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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>

The screenshot shows the Microsoft Azure portal homepage. At the top, there is a navigation bar with links for Microsoft, Azure, Explore, Products, Solutions, Pricing, Partners, Resources, Learn, Support, Contact Sales, Get started with Azure, Sign in, and a search bar. Below the navigation bar, the title "Microsoft Azure portal" is displayed, followed by a subtitle: "Build, manage, and monitor everything from simple web apps to complex cloud applications in a single, unified console". There are two buttons: "Sign in" and "New to Azure? Get started >". A dark blue banner at the bottom of the page contains the text: "Check out the how-to video series for tips on deploying your cloud workloads from the Azure portal. >". In the center of the page, there is a section titled "Azure mobile app" with the subtext: "Stay connected to your Azure resources—anytime, anywhere. Now available for iOS and Android." To the right of this text, there are two screenshots of the Azure mobile app interface on both iOS and Android devices.

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", items include Azure Device Registry, Azure DevOps organizations, Azure Database for MySQL servers, and Education. Under "Marketplace", items include Build Agents for Azure DevOps, Azure DevOps Auditing, Azure Devops Backup Tool, and Self Hosted Runner for Azure DevOps. Under "Documentation", there's 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.

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 standing on it, surrounded by clouds and a network of orange lines. 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.

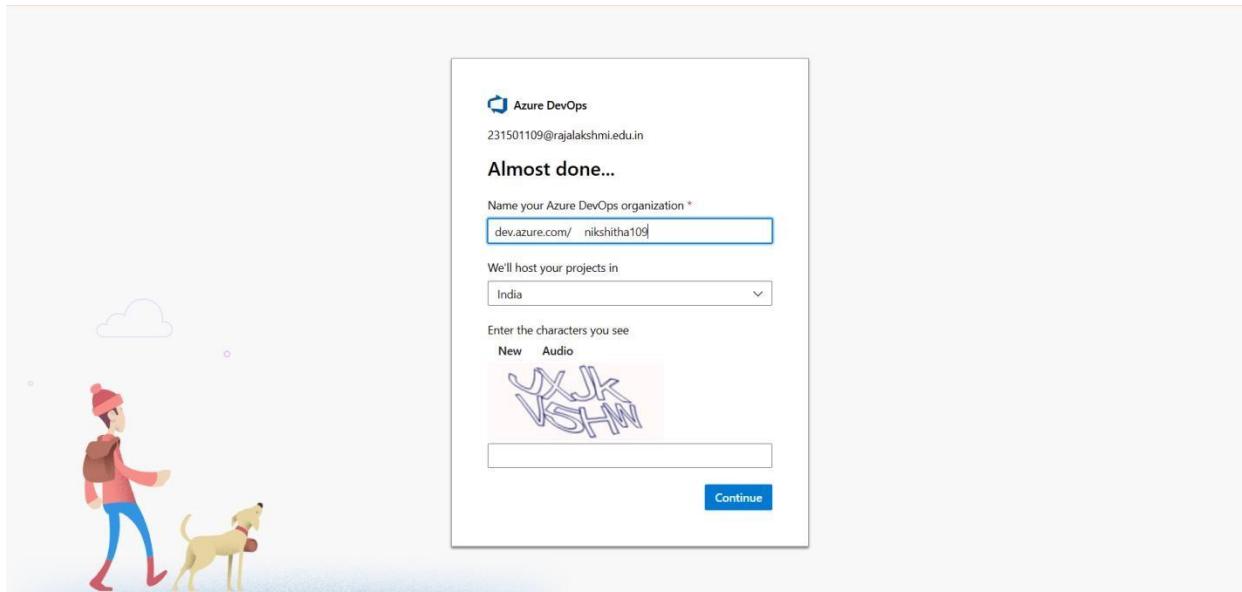
EXP NO: 2
Date :

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.

Create new project

Project name *

Description

Visibility

Public
Anyone on the internet can view the project. Certain features like TFVC are not supported.

Private
Only people you give access to will be able to view this project.

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

Advanced

The screenshot shows the 'Create new project' dialog box. At the top, it says 'Create new project'. Below that is a 'Project name *' field containing 'SMS Message Textingg'. There is a 'Description' field which is currently empty. Under 'Visibility', there are two options: 'Public' and 'Private'. The 'Private' option is selected and has a blue border around it. A note below says 'Public projects are disabled for your organization. You can turn on public visibility with [organization policies](#)'. At the bottom, there is a 'Advanced' button with a downward arrow.

