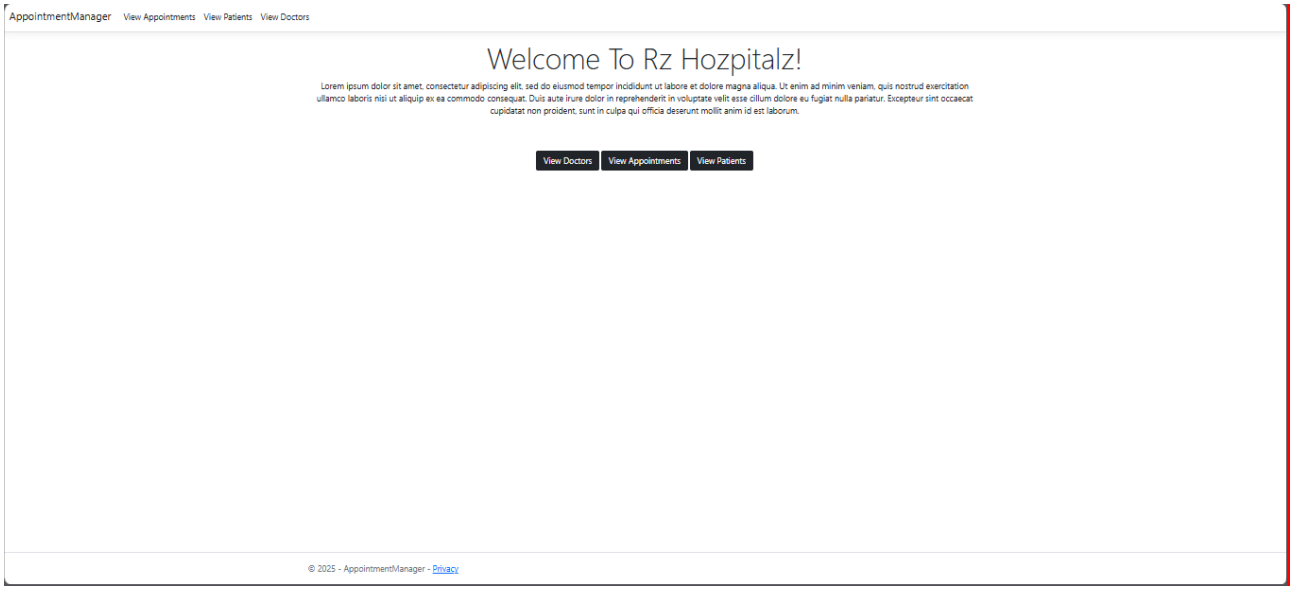
# 12576 Nisanth Saravanan
# RIX2024-Batch 1_Code Quality & Design Principles Lab Assessment

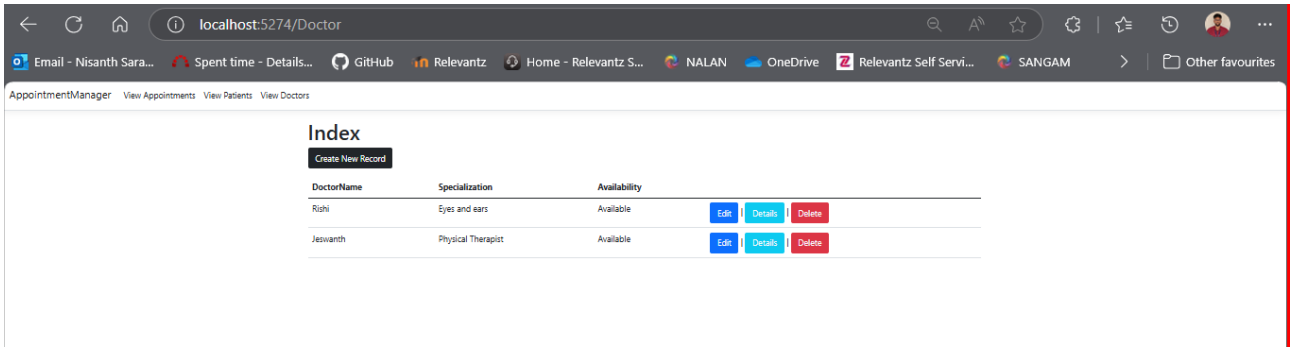
Selected Project: Appointment Manager.
Coder: Nisanth Saravanan
Reviewer: Ranjithkumar Palanisamy

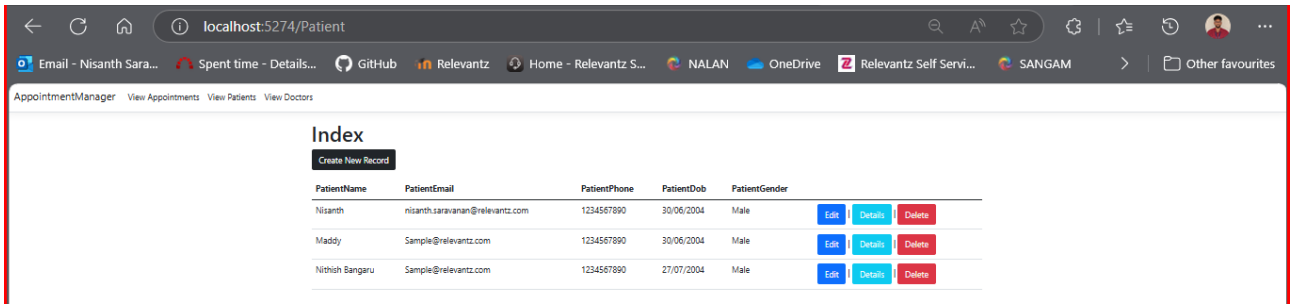
Project Description:
A MVC Project that let’s us add doctor, patient and appointment, in Razor pages.

