

Capstone Project – Documentation

Bug Tracking System (MVC - Single Controller)

Project Overview: Create a basic bug tracker where users can log software bugs/issues. The system allows tracking bug status, severity, and assignee in a clean interface.

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1. Features

- Add a new bug report
- View list of all bugs
- Edit bug details (e.g., status, severity)
- Delete bug entries
- View individual bug detail

2. Technologies Used

- ASP.NET Core MVC
- Entity Framework Core
- SQL Server
- Razor Views + Bootstrap
- Azure App Service (Deployment)
- Git for version control

3. Database Schema

Bug Table

| Field Name | Type |
|--------------|------------------------------------|
| Id | int (PK) |
| Title | string |
| Description | string |
| Severity | string (Low, Medium, High) |
| Status | string (Open, In Progress, Closed) |
| Assignee | string |
| ReportedDate | DateTime |

4. Controller

BugsController.cs

Handles:

- Index() – Show list of all bugs
- Create() – Submit a new bug
- Edit(id) – Update bug details (e.g., status/severity)
- Details(id) – View bug details
- Delete(id) – Delete bug record

5. Views

```
Views/Bugs/  
├── Index.cshtml  
├── Create.cshtml  
├── Edit.cshtml  
├── Details.cshtml  
└── Delete.cshtml
```

6. Folder Structure

```
BugTrackingSystem/  
├── Controllers/  
│   └── BugsController.cs  
├── Models/  
│   └── Bug.cs  
├── Views/  
│   └── Bugs/  
├── Data/  
│   └── ApplicationDbContext.cs
```

7. Deployment

- Push to GitHub
- Deploy to Azure App Service
- Use Azure SQL Database
- Configure appsettings.json with cloud DB connection

8. Documentation

- Setup and usage instructions
- Screenshot of the bug list and form
- Deployment steps

8 . Deployment

8.1 Setup and Usage Instructions :

Prerequisites

Make sure the following are installed:

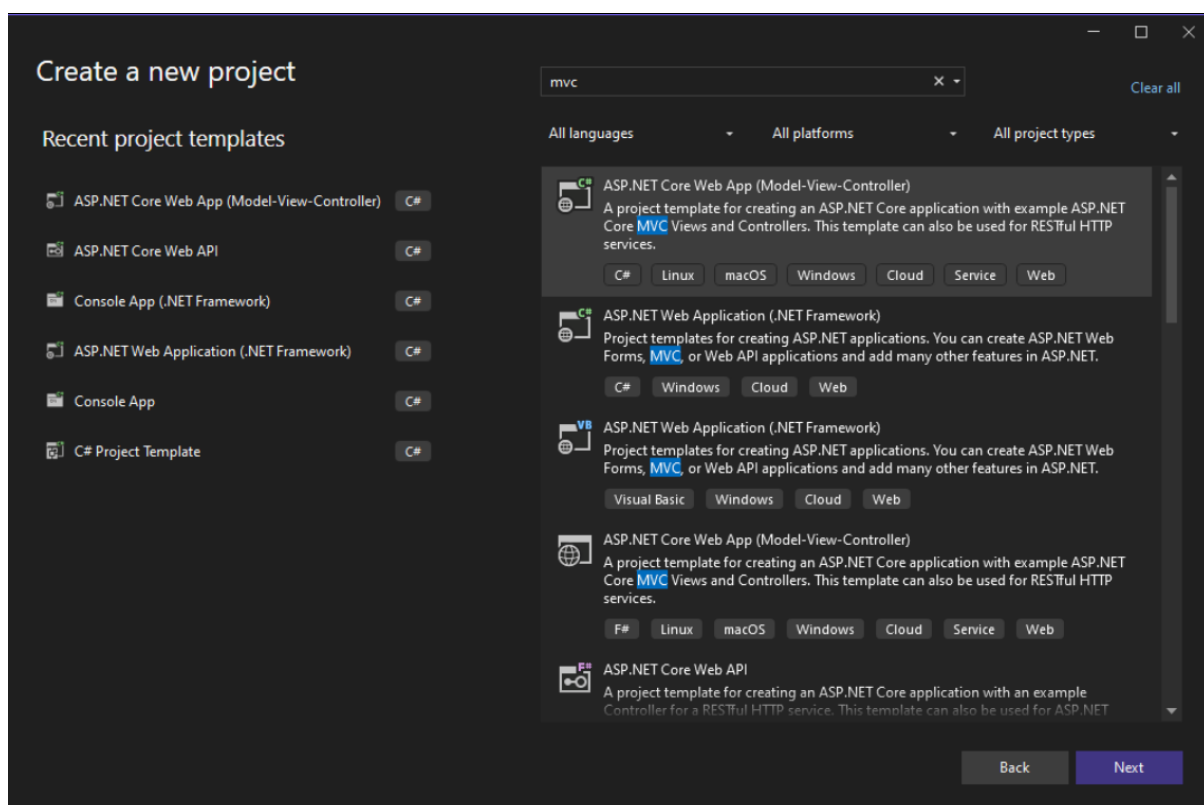
- Visual Studio 2022 + with **ASP.NET and web development** workload
- SQL Server (Express or full version)
- Git (for version control)
- Entity Framework Core packages installed via NuGet:
 - Microsoft.EntityFrameworkCore.SqlServer

Steps to Follow :

Step-1 : Open the Visual Studio 2022 in the system.

Click on the Create New Project, a page will open .

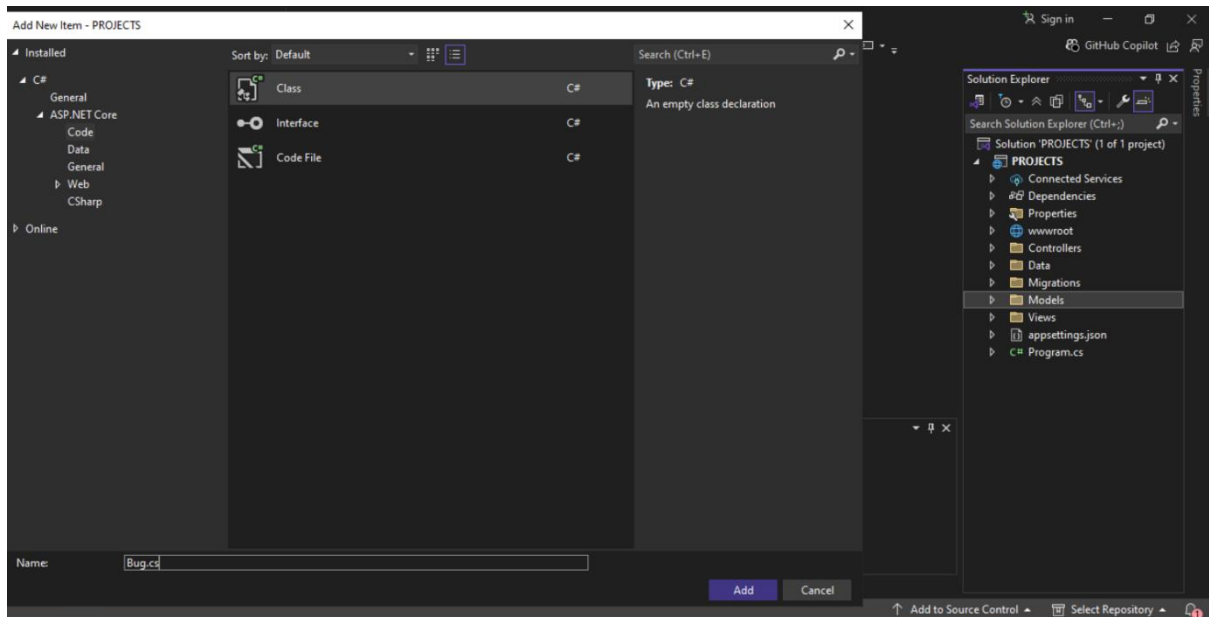
Right side in the top a search bar will be visible search for ASP.NET Core MVC, It will come select that one and type next.



In that page give the name for Project as PROJECTS, then click next.

