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

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING LAB MANUAL

CS23432 – Software Construction

(REGULATION 2023)

RAJALAKSHMI ENGINEERING COLLEGE
Thandalam, Chennai-602015

Name: Daksh Khinvasara

Register No: 231801025

Year / Branch / Section: 2nd / AI&DS / FA

Semester: IV

Academic Year: 2024 - 2025

INDEX

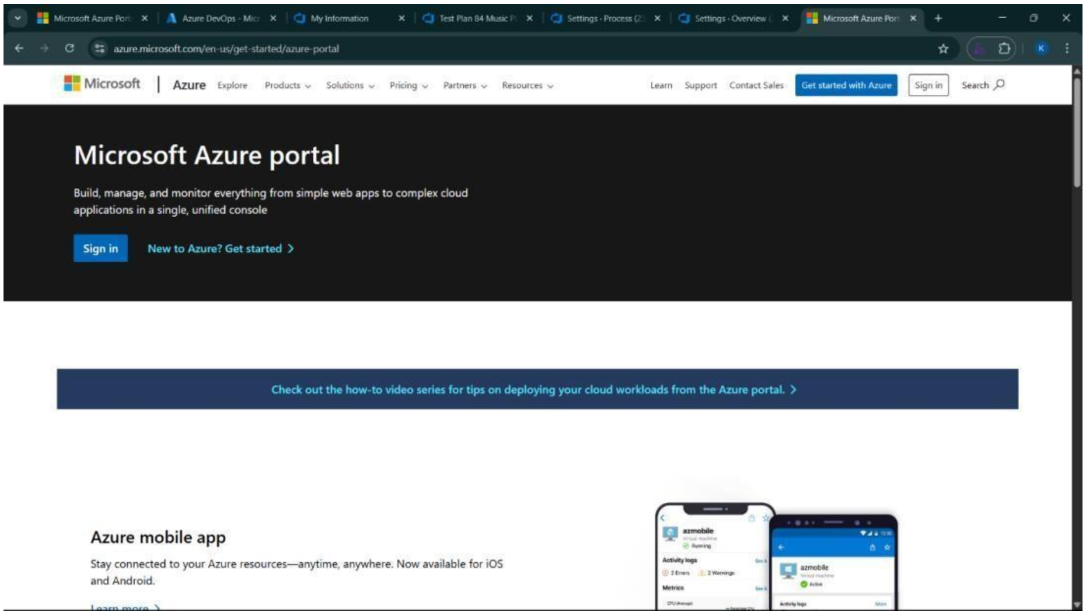
EXP NO: 1	**AZURE DEVOPS ENVIRONMENT SETUP**

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



Microsoft Azure portal

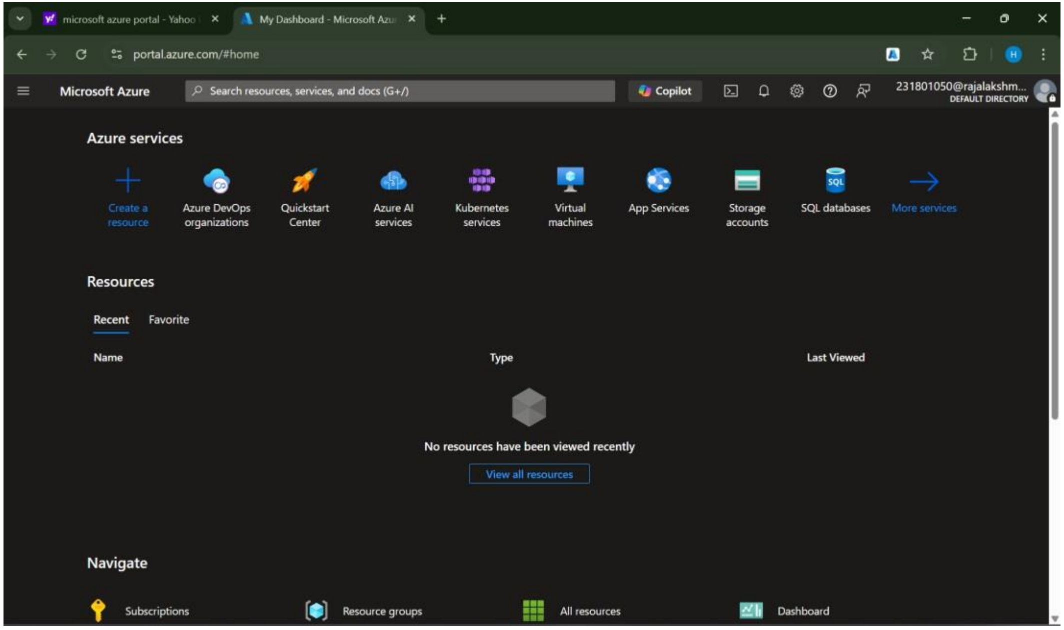
Build, manage, and monitor everything from simple web apps to complex cloud applications in a single, unified console

Check out the how-to video series for tips on deploying your cloud workloads from the Azure portal.

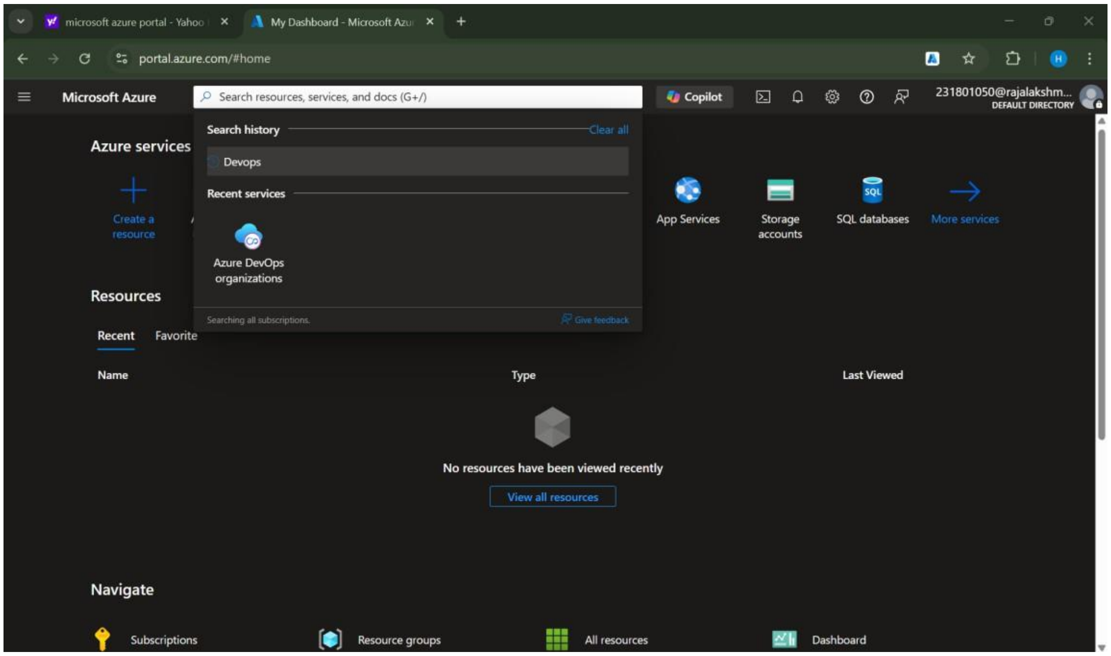
Azure mobile app

Stay connected to your Azure resources—anytime, anywhere. Now available for iOS and Android.

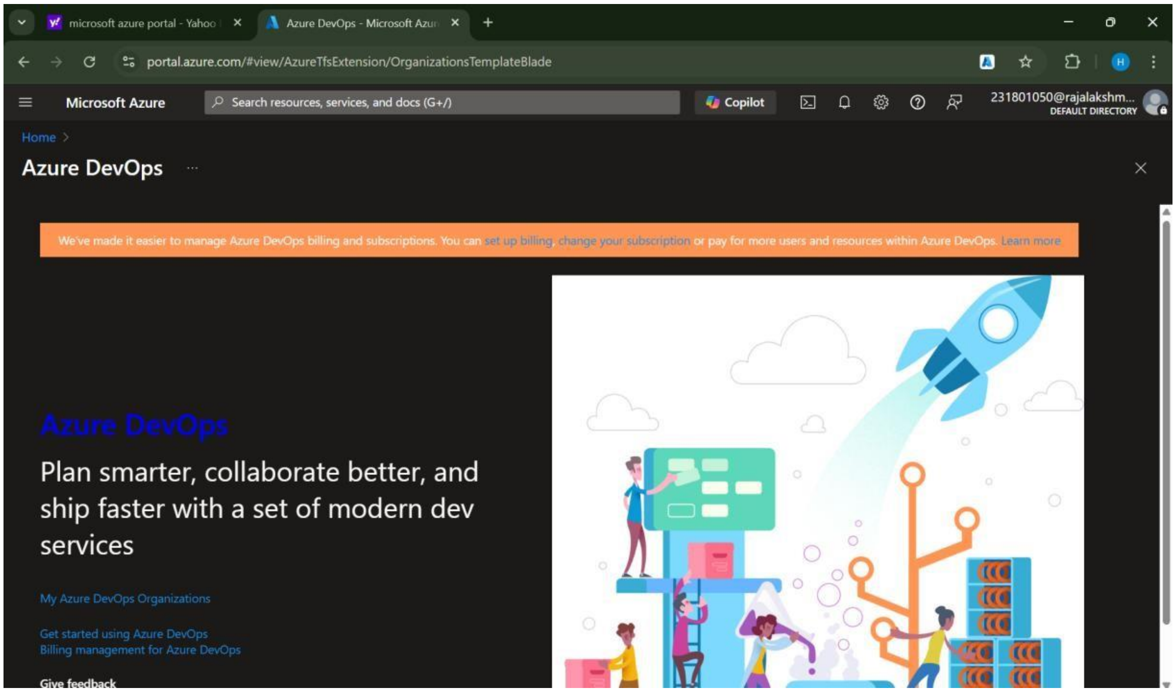
2. Azure home page



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



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.


microsoft azure portal - Yahoo
Azure DevOps - Microsoft Azure
portal.azure.com/#view/AzureTfsExtension/OrganizationsTemplateBlade
Microsoft Azure
Search resources, services, and docs (G+/)
Copilot
231801050@rajalakshm...
DEFAULT DIRECTORY
Home >
Azure DevOps

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

Azure DevOps

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

My Azure DevOps Organizations
Get started using Azure DevOps
Billing management for Azure DevOps
Give feedback

Result:

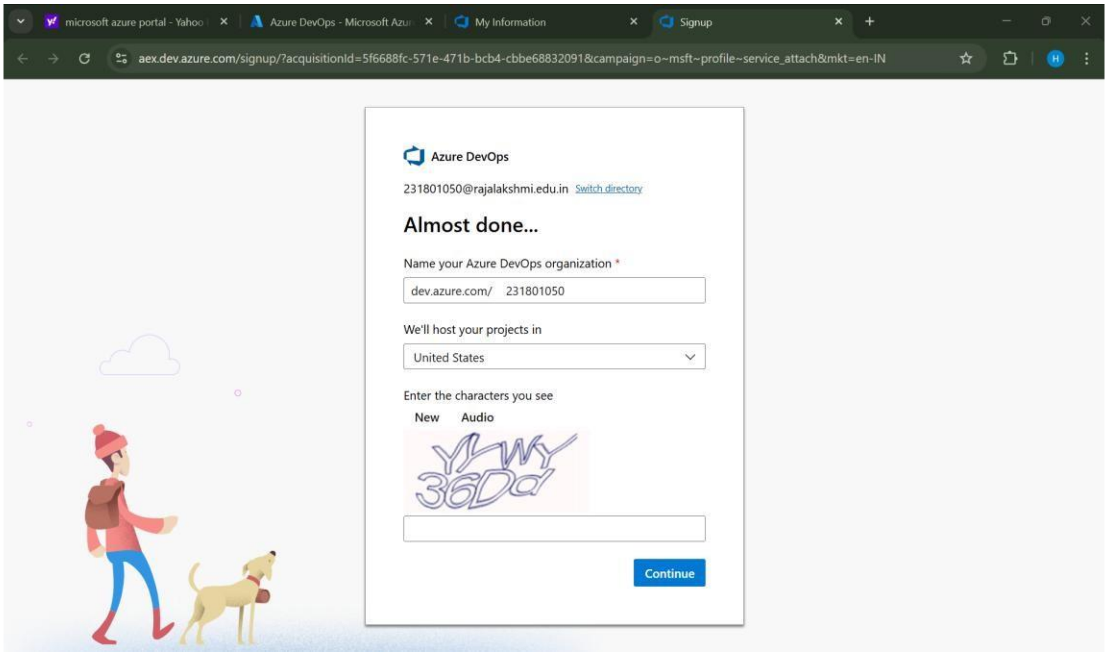
Successfully accessed the Azure DevOps environment and created a new organization through the Azure portal.

EXP NO: 2	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



aex.dev.azure.com/signup/?acquisitionId=5f6688fc-571e-471b-bcb4-cbbe68832091&campaign=o~msft~profile~service_attach&mkt=en-IN

231801050@rajalakshmi.edu.in

Almost done...

Name your Azure DevOps organization *

dev.azure.com/ 231801050

We'll host your projects in

United States

Enter the characters you see

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.

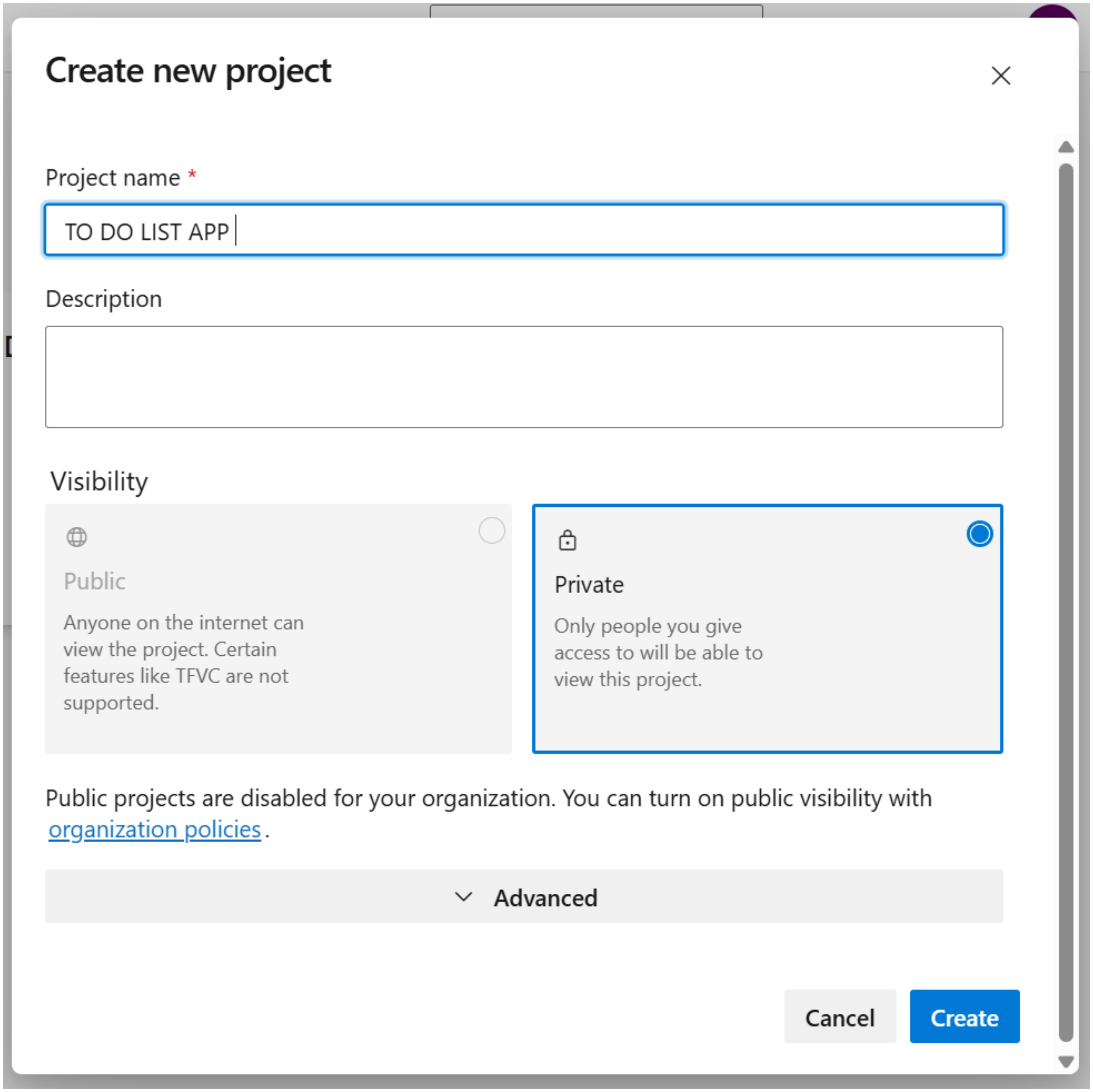
c. Enter the project name, description, and visibility options:

***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 *

TO DO LIST APP

Description

Visibility

○ Public

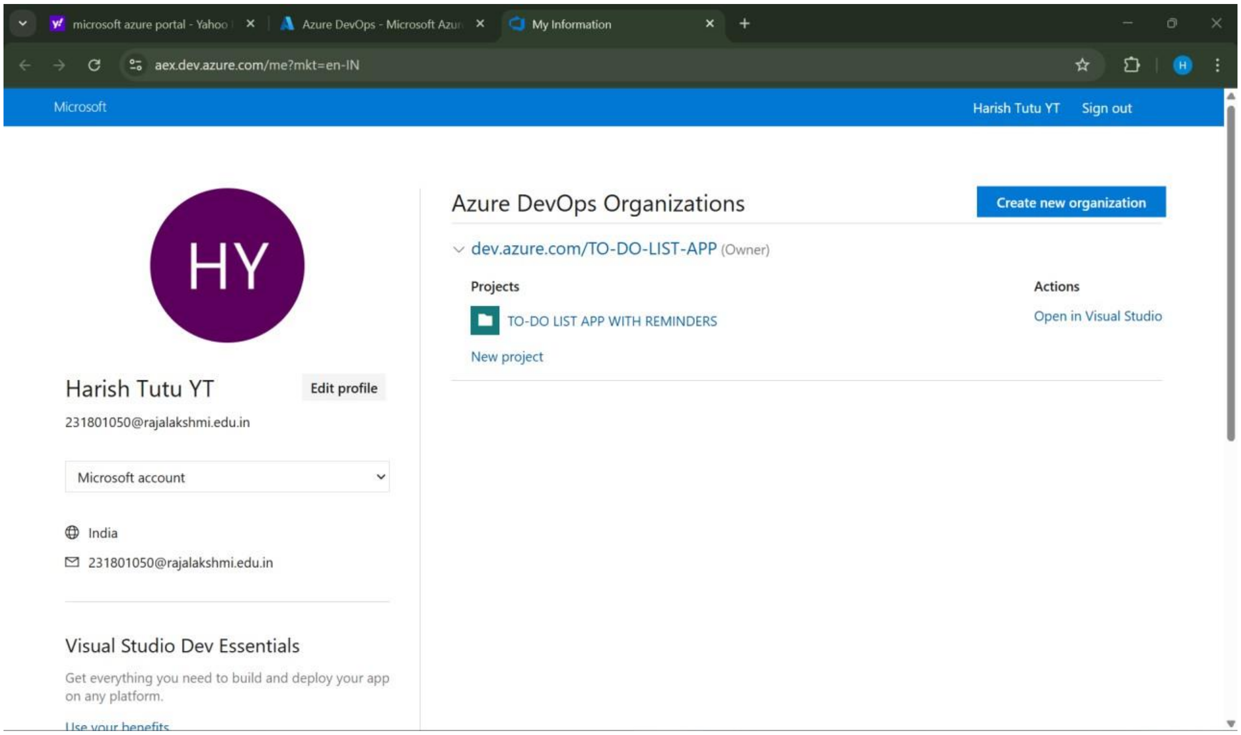
Anyone on the internet can view the project. Certain features like TFVC are not supported.

● 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.

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.



Harish Tutu YT

231801050@rajalakshmi.edu.in

Microsoft account

India

231801050@rajalakshmi.edu.in

Visual Studio Dev Essentials

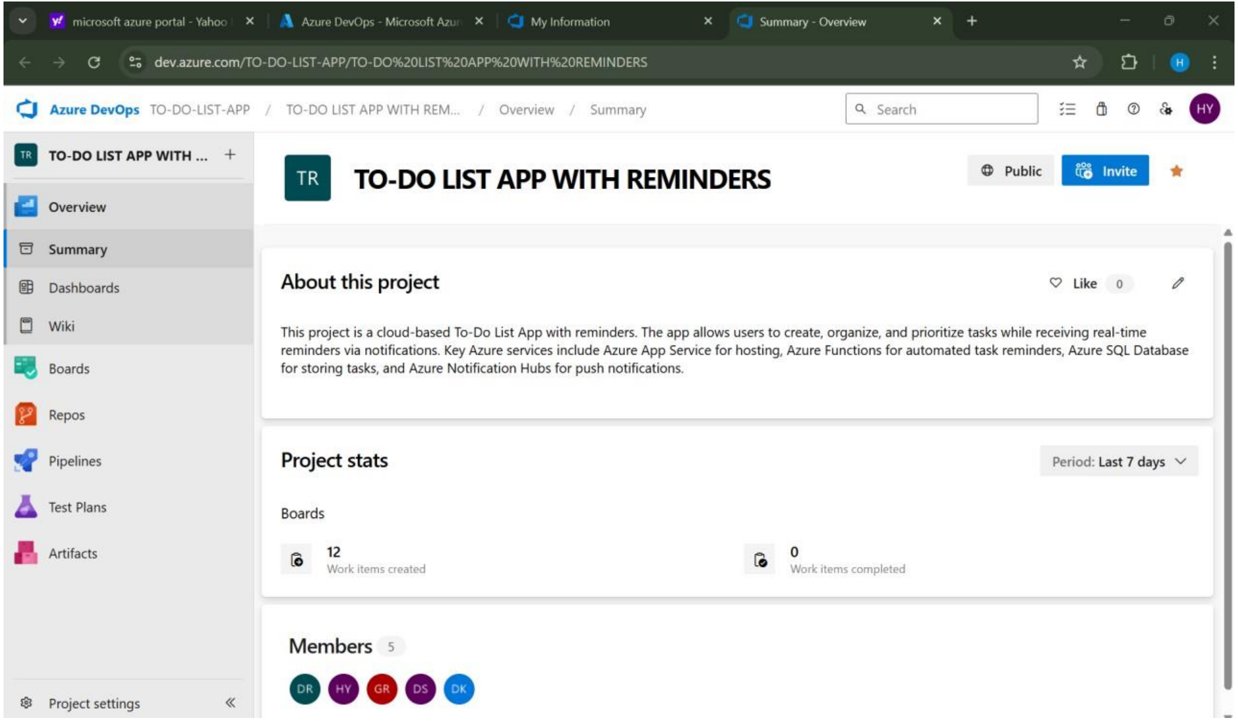
Get everything you need to build and deploy your app on any platform.

Azure DevOps Organizations

dev.azure.com/TO-DO-LIST-APP (Owner)

Projects	Actions
TO-DO LIST APP WITH REMINDERS	Open in Visual Studio

4. Project dashboard


microsoft azure portal - Yahoo
Azure DevOps - Microsoft Azur
My Information
Summary - Overview
dev.azure.com/TO-DO-LIST-APP/TO-DO%20LIST%20APP%20WITH%20REMINDERS
Azure DevOps
TO-DO-LIST-APP / TO-DO LIST APP WITH REM... / Overview / Summary
Search
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TO-DO LIST APP WITH ...
Overview
Summary
Dashboards
Wiki
Boards
Repos
Pipelines
Test Plans
Artifacts
Project settings
TR
Public
Invite
Like 0

TO-DO LIST APP WITH REMINDERS

About this project

This project is a cloud-based To-Do List App with reminders. The app allows users to create, organize, and prioritize tasks while receiving real-time reminders via notifications. Key Azure services include Azure App Service for hosting, Azure Functions for automated task reminders, Azure SQL Database for storing tasks, and Azure Notification Hubs for push notifications.

Project stats

Period: Last 7 days

Boards

12 Work items created

0 Work items completed

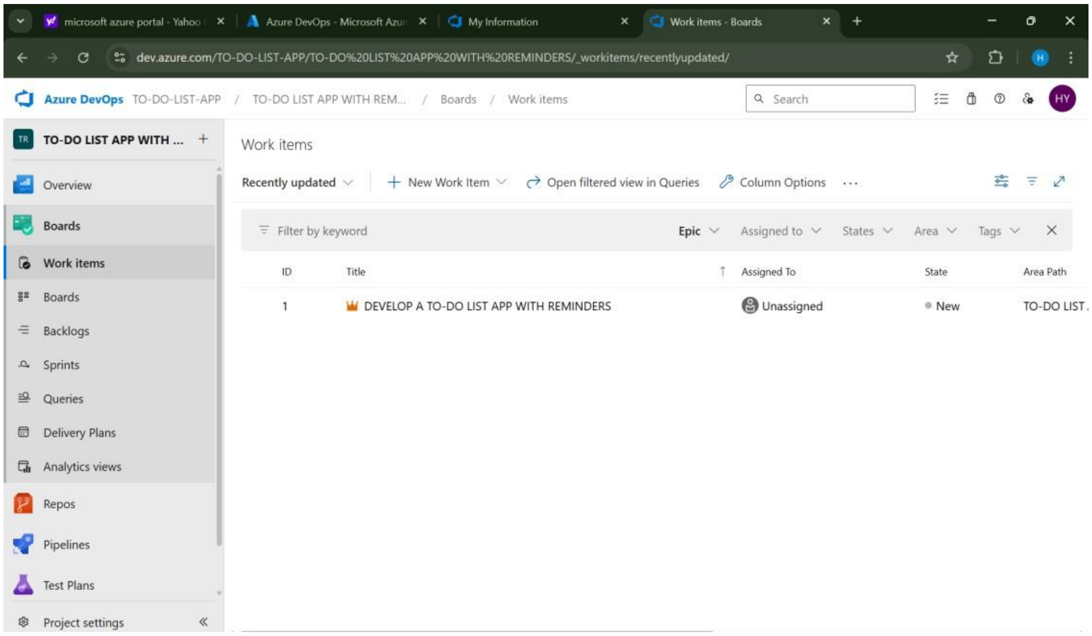
Members 5

DR HY GR DS DK

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.



ID	Title	Assigned To	State	Area Path
1	DEVELOP A TO-DO LIST APP WITH REMINDERS	Unassigned	New	TO-DO LIST

Result:

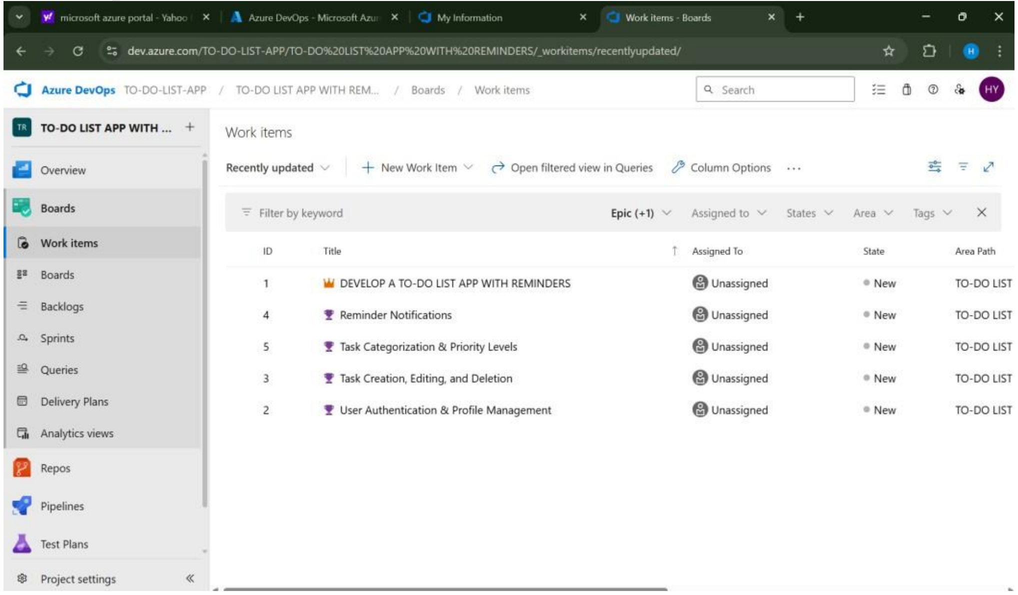
Successfully created an Azure DevOps project with user story management and agile workflow setup.

EXP NO: 3	SETTING UP EPICS, FEATURES, AND USER STORIES FOR PROJECT PLANNING

Aim:

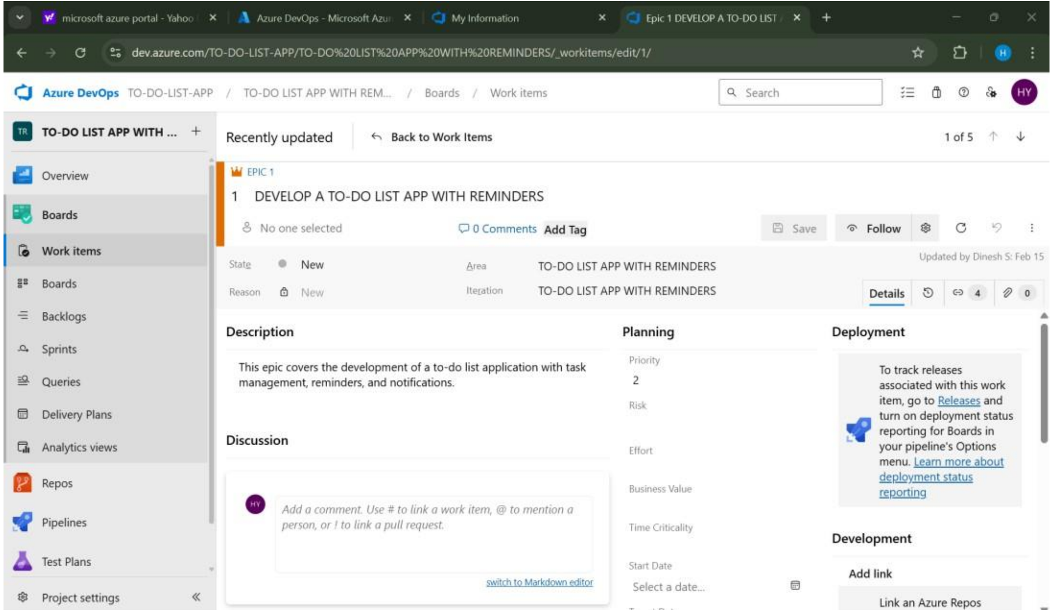
To learn about how to create epics, user story, features, backlogs for your assigned project.

Create Epic, Features, User Stories, Task



ID	Title	Assigned To	State	Area Path
1	DEVELOP A TO-DO LIST APP WITH REMINDERS	Unassigned	New	TO-DO LIST
4	Reminder Notifications	Unassigned	New	TO-DO LIST
5	Task Categorization & Priority Levels	Unassigned	New	TO-DO LIST
3	Task Creation, Editing, and Deletion	Unassigned	New	TO-DO LIST
2	User Authentication & Profile Management	Unassigned	New	TO-DO LIST

1. Fill in Epics



EPIC 1

1 DEVELOP A TO-DO LIST APP WITH REMINDERS

No one selected

Updated by Dinesh S: Feb 15

State: New

Reason: New

Area: TO-DO LIST APP WITH REMINDERS

Iteration: TO-DO LIST APP WITH REMINDERS

Description

This epic covers the development of a to-do list application with task management, reminders, and notifications.

Discussion

Add a comment. Use # to link a work item, @ to mention a person, or ! to link a pull request.

switch to Markdown editor

Planning

Priority: 2

Risk

Effort

Business Value

Time Criticality

Start Date: Select a date...