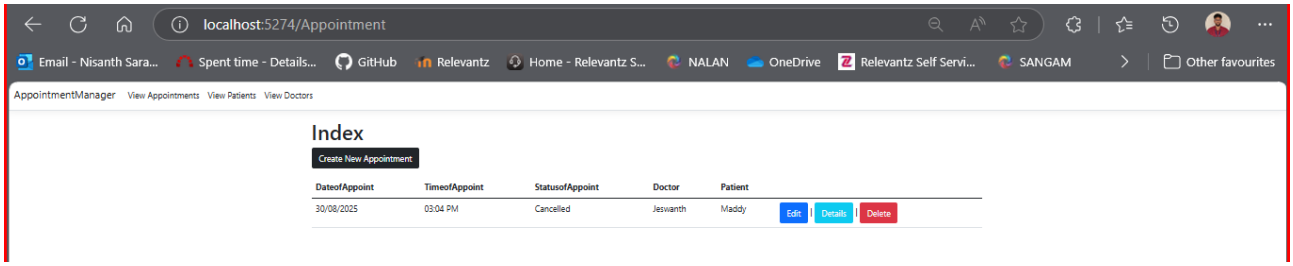
Project Output Screens:



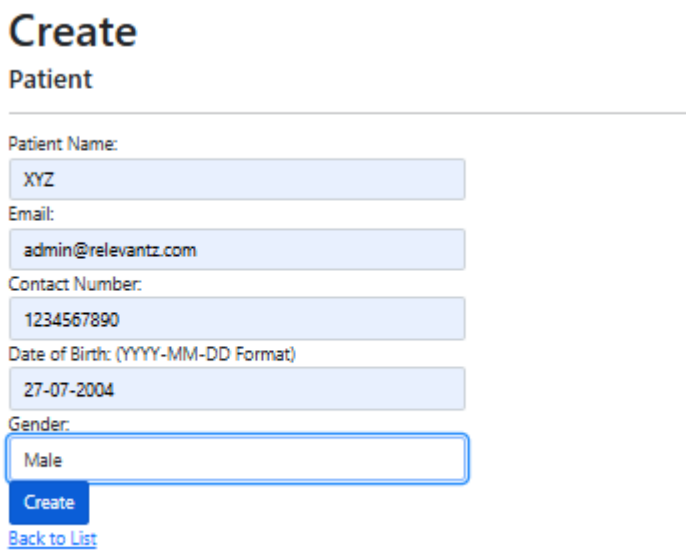

GET Method: Status: Working.

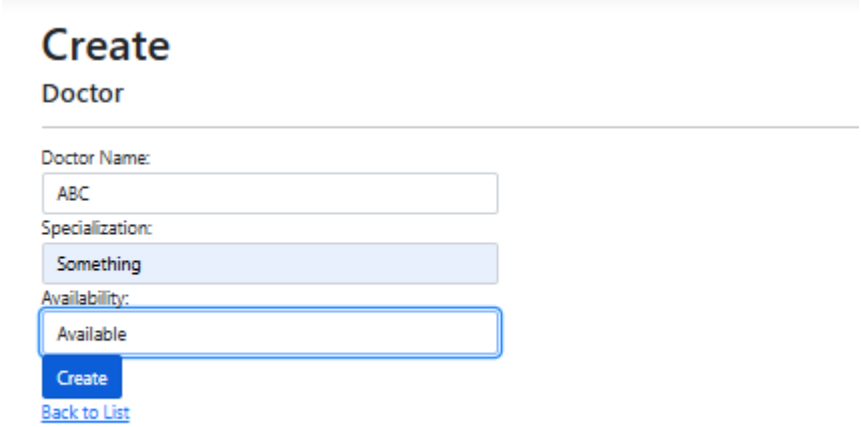


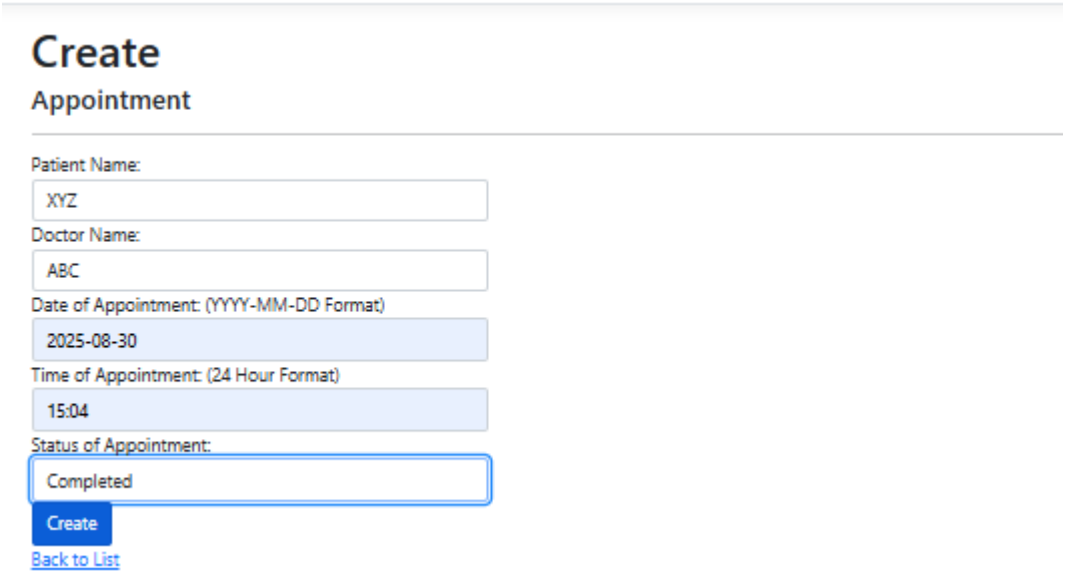



POST Method: Status: Working.