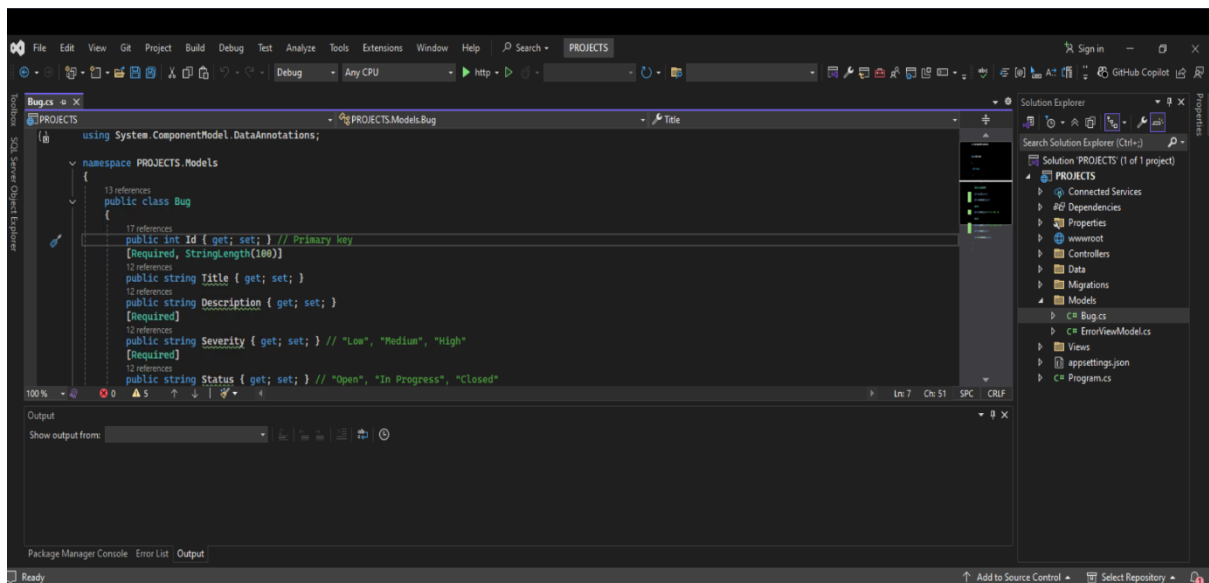
Additional information page will be visible there uncheck the box Configure For HTTPS and then click Create.

Step-2 : On the Models folders give the right click and add a class with name Bug.cs

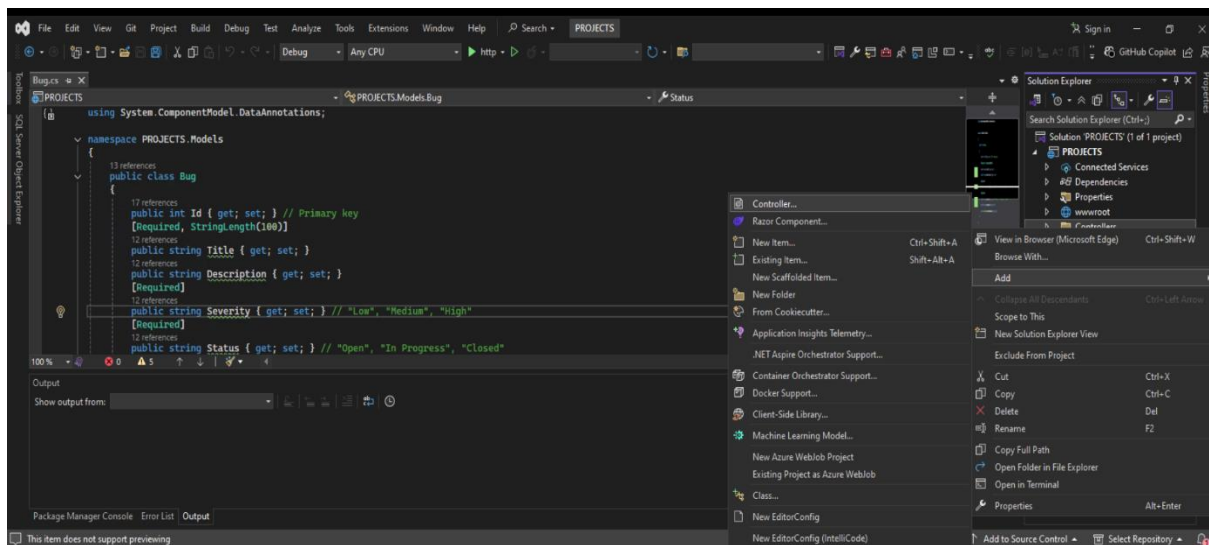


Click on Add, Bug.cs class will be created.

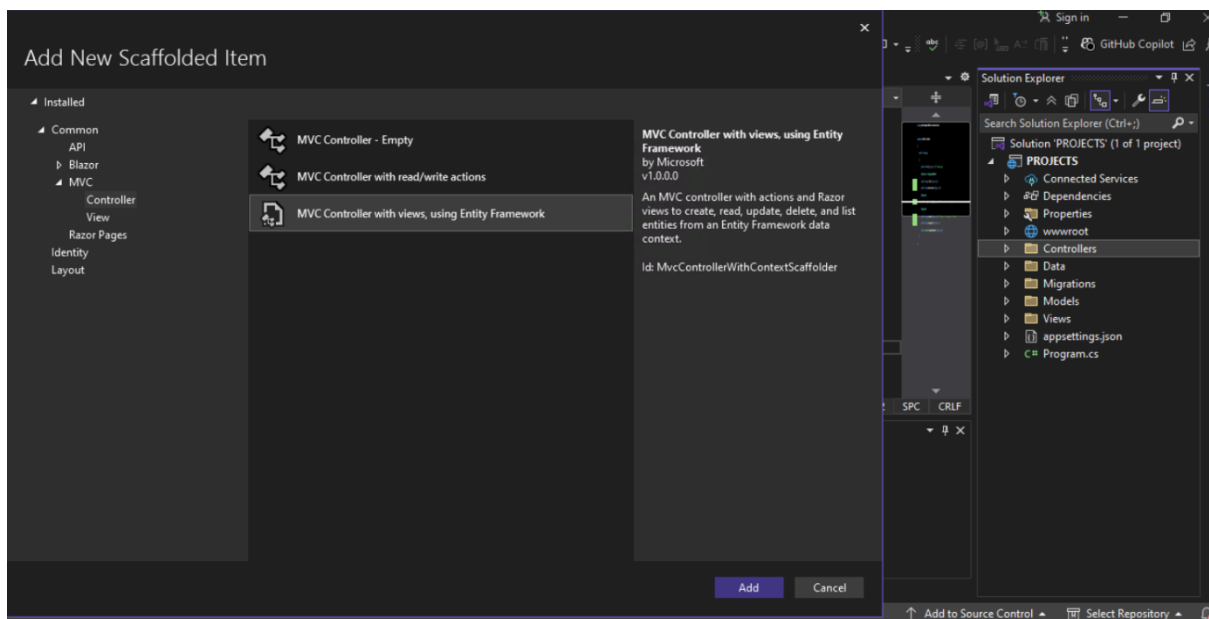
Step-3 : Add fields into the Bug.cs class



Step-4 : On controllers folder right click on it and Add , if you go to add you will Find controller option.



You will find a Add new Scaffolded Item Page select the MVC Controller with views Using Entity Framework then add.



A new page will be visible with ADD MVC Controller with views , using Entity Framework.

Select the Model class with Bug (PROJECTS.Models)

Add DbContext class with name PROJECTS.Data.PROJECTSContext.

Automatically SQL will be enables in the Database Provider.

The Controller name will be BugsController by default.

Then click on Add.

