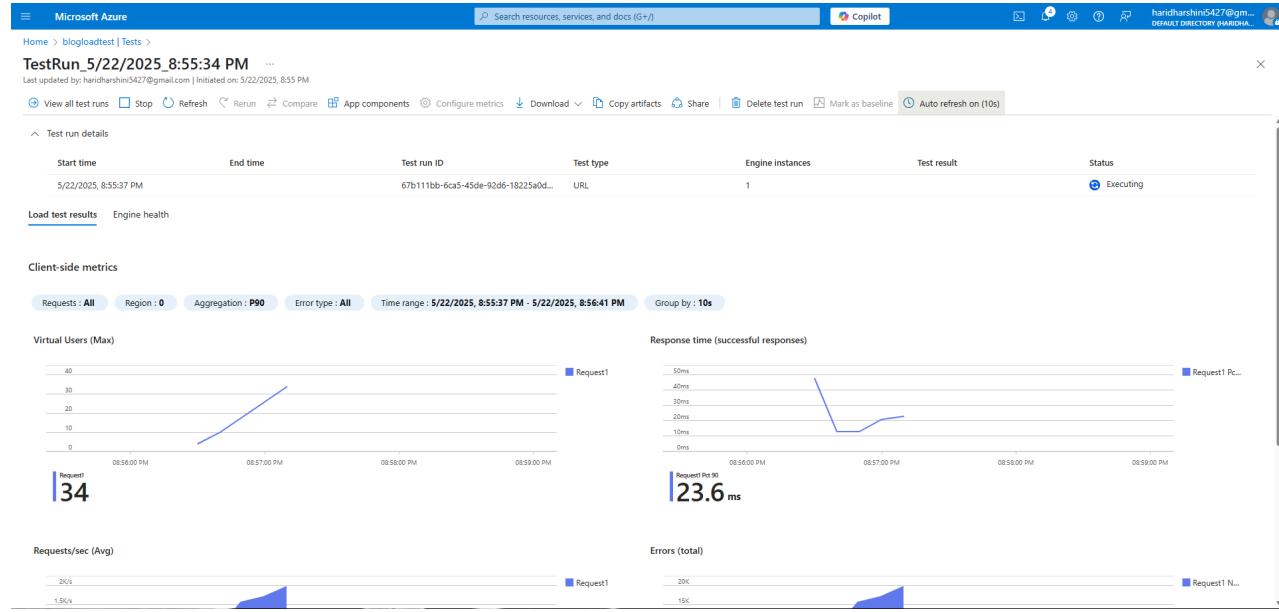
- *Run After Creation:* Keep checked.

### 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







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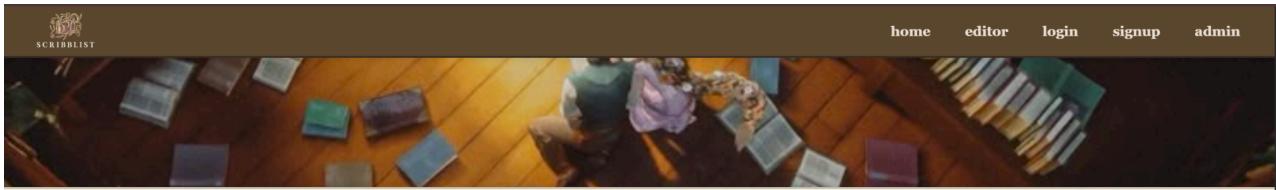


## The Silent Revolution: Why Gen Z Is Reviving Physical Books

In a world driven by touchscreens and algorithms, one might assume that books—the ink-on-paper kind—would have quietly faded into nostalgia. But in a surprising twist, Gen Z is leading a quiet, powerful resurgence of physical reading. This isn't just a trend; it's a movement. One where the scent of old pages, the texture of a well-worn spine, and the

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## The Silent Revolution: Why Gen Z Is Reviving Physical Books

Published At - 23 May 2025

In a world driven by touchscreens and algorithms, one might assume that books—the ink-on-paper kind—would have quietly faded into nostalgia. But in a surprising twist, Gen Z is leading a quiet, powerful resurgence of physical reading. This isn't just a trend; it's a movement. One where the scent of old pages, the texture of a well-worn spine, and the crackle of flipping paper signals a silent revolution.

A Digital Generation Goes Analog

Born into a world buzzing with notifications, Gen Z is the first generation to grow up completely surrounded by smartphones, tablets, and Wi-Fi. Ironically, this constant connection is exactly why many

### Result:

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

**EX 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 Blog management system project.

### **GitHub Project Structure:**

The screenshot shows the GitHub repository page for 'Blogger-Management-System'. The repository is public and has 7 commits. The project structure includes a 'public' folder, '.gitignore', 'README.md', 'package-lock.json', 'package.json', and 'server.js'. The 'README' file contains a description of 'Scribblest – A Minimal Blogging Platform' and its features: Frontend + Backend, SCRIBBLIST – A Blogging Website, and technologies used (HTML, CSS, JavaScript, Node.js). It also includes screenshots of the Admin Panel and User Interface. The repository details show 0 stars, 1 watching, and 0 forks. The 'Languages' section indicates 47.8% HTML, 27.2% JavaScript, and 25.0% CSS. Suggested workflows include Node.js, Publish Node.js Package, and Datadog Synthetics.

### **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.