Reflection after POST:

# Index

Create New Record

| PatientName | PatientEmail | PatientPhone | PatientDob | PatientGender | |
|---|---|---|---|---|---|
| Nisanth | nisanth.saravanan@relevantz.com | 1234567890 | 30/06/2004 | Male | Edit \| Details \| Delete |
| Maddy | Sample@relevantz.com | 1234567890 | 30/06/2004 | Male | Edit \| Details \| Delete |
| Nithish Bangaru | Sample@relevantz.com | 1234567890 | 27/07/2004 | Male | Edit \| Details \| Delete |
| XYZ | admin@relevantz.com | 1234567890 | 27/07/2004 | Male | Edit \| Details \| Delete |

# Index

Create New Record

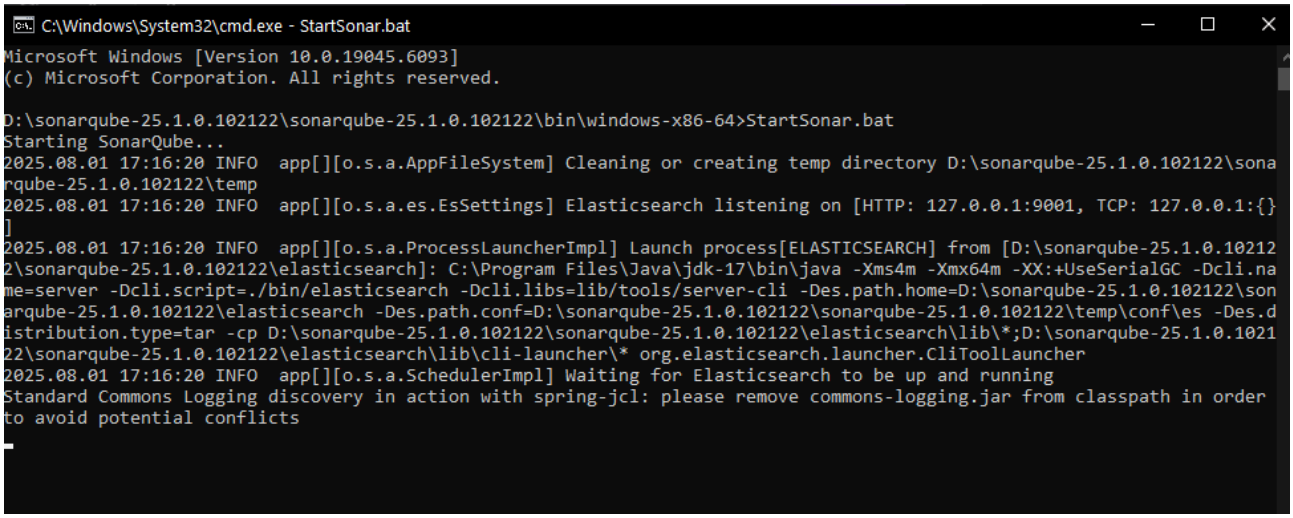
| DoctorName | Specialization | Availability | |
|---|---|---|---|
| Rishi | Eyes and ears | Available | Edit \| Details \| Delete |
| Jeswanth | Physical Therapist | Available | Edit \| Details \| Delete |
| ABC | Something | Available | Edit \| Details \| Delete |