Close

Add MVC Controller with views, using Entity Framework

Model class: Bug (PROJECTSS.Models)

DbContext class: PROJECTSS.Data.PROJECTSSContext

Database provider: SQL Server

Views

- ☒ Generate views
- ☒ Reference script libraries
- ☒ Use a layout page

(Leave empty if it is set in a Razor _viewstart file)

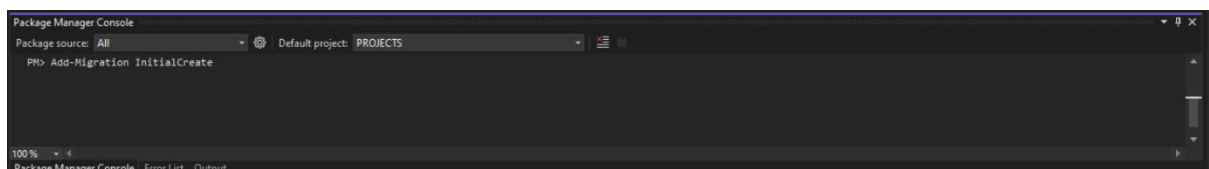
Controller name: BugsController

Add Cancel

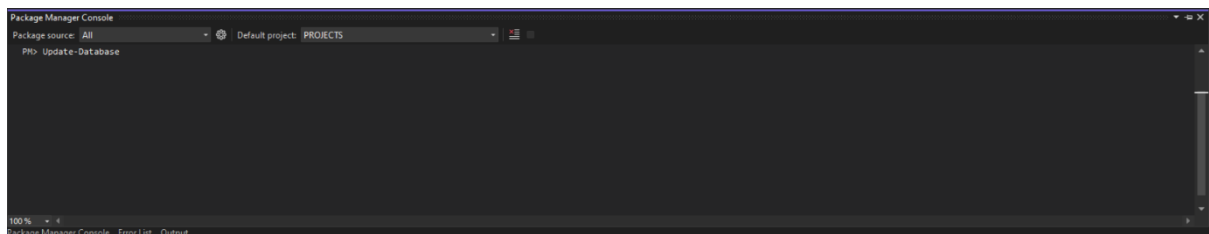
A new controller will be created with name BugsController.

Step-5 : In package Manager Console run these following commands

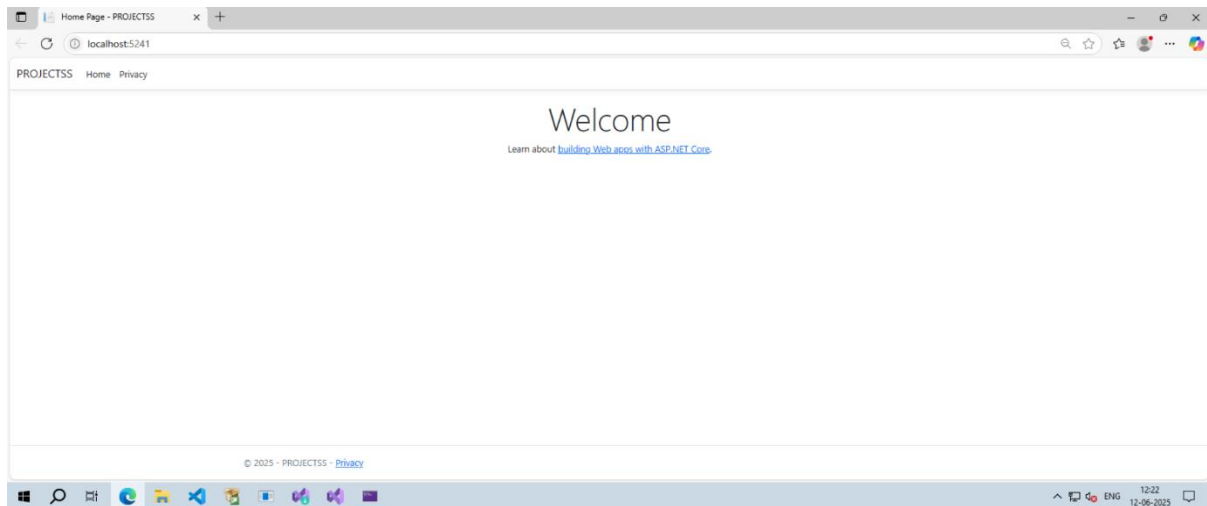
- Add-Migration InitialCreate



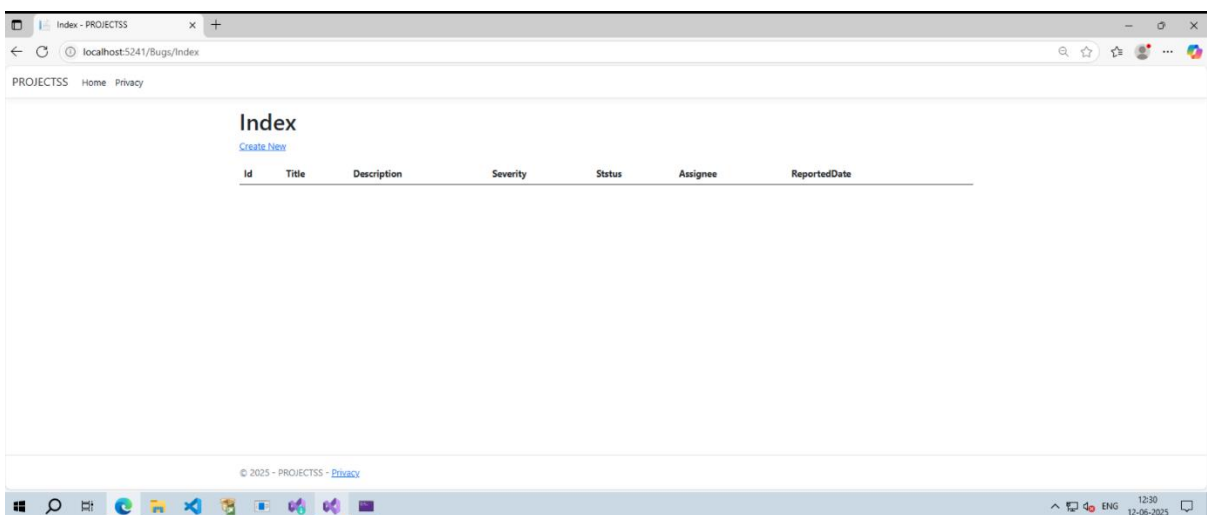
- Update-Database



Step-6 : Run the controller program a simple web page will be created with homepage.



Step-7 : Go to localhost:xxxx/Bugs/Index



Step-8 : Add the Style part for

Views/Bugs/Index.cshtml

Views/Bugs/Create.cshtml

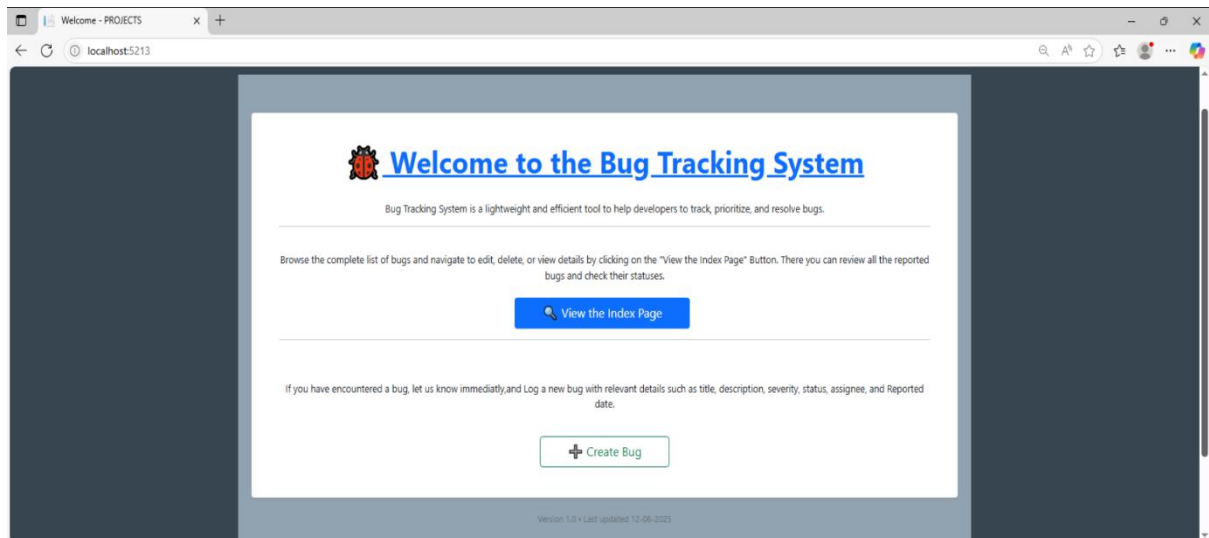
Views/Bugs/Edit.cshtml

Views/Bugs/Details.cshtml

Views/Bugs/Delete.cshtml with any one of HTML, CSS, Razor Views, Bootstrap.

