

INDEX

S.No.	Date	Title
1.	23/1/25	Azure Devops Environment Setup.
2.	30/1/25	Azure Devops Project Setup and User Story Management.
3.	06/2/25	Setting Up Epics, Features, And User Stories for Project Planning.
4.	13/2/25	Sprint Planning.
5.	20/2/25	Poker Estimation.
6.	27/2/25	Designing Class Diagram and Sequence Diagram.
7.	06/3/25	Designing Use Case Diagram and Activity Diagram.
8.	20/3/25	Testing – Test Plans and Test Cases.
9.	27/3/25	Load Testing and Pipelines.
10.	03/4/25	GitHub: Project Structure & Naming Conventions.

AZURE DEVOPS ENVIRONMENT SETUP

EXP NO: 1

Date :

Aim:

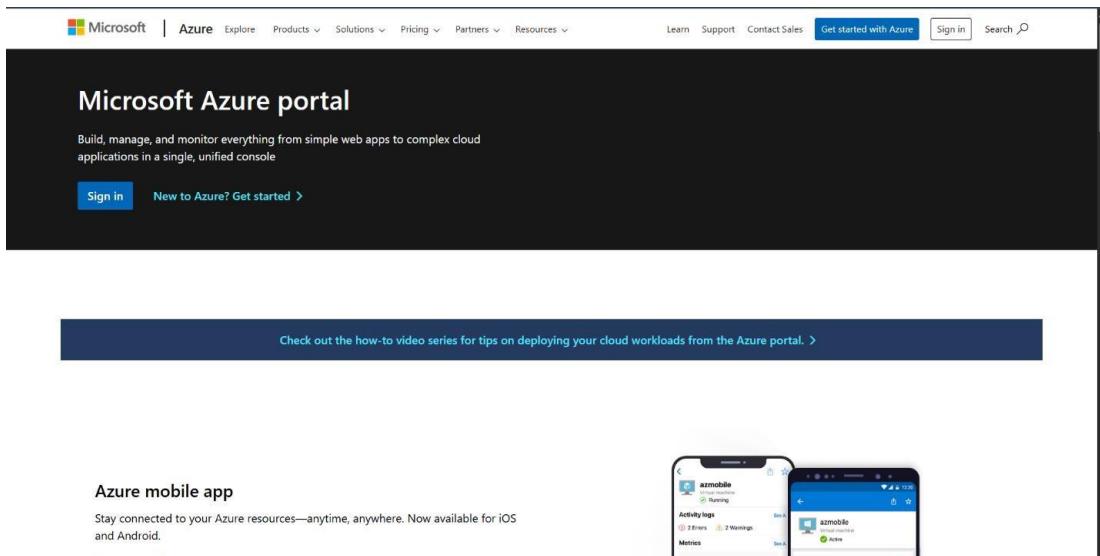
To set up and access the Azure DevOps environment by creating an organization through the Azure portal.

INSTALLATION

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

Sign in using your Microsoft account credentials.

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



2. Azure home page

The screenshot shows the Microsoft Azure home page. At the top, there's a search bar with placeholder text "Search resources, services, and docs (G+/" and a Copilot button. The main area is titled "Azure services" and features a grid of icons for various services: Create a resource, Azure DevOps organizations, Quickstart Center, Azure AI foundry, Kubernetes services, Virtual machines, App Services, Storage accounts, SQL databases, and a "More services" button. Below this is a section titled "Resources" with tabs for "Recent" (which is selected) and "Favorite". It includes columns for "Name", "Type", and "Last Viewed". A message says "No resources have been viewed recently" with a "View all resources" button. On the left, there's a sidebar with "Azure services" and "Create a resource" options, and a "Resources" section with "Recent" and "Favorite" tabs.

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

The screenshot shows the Microsoft Azure search results for the query "azure dev". The search bar at the top has "azur... dev" typed into it. The results are categorized into "Services", "Marketplace", and "Documentation". Under "Services", there are links to Azure Device Registry, Azure DevOps organizations, Azure Database for MySQL servers, and Education tools. Under "Marketplace", there are links to Build Agents for Azure DevOps, Azure DevOps Auditing, Azure Devops Backup Tool, and Self Hosted Runner for Azure DevOps. Under "Documentation", there is a link to Continue searching in Microsoft Entra ID. The right side of the screen shows the same Azure services dashboard as the first screenshot, with the "More services" button highlighted.

3.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. On the right, it shows the user's email (rsupraja2005@gmail.com) and profile picture. Below the navigation, the page title is 'Azure DevOps'. A banner at the top 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 content area features a large illustration of a rocket launching from a platform with a person, set against a background of clouds. To the left, there's a section titled 'Azure DevOps' with the subtext 'Plan smarter, collaborate better, and ship faster with a set of modern dev services'. Below this is a link 'My Azure DevOps Organizations'.

Result:

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

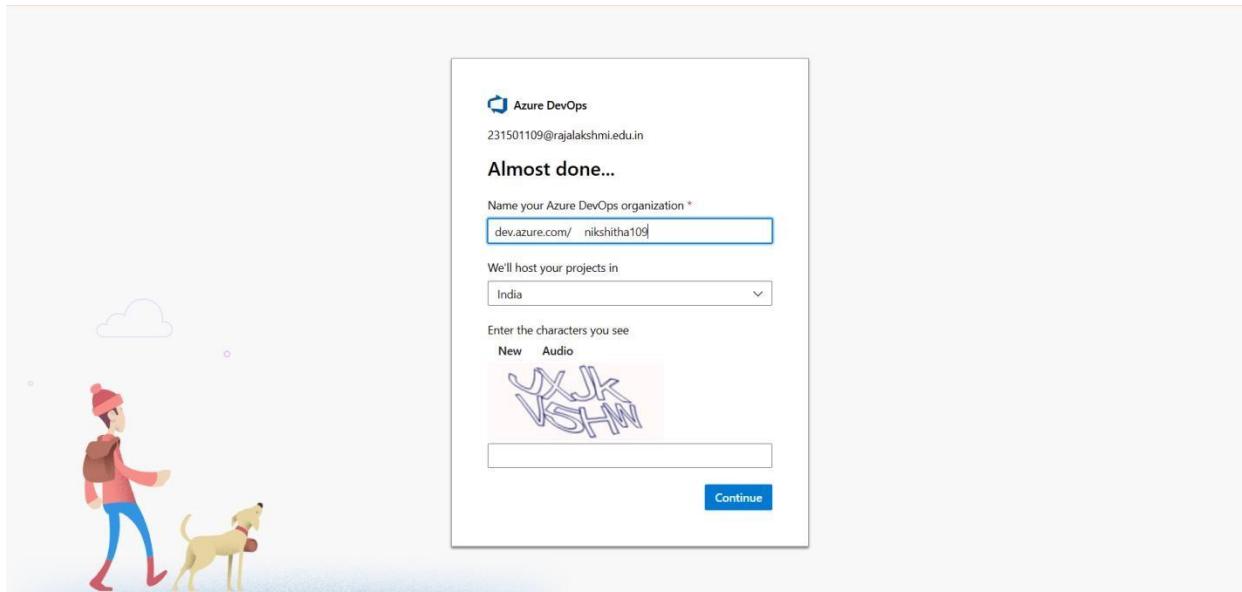
EXP NO: 2
Date :

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.