Deployment

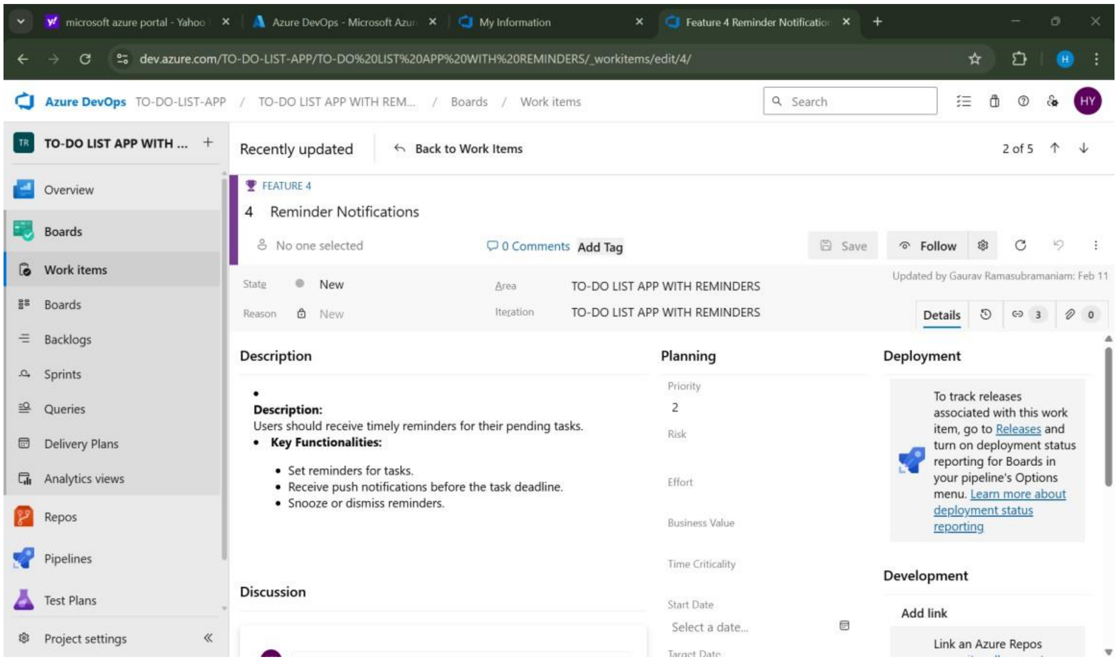
To track releases associated with this work item, go to Releases and turn on deployment status reporting for Boards in your pipeline's Options menu. Learn more about deployment status reporting

Development

Add link

Link an Azure Repos

2. Fill in Features


microsoft azure portal - Yahoo
Azure DevOps - Microsoft Azur
My Information
Feature 4 Reminder Notificatior
dev.azure.com/TO-DO-LIST-APP/TO-DO%20LIST%20APP%20WITH%20REMINDERS/_workitems/edit/4/
Azure DevOps
TO-DO-LIST-APP / TO-DO LIST APP WITH REM... / Boards / Work items
Search
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Overview
Boards
Work items
Boards
Backlogs
Sprints
Queries
Delivery Plans
Analytics views
Repos
Pipelines
Test Plans
Project settings
Recently updated
Back to Work Items
2 of 5
Save
Follow
Details
3
0

FEATURE 4

4 Reminder Notifications

No one selected
0 Comments
Add Tag

Updated by Gaurav Ramasubramaniam: Feb 11

State New
Reason New

Area: TO-DO LIST APP WITH REMINDERS

Iteration: TO-DO LIST APP WITH REMINDERS

Description

-

Description:
Users should receive timely reminders for their pending tasks.

- **Key Functionalities:**
  - Set reminders for tasks.
  - Receive push notifications before the task deadline.
  - Snooze or dismiss reminders.

Discussion

Planning

Priority: 2

Risk

Effort

Business Value

Time Criticality

Start Date: Select a date...

Target Date

Deployment

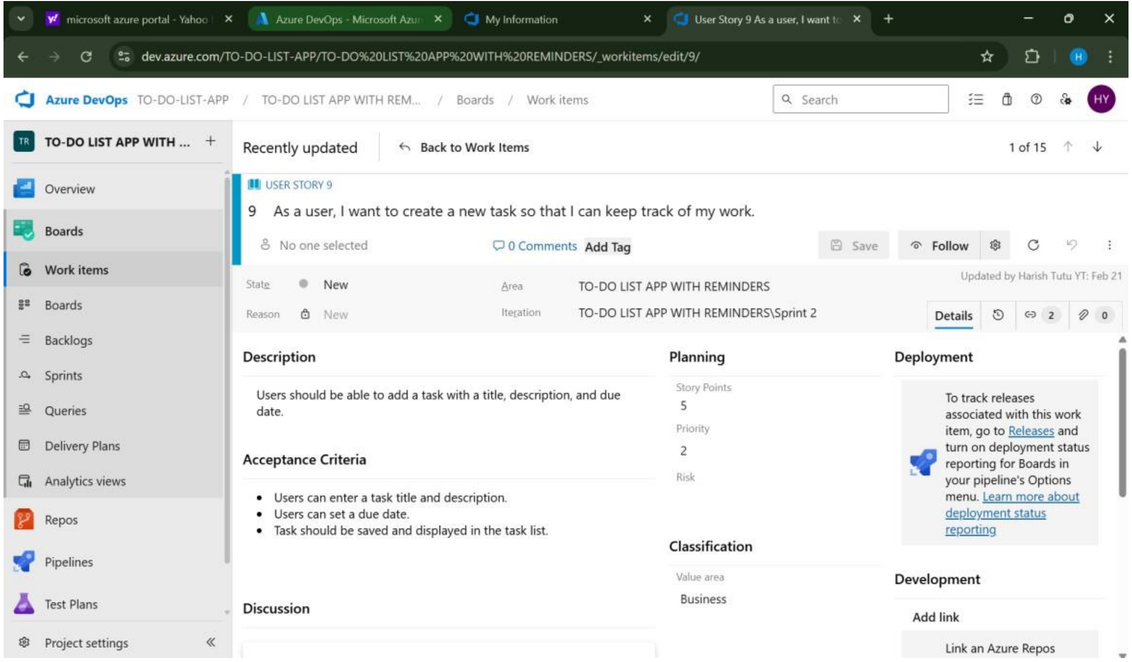
To track releases associated with this work item, go to Releases and turn on deployment status reporting for Boards in your pipeline's Options menu. Learn more about deployment status reporting

Development

Add link

Link an Azure Repos

3. Fill in User Story Details


microsoft azure portal - Yahoo
Azure DevOps - Microsoft Azur
My Information
User Story 9 As a user, I want tc
dev.azure.com/TO-DO-LIST-APP/TO-DO%20LIST%20APP%20WITH%20REMINDERS/_workitems/edit/9/
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Queries
Delivery Plans
Analytics views
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Test Plans
Project settings
Recently updated
Back to Work Items
1 of 15
Save
Follow
Details
2
0

USER STORY 9

9 As a user, I want to create a new task so that I can keep track of my work.

No one selected
0 Comments
Add Tag

Updated by Harish Tutu YT: Feb 21

State New
Reason New

Area: TO-DO LIST APP WITH REMINDERS

Iteration: TO-DO LIST APP WITH REMINDERS\Sprint 2

Description

Users should be able to add a task with a title, description, and due date.

Acceptance Criteria

- Users can enter a task title and description.
- Users can set a due date.
- Task should be saved and displayed in the task list.

Discussion

Planning

Story Points: 5

Priority: 2

Risk

Classification

Value area: Business

Deployment

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

Development

Add link

Link an Azure Repos

Result:

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

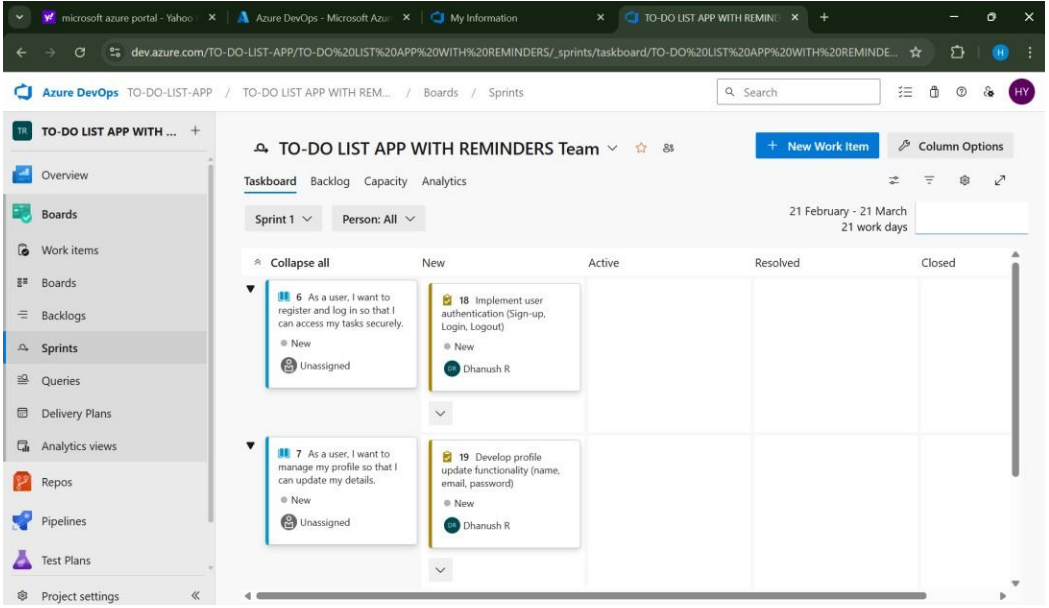
EXP NO: 4	**SPRINT PLANNING**

Aim:

To assign user story to specific sprint for the Music Playlist Batch Creator Project.

Sprint Planning

Sprint 1



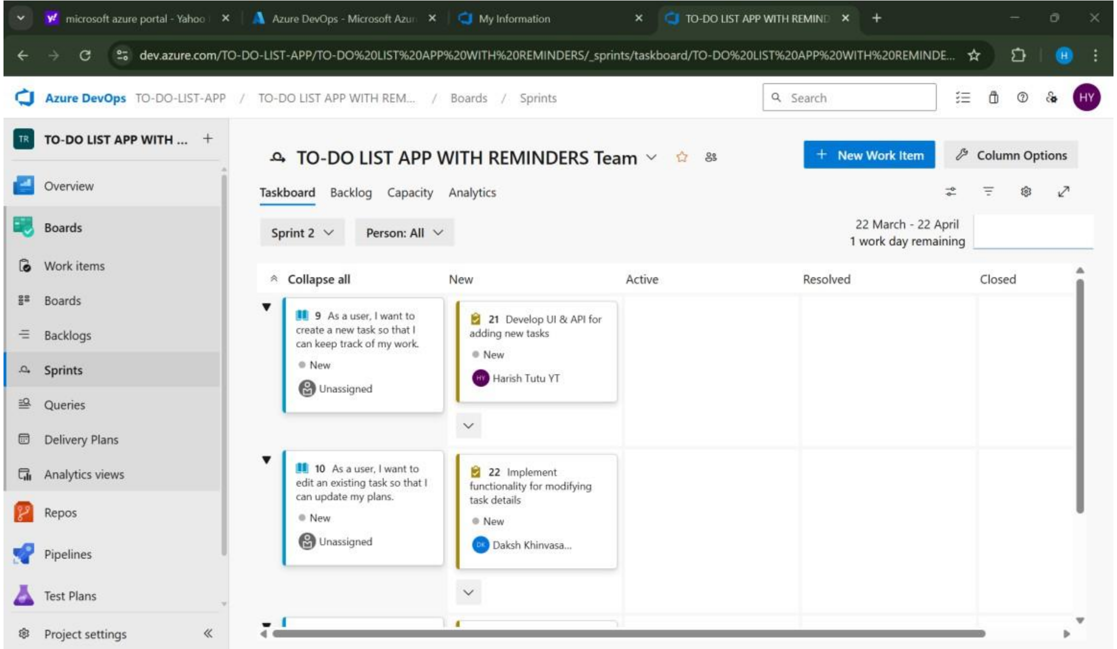
6 As a user, I want to register and log in so that I can access my tasks securely.
New
Unassigned

18 Implement user authentication (Sign-up, Login, Logout)
New
Dhanush R

7 As a user, I want to manage my profile so that I can update my details.
New
Unassigned

19 Develop profile update functionality (name, email, password)
New
Dhanush R

Sprint 2



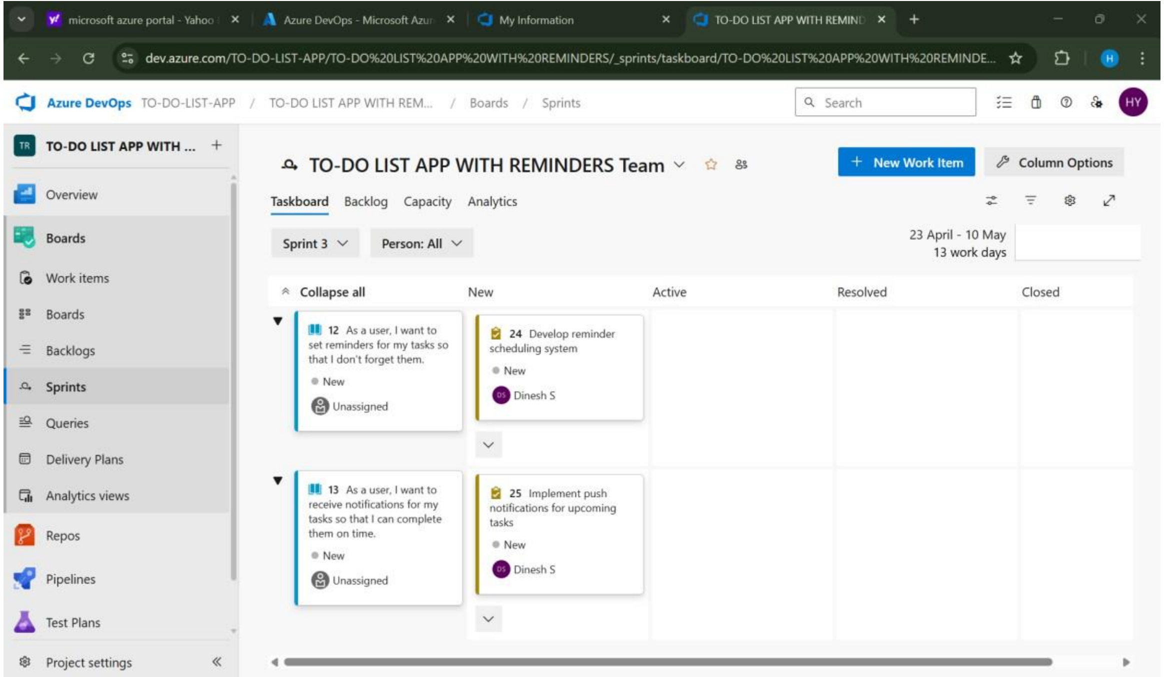
9 As a user, I want to create a new task so that I can keep track of my work.
New
Unassigned

21 Develop UI & API for adding new tasks
New
Harish Tutu YT

10 As a user, I want to edit an existing task so that I can update my plans.
New
Unassigned

22 Implement functionality for modifying task details
New
Daksh Khinvasa...

Sprint 3


microsoft azure portal - Yahoo
Azure DevOps - Microsoft Azur
My Information
TO-DO LIST APP WITH REMIND
dev.azure.com/TO-DO-LIST-APP/TO-DO%20LIST%20APP%20WITH%20REMINDERS/_sprints/taskboard/TO-DO%20LIST%20APP%20WITH%20REMINDE...
Azure DevOps TO-DO-LIST-APP / TO-DO LIST APP WITH REM... / Boards / Sprints
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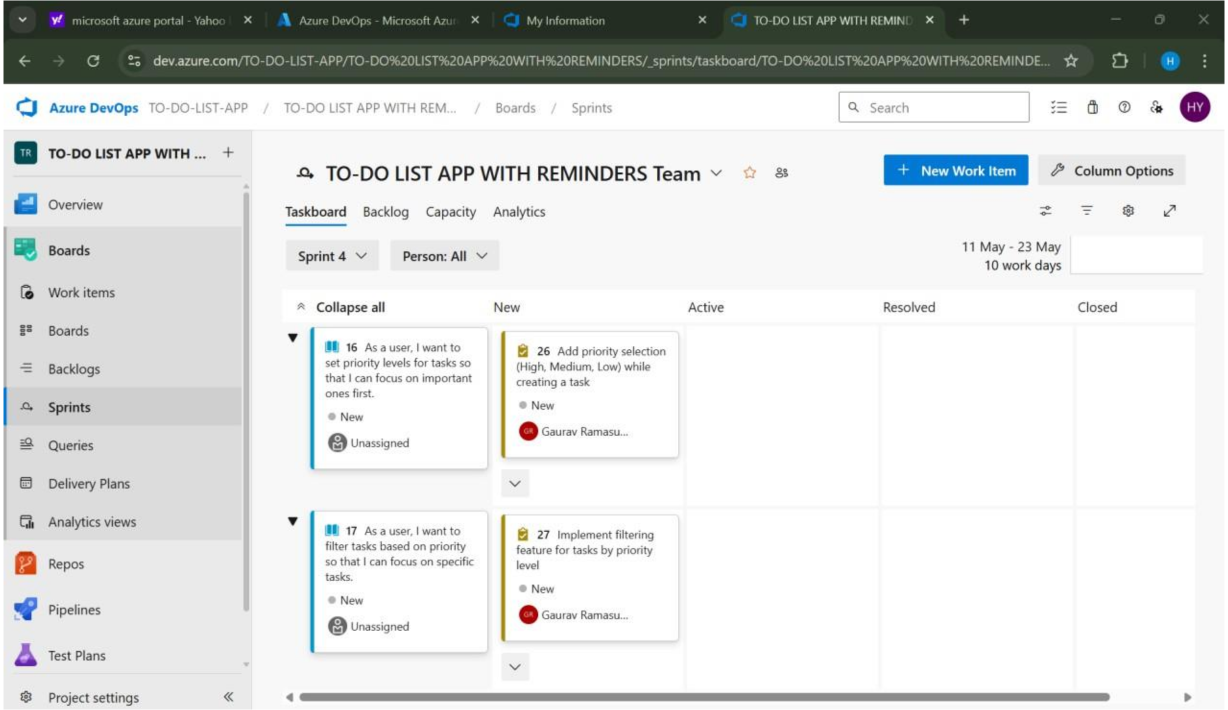
Pipelines
Test Plans
Project settings
TO-DO LIST APP WITH REMINDERS Team
New Work Item
Column Options
Taskboard
Backlog
Capacity
Analytics
Sprint 3
Person: All
Collapse all

23 April - 10 May
13 work days

	New	Active	Resolved	Closed
12 As a user, I want to set reminders for my tasks so that I don't forget them. New Unassigned	24 Develop reminder scheduling system New Dinesh S			
13 As a user, I want to receive notifications for my tasks so that I can complete them on time. New Unassigned	25 Implement push notifications for upcoming tasks New Dinesh S			

Sprint 4


microsoft azure portal - Yahoo
Azure DevOps - Microsoft Azur
My Information
TO-DO LIST APP WITH REMIND
dev.azure.com/TO-DO-LIST-APP/TO-DO%20LIST%20APP%20WITH%20REMINDERS/_sprints/taskboard/TO-DO%20LIST%20APP%20WITH%20REMINDE...
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Pipelines
Test Plans
Project settings
TO-DO LIST APP WITH REMINDERS Team
New Work Item
Column Options
Taskboard
Backlog
Capacity
Analytics
Sprint 4
Person: All
Collapse all

11 May - 23 May
10 work days

	New	Active	Resolved	Closed
16 As a user, I want to set priority levels for tasks so that I can focus on important ones first. New Unassigned	26 Add priority selection (High, Medium, Low) while creating a task New Gaurav Ramasu...			
17 As a user, I want to filter tasks based on priority so that I can focus on specific tasks. New Unassigned	27 Implement filtering feature for tasks by priority level New Gaurav Ramasu...			