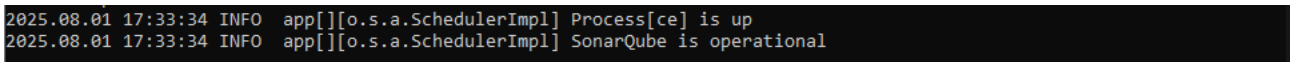
# Index

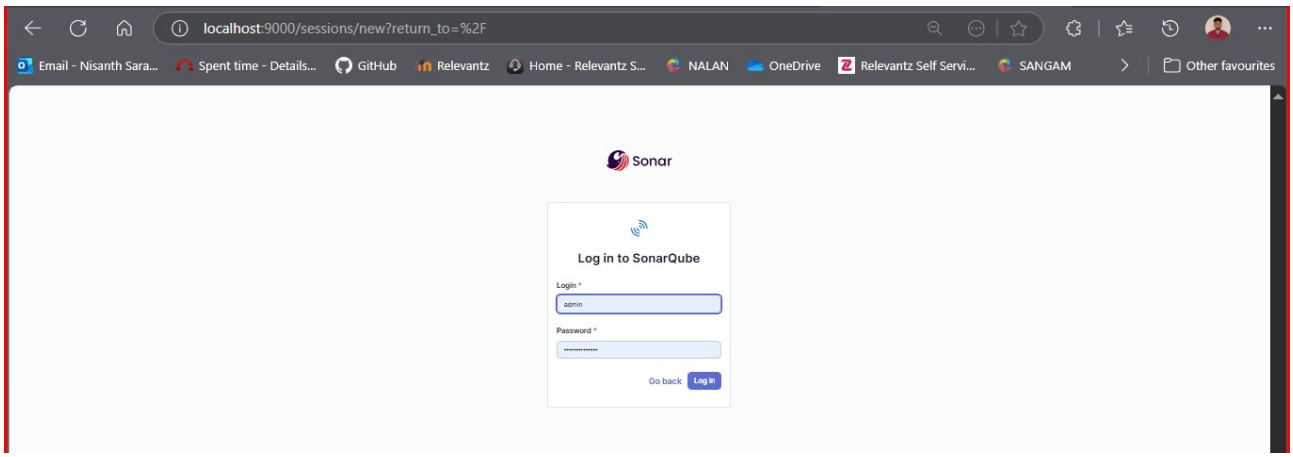
Create New Appointment

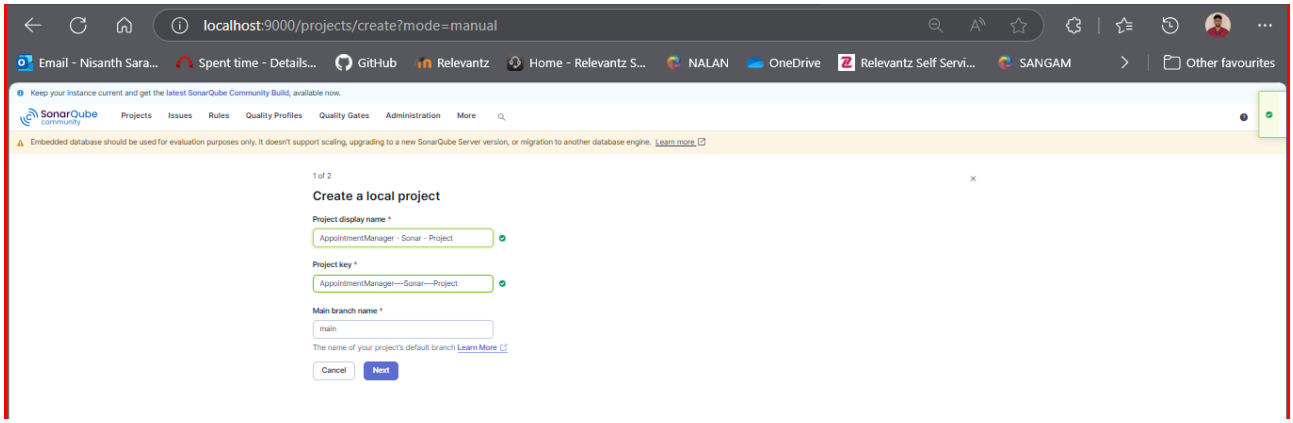
| DateofAppoint | TimeofAppoint | StatusofAppoint | Doctor | Patient | |
|---|---|---|---|---|---|
| 30/08/2025 | 03:04 PM | Cancelled | Jeswanth | Maddy | Edit \| Details \| Delete |
| 30/08/2025 | 03:04 PM | Completed | ABC | XYZ | Edit \| Details \| Delete |

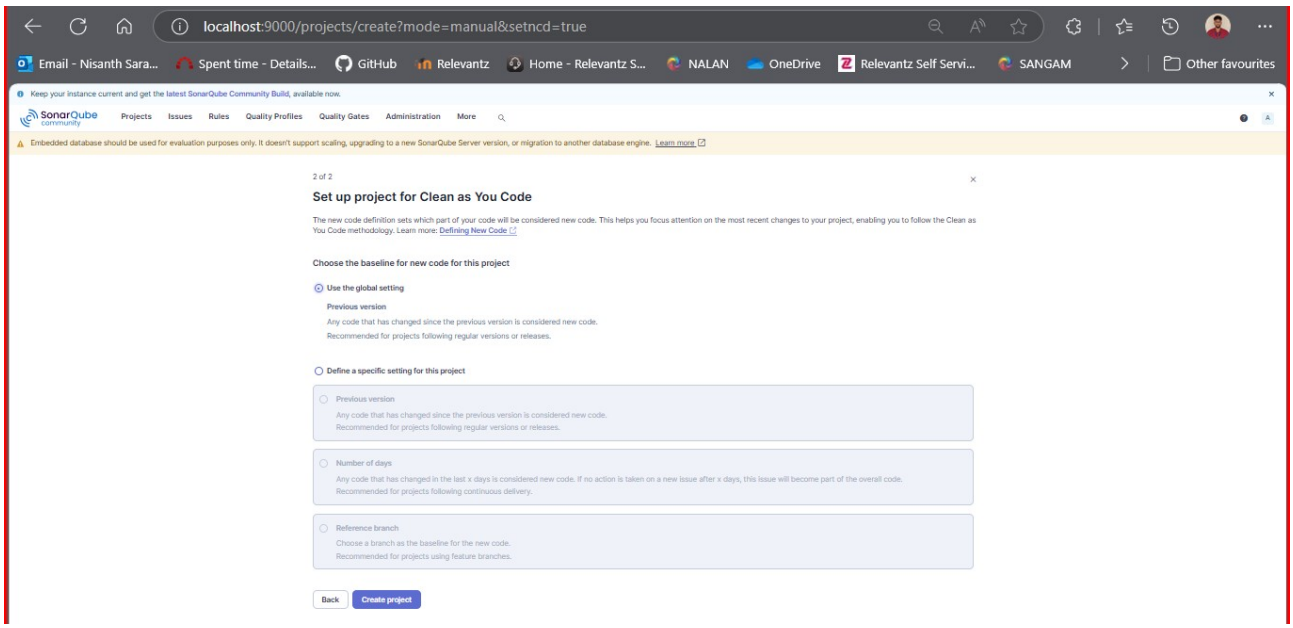
# SonarQube Setup:

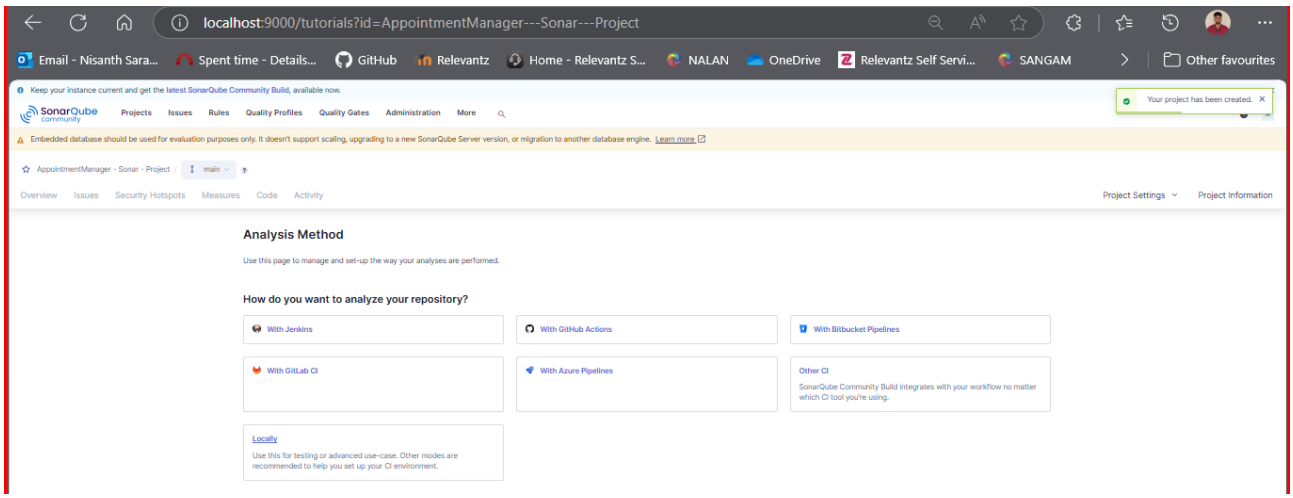


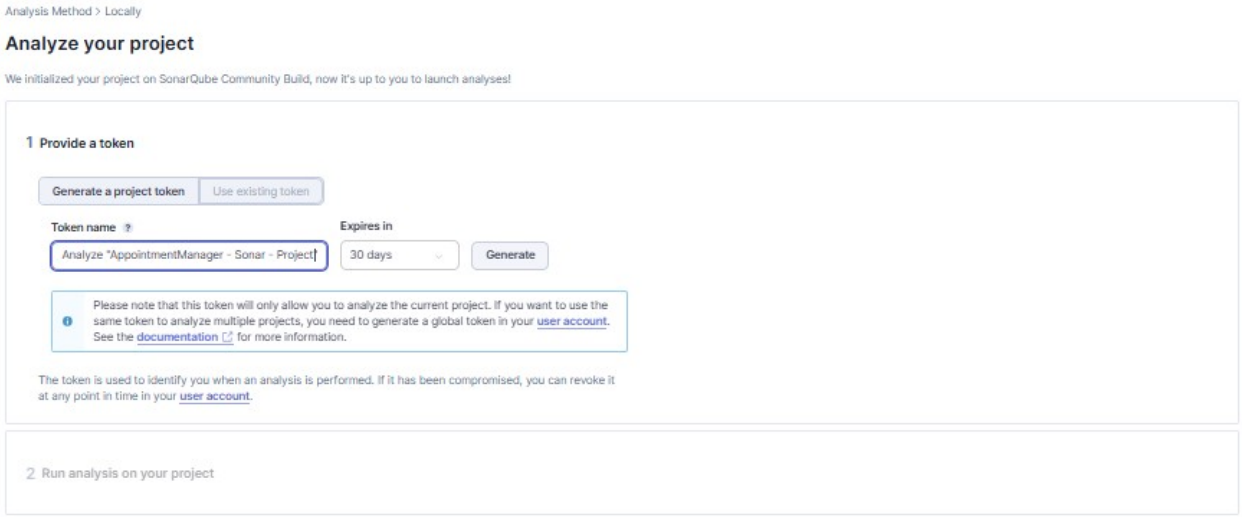




localhost:9000/projects/create?mode=manual&setncd=true
Email - Nisanth Sara...
Spent time - Details...
GitHub
Relevantz
Home - Relevantz S...
NALAN
OneDrive
Relevantz Self Servi...
SANGAM
Other favourites
Keep your instance current and get the latest SonarQube Community Build, available now.
SonarQube community
Projects
Issues
Rules
Quality Profiles
Quality Gates
Administration
More
Embedded database should be used for evaluation purposes only. It doesn't support scaling, upgrading to a new SonarQube Server version, or migration to another database engine. Learn more
2 of 2
Set up project for Clean as You Code
The new code definition sets which part of your code will be considered new code. This helps you focus attention on the most recent changes to your project, enabling you to follow the Clean as You Code methodology. Learn more: Defining New Code
Choose the baseline for new code for this project
Use the global setting
Previous version
Any code that has changed since the previous version is considered new code.
Recommended for projects following regular versions or releases.
Define a specific setting for this project
Previous version
Any code that has changed since the previous version is considered new code.
Recommended for projects following regular versions or releases.
Number of days
Any code that has changed in the last x days is considered new code. If no action is taken on a new issue after x days, this issue will become part of the overall code.
Recommended for projects following continuous delivery.
Reference branch
Choose a branch as the baseline for the new code.
Recommended for projects using feature branches.
Back
Create project