Step-9 : Add style part for Views/Home/Index.cshtml

Then the homepage will look like



Usage Instructions :

Step-1 : Index Page

After running the application in real life if we login into the page A welcome home screen will be visible, after clicking on “View the Index Page”/by giving “localhost:xxxx/Bugs/Index” then it will navigate to Index page.

| ID | Title | Description | Severity | Status | Assignee | ReportedDate | Actions |
|----|--|--|---|-------------|--------------------------|--------------|---|
| 1 | Login Button Not Responding on the Home Page | When users click on the "Login" button on the homepage, nothing happens. | High - The login functionality is critical for user access, and this issue is preventing all users from logging in. | Open | Charan Tej (Developer) | 06-06-2025 | Details Edit Delete |
| 2 | Forgot password email not sent | Users are not receiving the reset password email after submitting the "Forgot Password" form | High | Open | Yamuna | 07-06-2025 | Details Edit Delete |
| 3 | Alignment issue on About Us Page | The text content is overlapping with the image section on screen widths between 768px and 992px. | Low | Closed | Aditya | 08-06-2025 | Details Edit Delete |
| 4 | Dropdown menu not showing selected item | After selecting an option from the dropdown, the displayed value remains unchanged. | Medium | In progress | Joshna | 05-06-2025 | Details Edit Delete |
| 5 | Show dashboard load | Dashboard takes over 10 seconds to load. | Medium | In progress | Grithika | 07-06-2025 | Details Edit Delete |
| 6 | Incorrect Price Calculation in Cart. | The shopping cart displays incorrect total prices. | High | In progress | Abhi (Backend Developer) | 04-06-2025 | Details Edit Delete |
| 7 | Search function not returning results. | Users report that no searching results for existing products. | High | Open | Gunasee | 08-06-2025 | Details Edit Delete |

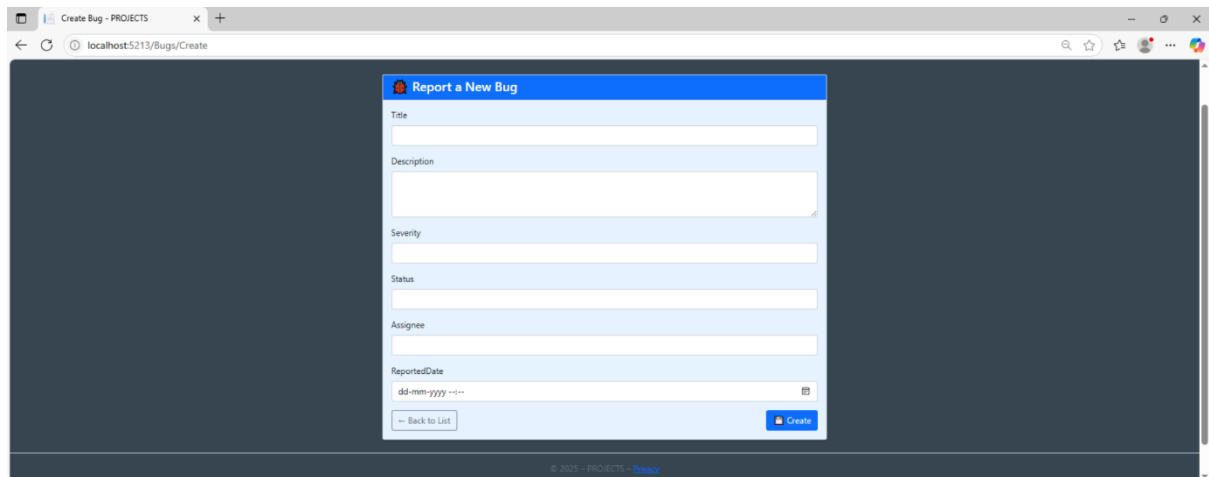
Here we can see the index page, it is having List of Bugs, we can create new bug, or we can delete the particular bug, or we can see the details of bugs individually, we can also edit the bugs.

Step-2 : Create

If we want to Create a new bug then Click On the “Create Bug” button, It will navigate to the localhost:xxxx/Bugs/Create page .There we can see the Report a New Bug page.

There we can see the Title, Description, Severity, Status, Assignee, ReportedDate as Id is by default.

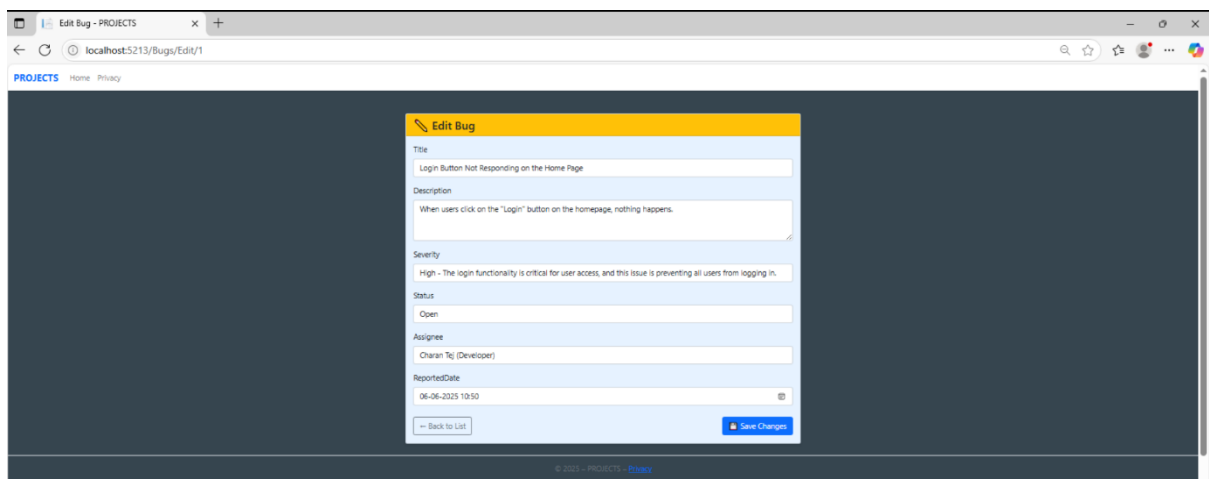
We have to fill the details and then click on “Create”.



The screenshot shows a web browser window with the address bar displaying 'localhost:5213/Bugs/Create'. The page title is 'Create Bug - PROJECTS'. The main content area features a form titled 'Report a New Bug' with a blue header. The form includes the following fields: 'Title' (text input), 'Description' (text area), 'Severity' (text input), 'Status' (text input), 'Assignee' (text input), and 'ReportedDate' (date picker set to 'dd-mm-yyyy'). At the bottom of the form are two buttons: 'Back to List' and 'Create'. The footer of the page shows '© 2025 - PROJECTS - Privacy'.

Step-3 : Edit

If we want to edit the particular entry we can click on the “Edit” button or we can give “localhost:xxxx/Bugs/Edit” it will navigate to the edit page.

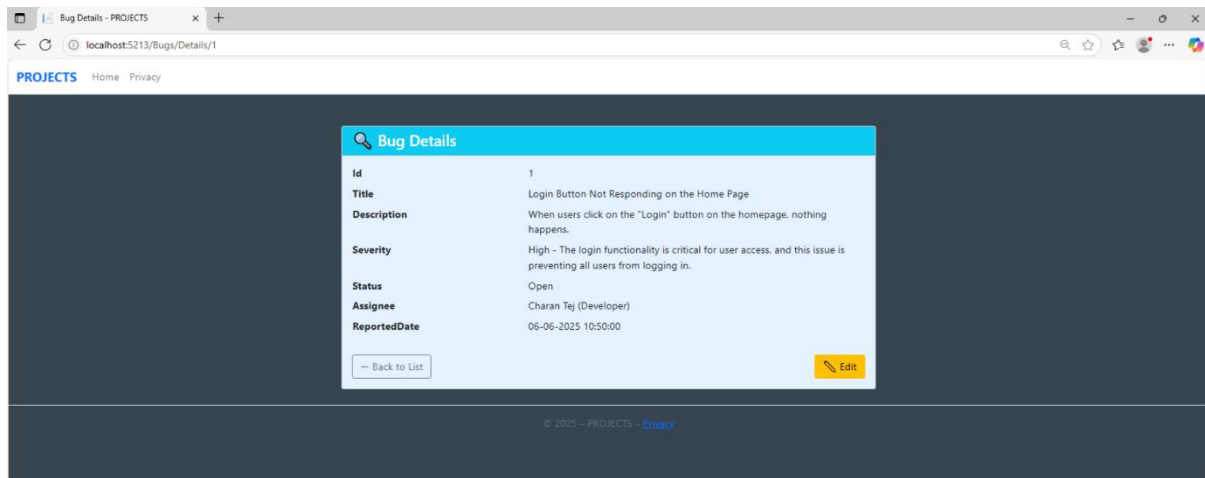


The screenshot shows a web browser window with the address bar displaying 'localhost:5213/Bugs/Edit/1'. The page title is 'Edit Bug - PROJECTS'. The main content area features a form titled 'Edit Bug' with a yellow header. The form includes the following fields: 'Title' (text input with value 'Login Button Not Responding on the Home Page'), 'Description' (text area with value 'When users click on the "Login" button on the homepage, nothing happens.'), 'Severity' (text input with value 'High - The login functionality is critical for user access, and this issue is preventing all users from logging in.'), 'Status' (text input with value 'Open'), 'Assignee' (text input with value 'Charan Tej (Developer)'), and 'ReportedDate' (date picker set to '06-06-2025 10:50'). At the bottom of the form are two buttons: 'Back to List' and 'Save Changes'. The footer of the page shows '© 2025 - PROJECTS - Privacy'.