Result:

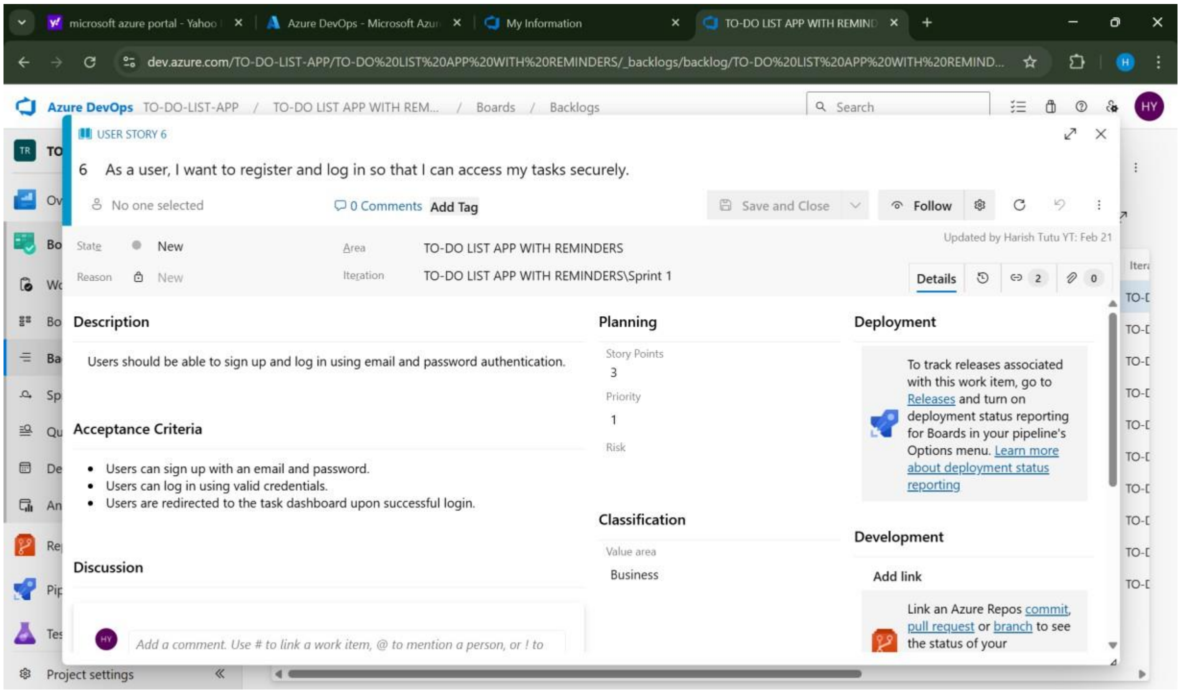
The Sprints are created for the To-do list app with reminders project.

EXP NO: 5	# POKER ESTIMATION

Aim:

Create Poker Estimation for the user stories - To-do list app with reminders project.

Poker Estimation


microsoft azure portal - Yahoo
Azure DevOps - Microsoft Azur
My Information
TO-DO LIST APP WITH REMIND
dev.azure.com/TO-DO-LIST-APP/TO-DO%20LIST%20APP%20WITH%20REMINDERS/_backlogs/backlog/TO-DO%20LIST%20APP%20WITH%20REMIND...
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USER STORY 6

6 As a user, I want to register and log in so that I can access my tasks securely.

No one selected 0 Comments Add Tag Save and Close Follow

Updated by Harish Tutu YT: Feb 21

State: New
Reason: New
Area: TO-DO LIST APP WITH REMINDERS
Iteration: TO-DO LIST APP WITH REMINDERS\Sprint 1

Details 2 0

Description

Users should be able to sign up and log in using email and password authentication.

Acceptance Criteria

- Users can sign up with an email and password.
- Users can log in using valid credentials.
- Users are redirected to the task dashboard upon successful login.

Discussion

Add a comment. Use # to link a work item, @ to mention a person, or ! to

Planning

Story Points
3

Priority
1

Risk

Classification

Value area
Business

Deployment

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

Development

Add link

Link an Azure Repos commit, pull request or branch to see the status of your

Result:

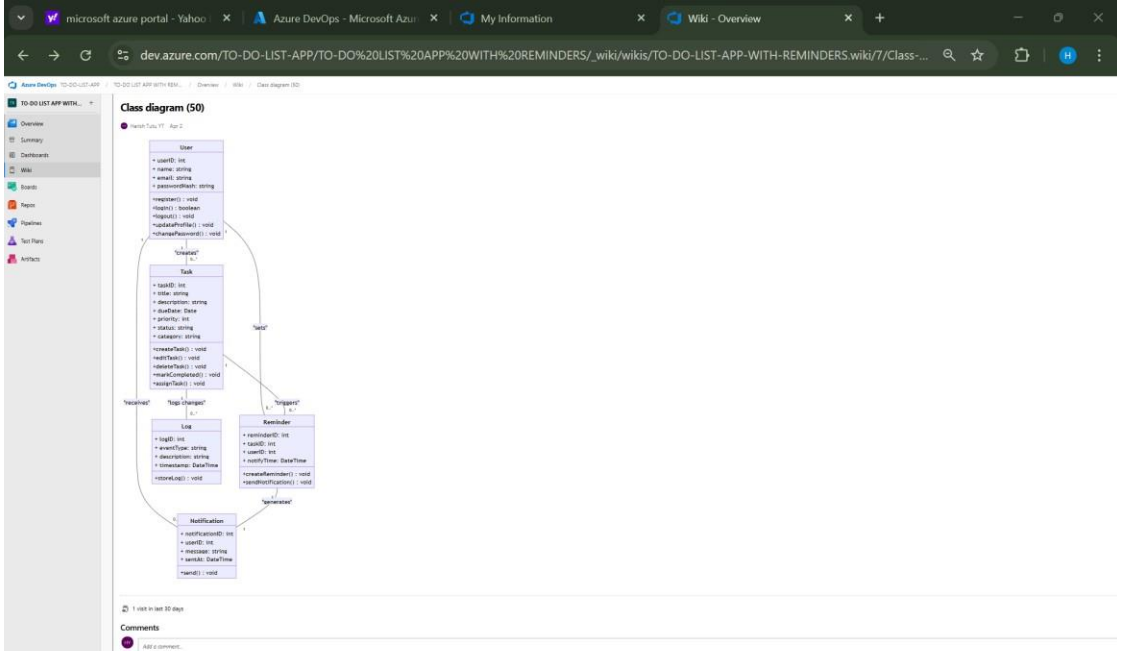
The Estimation/Story Points is created for the project using Poker Estimation.

EXP NO: 6	DESIGNING CLASS AND SEQUENCE DIAGRAMS FOR PROJECT ARCHITECTURE

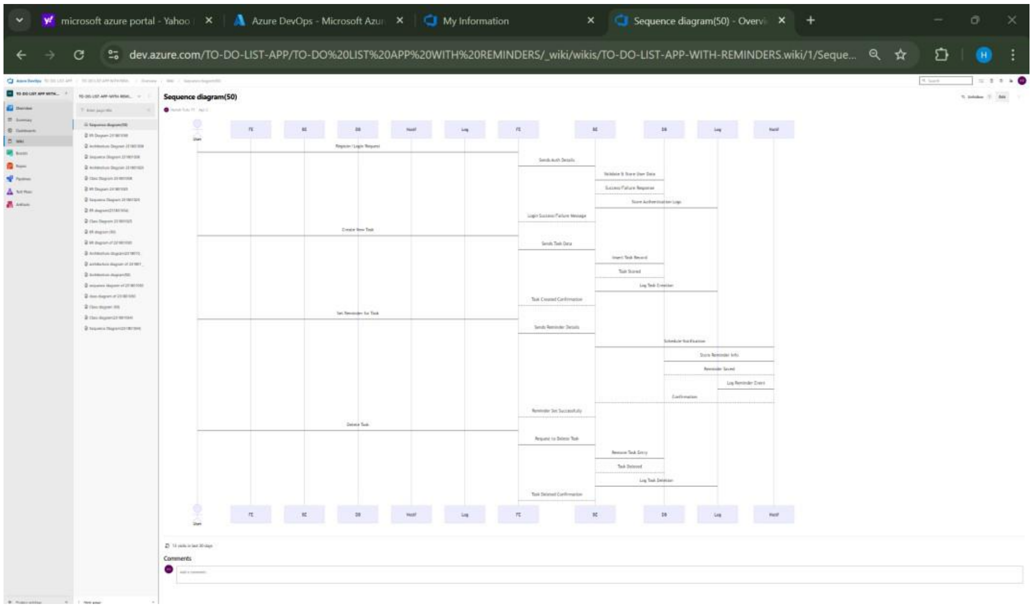
Aim:

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

6A. Class Diagram



6B. Sequence Diagram



Result:

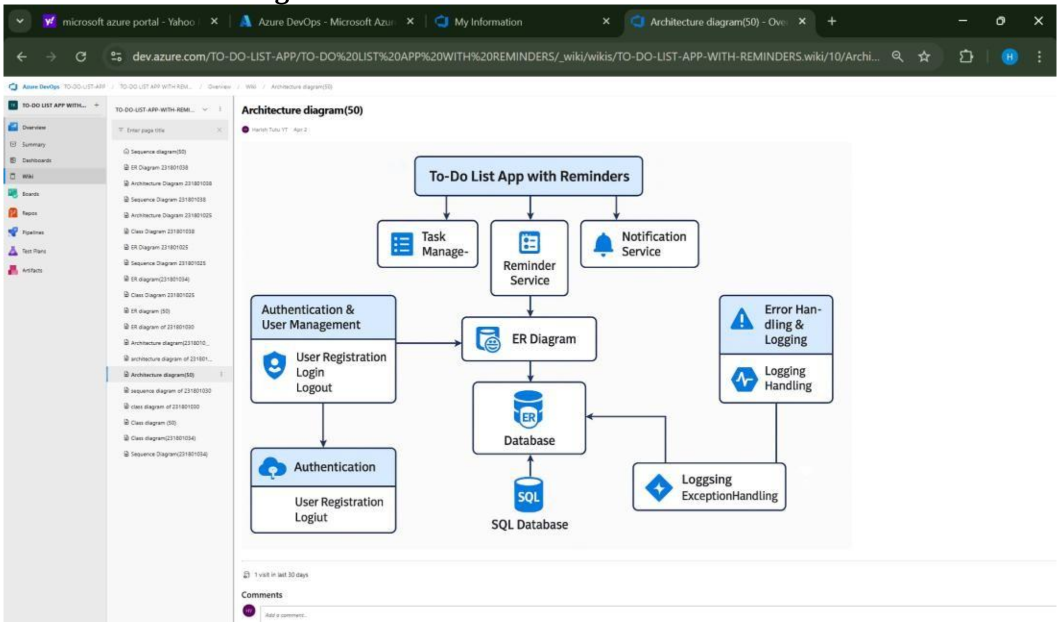
The Class Diagram and Sequence Diagram is designed Successfully for the To-do list app with reminders project.

EXP NO: 7	DESIGNING ARCHITECTURAL AND ER DIAGRAMS FOR PROJECT STRUCTURE

Aim:

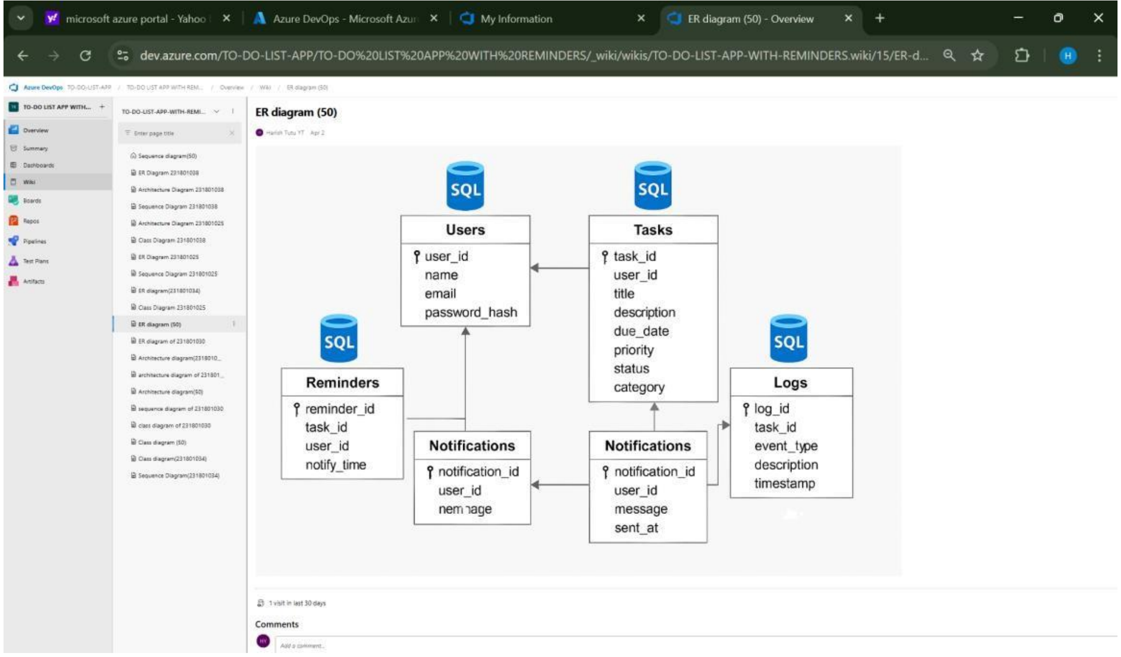
To Design an Architectural Diagram and ER Diagram for the given Project.

7A. Architectural Diagram



microsoft azure portal - Yahoo
Azure DevOps - Microsoft Azur
My Information
Architecture diagram(50) - Over
dev.azure.com/TO-DO-LIST-APP/TO-DO%20LIST%20APP%20WITH%20REMINDERS/_wiki/wikis/TO-DO-LIST-APP-WITH-REMINDERS.wiki/10/Archi...
Architecture diagram(50)
To-Do List App with Reminders
Task Manage-
Reminder Service
Notification Service
Authentication & User Management
User Registration
Login
Logout
ER Diagram
Error Han-dling & Logging
Logging Handling
Database
Authentication
User Registration
Logiut
SQL
SQL Database
Loggsing ExceptionHandling
1 visit in last 30 days
Comments
Add a comment...

7B.ER Diagram



Result:

The Architecture Diagram and ER Diagram is designed Successfully for the To-do list app with reminders project.