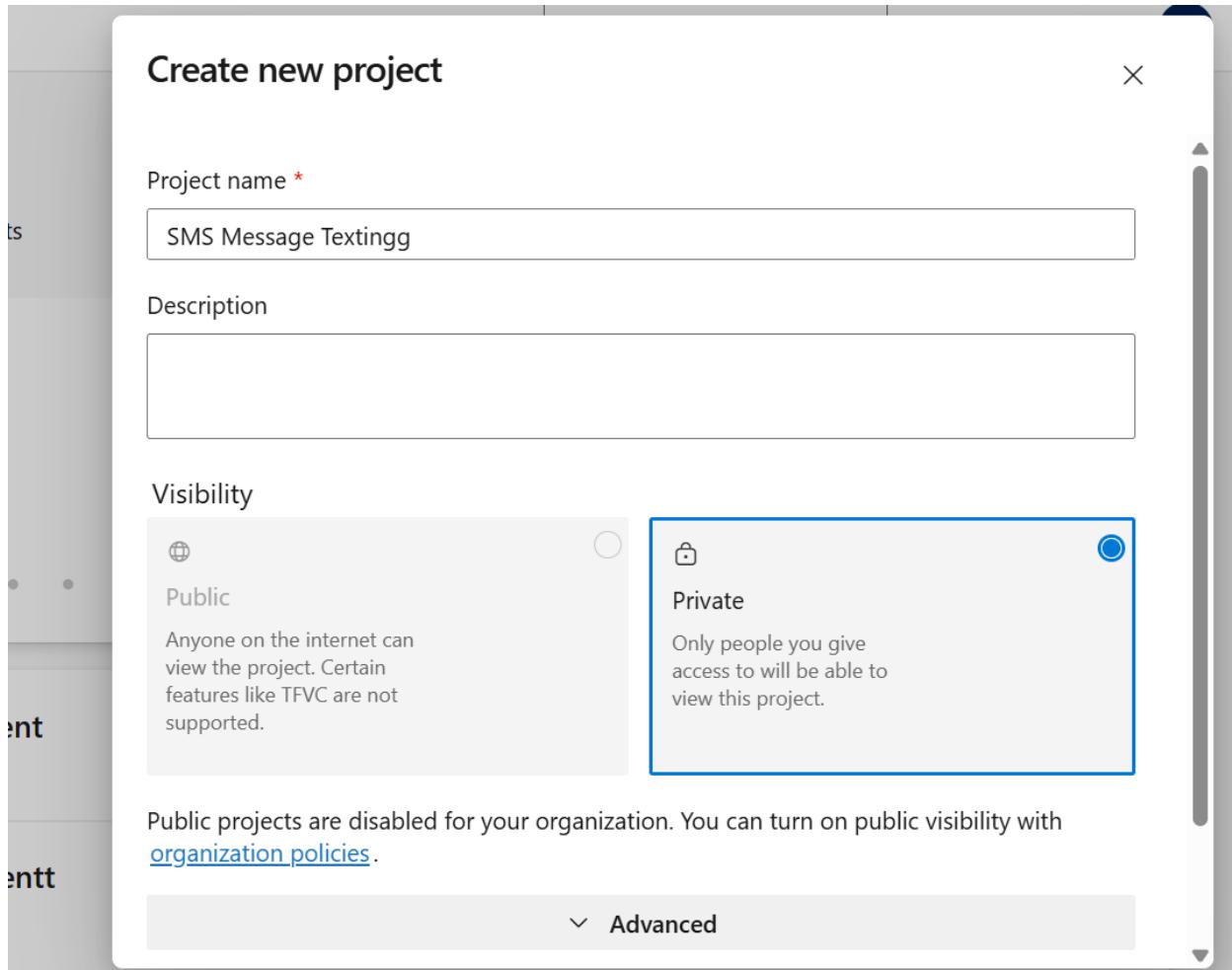
c. Enter the project name, description, and visibility options:

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.



- 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 Organizations dashboard. On the left, there's a profile section for 'Supraja R' with a large circular icon containing 'SR'. Below it are details like email (rsupraja2005@gmail.com), location (India), and account type (Microsoft account). A dropdown menu shows 'Visual Studio Dev Essentials'. On the right, the main area lists 'Azure DevOps Organizations' with a 'Create new organization' button. It shows three organizations: 'dev.azure.com/2116231501164' (Owner), 'dev.azure.com/2231501164' (Owner), and 'dev.azure.com/231501164' (Owner). Each organization has a 'New project' link, 'Actions' (with 'Open in Visual Studio'), and a 'Projects' section listing existing ones like 'Sms Messaging' and 'sms'.

4. Project dashboard

The screenshot shows the 'Sms Messaging' project dashboard. The left sidebar includes options like Overview, Summary, Dashboards, Wiki, Boards, Repos, Pipelines, Test Plans, Artifacts, and Project settings. The main content area has a title 'Sms Messaging' with a 'Private' button and an 'Invite' button. Under 'About this project', it describes the system as a communication platform for text messages. It mentions integration with GSM modems or APIs like Twilio or Nexmo, and internal messaging using modern technologies like WebSockets or Firebase. Key features include user authentication, contact management, message logs, scheduled messaging, and delivery status tracking. Security measures like encryption and access control are also mentioned. The 'Project stats' section shows data for the last 7 days, with a 'Boards' tab selected.

5. To manage user stories:

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

text messaging system Team

Order	Work Item Type	Title	Status	Effort	Business Area	Tags
1	Epic	> Messaging System	New		Business	
2	Epic	> Group Messaging	New		Business	
3	Epic	> Push Notifications & Status Updates	New		Business	
	Feature	> Real-time push notifications	New		Business	
	User Story	As a user, I want to be notified when I receive a new message.	New		Business	
	Feature	> Message status indicators (block for sent, double tick for delivered)	New		Business	
	User Story	As a user, I want to see the delivery status of my messages.	New		Business	
4	Epic	> SMS Campaign Management	New		Business	
	Feature	> Campaign builder interface - Target user segmentation	New		Business	
	User Story	As an admin, I want to send SMS campaigns to users.	New		Business	
	Feature	> Admin-only SMS control panel	New		Business	
	User Story	As an admin, I want to send messages without requiring an API key.	New		Business	
5	Epic	> Scheduling Messages	New		Business	
	Feature	> Message scheduling interface - Time zone support	New		Business	
	User Story	As a user, I want to schedule my messages, so they arrive at the right time.	New		Business	
6	Epic	> User Management	New		Business	
	Feature	> User registration/login - Profile management - Role-based access control	New		Business	
	User Story	As an admin, I want to manage user accounts, so I can grant them specific roles.	New		Business	

Sms Messaging Team

Order	Work Item Type	Title
1	Epic	> User Management
2	Epic	> Group Messaging
3	Epic	> Messaging System