There we can edit the details which we want to change, change the details and click on “Save Changes” button , changes will be saved.

Step-4 : Details

In Index page we can see the Details button, So if we want to know about particular bug information then click on the particular bug details ,it will navigate as shown below.



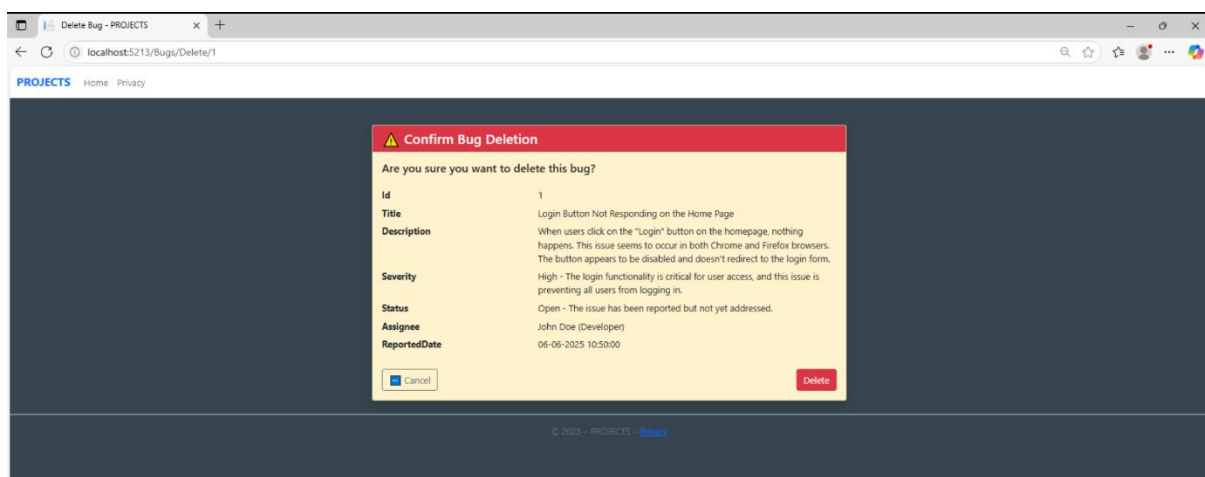
Here the navigation is localhost:xxxx/Bugs/Details/1.

Here we can see the individual bug details, like Id, Title of the bug, Description, Severity, Status, Assignee, ReportedDate.

If we don't want any detail we can edit.

Step-5 : Delete

So if we don't want any bug record then we can select the particular bug delete button, or we can give manually like "localhost:xxxx/Bugs/Delete/x then it will navigate to that page.



It is showing a warning here that we want to delete this bug or not.


If we click on delete the particular bug will be deleted.

8.2 Screenshot of the bug list and form:

Bug list:

| Bug Tracking System | | | | | | | + Create New Bug |
|---------------------|--|--|---|-------------|--------------------------|--------------|---|
| Id | Title | Description | Severity | Status | Assignee | ReportedDate | Actions |
| 1 | Login Button Not Responding on the Home Page | When users click on the "Login" button on the homepage, nothing happens. | High - The login functionality is critical for user access, and this issue is preventing all users from logging in. | Open | Charan Tej (Developer) | 06-06-2025 | Details Edit Delete |
| 2 | Forgot password email not sent | Users are not receiving the reset password email after submitting the "Forgot Password" form | High | Open | Yamuna | 07-06-2025 | Details Edit Delete |
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| 7 | Search function not returning results. | Users report that no searching results for existing products. | High | Open | Gunasree | 08-06-2025 | Details Edit Delete |

Create form:

 **Report a New Bug**

Title

Description

Severity


Status

Assignee

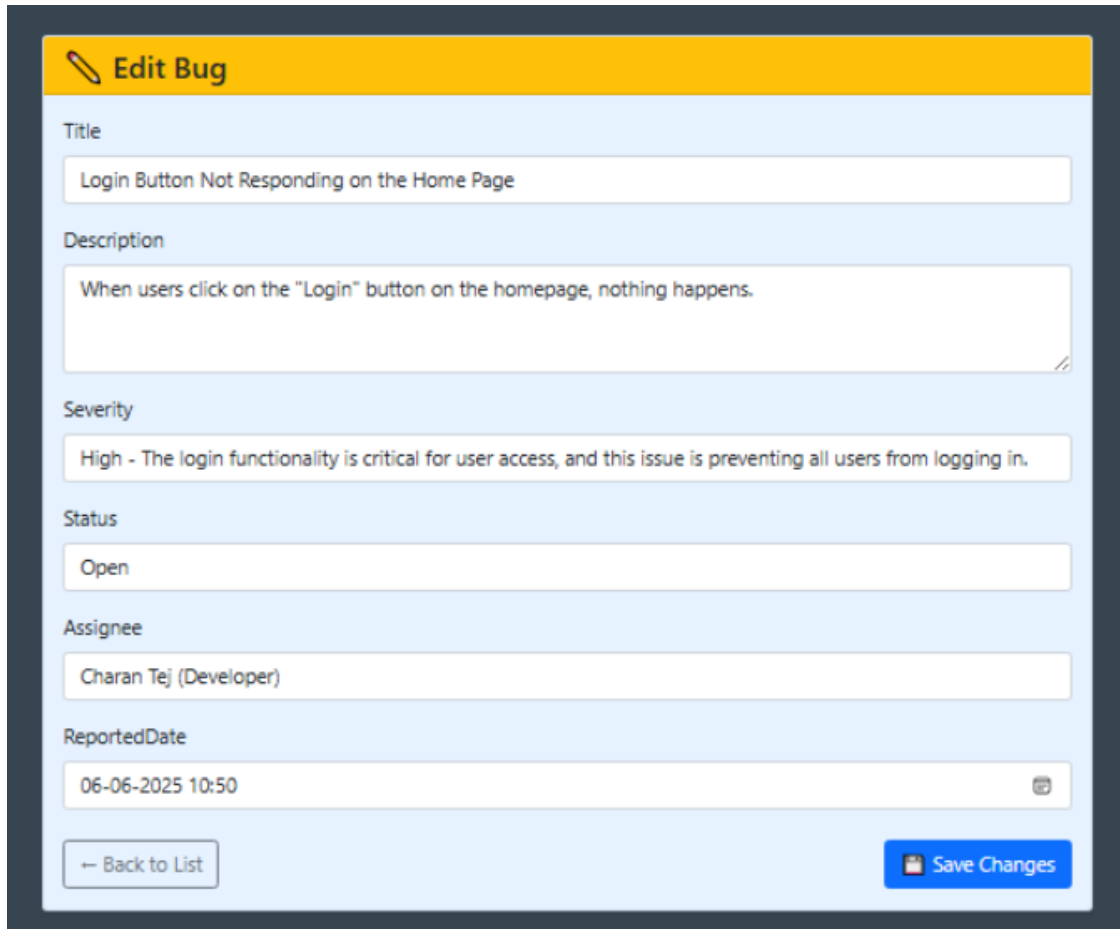
ReportedDate

dd-mm-yyyy --:--

[← Back to List](#)

 **Create**

Edit Form:



The screenshot shows a web form titled "Edit Bug" with a yellow header bar. The form is set against a light blue background and contains several input fields and buttons. The fields are labeled "Title", "Description", "Severity", "Status", "Assignee", and "ReportedDate". The "Title" field contains the text "Login Button Not Responding on the Home Page". The "Description" field contains the text "When users click on the 'Login' button on the homepage, nothing happens." The "Severity" field contains the text "High - The login functionality is critical for user access, and this issue is preventing all users from logging in." The "Status" field contains the text "Open". The "Assignee" field contains the text "Charan Tej (Developer)". The "ReportedDate" field contains the text "06-06-2025 10:50". At the bottom left of the form is a button labeled "← Back to List", and at the bottom right is a blue button labeled "Save Changes".