EXP NO: 8

TESTING – TEST PLANS AND TEST CASES

Aim:

To give test cases for the To-Do List App showcasing both the happy path (expected scenarios) and error path (unexpected scenarios).

Test Planning and Test Case

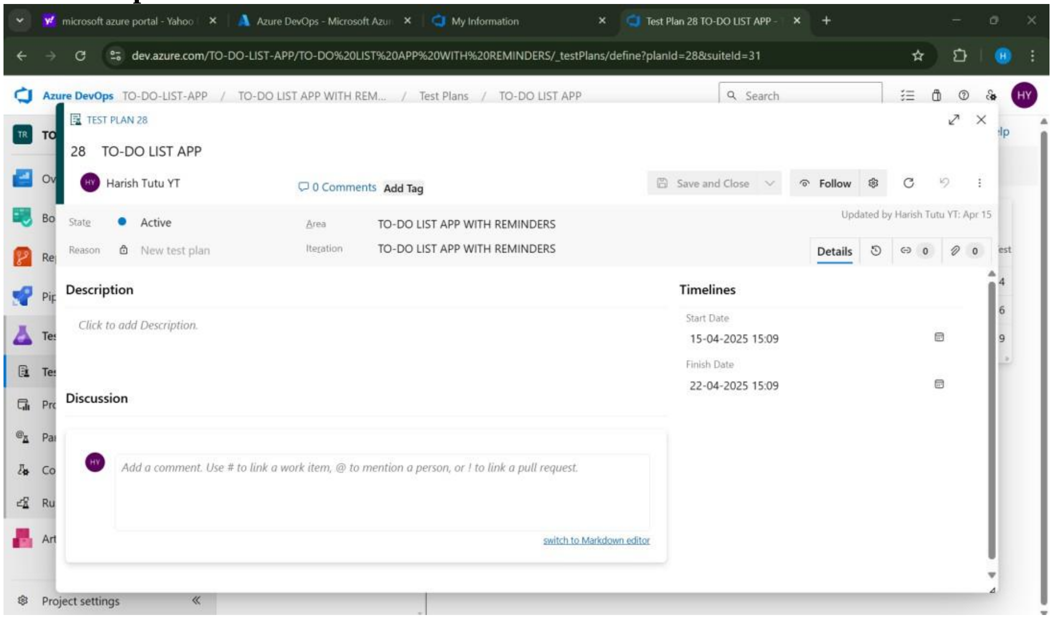
Test Case Design Procedure

1. **Understand Core Features of the Application**
    - User signup, login, logout, and profile management
    - Creating, editing, and deleting tasks
    - Setting task reminders and receiving notifications
    - Setting and filtering task priorities
2. **Define User Interactions**
    - Each test case is based on real user actions like registering, creating tasks, setting reminders, etc.
3. **Design Happy Path Test Cases**
    - These validate that all core functionalities work as expected under normal conditions..
4. **Design Error Path Test Cases**
    - Simulate negative or unexpected behavior like login failures or invalid inputs.
5. **Break Down Steps and Expected Results**
    - Each test case includes step-by-step user actions and the expected outcome
6. **Use Clear Naming and IDs**
    - Example: TC01-Successful-Login, TC05-Task-Reminder-Failure
7. **Separate Test Suites**
    - Group test cases based on modules: Authentication, Task Management, Reminders, Priority Handling, Security.

8. Prioritize and Review

- High-priority test cases are assigned to core features like login, task creation, and reminder notifications.

1. New test plan



dev.azure.com/TO-DO-LIST-APP/TO-DO%20LIST%20APP%20WITH%20REMINDERS/_testPlans/define?planId=28&suiteId=31

TEST PLAN 28

28 TO-DO LIST APP

Harish Tutu YT

State: Active

Reason: New test plan

Area: TO-DO LIST APP WITH REMINDERS

Iteration: TO-DO LIST APP WITH REMINDERS

Updated by Harish Tutu YT: Apr 15

Description

Click to add Description.

Timelines

Start Date: 15-04-2025 15:09

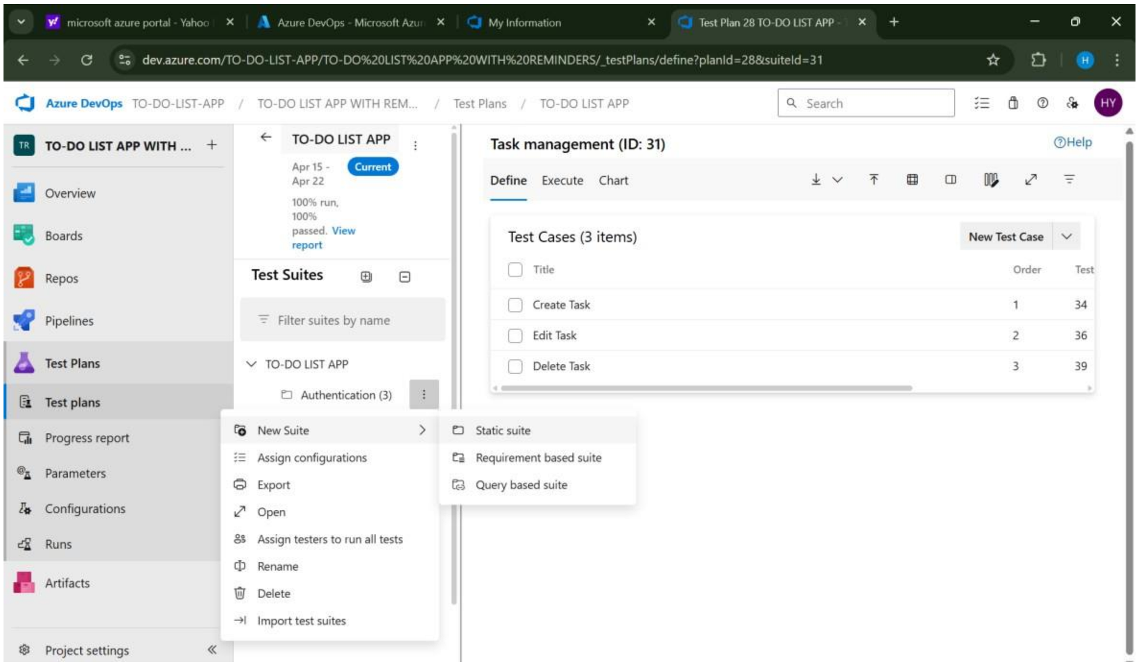
Finish Date: 22-04-2025 15:09

Discussion

Add a comment. Use # to link a work item, @ to mention a person, or ! to link a pull request.

Azure DevOps
TO-DO-LIST-APP / TO-DO LIST APP WITH REM... / Test Plans / TO-DO LIST APP
Search
0 Comments
Add Tag
Save and Close
Follow
Details
switch to Markdown editor
Project settings

2. Test suite



dev.azure.com/TO-DO-LIST-APP/TO-DO%20LIST%20APP%20WITH%20REMINDERS/_testPlans/define?planId=28&suiteId=31

TO-DO LIST APP

Apr 15 - Apr 22 Current

100% run, 100% passed. View report

Task management (ID: 31)

Test Cases (3 items)

Title	Order	Test
Create Task	1	34
Edit Task	2	36
Delete Task	3	39

3. Test case

Give two test cases for at least five user stories showcasing the happy path and error scenarios in azure DevOps platform.
To-Do List App – Test Plans

Test Suites

Test Suit: TS01 - User Authentication

1. TC01 – User Registration & Login

Action 1: Open the app and click “Register”.

Expected Result: Registration form appears.

Action 2: Enter valid name, email, and password, then click “Submit”.

Expected Result: Account created, redirected to login page.

Action 3: Enter credentials and click “Login”.

Expected Result: Dashboard loads, user successfully logged in.

2. TC02 – Manage Profile

Action 1: Click on “Profile” in the navigation bar.

Expected Result: Profile details are displayed.

Action 2: Click “Edit”, change user info (e.g., name).

Expected Result: Editable fields appear.

Action 3: Click “Save Changes”.

Expected Result: Profile updated confirmation appears.

3. TC03 – Logout

Action 1: Click on “Logout” button from dashboard.

Expected Result: Logout confirmation popup appears.

Action 2: Confirm logout.

Expected Result: User is logged out.

Action 3: Try accessing dashboard URL directly.

Expected Result: Redirected to login page.

Test Suit: TS02 – Task management

1. TC04 – Create Task

Action 1: Click “Add New Task”.

Expected Result: Task creation form opens.

Action 2: Fill in task title, due date, priority, and click “Save”.

Expected Result: Task added to list.

Action 3: View the dashboard.

Expected Result: Newly created task appears in “Upcoming Tasks”

2. TC05 – Edit Task

Action 1: Click the “Edit” icon next to a task.

Expected Result: Task fields become editable.

Action 2: Change title or date.

Expected Result: Fields accept new values.

Action 3: Click “Update”.

Expected Result: Task details are updated in task list.

3. TC06 – Delete Task

Action 1: Click on the “Delete” button of a task.

Expected Result: Confirmation dialog appears.

Action 2: Click “Yes, Delete”.

Expected Result: Task is removed from the list.

Action 3: Refresh the page.

Expected Result: Task no longer appears.

Test Suit: TS03 – Reminder & notification

1. TC07 – Set Reminders

Action 1: Click “Set Reminder” on a task.

Expected Result: Date and time input appears.

Action 2: Set future time and save.

Expected Result: Reminder is saved.

Action 3: Wait till reminder time.

Expected Result: Notification or alert is triggered.

2. TC08 – Notifications

Action 1: Ensure a task has a reminder set.

Expected Result: Reminder time shows in UI.

Action 2: Wait until the task time arrives.

Expected Result: App shows a popup or notification.

Action 3: Click the notification.

Expected Result: User navigates to the task.

3. TC09 – Set Task Priority

Action 1: Click “New Task”, set priority as “High”.

Expected Result: Priority dropdown is available and saves input.

Action 2: Save the task.

Expected Result: Priority level shows in task card.

Action 3: Hover or click task for details.

Expected Result: Priority tag (e.g., red for high) is visible.

4. TC10 – Filter Tasks by Priority

Action 1: Click “Filter” and choose “High Priority”.

Expected Result: Filter activates.

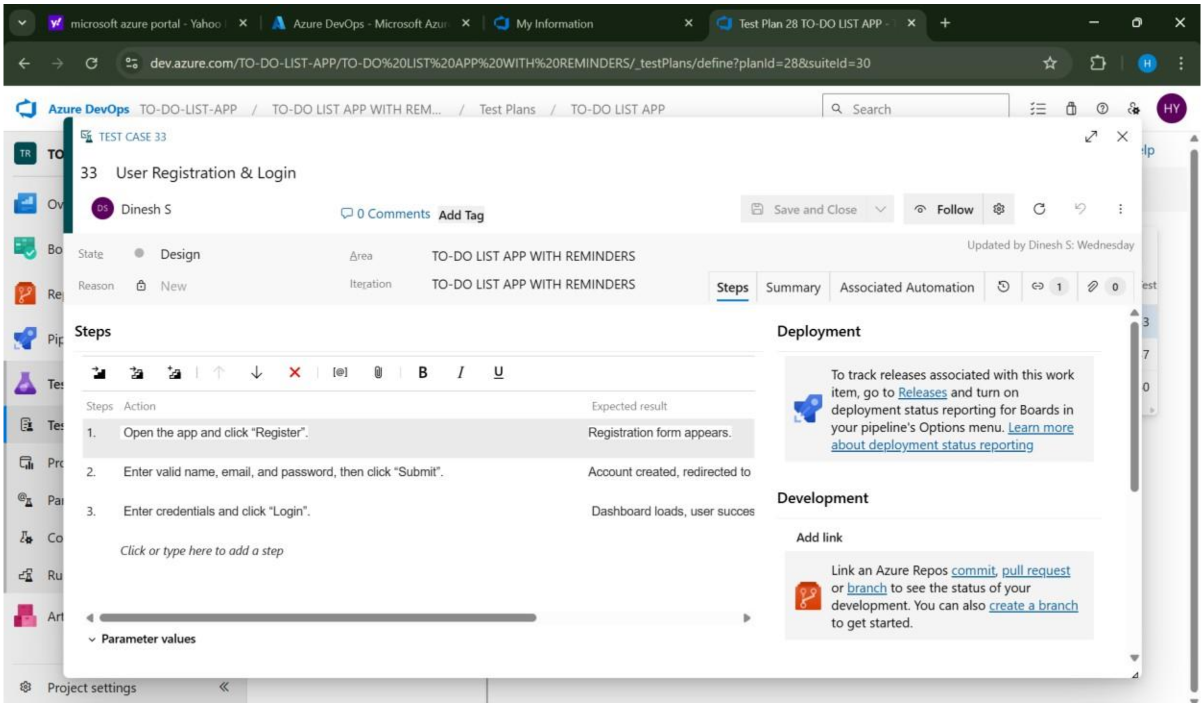
Action 2: View task list.

Expected Result: Only high-priority tasks are visible.

Action 3: Remove filter.

Expected Result: All tasks become visible again.

Test Cases



microsoft azure portal - Yahoo
Azure DevOps - Microsoft Azur
My Information
Test Plan 28 TO-DO LIST APP -
dev.azure.com/TO-DO-LIST-APP/TO-DO%20LIST%20APP%20WITH%20REMINDERS/_testPlans/define?planId=28&suiteId=30
Azure DevOps
TO-DO-LIST-APP / TO-DO LIST APP WITH REM... / Test Plans / TO-DO LIST APP
Search
Project settings

TEST CASE 33

33 User Registration & Login

Dinesh S

0 Comments Add Tag

Save and Close Follow

Updated by Dinesh S: Wednesday

State: Design

Reason: New

Area: TO-DO LIST APP WITH REMINDERS

Iteration: TO-DO LIST APP WITH REMINDERS

Steps | Summary | Associated Automation

Steps

Steps	Action	Expected result
1.	Open the app and click “Register”.	Registration form appears.
2.	Enter valid name, email, and password, then click “Submit”.	Account created, redirected to
3.	Enter credentials and click “Login”.	Dashboard loads, user succes

Click or type here to add a step

Parameter values

Deployment

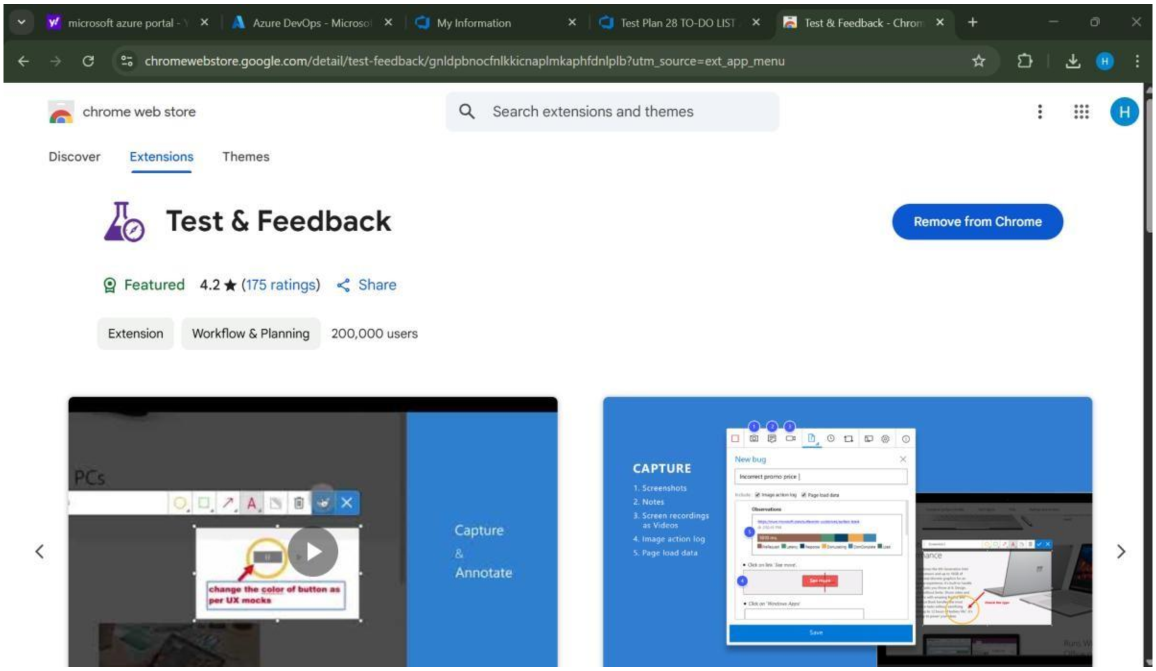
To track releases associated with this work item, go to Releases and turn on deployment status reporting for Boards in your pipeline's Options menu. Learn more about deployment status reporting

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.