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

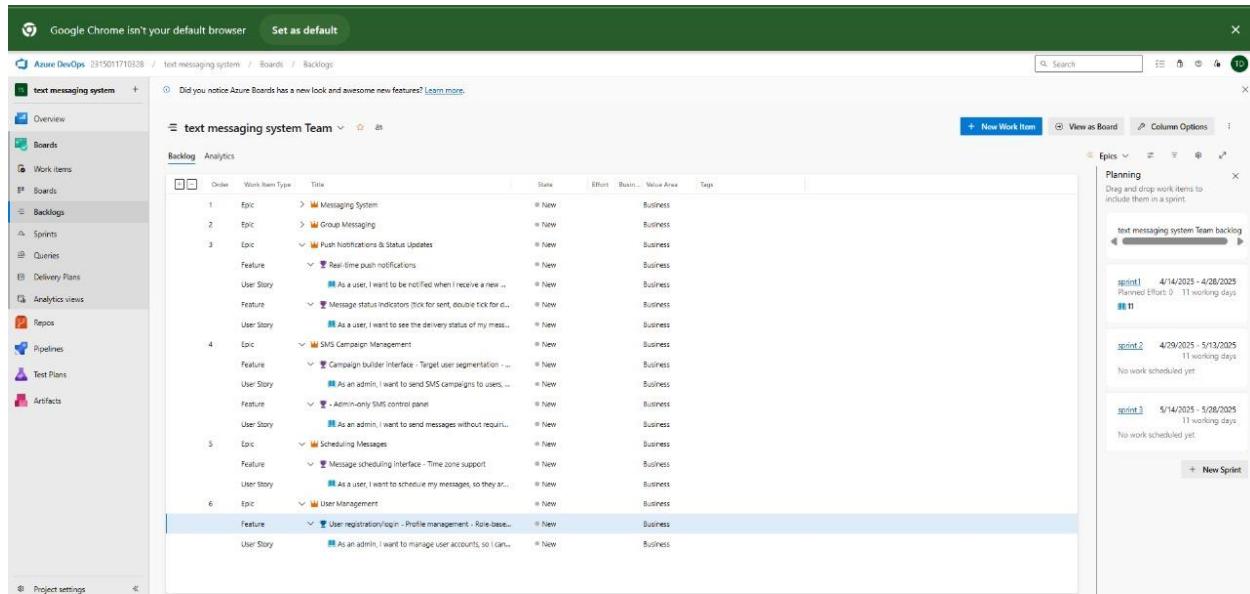
EXP NO: 3
Date :

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

Aim:

To create epics, user stories, features, and tasks for the project, Batch Data Analysis and Visualization.

1.Create Epic, Features, User Stories, Task



The screenshot shows the Azure DevOps Backlog board for the 'text messaging system' project. The backlog is organized into several epics, each containing features and user stories. The epics are:

- Epic 1: Messaging System (contains Group Messaging, Push notifications & Status Updates)
- Epic 2: Group Messaging (contains Real-time push notifications)
- Epic 3: Push notifications & Status Updates (contains Message status indicator, As a user, I want to see the delivery status of my messages)
- Epic 4: SMS Campaign Management (contains Campaign builder interface, As an admin, I want to send SMS campaigns to users, Admin-only SMS control panel)
- Epic 5: Scheduling Messages (contains Message scheduling interface, As a user, I want to schedule my messages, so they are sent at specific times)
- Epic 6: User Management (contains User registration/login - Profile management, As an admin, I want to manage user accounts, so I can...)

The backlog table includes columns for Order, Work item Type, Title, State, Effort, Business Value Area, and Tags. The Business Value Area for most items is listed as 'Business'. The backlog also includes a 'Planning' section showing three sprints: Sprint 1 (4/14/2025 - 4/28/2025), Sprint 2 (4/29/2025 - 5/13/2025), and Sprint 3 (5/14/2025 - 5/28/2025). The backlog is currently empty, indicating no work items have been assigned to these sprints.

2. Fill in Epics

The screenshot shows the Azure DevOps Boards backlog for the 'Sms Messaging Team'. The backlog is organized into three main epics:

- Epic 1: User Management
 - Feature: User registration/login
 - User Story: Admin access
- Epic 2: Group Messaging
- Epic 3: Messaging System

On the right side, there are sections for 'Epics' and 'Sprints':

- Epics:** Shows the backlog for the 'Sms Messaging Team'.
- Sprints:**
 - Sprint 1:** 5/16/2025 - 5/30/2025, Planned Effort: 0.15 working days, 1 item.
 - Sprint 2:** 6/2/2025 - 6/16/2025, 15 working days, No work scheduled yet.
 - Sprint 3:** 6/17/2025 - 7/1/2025.

3. Fill in Features

The screenshot shows the 'New User Story' dialog in Azure DevOps. The story is titled 'Real time notifications' and has the following details:

- State:** New
- Reason:** New
- Area:** Sms Messaging
- Iteration:** Sms Messaging\Sprint 1

The dialog is divided into several sections:

- Description:** Click to add Description.
- Acceptance Criteria:** Click to add Acceptance Criteria.
- Discussion:** (empty)
- Planning:** Story Points, Priority (2), Risk.
- Classification:** Value area (Business).
- Deployment:** To track releases associated with this work item, go to [Releases](#) and turn on deployment status reporting for Boards in your pipeline's Options menu. [Learn more about deployment status reporting](#).
- Development:** Add link.

4.Fill in User Stories

The screenshot shows the 'User Story' creation screen in Azure DevOps. At the top, there is a header bar with a back arrow, a search bar containing 'USER STORY 3', and a close button. Below the header, the main content area has a title 'As a user, I want to be able to upload multiple CSV files at once, so I can analyze them together.' followed by a text input field. To the right of the title are buttons for 'Save and Close', 'Follow', and other options. Below the title, there are sections for 'State' (New), 'Reason' (New), 'Area' (Batch data analysis and visualization), and 'Iteration' (Batch data analysis and visualization\Sprint 1). A note indicates the story was updated by Shri Dharshini on Mar 27. The main body of the form is divided into several sections: 'Description' (with a placeholder 'Click to add Description.'), 'Acceptance Criteria' (with a placeholder 'Click to add Acceptance Criteria.'), 'Discussion' (with a comment placeholder 'Add a comment. Use # to link a work item, @ to mention a person, or ! to link a pull request.' and a 'switch to Markdown editor' link), 'Planning' (Story Points, Priority 2, Risk), 'Classification' (Value area Business), 'Deployment' (instructions to track releases via Releases and reporting), 'Development' (Add link), and 'Related Work'.

Result: Thus, epics, features, user stories, and tasks have been created successfully.

EXP NO: 4

Date :

SPRINTPLANNING

Aim:

To assign a user story to a specific sprint for the project, Batch Data Analysis and Visualization.