Edit Bug

Title
Login Button Not Responding on the Home Page

Description
When users click on the "Login" button on the homepage, nothing happens.

Severity
High - The login functionality is critical for user access, and this issue is preventing all users from logging in.

Status
Open

Assignee
Charan Tej (Developer)

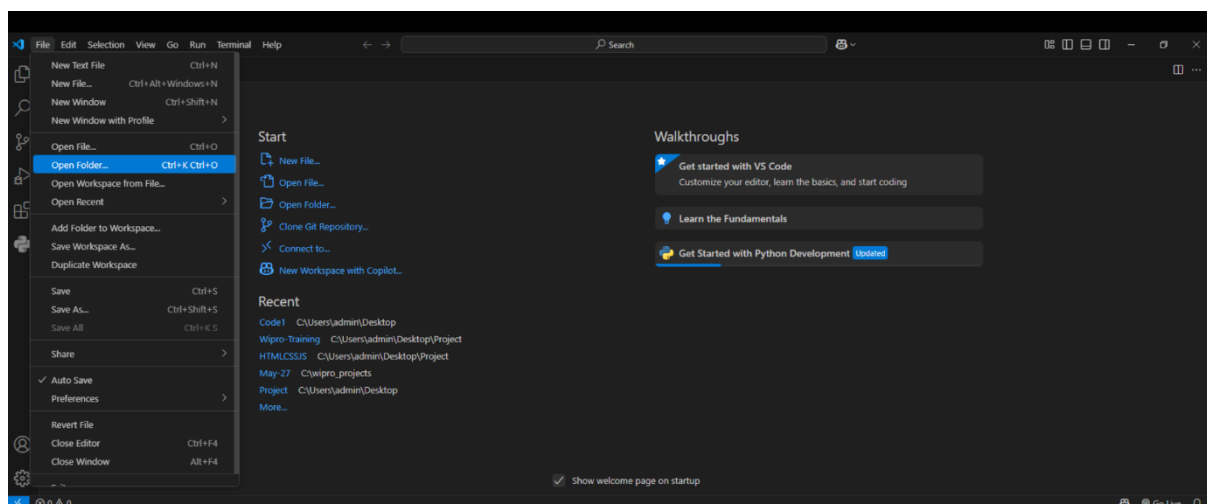
ReportedDate
06-06-2025 10:50

← Back to List Save Changes

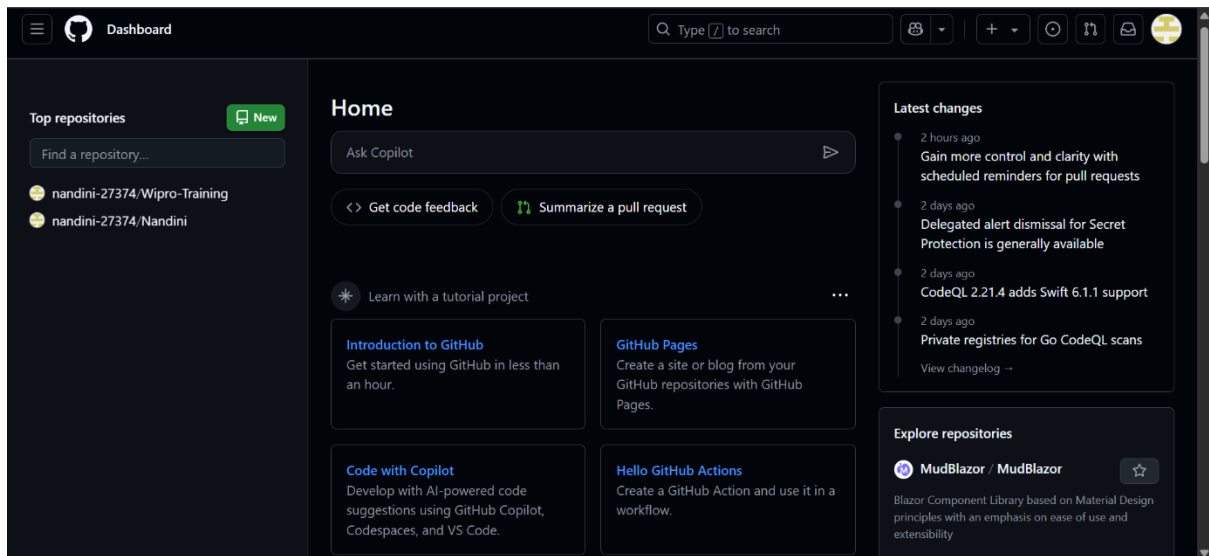
8.3 Deployment Steps:

Step-1 : Create a folder in the File Explorer.

Step-2 : Open that folder in Visual Studio Code.



Step-3 : Go to the Git Hub home page



There we can see the “New”, click on it it will navigate to another page.

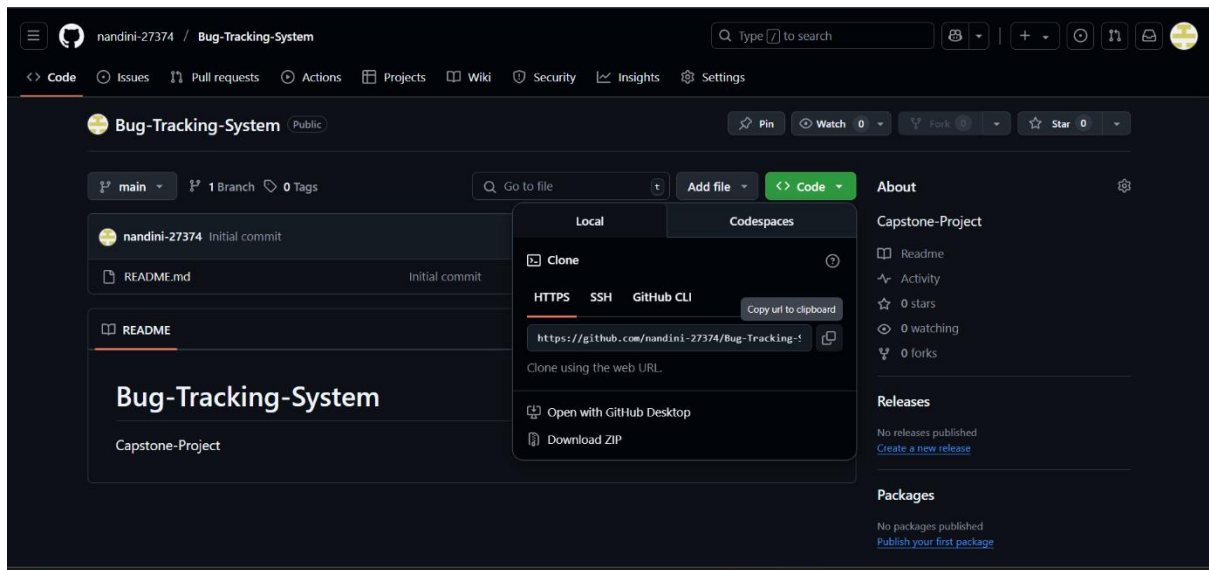


Step-4 : It will ask for Repository name after that, Description is optional.