- 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 user profile for Supraja R with a large circular icon containing the letters 'SR'. Below the profile are sections for Microsoft account, location (India), and email (rsupraja2005@gmail.com). A 'Visual Studio Dev Essentials' section is also present. The main area lists three organizations:

- dev.azure.com/2116231501164** (Owner): Create a Team Project and start collaborating with your team now! Actions: Create new organization, Open in Visual Studio.
- dev.azure.com/2231501164** (Owner): Projects: Sms Messaging, sms. Actions: Open in Visual Studio.
- dev.azure.com/231501164** (Owner)

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' and a 'About this project' section. It describes the system as a communication platform for text messages, mentioning integration with GSM modems or APIs like Twilio or Nexmo. Key features include user authentication, contact management, message logs, scheduled messaging, and delivery status tracking. The 'Project stats' section shows boards for the last 7 days.

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.

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

text messaging system Team

Backlog **Analytics**

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

Planning

Drag and drop work items to include them in a sprint.

text messaging system Team backlog

sprint 1 4/14/2025 - 4/28/2025
Planned Effort: 0 - 11 working days
11

sprint 2 4/29/2025 - 5/13/2025
No work scheduled yet

sprint 3 5/14/2025 - 5/28/2025
11 working days
No work scheduled yet

+ New Sprint

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

Sms Messaging Team

Backlog **Analytics**

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

Planning

Drag and drop work items to include them in a sprint.

Sms Messaging Team backlog

Sprint 1 5/16/2025 - 5/30/2025
Planned Effort: 0 15 working days
1

Sprint 2 6/2/2025 - 6/16/2025
15 working days
No work scheduled yet

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

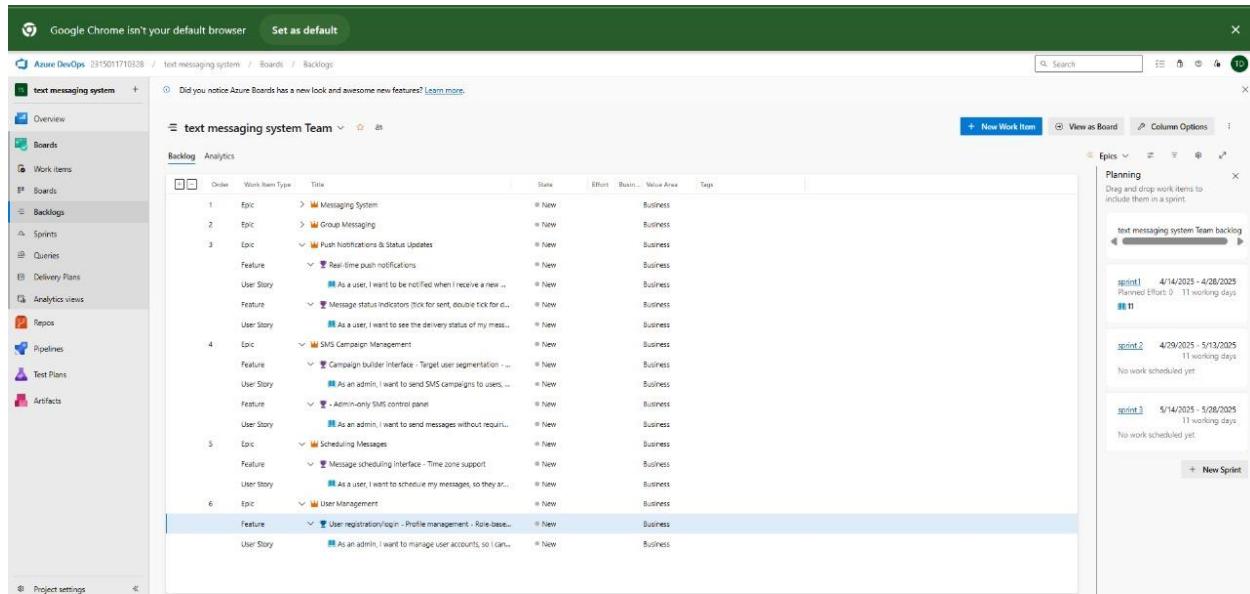
EXP NO: 3
Date :

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 listed are:

- Epic 1: Messaging System
- Epic 2: Group Messaging
- Epic 3: Push notifications & Status Updates
 - Feature: Real-time push notifications
 - User Story: As a user, I want to be notified when I receive a new message.
 - Feature: Message status indicator (like for sent, bounce back etc.)
 - User Story: As a user, I want to see the delivery status of my messages.
- Epic 4: SMS Campaign Management
 - Feature: Campaign builder interface - Target user segmentation
 - User Story: As an admin, I want to send SMS campaigns to users.
 - Feature: Admin-only SMS control panel
 - User Story: As an admin, I want to send messages without requiring approval.
- Epic 5: Scheduling Messages
 - Feature: Message scheduling interface - Time zone support
 - User Story: As a user, I want to schedule my messages, so they are sent at the right time.
- Epic 6: User Management
 - Feature: User registration/login - Profile management - Role-based access control
 - User Story: As an admin, I want to manage user accounts, so I can assign roles.