SPRINT PLANNING

Sprint 1

The screenshot shows the Azure Boards interface for the 'Sms Messaging' project. The left sidebar has 'Sprints' selected. The main area displays a 'Sprint 1' backlog with four items:

	New	Active	Resolved	Closed
9 As a user, I want to see my message history with each contact, so I can refer to past messages.	● New ● Unassigned			
10 As a user, I want to create group chats, so I can communicate with multiple people at once.	● New ● Unassigned			
8 As a user, I want to send multimedia messages via MMS, so I can share images and videos	● New ● Unassigned			
11 Enables creation and naming of group chats. - Allows adding/removing participants and assigning roles (creator/admin).	● New ● Unassigned			

At the top right, there are buttons for 'New Work Item' and 'Column Options'. A status bar at the bottom indicates 'June 2 - June 16' and '15 work days'.

Sprint 2

The screenshot shows the Azure Boards interface for the 'Sms Messaging' project. The left sidebar has 'Sprints' selected. The main area displays a 'Sprint 1' backlog with two items:

	New	Active	Resolved	Closed
5 Admin access	● New ● Unassigned			
7 As a user, I want to send and receive text messages, so I can communicate with others.	● New ● Unassigned			

At the top right, there are buttons for 'New Work Item' and 'Column Options'. A status bar at the bottom indicates 'May 16 - May 30' and '11 work days remaining'.

Sprint 3

The screenshot shows the Azure DevOps Taskboard for the 'Sms Messaging Team' project. The left sidebar navigation bar is visible, showing options like Overview, Boards, Work items, Backlogs, Sprints, Queries, Delivery Plans, Analytics views, Repos, and Project settings. The 'Sprints' option is selected. The main area displays the Taskboard for 'Sprint 3'. At the top right, there are buttons for '+ New Work Item' and 'Column Options'. Below that, a date range 'June 17 - July 1' and '15 work days' is shown. The taskboard grid has columns for 'New', 'Active', 'Resolved', and 'Closed'. Two tasks are listed:

- 13. As a user, I want to see the delivery status of my messages.
 - New
 - Unassigned
- 12. As a user, I want to be notified when I receive a new message.
 - New
 - Unassigned

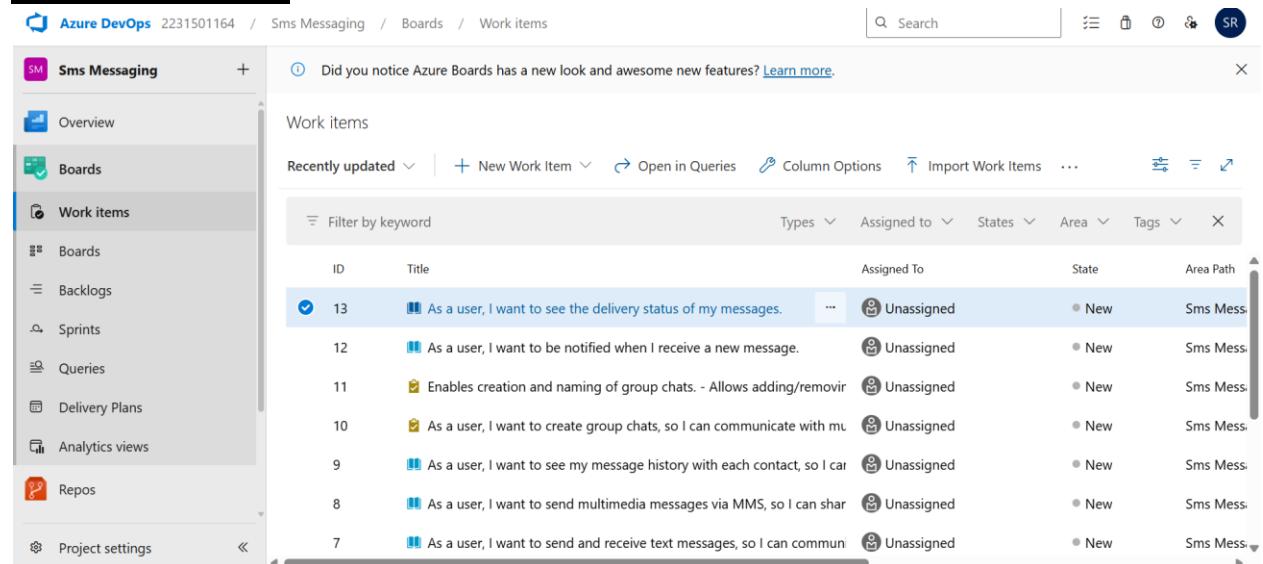
Result: The Sprints are created for the project, Batch Data Analysis and Visualization.

EXP NO: 5 Date :	<h1>POKERESTIMATION</h1>
-----------------------------------	--------------------------

Aim:

Create Poker Estimation for the user stories for the project, Batch Data Analysis and Visualization.

Poker Estimation



The screenshot shows the Azure DevOps Boards Work items page for the 'Sms Messaging' project. The left sidebar navigation includes 'Overview', 'Boards', 'Work items' (selected), 'Boards', 'Backlogs', 'Sprints', 'Queries', 'Delivery Plans', 'Analytics views', 'Repos', and 'Project settings'. The main area displays a list of work items under the heading 'Work items'. The list includes columns for 'ID', 'Title', 'Assigned To', 'State', and 'Area Path'. There are 14 items listed, all assigned to 'Unassigned' and marked as 'New' in the 'State' column. The 'Area Path' column shows 'Sms Mess' for all items. The first item is selected, showing its details: 'As a user, I want to see the delivery status of my messages.' The 'Title' column contains icons representing different story types (e.g., User Story, Task, Bug).

ID	Title	Assigned To	State	Area Path
13	As a user, I want to see the delivery status of my messages.	Unassigned	New	Sms Mess
12	As a user, I want to be notified when I receive a new message.	Unassigned	New	Sms Mess
11	Enables creation and naming of group chats. - Allows adding/removing users from group chats.	Unassigned	New	Sms Mess
10	As a user, I want to create group chats, so I can communicate with multiple people at once.	Unassigned	New	Sms Mess
9	As a user, I want to see my message history with each contact, so I can quickly refer back to previous conversations.	Unassigned	New	Sms Mess
8	As a user, I want to send multimedia messages via MMS, so I can share photos, videos, and other files.	Unassigned	New	Sms Mess
7	As a user, I want to send and receive text messages, so I can communicate with others in real-time.	Unassigned	New	Sms Mess
6	As a user, I want to receive notifications for new messages.	Unassigned	New	Sms Mess
5	As a user, I want to search for messages by keyword.	Unassigned	New	Sms Mess
4	As a user, I want to mark messages as read or unread.	Unassigned	New	Sms Mess
3	As a user, I want to archive old messages.	Unassigned	New	Sms Mess
2	As a user, I want to pin important messages.	Unassigned	New	Sms Mess
1	As a user, I want to filter messages by sender or recipient.	Unassigned	New	Sms Mess

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

EXP NO: 6
Date :