4. Installation of test

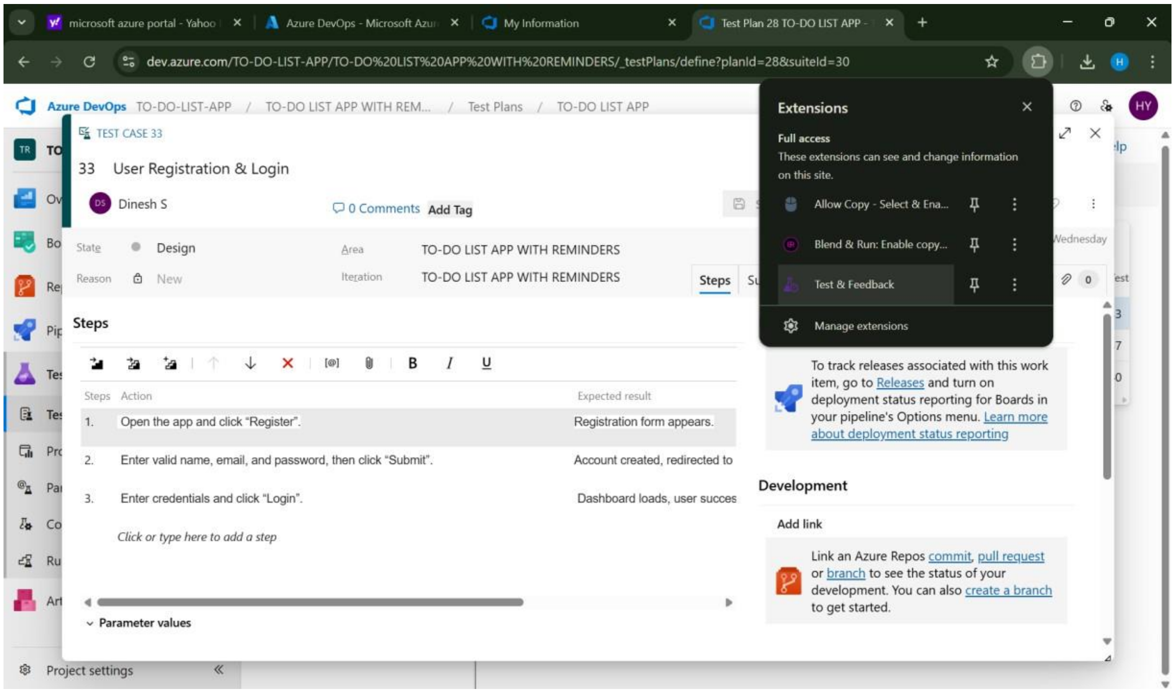


Test & Feedback

Featured 4.2 ★ (175 ratings)

Extension | Workflow & Planning | 200,000 users

Test and feedback
Showing it as an extension



microsoft azure portal - Yahoo
Azure DevOps - Microsoft Azur
My Information
Test Plan 28 TO-DO LIST APP -
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Azure DevOps
TO-DO-LIST-APP / TO-DO LIST APP WITH REM... / Test Plans / TO-DO LIST APP
HY

TEST CASE 33

33 User Registration & Login

Dinesh S

0 Comments Add Tag

State: Design
Reason: New
Area: TO-DO LIST APP WITH REMINDERS
Iteration: TO-DO LIST APP WITH REMINDERS

Steps

Steps	Action	Expected result
1.	Open the app and click “Register”.	Registration form appears.
2.	Enter valid name, email, and password, then click “Submit”.	Account created, redirected to
3.	Enter credentials and click “Login”.	Dashboard loads, user succes

Click or type here to add a step

Parameter values

Extensions

Full access
These extensions can see and change information on this site.

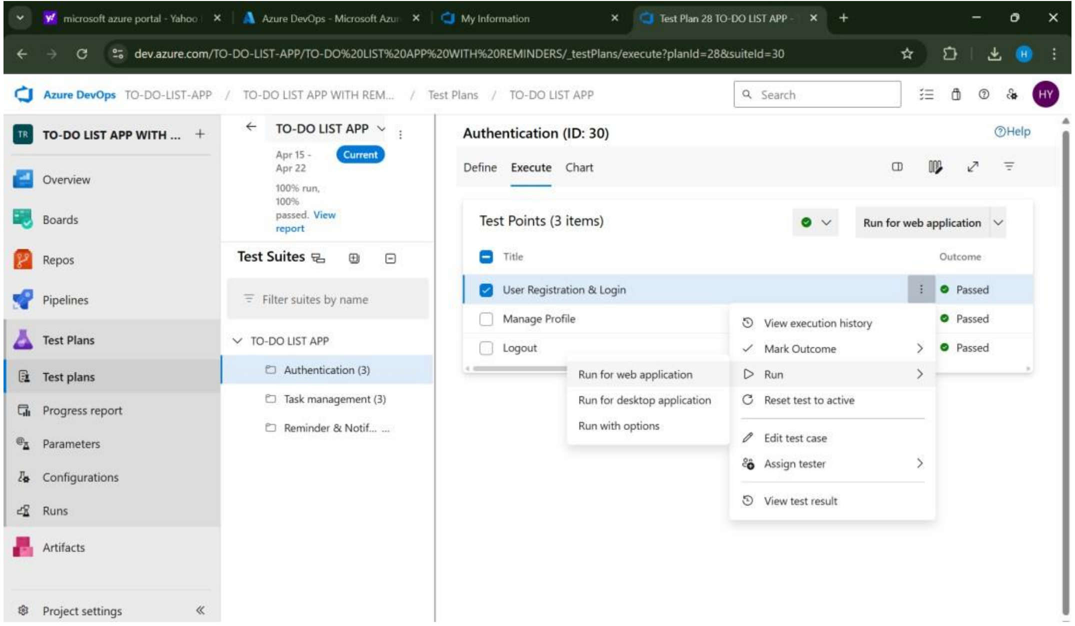
To track releases associated with this work item, go to Releases and turn on deployment status reporting for Boards in your pipeline's Options menu. Learn more about deployment status reporting

Development

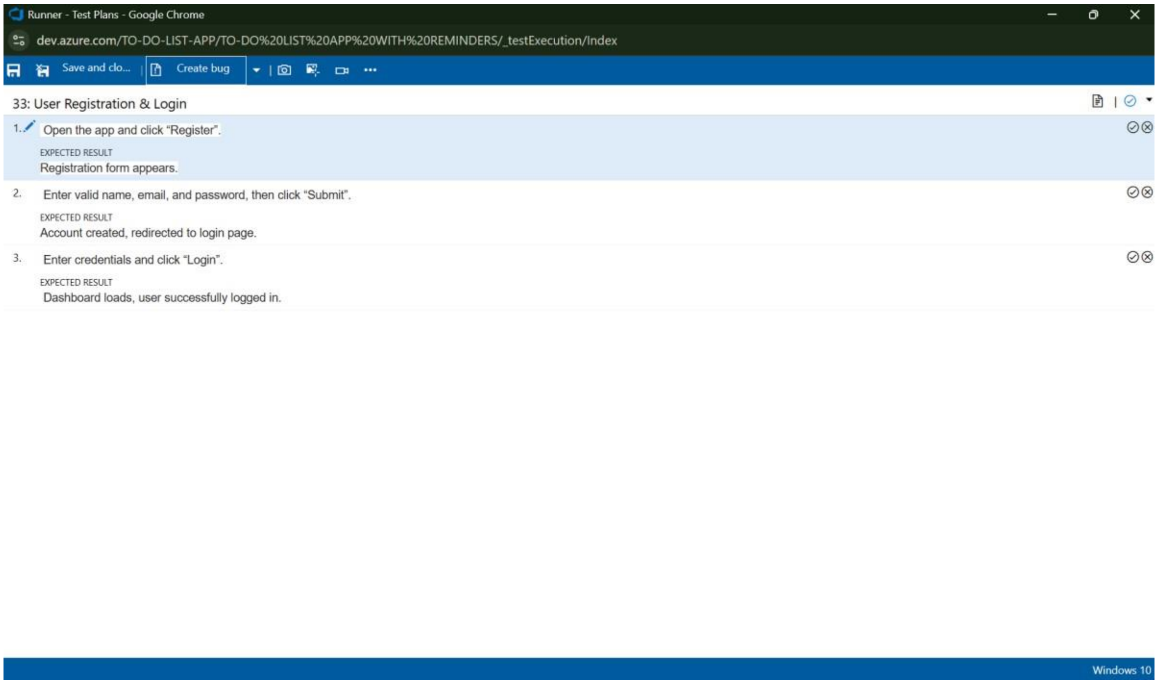
Add link

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.

5. Running the test cases



6.


Runner - Test Plans - Google Chrome
dev.azure.com/TO-DO-LIST-APP/TO-DO%20LIST%20APP%20WITH%20REMINDERS/_testExecution/Index
Save and clo...
Create bug
Windows 10

33: User Registration & Login

1. Open the app and click "Register".

EXPECTED RESULT
Registration form appears.

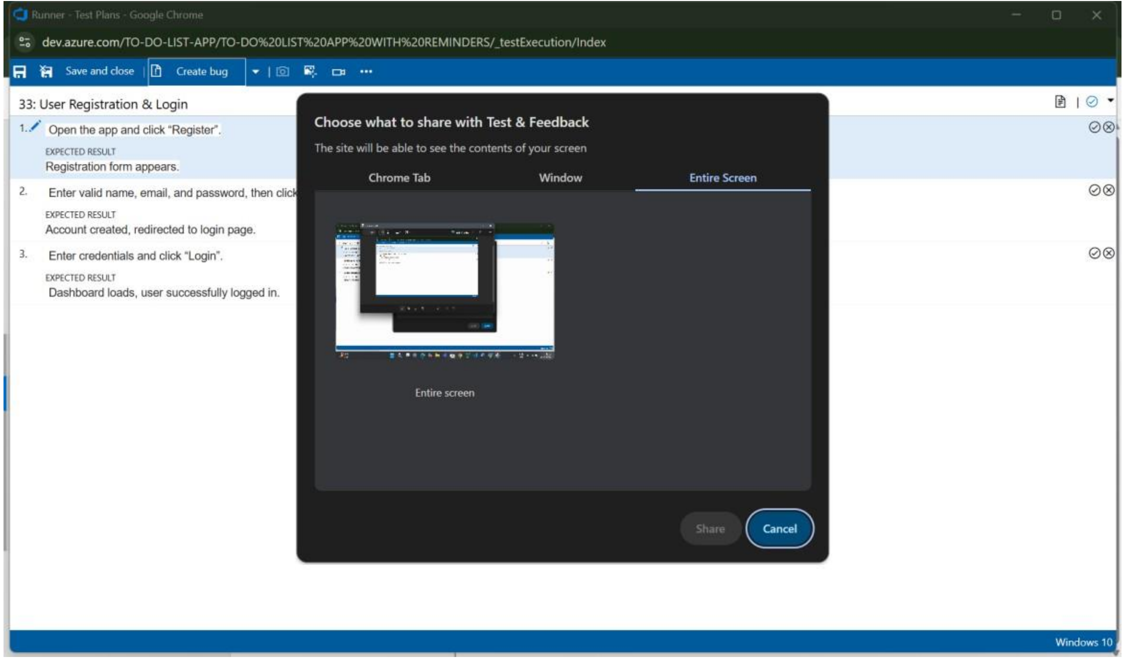
2. Enter valid name, email, and password, then click "Submit".

EXPECTED RESULT
Account created, redirected to login page.

3. Enter credentials and click "Login".

EXPECTED RESULT
Dashboard loads, user successfully logged in.

6. Recording the test case



dev.azure.com/TO-DO-LIST-APP/TO-DO%20LIST%20APP%20WITH%20REMINDERS/_testExecution/Index

33: User Registration & Login

1. Open the app and click "Register".

EXPECTED RESULT
Registration form appears.

2. Enter valid name, email, and password, then click

EXPECTED RESULT
Account created, redirected to login page.

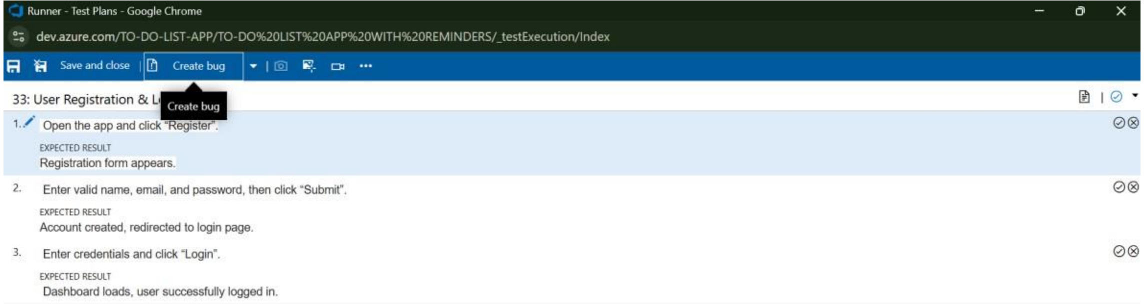
3. Enter credentials and click "Login".

EXPECTED RESULT
Dashboard loads, user successfully logged in.

Choose what to share with Test & Feedback

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

7. Creating the bug



dev.azure.com/TO-DO-LIST-APP/TO-DO%20LIST%20APP%20WITH%20REMINDERS/_testExecution/Index

33: User Registration & L

1. Open the app and click "Register".

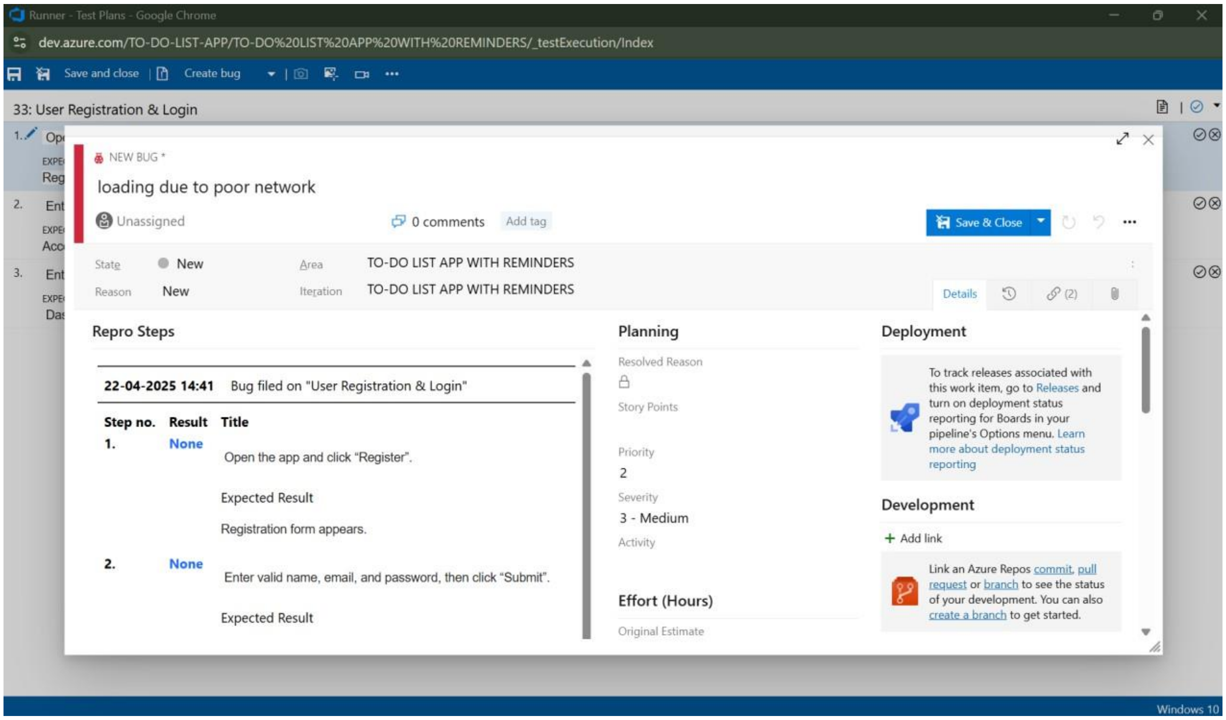
EXPECTED RESULT
Registration form appears.

2. Enter valid name, email, and password, then click "Submit".

EXPECTED RESULT
Account created, redirected to login page.

3. Enter credentials and click "Login".

EXPECTED RESULT
Dashboard loads, user successfully logged in.