The backlog table includes columns for Order, Work Item Type, Title, State, Effort, Business Value, Value Area, and Tags. The 'Business' value area is consistently selected for all items. The backlog is currently in 'Planning' mode, with three sprints visible on the right side:

- sprint 1: 4/14/2025 - 4/28/2025, Planned Effort: 0 - 11 working days
- sprint 2: 4/29/2025 - 5/13/2025, No work scheduled yet
- sprint 3: 5/14/2025 - 5/28/2025, No work scheduled yet

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:** Shows three sprints: Sprint 1 (5/16/2025 - 5/30/2025), Sprint 2 (6/2/2025 - 6/16/2025), and Sprint 3 (6/17/2025 - 7/1/2025). Sprint 1 has a planned effort of 0.15 working days and 1 task assigned.

3. Fill in Features

The screenshot shows the 'New User Story' dialog in Azure DevOps. The story is titled 'Real time notifications' and is categorized under 'Sms Messaging' in the 'Sms Messaging' iteration.

Description: Click to add Description.

Acceptance Criteria: Click to add Acceptance Criteria.

Discussion: (Empty)

Planning:

- Story Points: 2
- Priority: 2
- Risk: (Empty)

Classification:

- Value area: Business

Development:

- Add link: (Empty)

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](#)

4.Fill in User Stories

The screenshot shows the 'USER STORY 3' creation page in Microsoft Azure DevOps. At the top, there is a summary bar with the story title 'As a user, I want to be able to upload multiple CSV files at once, so I can analyze them together.' Below this are sections for 'Description', 'Acceptance Criteria', 'Discussion', 'Planning', 'Classification', and 'Deployment'. The 'Description' section has a placeholder 'Click to add Description.'. The 'Acceptance Criteria' section has a placeholder 'Click to add Acceptance Criteria.'. The 'Discussion' section contains a comment placeholder 'Add a comment. Use # to link a work item, @ to mention a person, or ! to link a pull request.' The 'Planning' section shows 'State: New', 'Area: Batch data analysis and visualization', and 'Iteration: Batch data analysis and visualization\Sprint 1'. It also includes 'Story Points', 'Priority (2)', and 'Risk'. The 'Classification' section shows 'Value area: Business'. The 'Deployment' section provides instructions on tracking releases. The 'Development' section includes a 'Related Work' link. The bottom of the screen shows a dark navigation bar.

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 is collapsed, showing options like Overview, Boards, Work items, Boards, Backlogs, Sprints, Queries, Delivery Plans, Analytics views, Repos, Pipelines, Test Plans, and Artifacts. The main area displays a 'Sprint 1' board with columns: New, Active, Resolved, and Closed. There are four user stories listed under the 'New' column:

- #9 As a user, I want to see my message history with each contact, so I can refer to past messages.
Status: New
Assignee: Unassigned
- #10 As a user, I want to create group chats, so I can communicate with multiple people at once.
Status: New
Assignee: Unassigned
- #8 As a user, I want to send multimedia messages via MMS, so I can share images and videos.
Status: New
Assignee: Unassigned
- #11 Enables creation and naming of group chats. - Allows adding/removing participants and assigning roles (creator/admin).
Status: New
Assignee: 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 is collapsed, showing options like Overview, Boards, Work items, Boards, Backlogs, Sprints, Queries, Delivery Plans, Analytics views, Repos, Pipelines, Test Plans, and Artifacts. The main area displays a 'Sprint 1' board with columns: New, Active, Resolved, and Closed. There are two user stories listed under the 'New' column:

- #5 Admin access
Status: New
Assignee: Unassigned
- #7 As a user, I want to send and receive text messages, so I can communicate with others.
Status: New
Assignee: 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 interface for the 'Sms Messaging' project. The left sidebar is open, showing options like Overview, Boards, Work items, Backlogs, Sprints (which is selected), Queries, Delivery Plans, Analytics views, Repos, and Project settings. The main area is titled 'Sms Messaging Team' and shows a 'Taskboard' for 'Sprint 3'. The board has columns for New, Active, Resolved, and Closed. Two tasks are visible in the 'New' column:

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

At the top right, there are buttons for 'New Work Item' and 'Column Options'. A search bar and other navigation icons are at the very top.