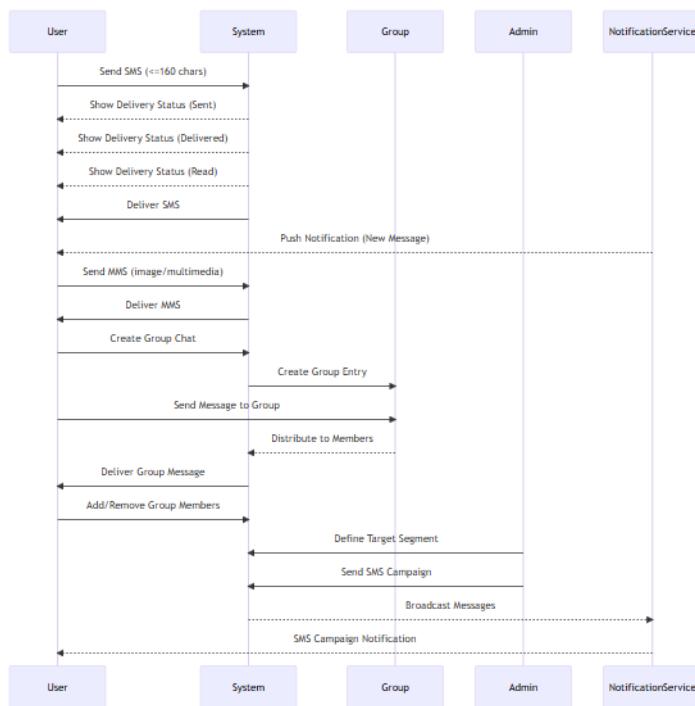
DESIGNING CLASS DIAGRAM AND SEQUENCE DIAGRAM

Aim:

To design a Class Diagram and Sequence Diagram for the project, Batch Data Analysis and Visualization.

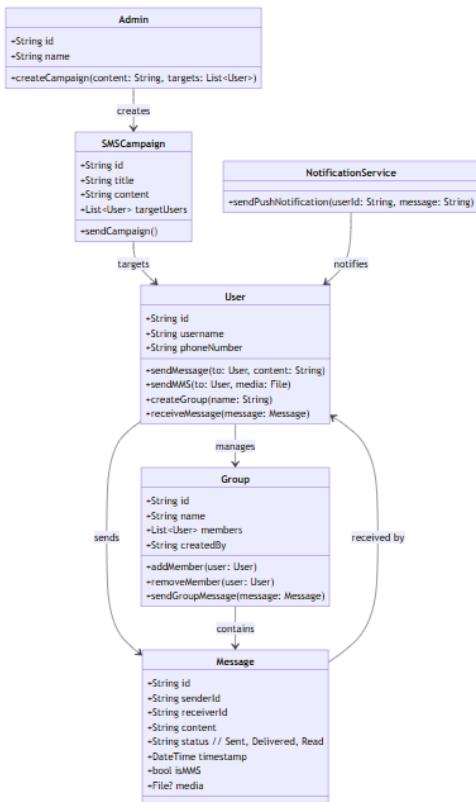
6A. Class Diagram

SMS Message texting



6B. Sequence Diagram

SMS Message texting Class diagram



Result: The Class and Sequence Diagrams are designed successfully for the project, SMS Message System.

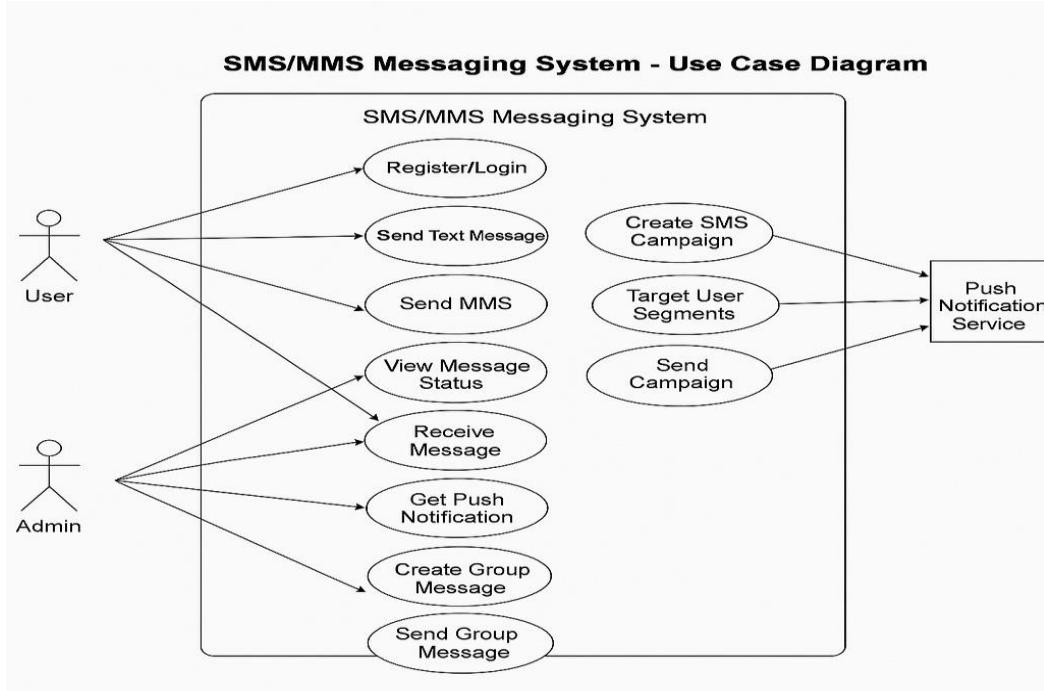
EXP NO: 7
Date :