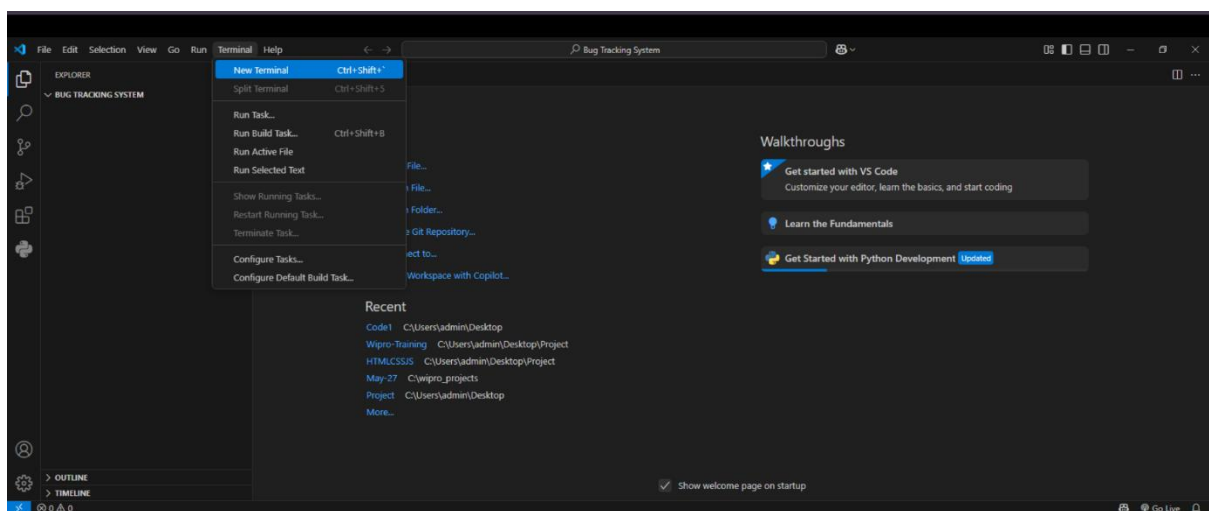
Here Repository name is “Bug Tracking System” and Description as “Capstone-Project”.

Step-5 : Select the Public and README file, then Click on “Create Repository”.

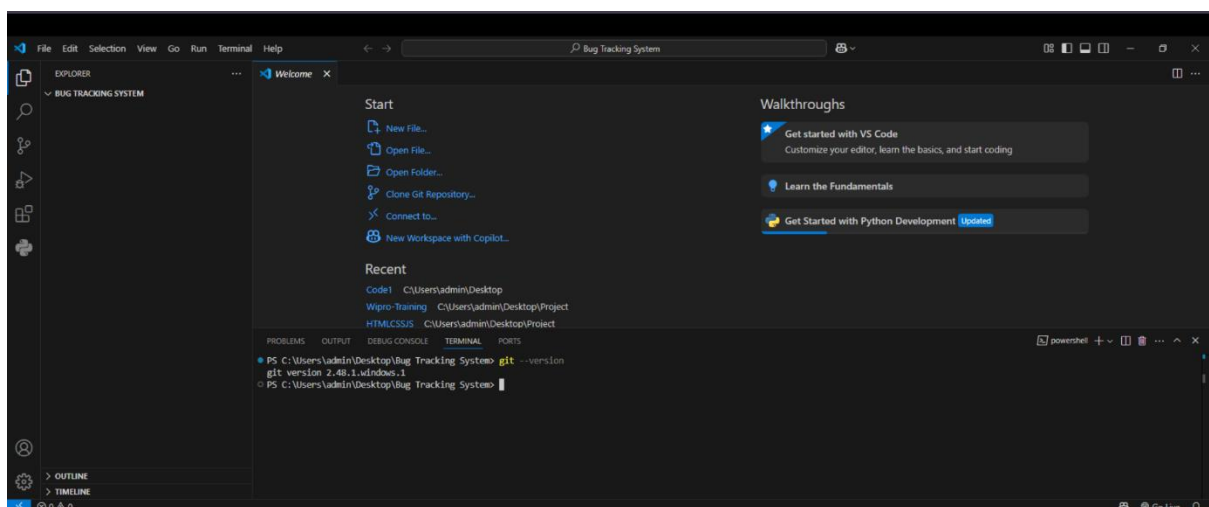
A new repository is created with name Bug Tracking System.



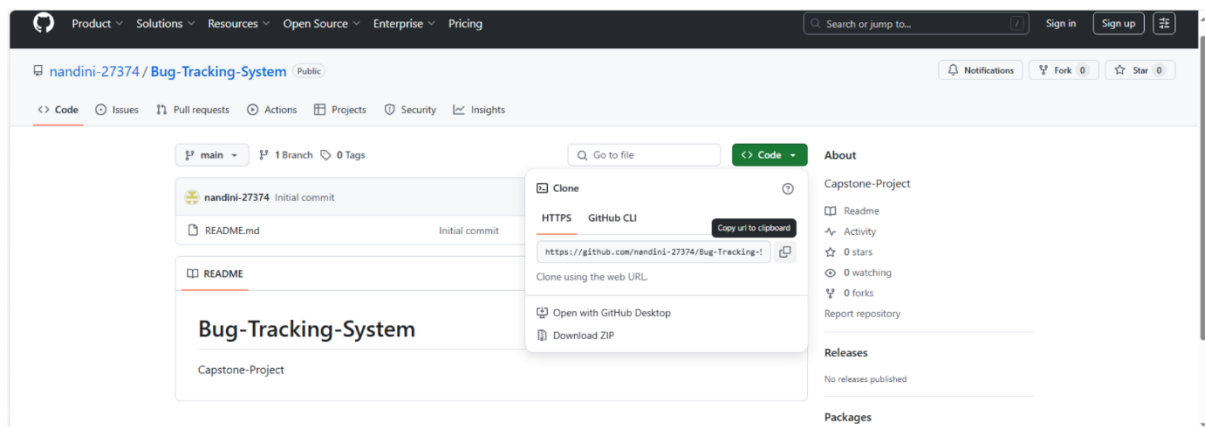
Step-6 : Go to the VS Code then open the new terminal



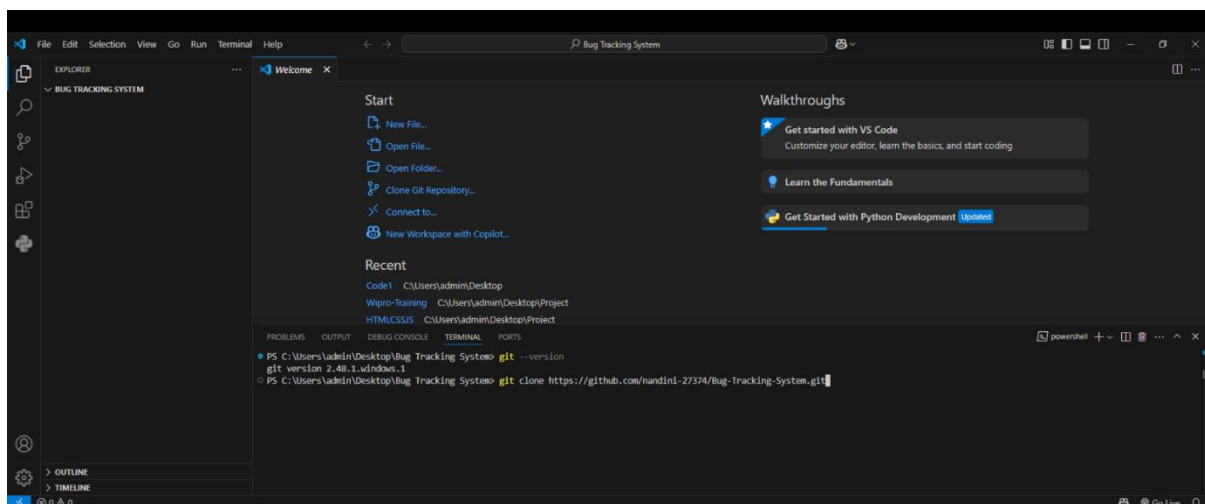
After clicking new terminal a new window will come.