localhost:9000/tutorials?id=AppointmentManager---Sonar---Project
Email - Nisanth Sara...
Spent time - Details...
GitHub
Relevantz
Home - Relevantz S...
NALAN
OneDrive
Relevantz Self Servi...
SANGAM
Other favourites
Keep your instance current and get the latest SonarQube Community Build, available now.
Your project has been created.
SonarQube community
Projects
Issues
Rules
Quality Profiles
Quality Gates
Administration
More
Embedded database should be used for evaluation purposes only. It doesn't support scaling, upgrading to a new SonarQube Server version, or migration to another database engine. Learn more
AppointmentManager - Sonar - Project
main
Overview
Issues
Security Hotspots
Measures
Code
Activity
Project Settings
Project Information
Analysis Method
Use this page to manage and set-up the way your analyses are performed.
How do you want to analyze your repository?
With Jenkins
With GitHub Actions
With Bitbucket Pipelines
With GitLab CI
With Azure Pipelines
Other CI
SonarQube Community Build integrates with your workflow no matter which CI tool you're using.
Locally
Use this for testing or advanced use-case. Other modes are recommended to help you set up your CI environment.


Analysis Method > Locally
Analyze your project
We initialized your project on SonarQube Community Build, now it's up to you to launch analyses!
1 Provide a token
Generate a project token
Use existing token
Token name
Analyze "AppointmentManager - Sonar - Project"
Expires in
30 days
Generate
Please note that this token will only allow you to analyze the current project. If you want to use the same token to analyze multiple projects, you need to generate a global token in your user account. See the documentation for more information.
The token is used to identify you when an analysis is performed. If it has been compromised, you can revoke it at any point in time in your user account.
2 Run analysis on your project

## Analyze your project

We initialized your project on SonarQube Community Build, now it's up to you to launch analyses!

**1 Provide a token**

Analyze "AppointmentManager - Sonar - Project": **sqp_43dc78e354ed6b8d364f5b254c55add94b1c923a**

**2 Run analysis on your project**

What option best describes your project?

Maven | Gradle | .NET | Other (for JS, TS, Go, Python, PHP, ...)

Which framework do you use?

.NET Core | .NET Framework

```
Developer PowerShell
**********************************************************************
** Visual Studio 2022 Developer PowerShell v17.14.7
** Copyright (c) 2025 Microsoft Corporation
**********************************************************************
PS D:\Intern Files\Intern Assessment\L1 Assessment\Code Quality\AppointManager_Code_Review_Repo\AppointmentManager\AppointmentManager> dotnet tool install --global dotnet-sonarscanner
Tool 'dotnet-sonarscanner' is already installed.
PS D:\Intern Files\Intern Assessment\L1 Assessment\Code Quality\AppointManager_Code_Review_Repo\AppointmentManager\AppointmentManager>
```

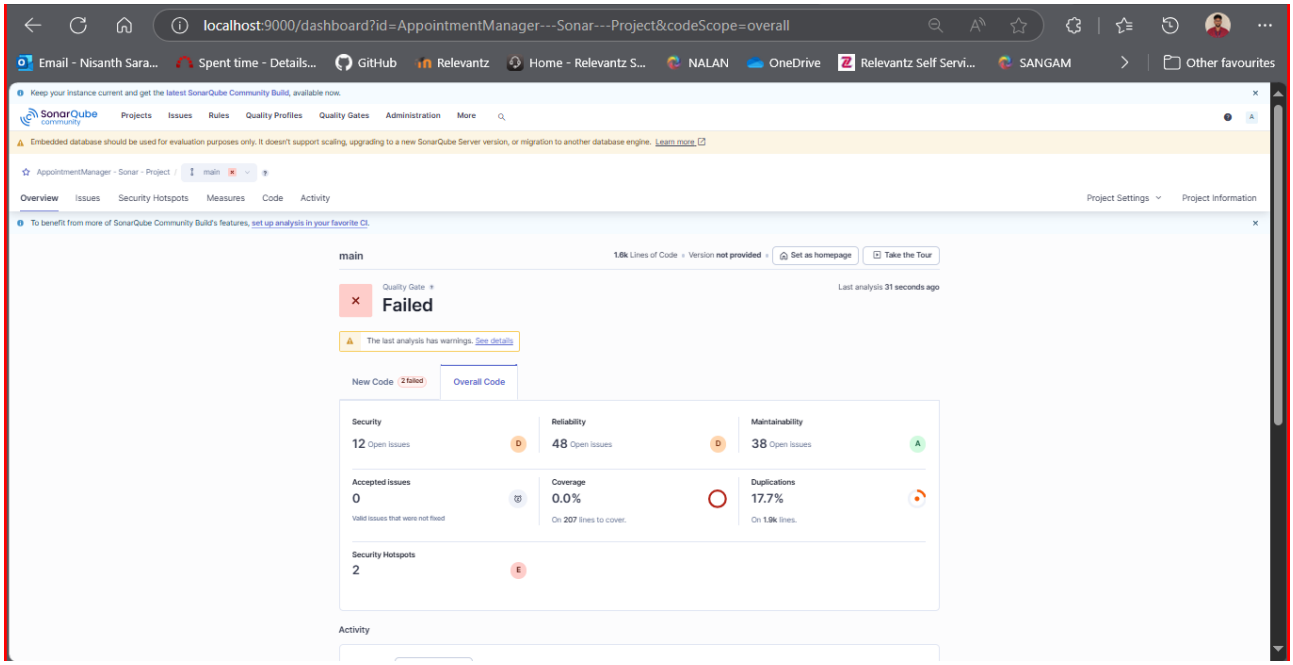
```
PS D:\Intern Files\Intern Assessment\L1 Assessment\Code Quality\AppointManager_Code_Review_Repo\AppointmentManager\AppointmentManager> dotnet sonarscanner begin /k:"AppointmentManager---Sonar---Project" /d:sonar.host.url="http://localhost:9000"  /d:sonar.token="sqp_43dc78e354ed6b8d364f5b254c55add94b1c923a"
SonarScanner for MSBuild 10.3
Using the .NET Core version of the Scanner for MSBuild
Pre-processing started.
Preparing working directories...
17:20:14.732  Updating build integration targets...
17:20:14.938  Using SonarQube v25.1.0.102122.
17:20:15.054  Fetching analysis configuration settings...
17:20:16.258  Provisioning analyzer assemblies for cs...
17:20:16.259  Installing required Roslyn analyzers...
17:20:16.26  Processing plugin: csharp version 10.4.0.108396
17:20:16.651  Provisioning analyzer assemblies for vbnet...
17:20:16.651  Installing required Roslyn analyzers...
17:20:16.652  Processing plugin: vbnet version 10.4.0.108396
17:20:16.683  Incremental PR analysis: Base branch parameter was not provided.
17:20:16.684  Cache data is empty. A full analysis will be performed.
17:20:16.736  Pre-processing succeeded.
PS D:\Intern Files\Intern Assessment\L1 Assessment\Code Quality\AppointManager_Code_Review_Repo\AppointmentManager\AppointmentManager>
```