DESIGNING USE CASE DIAGRAM AND ACTIVITY DIAGRAM

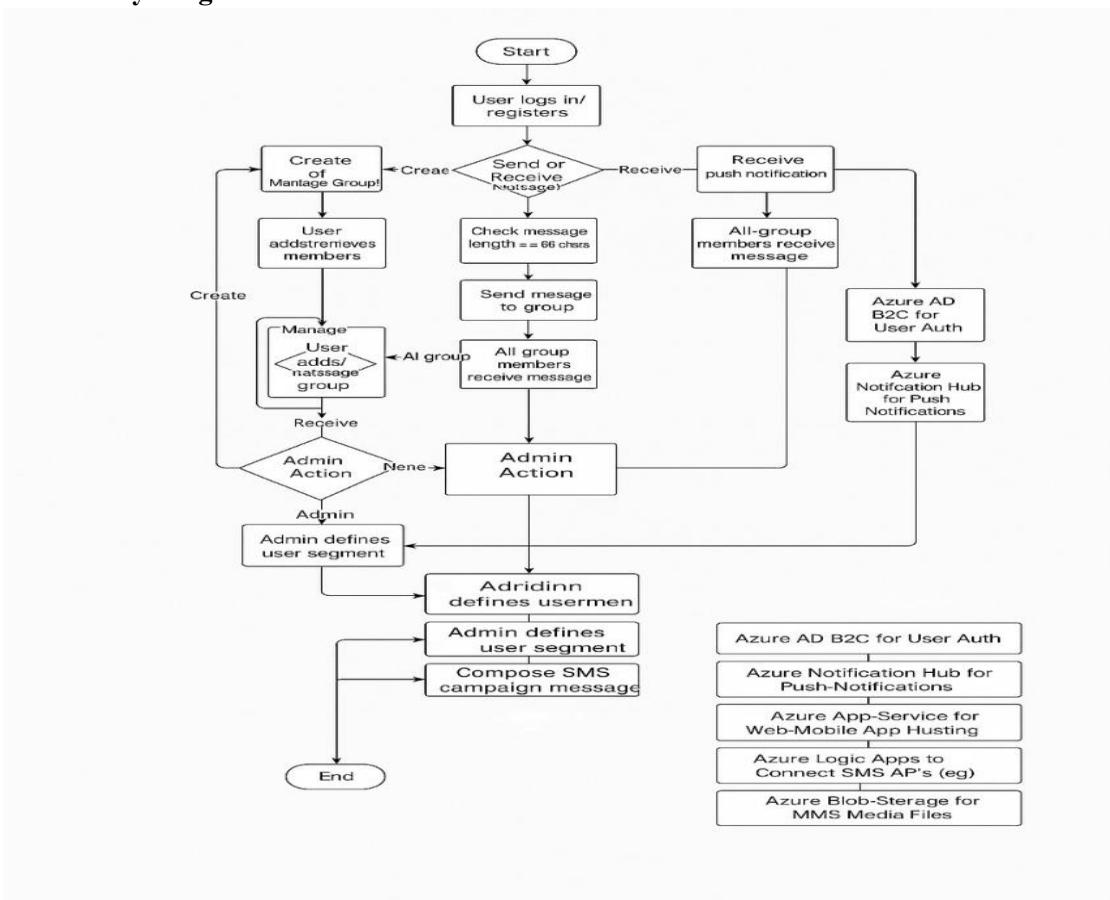
Aim:

To design a Use Case Diagram and an Activity Diagram for the project, SMS Messaging System

7A. Use Case Diagram



7B. Activity Diagram



Result: The Use Case and Activity Diagrams are designed successfully for the project, Batch Data Analysis and Visualization.

EXP NO: 8 Date :	<h2 style="margin: 0;">TESTING – TEST PLANS AND TEST CASES</h2>
-----------------------------------	---

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

1. User Authentication
2. Uploading and Managing Batch Data Files
3. Running Batch Analysis Jobs
4. Viewing Interactive Visualizations and Charts
5. Exporting Analysis Results

2. Define User Interactions

- Simulate real scenarios (e.g., upload dataset, trigger job, download result).

3. Design Happy Path Test Cases

- Validate all main functions work properly (e.g., successful login, upload, and visualization).

4. Design Error Path Test Cases

- Simulate unexpected or invalid user behavior (e.g., upload fails, unsupported file, job timeout).

5. Break Down Steps and Expected Results

- Each test case includes step-by-step actions and expected outcomes.

6. Use Clear Naming and IDs

- Example: TC01 – Successful File Upload, TC08 – Visualization Fails.

7. Separate Test Suites

- Suites grouped by modules (Login, File Upload, Job Execution, Visualization, Export).

8. Prioritize and Review

- Critical test cases marked as High Priority.
- Mapped to user stories in Azure DevOps. **1.New test plan**

The screenshot shows the Azure DevOps interface for creating a new test plan. The left sidebar is for the project 'Sms Messaging' and includes 'Overview', 'Boards', 'Repos', 'Pipelines', 'Test Plans' (which is selected), 'Test plans', 'Progress report', 'Parameters', 'Configurations', 'Runs', and 'Project settings'. The main area is titled 'New Test Plan' with fields for 'Name *' (set to 'Login'), 'Area Path *' (set to 'Sms Messaging'), 'Iteration *' (set to 'Sms Messaging\Sprint 3'), and a date range '6/17/2025 - 7/1/2025'. At the bottom are 'Create' and 'Cancel' buttons.

2. Test suite

The screenshot shows the Azure DevOps interface for defining a test suite. The left sidebar is for the project 'Sms Messaging' and includes 'Overview', 'Boards', 'Repos', 'Pipelines', 'Test Plans' (selected), 'Test plans', 'Progress report', 'Parameters', 'Configurations', 'Runs', and 'Project settings'. The main area is titled 'Test Suites' for the 'Future' iteration. It shows a list of suites under 'Login': 'chats display' and 'dashboard check'. A 'Define' tab is selected at the top right. The URL in the browser bar is 'Azure DevOps 2231501164 / Sms Messaging / Test Plans / Login'.

3. Test case

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

Batch Data Analysis and Visualization – Test Plans

USER STORIES

- As a user, I want to log in using my username and password so that I can access my account.
- As a user, I should not be able to submit the login form with empty fields so that I can provide the required data.
- As a user, I want to log out when I click the logout button so that I can end my session securely.
- As a user, I want to be redirected to the login page after logging out so that I know my session has ended and I can log in again if needed.
- As a user, I want to be able to upload multiple CSV files at once, so I can analyze them together.

Test Suites

Test Suite: TS01 - User Authentication (ID: 54)

1. TC01 – Successful Login ○

Action:

- Navigate to the login page
- Enter valid credentials
- Click "Login" ○

Expected Results:

- User redirected to dashboard.
- **Type:** Happy Path

2. TC02 – Prevent Login with

Empty Fields ○ **Action:**

- Navigate to the login page.
- Leave username and/or password fields empty.
- Click on "Login".

○ **Expected Results:**

- Validation error message is shown prompting user to fill required fields.
- **Type:** Error Path ○

Test Suite: TS02 - Logout Functionality(ID: 47)

1. TC03 – Successful Logout and Redirect ○

Action:

- Log in successfully.
- Click the "Logout" button.
- **Expected Results:**
 - User session ends.
 - User is redirected to the login page.
- **Type:** Happy Path

2. TC04– Access Protected Page After

Logout ○ Action:

- Logout.
- Attempt to navigate back to a protected page (e.g., dashboard) via browser back button or URL. ○ **Expected Results:**
 - User is redirected to the login page and denied access.
- **Type:** Error Path

Test Suite: TS03 - CSV Upload Functionality (ID: 88)

1. TC05 – Upload Multiple Valid CSV Files ○

Action:

- Log in successfully
- Navigate to the CSV upload section
- Select multiple valid .csv files
- Click "Upload"

○ **Expected Results:**

- All files are uploaded successfully.
- Files are listed and ready for analysis.