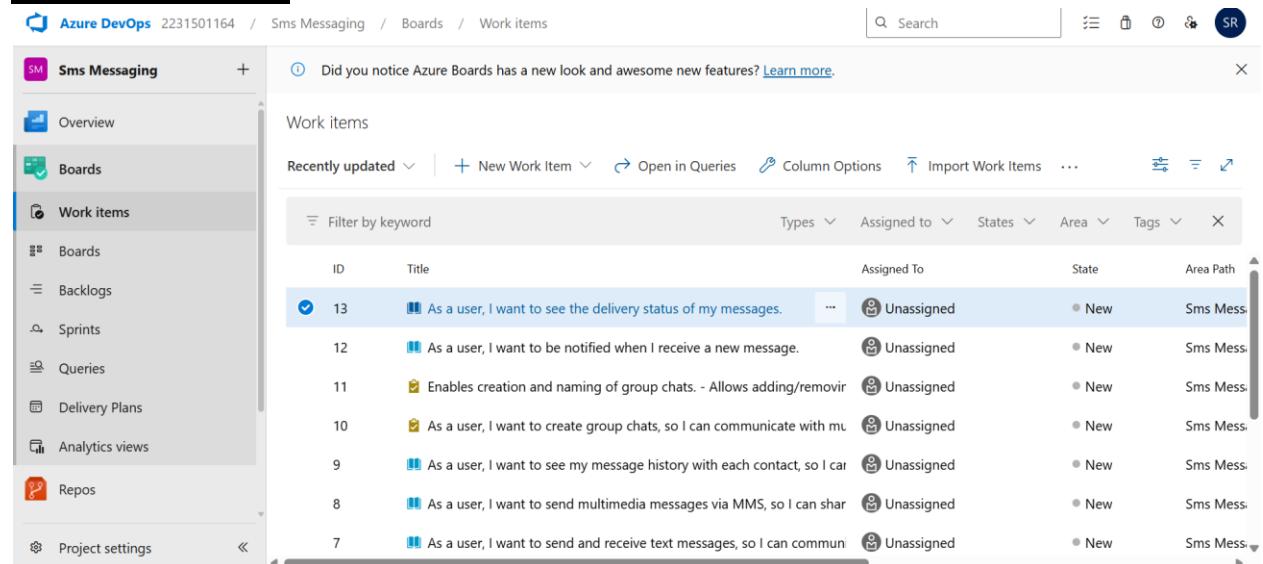
Result: The Sprints are created for the project, Batch Data Analysis and Visualization.

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

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

Poker Estimation



The screenshot shows the Azure Boards interface for the 'Sms Messaging' project. The left sidebar is collapsed, and the main area displays a list of work items under the 'Work items' tab. The list includes the following user stories:

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...	Unassigned	New	Sms Mess...
10	As a user, I want to create group chats, so I can communicate with more...	Unassigned	New	Sms Mess...
9	As a user, I want to see my message history with each contact, so I can...	Unassigned	New	Sms Mess...
8	As a user, I want to send multimedia messages via MMS, so I can share...	Unassigned	New	Sms Mess...
7	As a user, I want to send and receive text messages, so I can commun...	Unassigned	New	Sms Mess...

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

EXP NO: 6
Date :

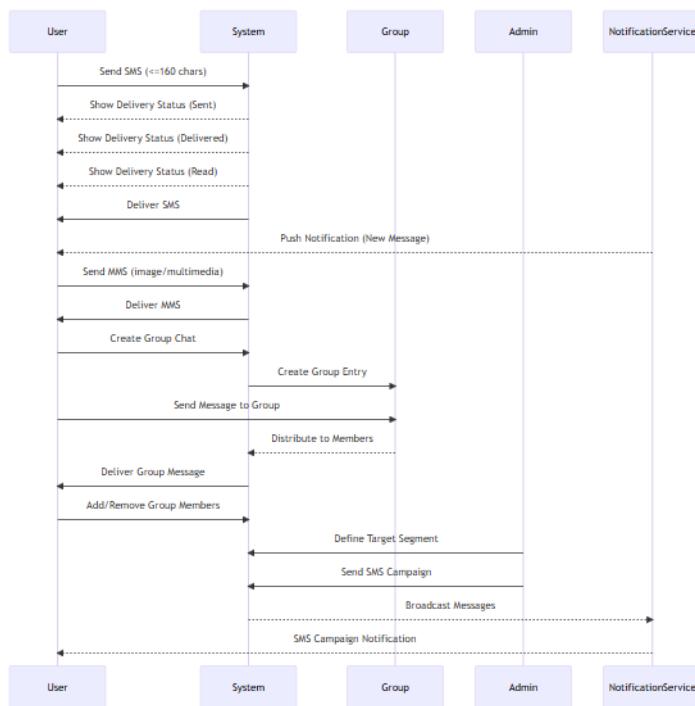
DESIGNING CLASS DIAGRAM AND SEQUENCE DIAGRAM