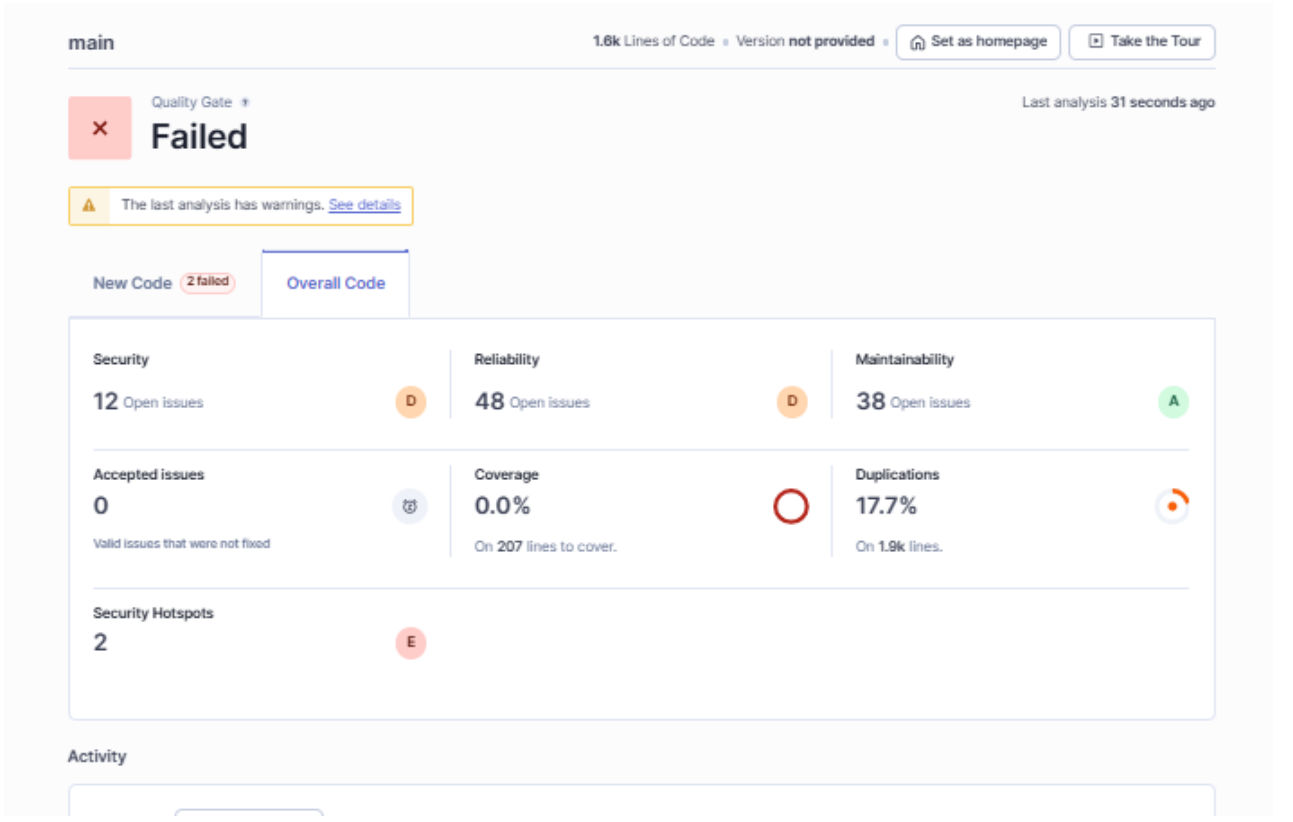
```
PS D:\Intern Files\Intern Assessment\L1 Assessment\Code Quality\AppointManager_Code_Review_Repo\AppointmentManager\AppointmentManager> dotnet build
Restore complete (0.5s)
  AppointmentManager succeeded with 31 warning(s) (11.7s) → bin\Debug\net8.0\AppointmentManager.dll
    D:\Intern Files\Intern Assessment\L1 Assessment\Code Quality\AppointManager_Code_Review_Repo\AppointmentManager\AppointmentManager\Views\Appointment\Delete.cshtml(36,39): warning CS8602: Dereference of a possibly null reference.
    D:\Intern Files\Intern Assessment\L1 Assessment\Code Quality\AppointManager_Code_Review_Repo\AppointmentManager\AppointmentManager\Views\Appointment\Delete.cshtml(42,39): warning CS8602: Dereference of a possibly null reference.
    D:\Intern Files\Intern Assessment\L1 Assessment\Code Quality\AppointManager_Code_Review_Repo\AppointmentManager\AppointmentManager\Views\Appointment\Details.cshtml(35,39): warning CS8602: Dereference of a possibly null reference.
```

```
PS D:\Intern Files\Intern Assessment\L1 Assessment\Code Quality\AppointManager_Code_Review_Repo\AppointmentManager\AppointmentManager> dotnet sonarscanner end /d:sonar.token="sqp_43dc78e354ed6b8d364f5b254c55add94b1c923a"
SonarScanner for MSBuild 10.3
Using the .NET Core version of the Scanner for MSBuild
Post-processing started.
17:21:15.491  Starting with Scanner for .NET v8 the way the `sonar.projectBaseDir` property is automatically detected has changed and this has an impact on the files that are analyzed and other properties that are resolved relative to it like `sonar.exclusions` and `sonar.test.exclusions`. If you would like to customize the behavior, please set the `sonar.projectBaseDir` property to point to a directory that contains all the source code you want to analyze. The path may be relative (to the directory from which the analysis was started) or absolute.
Calling the SonarScanner CLI...
INFO: Scanner configuration file: C:\Users\nisanth.saravanan\.dotnet\tools\.store\dotnet-sonarscanner\10.3.0\dotnet-sonarscanner\10.3.0\tools\netcoreapp3.1\any\sonar-scanner-5.0.2.4997\bin\..\conf\sonar-scanner.properties
INFO: Project root configuration file: D:\Intern Files\Intern Assessment\L1 Assessment\Code Quality\AppointManager_Code_Review_Repo\AppointmentManager\AppointmentManager\.sonarqube\out\sonar-project.properties
INFO: SonarScanner 5.0.2.4997
INFO: Java 17.0.13 Eclipse Adoptium (64-bit)
INFO: Windows 10 10.0 amd64
```

```
INFO: ------------------------------------------------------------------------
INFO: EXECUTION SUCCESS
INFO: ------------------------------------------------------------------------
INFO: Total time: 20.344s
INFO: Final Memory: 15M/60M
INFO: ------------------------------------------------------------------------
The SonarScanner CLI has finished
17:21:36.954  Post-processing succeeded.
PS D:\Intern Files\Intern Assessment\L1 Assessment\Code Quality\AppointManager_Code_Review_Repo\AppointmentManager\AppointmentManager>
```