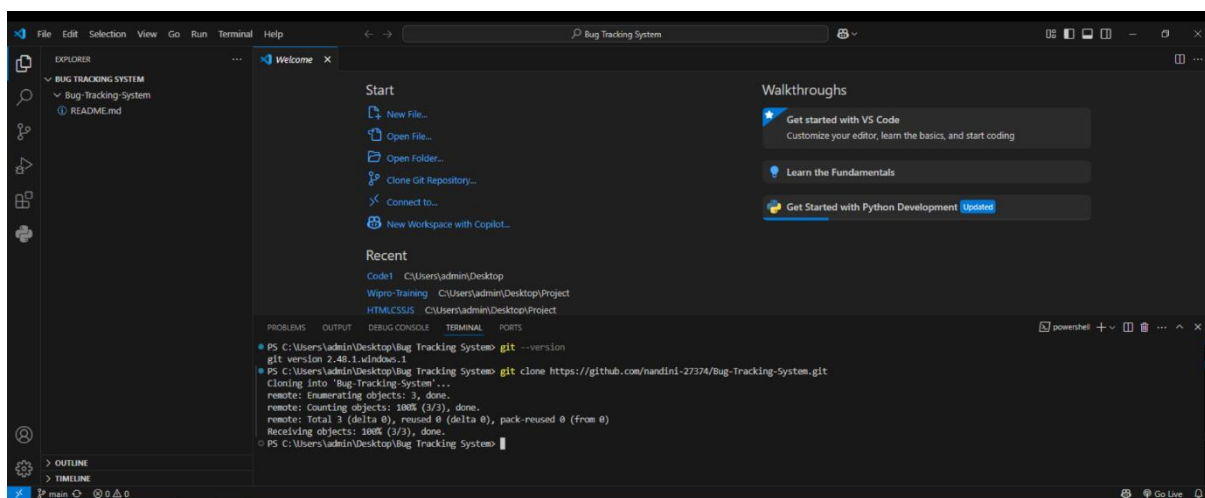
Step-7 : Go to the Git Hub newly created repository and copy that clone link.



Step-8 : Now come to Visual Studio code , In terminal paste the link.



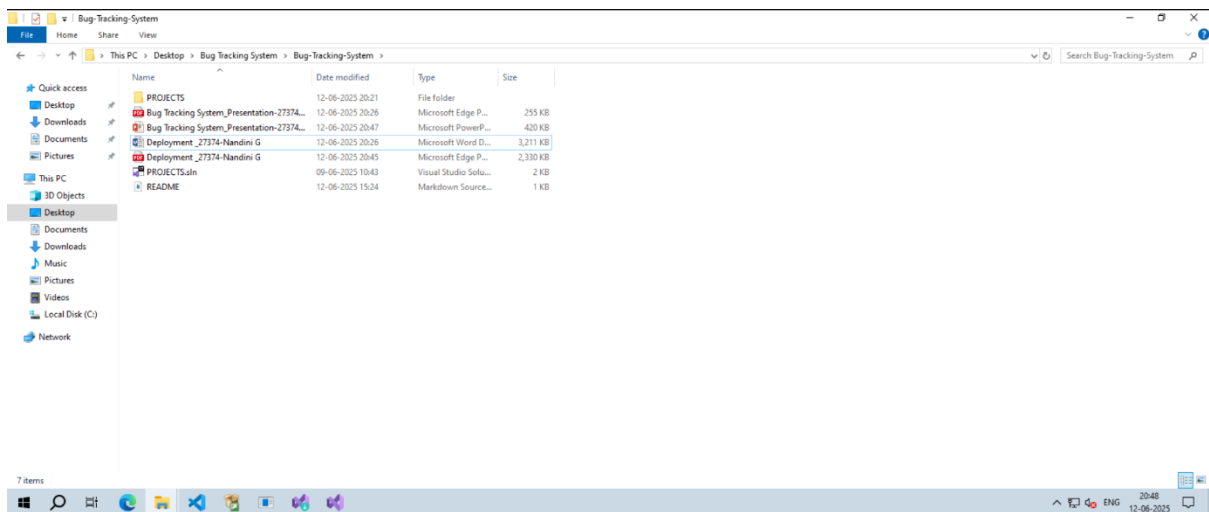
Now give enter.



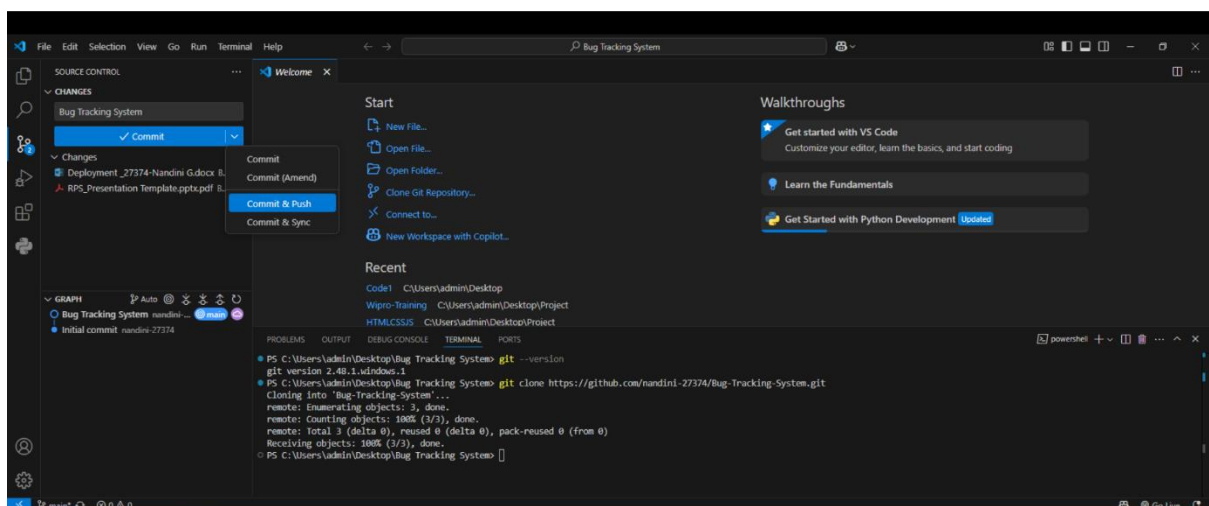
Now we can see at the left side corner we can see the “Bug Tracking System” which we have created in the Git Hub.

Step-9 : Copy the files that you want to push into the GIT Hub.

- Go to admin in the desktop there search for source from there you can find the PROJECTS web application.
- And also copy the word doc containing setup and usage instructions, Deployment steps, Screenshots of the outputs also ppt .
- Paste into Bug Tracking System folder.

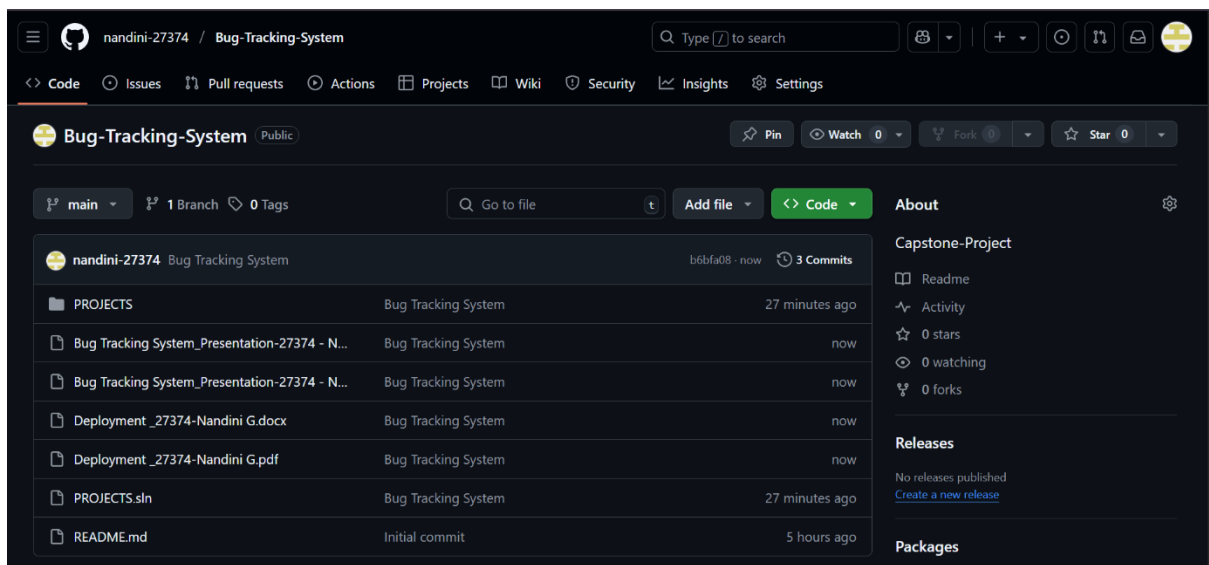


Step-10 : Go to visual studio code there you can see source control is having some action.



There give a commit and select commit & push.

Refresh the GIT Hub you can see the files there.



These are the files that we pushes through the Visual Studio Code.

By

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.Net FullStack

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