Aim:

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

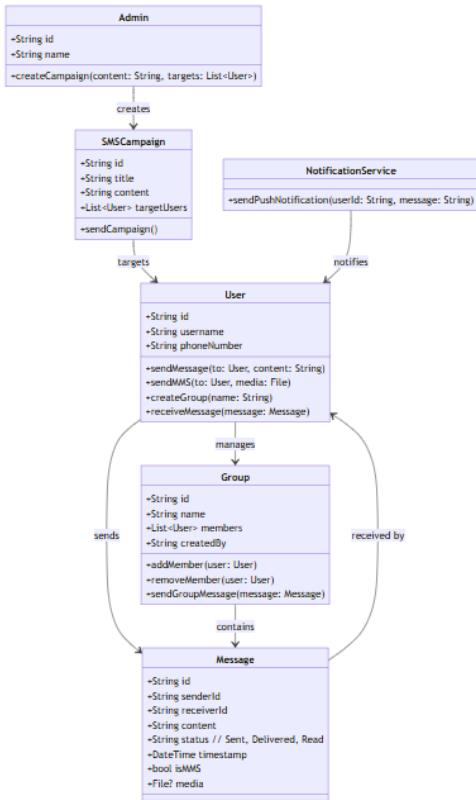
6A. Class Diagram

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.

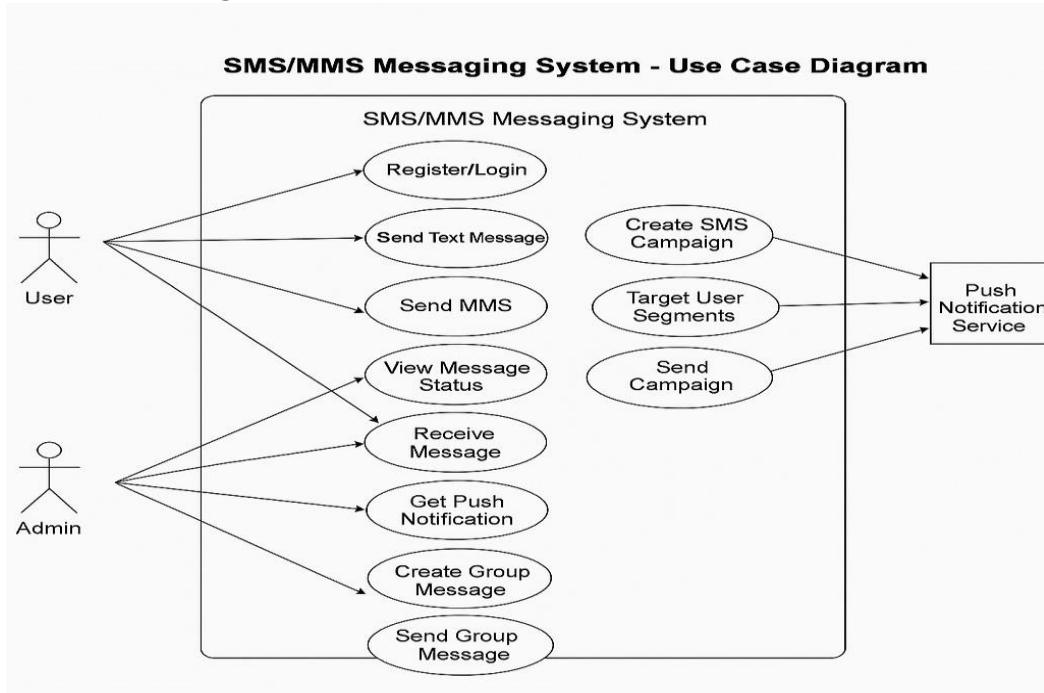
EXP NO: 7
Date :