○ **Type:** Happy Path

2. TC06 – Upload Attempt Without Selecting

Files ○ Action:

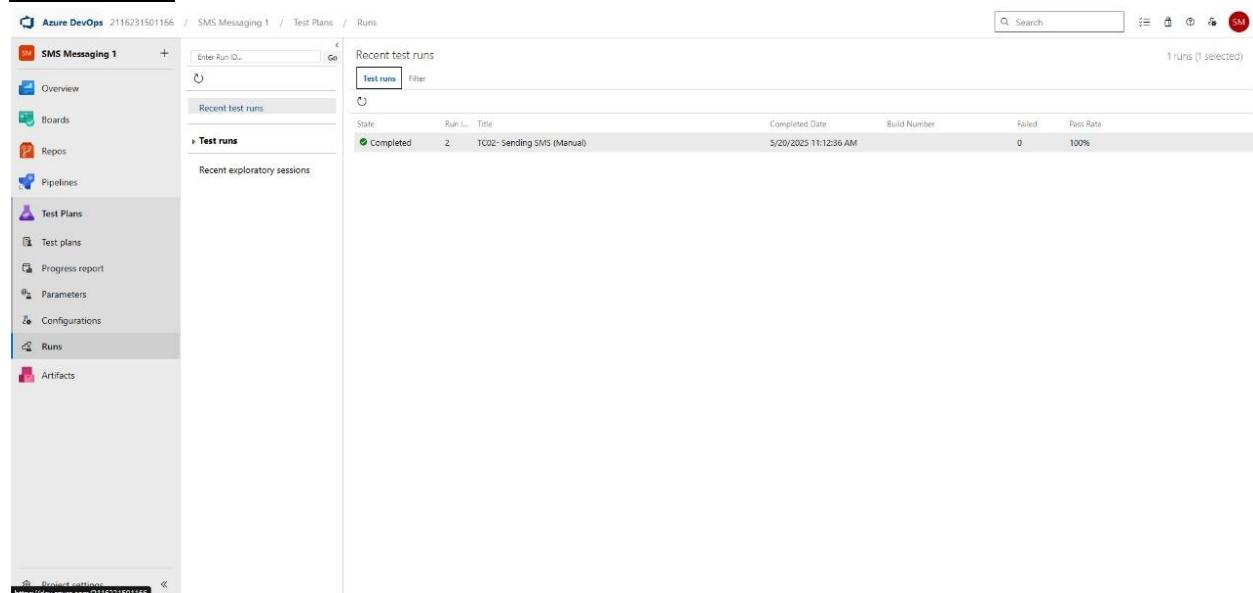
- Navigate to the CSV upload section
- Click "Upload" without selecting any files.

○ Expected Results:

- Validation message prompting the user to select at least one file.

Type: Error Path

Test Cases



The screenshot shows the Azure DevOps Test Plans interface. The left sidebar is titled 'SMS Messaging 1' and includes sections for Overview, Boards, Repos, Pipelines, Test Plans, Test plans, Progress report, Parameters, Configurations, Runs, and Artifacts. The 'Runs' section is currently selected. The main area displays a table of recent test runs. One row is visible, showing a completed run with the following details:

State	Run ID	Title	Completed Date	Build Number	Failed	Pass Rate
Completed	2	TC02- Sending SMS (Manual)	5/20/2025 11:12:36 AM		0	100%

Test and feedback

Showing it as an extension

4. Running the test cases

The screenshot shows the Azure DevOps interface for managing test plans. The left sidebar has a 'Test Plans' section selected. The main area displays a table titled 'Test Plans' with one row. The table columns are: Title, Test Plan ID, State, Area Path, Iteration, and Assigned To. The single row contains: 'TC01-Register and Login', '11', 'Active', 'SMS Messaging 1', 'SMS Messaging 1\Sprint 1', and a user icon for 'Surya Mv'. A 'Loading completed' message is visible at the bottom of the table area.

Title	Test Plan ID	State	Area Path	Iteration	Assigned To
TC01-Register and Login	11	Active	SMS Messaging 1	SMS Messaging 1\Sprint 1	Surya Mv

Your response was submitted.

Important thing you can do next:

[Save my response](#)

[Submit another response](#)

Microsoft Forms
Get set for your own event invitation!
[Start now →](#)

Privacy and cookies | Terms of use

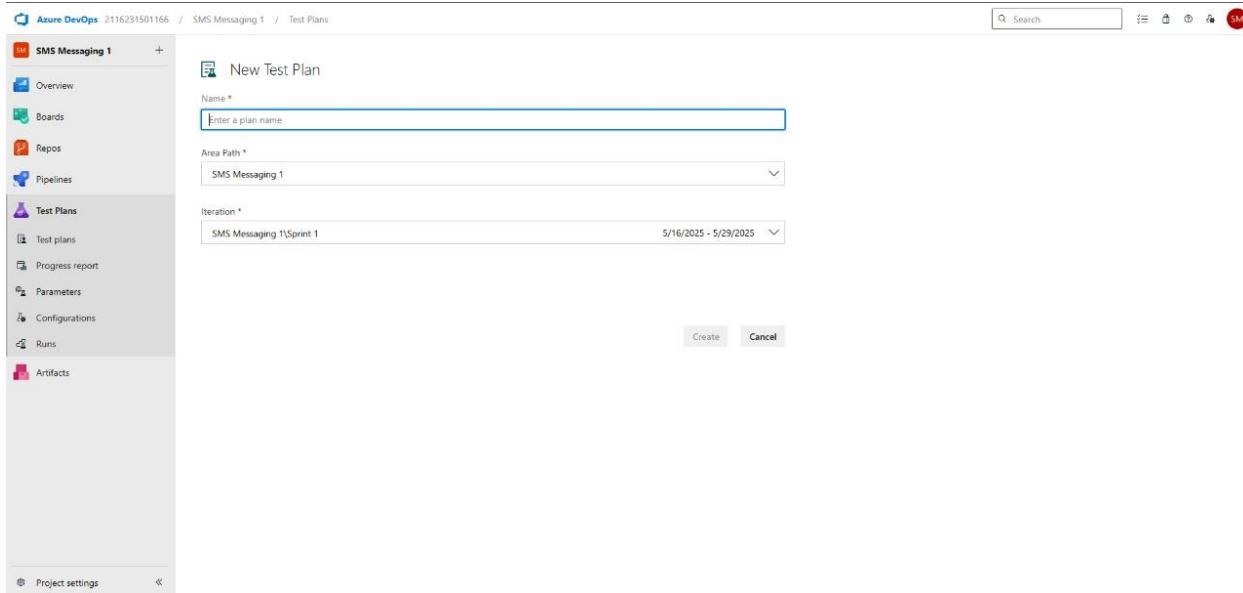
Azure DevOps 2116231501166 / SMS Messaging 1 / Test Plans

Test Plans

Mine All

Title	Test Plan ID	State	Area Path	Iteration	Assigned To
No favorites yet! Favorite a test plan to quickly access it ↗					
> SMS Messaging 1 Team					

Project settings <<



8. Test case results

#20250518.1 • Set up CI with Azure Pipelines

Failed : Messaging

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

Summary Code Coverage

Individual CI by Supraja R

Repository and version

Time started and elapsed

Related

Tests and coverage

View 3 changes

Errors 1

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

View documentation for troubleshooting failed runs

Jobs

Name	Status	Duration
Job	Failed	

5. Test report summary

- Assigning bug to the developer and changing state

6. Progress report

The screenshot shows a web browser window with a test plan titled "TC02- Sending SMS (ID: 15)". The "Execute" tab is active. A table displays a single test point: "Login successful" with status "In Progress", ordered 1, Test Case ID 19, Configuration Windows 10, and Tester Surya Mv.