Runner - Test Plans - Google Chrome
dev.azure.com/TO-DO-LIST-APP/TO-DO%20LIST%20APP%20WITH%20REMINDERS/_testExecution/Index
Save and close
Create bug
Details
(2)
Windows 10

33: User Registration & Login

NEW BUG *

loading due to poor network

Unassigned

0 comments

Add tag

Save & Close

State New

Reason New

Area TO-DO LIST APP WITH REMINDERS

Iteration TO-DO LIST APP WITH REMINDERS

Repro Steps

22-04-2025 14:41 Bug filed on "User Registration & Login"

Step no.	Result	Title
1.	None	Open the app and click "Register". Expected Result Registration form appears.
2.	None	Enter valid name, email, and password, then click "Submit". Expected Result

Planning

Resolved Reason

Story Points

Priority

2

Severity

3 - Medium

Activity

Effort (Hours)

Original Estimate

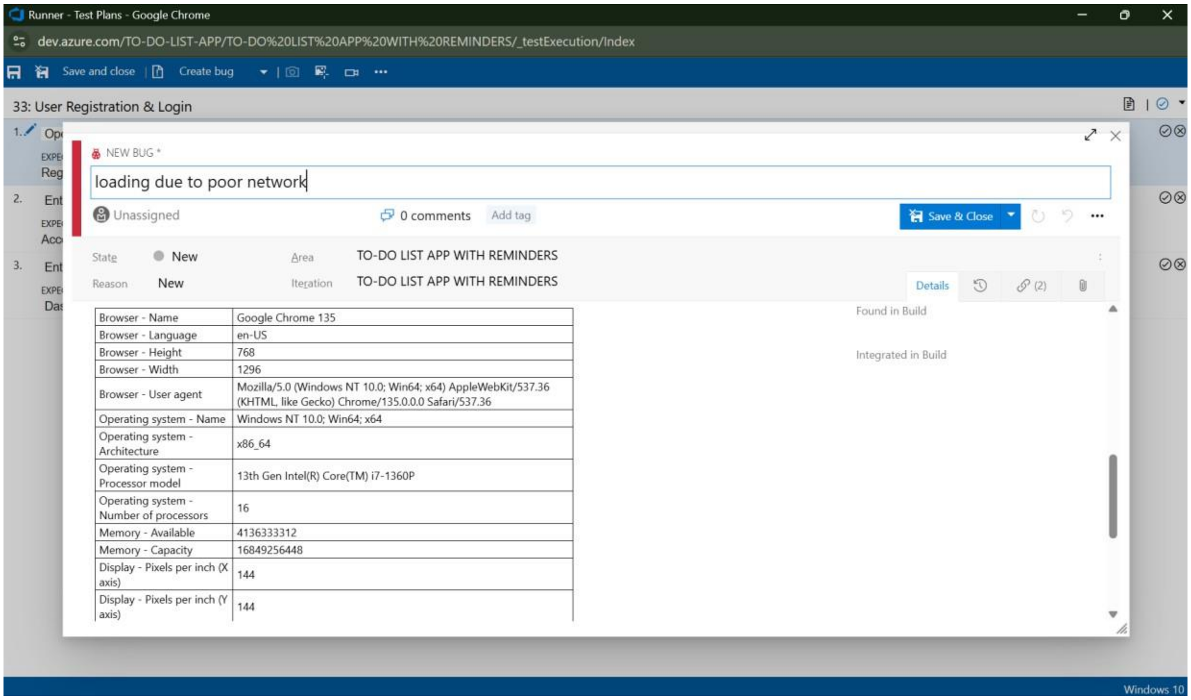
Deployment

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.


Runner - Test Plans - Google Chrome
dev.azure.com/TO-DO-LIST-APP/TO-DO%20LIST%20APP%20WITH%20REMINDERS/_testExecution/Index
Save and close
Create bug
Details
(2)
Windows 10

33: User Registration & Login

NEW BUG *

loading due to poor network

Unassigned

0 comments

Add tag

Save & Close

State New

Reason New

Area TO-DO LIST APP WITH REMINDERS

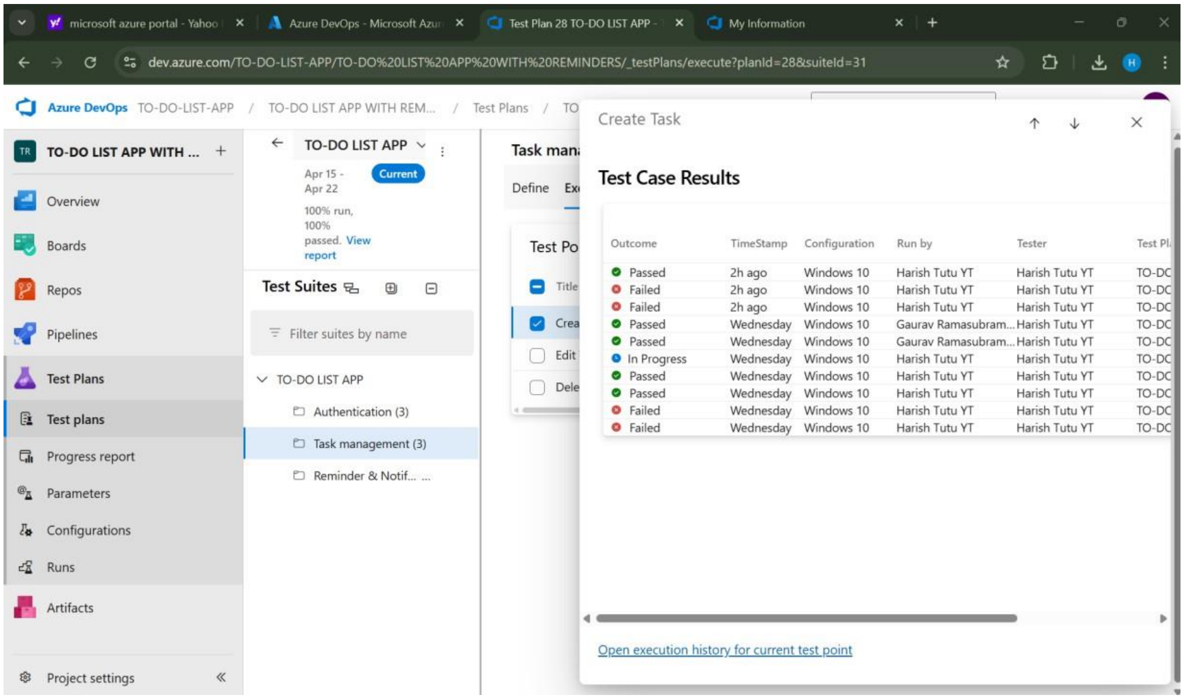
Iteration TO-DO LIST APP WITH REMINDERS

Browser - Name	Google Chrome 135
Browser - Language	en-US
Browser - Height	768
Browser - Width	1296
Browser - User agent	Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/135.0.0.0 Safari/537.36
Operating system - Name	Windows NT 10.0; Win64; x64
Operating system - Architecture	x86_64
Operating system - Processor model	13th Gen Intel(R) Core(TM) i7-1360P
Operating system - Number of processors	16
Memory - Available	4136333312
Memory - Capacity	16849256448
Display - Pixels per inch (X axis)	144
Display - Pixels per inch (Y axis)	144

Found in Build

Integrated in Build

8. Test case results



dev.azure.com/TO-DO-LIST-APP/TO-DO%20LIST%20APP%20WITH%20REMINDERS/_testPlans/execute?planId=28&suiteId=31

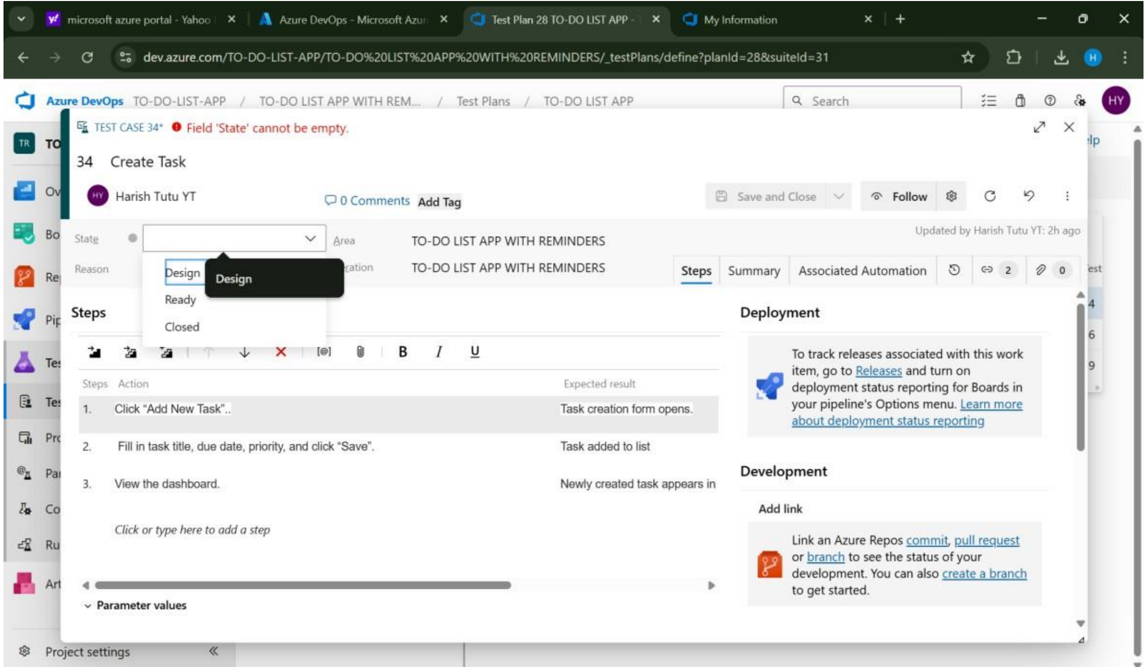
Create Task

Test Case Results

Outcome	TimeStamp	Configuration	Run by	Tester	Test Pl
Passed	2h ago	Windows 10	Harish Tutu YT	Harish Tutu YT	TO-DC
Failed	2h ago	Windows 10	Harish Tutu YT	Harish Tutu YT	TO-DC
Failed	2h ago	Windows 10	Harish Tutu YT	Harish Tutu YT	TO-DC
Passed	Wednesday	Windows 10	Harish Tutu YT	Harish Tutu YT	TO-DC
Passed	Wednesday	Windows 10	Gaurav Ramasubram...	Harish Tutu YT	TO-DC
In Progress	Wednesday	Windows 10	Harish Tutu YT	Harish Tutu YT	TO-DC
Passed	Wednesday	Windows 10	Harish Tutu YT	Harish Tutu YT	TO-DC
Passed	Wednesday	Windows 10	Harish Tutu YT	Harish Tutu YT	TO-DC
Failed	Wednesday	Windows 10	Harish Tutu YT	Harish Tutu YT	TO-DC
Failed	Wednesday	Windows 10	Harish Tutu YT	Harish Tutu YT	TO-DC

Open execution history for current test point

9. Test report summary



dev.azure.com/TO-DO-LIST-APP/TO-DO%20LIST%20APP%20WITH%20REMINDERS/_testPlans/define?planId=28&suiteId=31

TEST CASE 34* Field 'State' cannot be empty.

34 Create Task

Harish Tutu YT

State:
Area: TO-DO LIST APP WITH REMINDERS
Iteration: TO-DO LIST APP WITH REMINDERS

Updated by Harish Tutu YT: 2h ago

Steps

Steps	Action	Expected result
1.	Click "Add New Task"..	Task creation form opens.
2.	Fill in task title, due date, priority, and click "Save".	Task added to list
3.	View the dashboard.	Newly created task appears in

Click or type here to add a step

Parameter values

Deployment

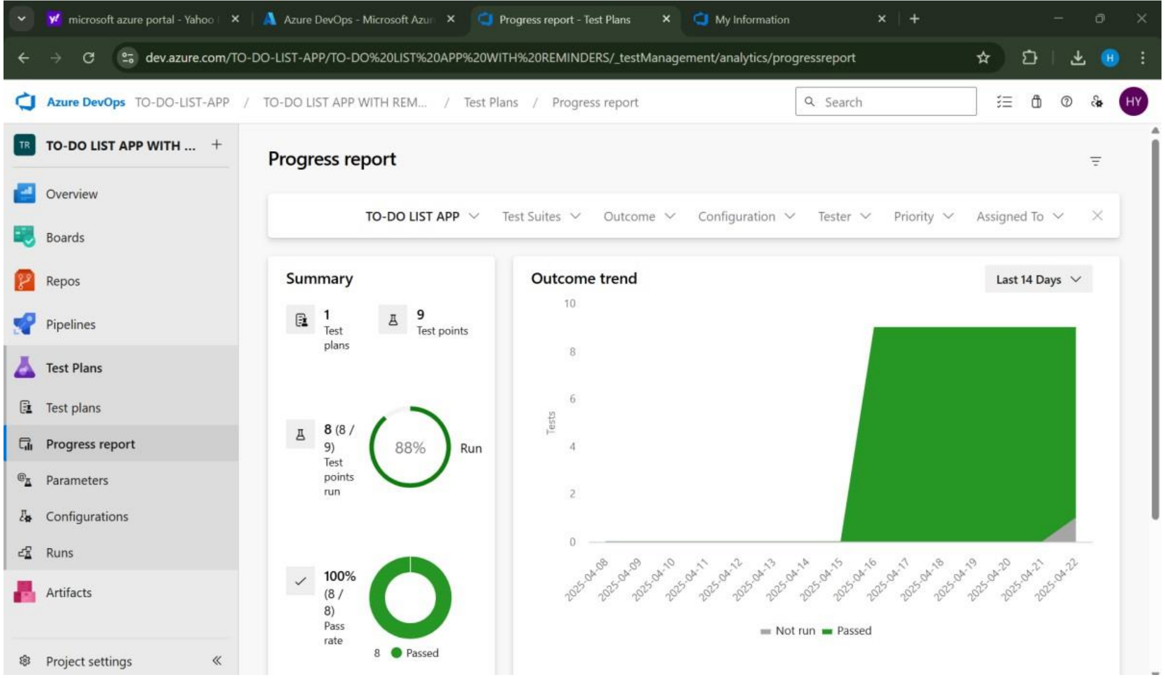
To track releases associated with this work item, go to Releases and turn on deployment status reporting for Boards in your pipeline's Options menu. Learn more about deployment status reporting

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.

10. Progress report



dev.azure.com/TO-DO-LIST-APP/TO-DO%20LIST%20APP%20WITH%20REMINDERS/_testManagement/analytics/progressreport

Progress report

Summary

1 Test plans

9 Test points

8 (8 / 9) Test points run — 88% Run

100% (8 / 8) Pass rate — 8 ● Passed

Outcome trend

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	LOAD TESTING AND PIPELINES

Aim:

To create an Azure Load Testing resource and run a load test to evaluate the performance of a target endpoint and to create and demonstrate an Azure DevOps pipeline for automating application builds, tests, and deployment.

Load Testing

Azure Load Testing:
Azure Load Testing allows you to simulate high traffic and stress tests for your web applications and APIs to understand how they perform under load. It helps identify performance bottlenecks, scalability issues, and optimize resource usage before deployment.