DESIGNING USE CASE DIAGRAM AND ACTIVITY DIAGRAM

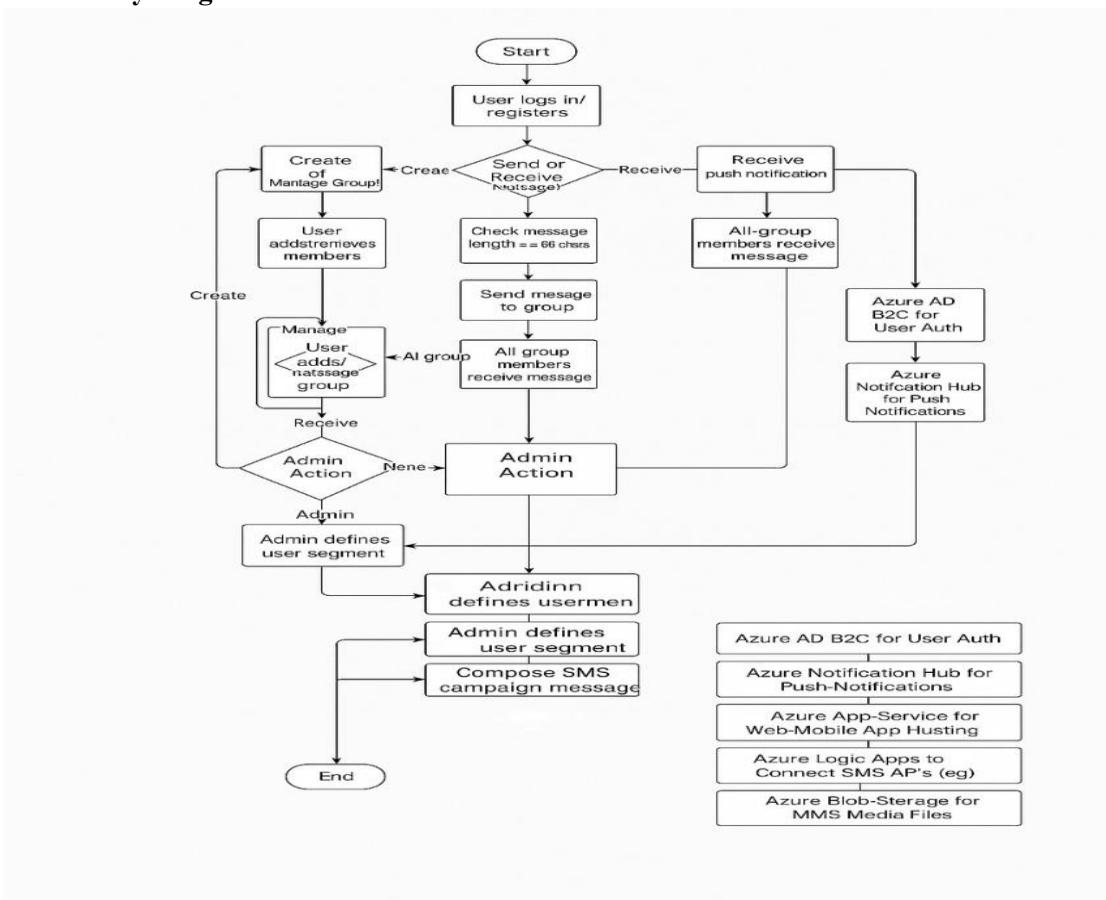
Aim:

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>
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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'), and 'Iteration *' (set to 'Sms Messaging\Sprint 3'). A date range '6/17/2025 - 7/1/2025' is also shown. At the bottom right are 'Create' and 'Cancel' buttons.

2.Test suite

The screenshot shows the Azure DevOps interface for managing test suites. 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' and shows a list of suites under the 'Login' category. The 'chats display' suite is currently selected. The interface includes a 'Future' filter at the top and tabs for 'Define', 'Execute', and 'Ch'. A search bar at the top allows filtering by suite name.

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:

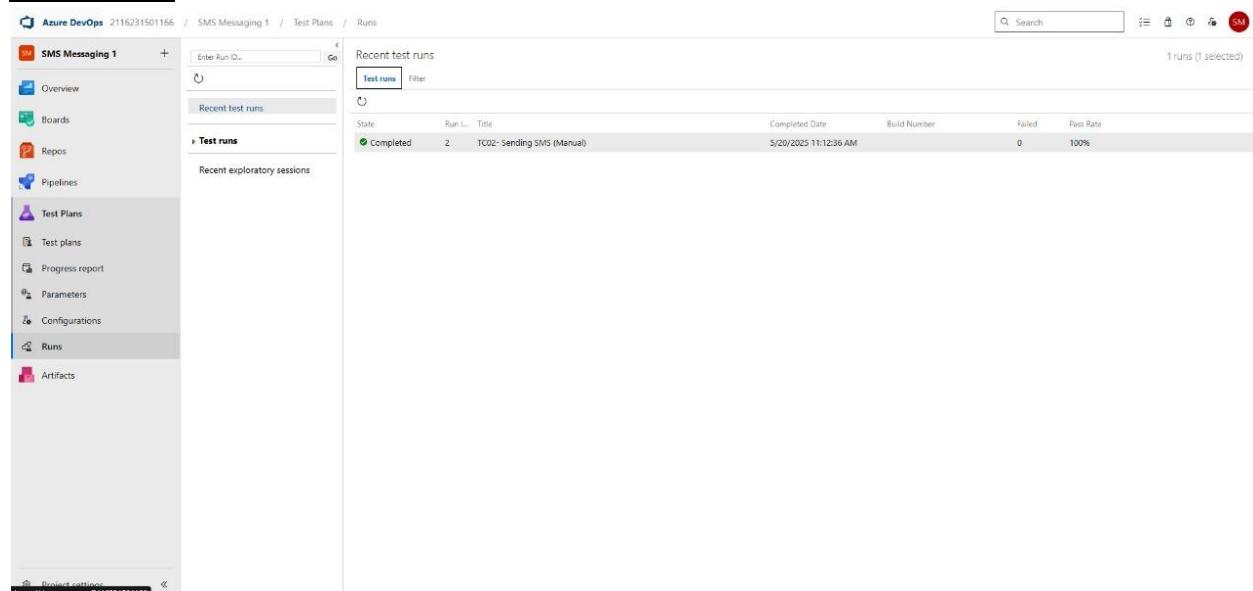
- Navigate to the CSV upload section
- Click "Upload" without selecting any files.

○ 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 Cases interface. The left sidebar has 'SMS Messaging 1' selected. Under 'Test Plans', 'Runs' is highlighted. The main area shows a table of recent test runs:

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

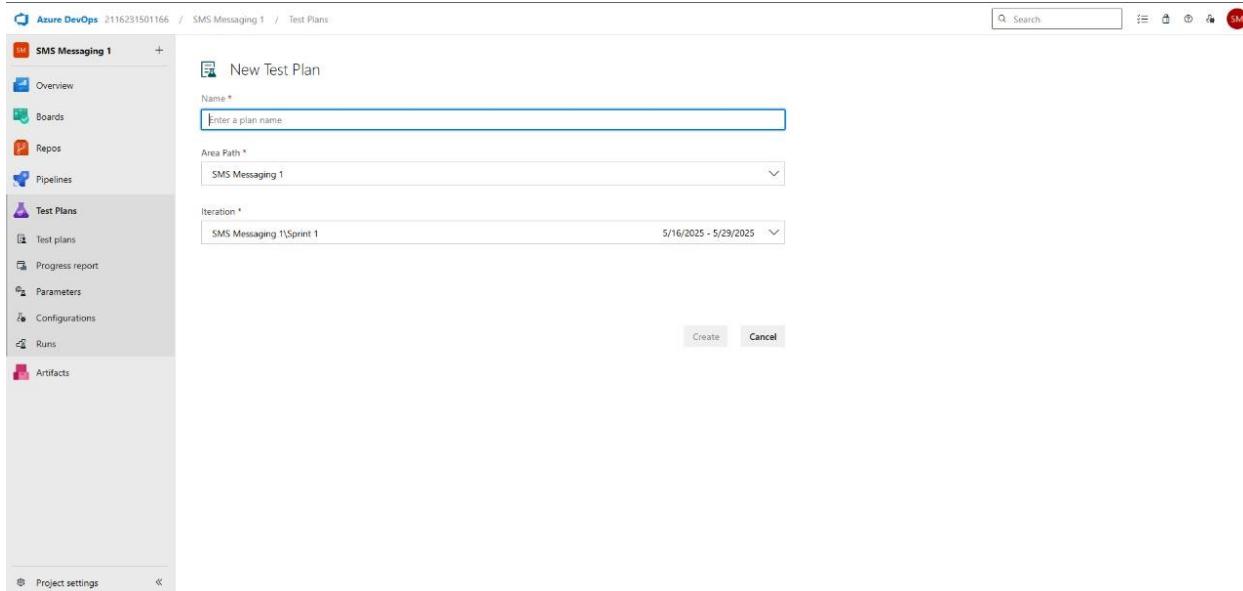
Showing it as an extension

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 search bar and filter options are at the top right. A message 'Loading completed' is visible at the bottom.