7. View the new test case template

The screenshot shows the Azure DevOps 'Process' settings page. It displays the 'Test Case' template under 'All processes > BATCH DATA ANALYSIS'. The 'Steps' section is expanded, showing fields for 'Text (multiple lines)', 'Recent test case results', and 'Custom text (single line)'. Other sections like 'Deployment', 'Development', 'Related Work', and 'Status' are also visible.

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

EXP NO: 9 Date:	<h2>CI/CD PIPELINES IN AZURE</h2>
----------------------------------	-----------------------------------

Aim:

To create and demonstrate an Azure DevOps pipeline for automating application builds, tests, and deployment.

PROCEDURE:

Steps to Create and implement pipelines in Azure:

1. Sign in to Azure DevOps and Navigate to Your Project
Log in to dev.azure.com, select your organization, and open the project where your Student Management System code resides.
2. Connect a Code Repository (Azure Repos or GitHub)
Ensure your application code is stored in a Git-based repository such as Azure Repos or GitHub. This will be the source for triggering builds and deployments in your pipeline.
3. Create a New Pipeline
Go to the Pipelines section on the left panel and click “Create Pipeline”. Choose your source (e.g., Azure Repos Git or GitHub), and then select the repository containing your project code.
4. Choose the Pipeline Configuration
You can select either the YAML-based pipeline (recommended for version control and automation) or the Classic Editor for a GUI-based setup. If using YAML, Azure DevOps will suggest a template or allow you to define your own.
5. Define Build Stage (CI - Continuous Integration) from YAML file
6. Install dependencies (e.g., npm install, dotnet restore)

7. Build the application (dotnet build, npm run build)
8. Run unit tests (dotnet test, npm test)
9. Publish build artifacts to be used in the release stage
10. Save and Run the Pipeline for the First Time

Save the YAML or build definition and click “Run”.

Azure will fetch the latest code and execute the defined build and test stages.

11. Configure Continuous Deployment (CD)

Navigate to the Releases tab under Pipelines and click “New Release Pipeline”. Add an Artifact (from the build stage) and create a new Stage (e.g., Development, Production).

12. Configure the CD stage with deployment tasks such as deploying to Azure App Service, running database migrations or scripts, and restarting services using the Azure App Service Deploy task linked to your subscription and app details.

13. Set Triggers and Approvals

Enable continuous deployment trigger so the release pipeline runs automatically after a successful build.

For production environments, configure pre-deployment approvals to ensure manual verification before release.

14. Monitor Pipelines and Manage Logs

View all pipeline runs under the Runs section.

Check logs for build/test/deploy stages to debug any errors.

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

15. Review and Maintain Pipelines

Regularly update your pipeline tasks or YAML configurations as your application grows. Ensure pipeline runs are clean and artifacts are stored securely.

Integrate quality gates and code coverage policies to maintain code quality.

Pipeline

The screenshot shows the Azure DevOps Pipelines interface for a project named "Batch Data Analysis and Visualization". A successful pipeline run (#20250517.1) is displayed, titled "Set up CI with Azure Pipelines". The run was triggered by "Batch Data Analysis and Visualization (5)" and is retained as one of three recent runs by main (Branch). The pipeline summary includes sections for "Individual CI by NIKSHITHA H", "Repository and version" (Batch Data Analysis and Visualization, main branch), and "Time started and elapsed" (Just now, 20s). It also shows "Related" work items (0) and artifacts (0). A "Jobs" section lists a single job named "Job" which was successful and took 2 seconds. There are links to "View retention leases", "View 4 changes", and "Get started".

Result:

Successfully demonstrated pipelines in azure devops

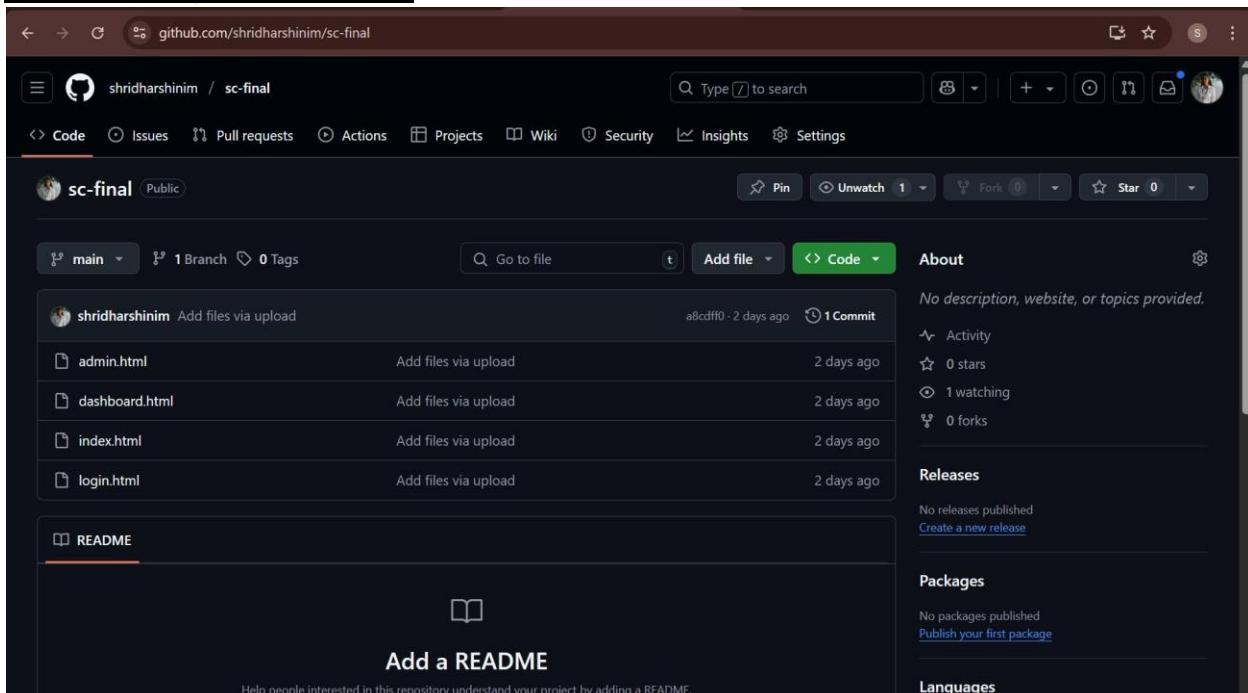
EXP NO: 10
Create Epic, Features, User Stories, Task
Date :

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 Music Playlist Batch Creator project.

GitHub Project Structure



The screenshot shows a GitHub repository page for 'sc-final' owned by 'shridharshinim'. The repository is public and contains a single commit from 'shridharshinim' titled 'Add files via upload'. The commit includes four files: 'admin.html', 'dashboard.html', 'index.html', and 'login.html', all added via upload 2 days ago. A 'README' file is present but has not been committed yet. The repository has 0 stars, 1 watching, 0 forks, and no releases or packages published. The 'Languages' section is also visible.

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.