Steps to Create an Azure Load Testing Resource:

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

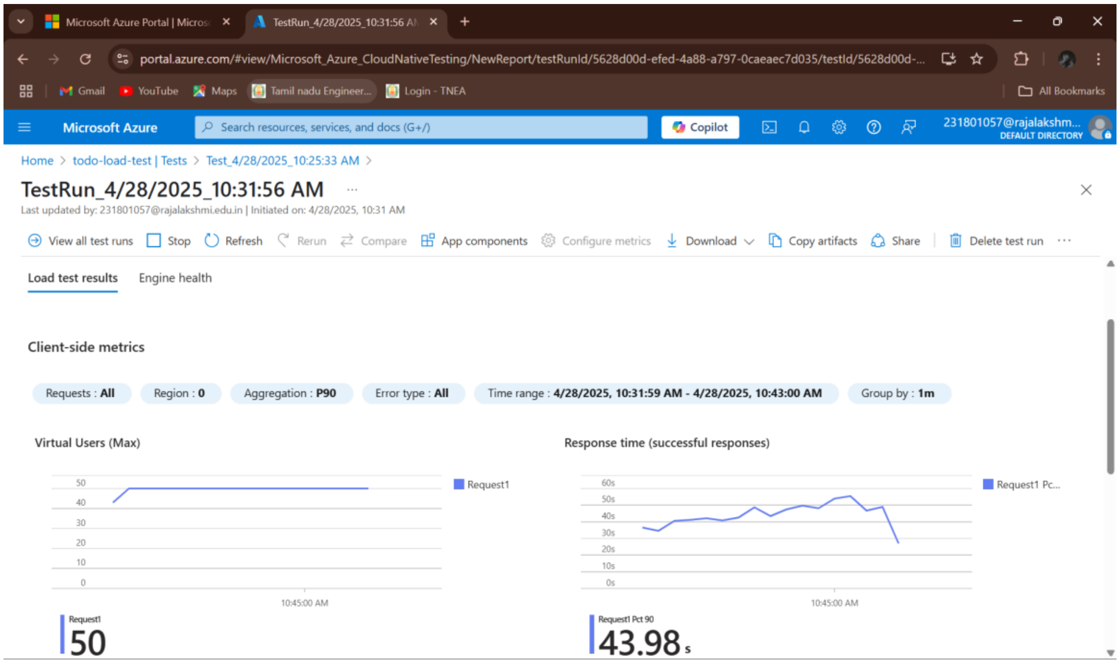
1. Sign in to Azure Portal
   Go to https://portal.azure.com and log in.
2. Create the Resource
   - Go to *Create a resource* → Search for "Azure Load Testing".
   - Select Azure Load Testing and click Create.
3. Fill in the Configuration Details
   - Subscriptio*n:* Choose your Azure subscription.
   - *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 the deployment is complete, click on '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



TestRun_4/28/2025_10:31:56 AM

Last updated by: 231801057@rajalakshmi.edu.in | Initiated on: 4/28/2025, 10:31 AM

Client-side metrics

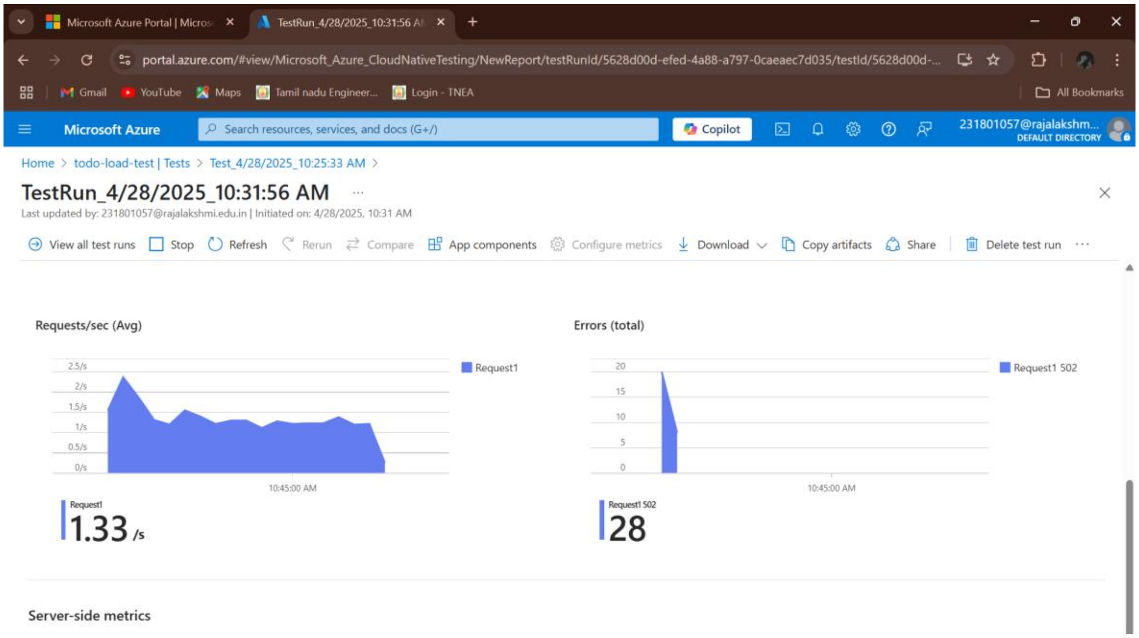
Requests : **All** | Region : **0** | Aggregation : **P90** | Error type : **All** | Time range : **4/28/2025, 10:31:59 AM - 4/28/2025, 10:43:00 AM** | Group by : **1m**

Virtual Users (Max)

Request1
50

Response time (successful responses)

Request1 Pct 90
43.98 s



TestRun_4/28/2025_10:31:56 AM

Last updated by: 231801057@rajalakshmi.edu.in | Initiated on: 4/28/2025, 10:31 AM

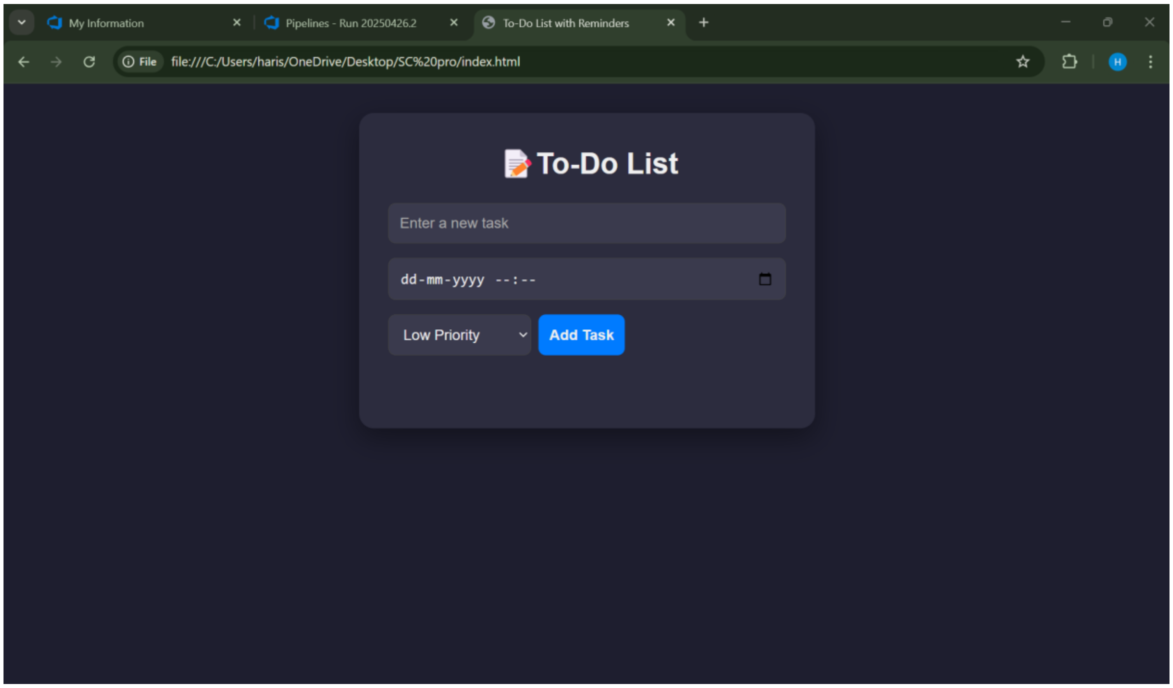
Requests/sec (Avg)

Request1
1.33 /s

Errors (total)

Request1 502
28

Server-side metrics


My Information
Pipelines - Run 20250426.2
To-Do List with Reminders
File
file:///C:/Users/haris/OneDrive/Desktop/SC%20pro/index.html
To-Do List
Enter a new task
dd-mm-yyyy --:--
Low Priority
Add Task

Pipelines

Description:
This experiment demonstrates connecting a GitHub-hosted Flask-based music recommendation project with Azure DevOps. The pipeline will automatically install dependencies, run basic tests, and publish artifacts. This ensures that every commit triggers checks for reliability and smooth deployment.

Steps:

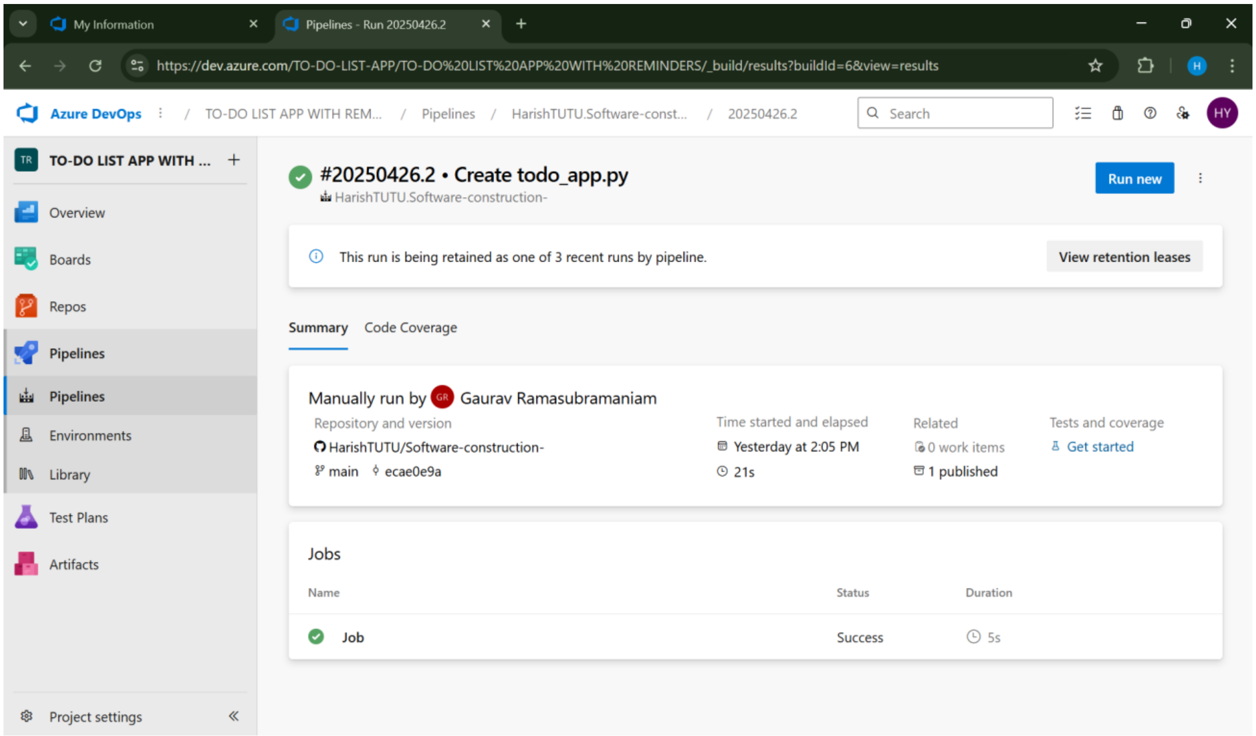
1. Connect GitHub to Azure DevOps:
   - In Azure DevOps, create a new project.
   - Create a pipeline and select GitHub as the source.
   - Authorize access to your GitHub repository, ensuring that Azure DevOps can pull the repository for your pipeline.
2. Create azure-pipelines.yml in Your Repo Root:
   - In your GitHub repository, create a new file called azure-pipelines.yml in the root directory.
   - Add the following basic pipeline configuration for Python and Flask:

yml Code

```
trigger:
  - main  # Trigger pipeline when changes are pushed to the main branch

pool:
  vmImage: ubuntu-latest  # Use a hosted Ubuntu agent

steps:
# Step 1: Checkout the code from GitHub
- checkout: self

# Step 2: Set up Python environment
- task: UsePythonVersion@0
  inputs:
    versionSpec: '3.x'  # Use the latest Python 3.x version
  displayName: "Set up Python"

# Step 3: Install dependencies from the correct path
- script: |
    python -m pip install --upgrade pip
    pip install -r project/requirements.txt  # Adjusted path to requirements.txt
  displayName: "Install dependencies"

# Step 4: Run a simple Python script to check the environment
- script: |
    python -c "print(' Hello from TO-DO LIST APP WITH REMINDERS!')"
  displayName: "Run a Python script"
```

3. Pipeline Tasks Include:
    - Setting up the Python environment using the UsePythonVersion task.
    - Installing project dependencies from project/requirements.txt. Ensure the path to requirements.txt is correct (located under the project folder).
    - Running a simple Python script to verify that Python is set up correctly and the pipeline works.
4. Run and Monitor Pipeline:
    - Commit changes to the main branch of your repository to trigger the pipeline in Azure DevOps.
    - Monitor the logs in the Azure DevOps portal to view logs, errors, or success messages and ensure everything runs smoothly.

Pipeline



#20250426.2 • Create todo_app.py

HarishTUTU.Software-construction-

This run is being retained as one of 3 recent runs by pipeline.

Manually run by GR Gaurav Ramasubramaniam

Repository and version
HarishTUTU/Software-construction-
main ecae0e9a

Time started and elapsed
Yesterday at 2:05 PM
21s

Related
0 work items
1 published

Tests and coverage
Get started

Jobs

Name	Status	Duration
Job	Success	5s

Result:

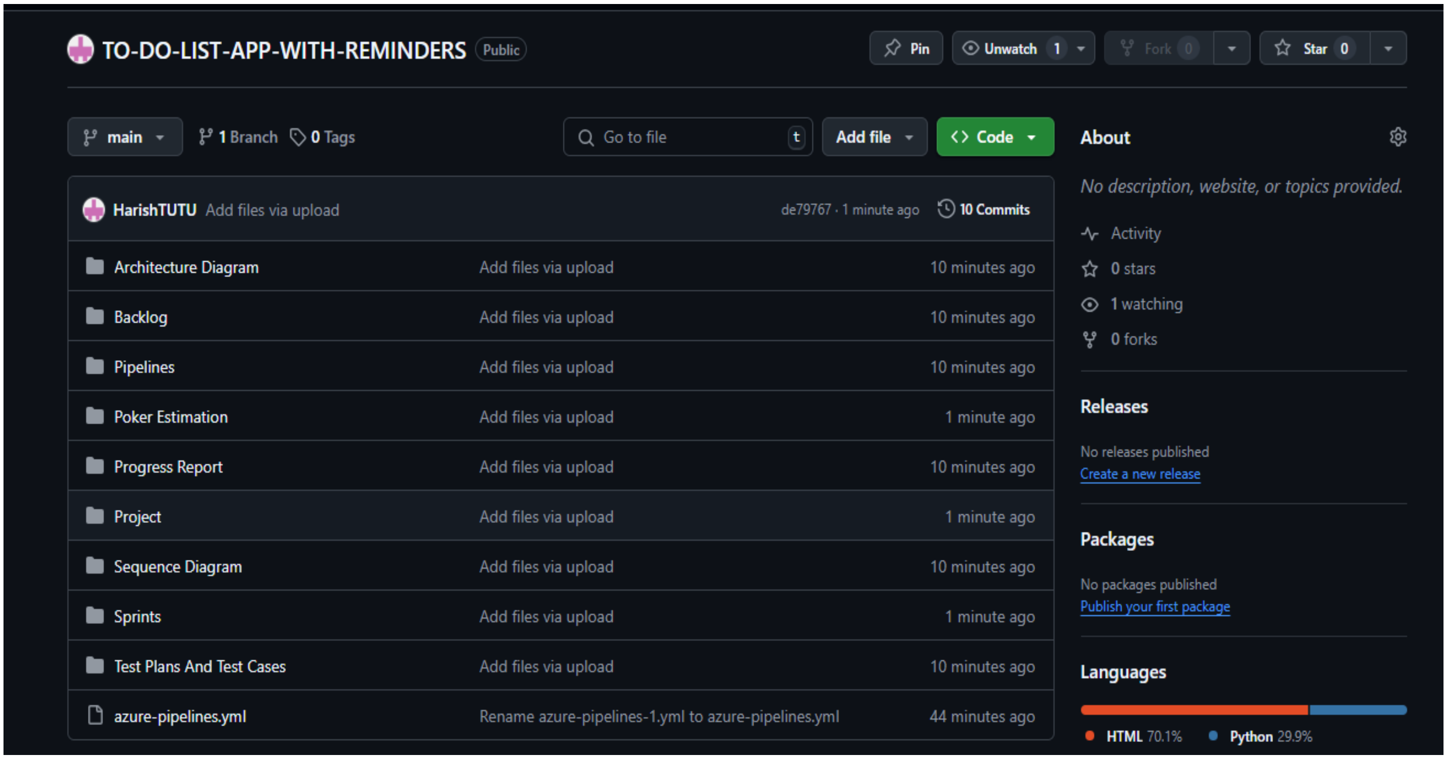
Successfully created the Azure Load Testing resource and executed a load test to assess the performance of the specified endpoint and also demonstrated pipelines in azure devops.

EXP NO: 10	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 TO-DO LIST APP WITH REMINDERS project.

GitHub Project Structure



HarishTUTU Add files via upload · de79767 · 1 minute ago · 10 Commits

Architecture Diagram	Add files via upload	10 minutes ago
Backlog	Add files via upload	10 minutes ago
Pipelines	Add files via upload	10 minutes ago
Poker Estimation	Add files via upload	1 minute ago
Progress Report	Add files via upload	10 minutes ago
Project	Add files via upload	1 minute ago
Sequence Diagram	Add files via upload	10 minutes ago
Sprints	Add files via upload	1 minute ago
Test Plans And Test Cases	Add files via upload	10 minutes ago
azure-pipelines.yml	Rename azure-pipelines-1.yml to azure-pipelines.yml	44 minutes ago

No description, website, or topics provided.

No releases published
Create a new release

No packages published
Publish your first package

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.