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

The image shows two overlapping web pages. The top page is a Microsoft Forms response submission confirmation. It features a green checkmark icon, the text "Your response was submitted.", and a section titled "Important thing you can do next:" with two buttons: "Save my response" and "Submit another response". Below this is an advertisement for Microsoft Forms with the text "Get set for your own event invitation!" and a "Start now →" button. The bottom page is the "Test Plans" section of the Azure DevOps interface for the project "SMS Messaging 1". The sidebar on the left lists "SMS Messaging 1" under "Azure DevOps", followed by "Overview", "Boards", "Repos", "Pipelines", "Test Plans" (which is selected), "Test plans", "Progress report", "Parameters", "Configurations", "Runs", and "Artifacts". The main content area shows a table titled "Test Plans" with columns: Title, Test Plan ID, State, Area Path, Iteration, and Assigned To. A message at the top of the table says "No favorites yet! Favorite a test plan to quickly access it." and shows a link to "SMS Messaging 1 Team".



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: Sms Messaging
main c6d3cd8f

Time started and elapsed: Just now <1s

Related: 0 work items 0 artifacts

Tests and coverage: Get started

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, specifically the "Test Case" template. It includes sections for "Steps", "Recent test results", "Deployment", "Development", "Related Work", and "Status". The "Steps" section contains a "Text (multiple lines)" input field. The "Recent test results" section contains a "text" input field. The "Status" section includes "Priority" (Integer) and "Automation status" (Text (single line)) fields.

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

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

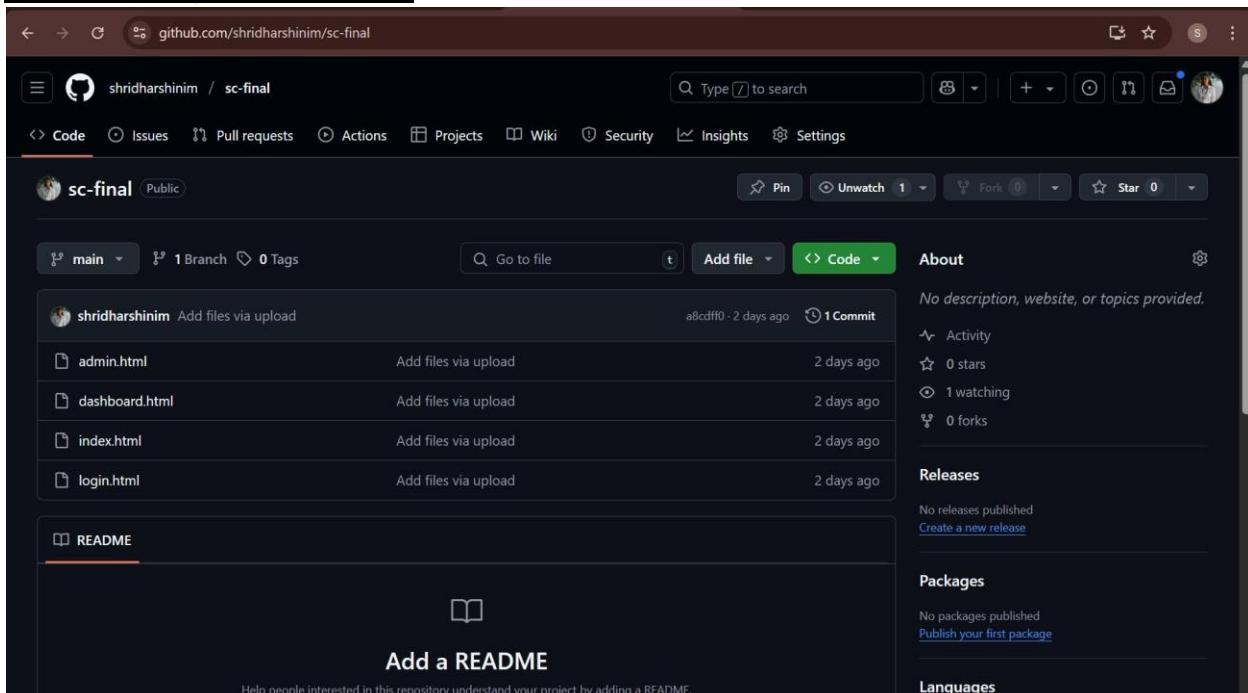
EXP NO: 10
Create Epic, Features, User Stories, Task
Date :

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 named 'sc-final' owned by 'shridharshinim'. The repository is public and contains one branch ('main') and one commit ('a8cdff0 - 2 days ago'). The commit message is 'Add files via upload'. The repository has 0 stars, 1 watching, 0 forks, and no releases or packages published. A 'README' file is present. The interface is dark-themed.

File	Description	Last Commit
admin.html	Add files via upload	2 days ago
dashboard.html	Add files via upload	2 days ago
index.html	Add files via upload	2 days ago
login.html	Add files via upload	2 days ago

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.