Initial SonarQube Analysis:



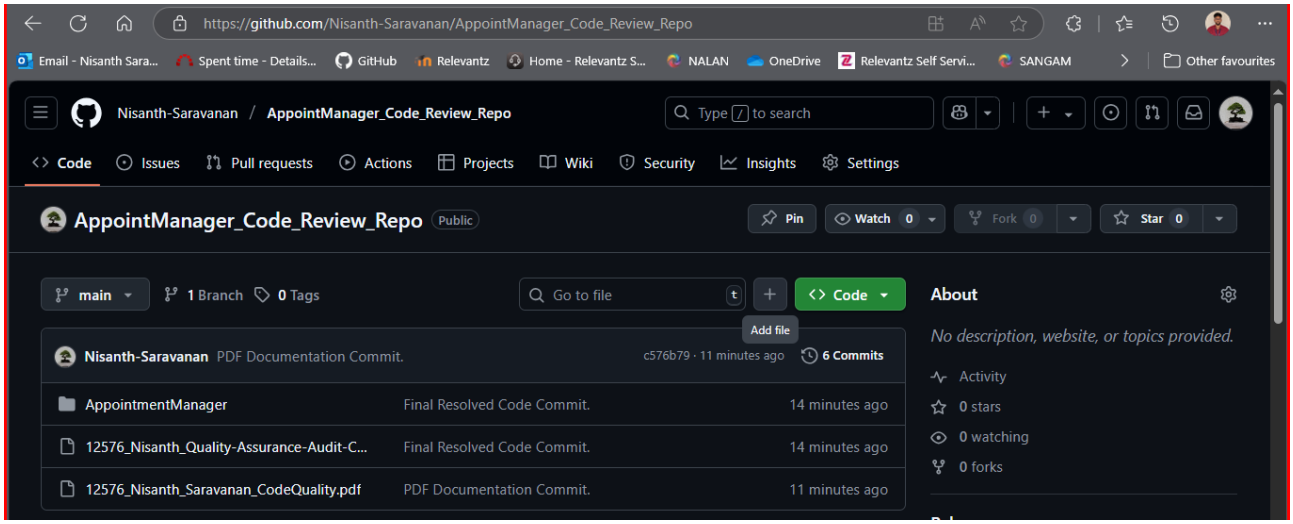
## Peer-Review Comments:

| QUALITY ASSURANCE AUDIT CHECKLIST TEMPLATE | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Ref No. | Source[ Code Fie] Position (Code Line) | SCORE [1-5] | MEETS STANDARDS | OPPORTUNITIES FOR IMPROVEMENT | MINOR CONCERNS | MAJOR CONCERNS | NOTES | RECOMMENDATIONS | STATUS MARK RESOLVED |
| 1 | AppDbContext.cs - Line : 9 | 3 | No | Yes | Yes | No | Class name must be pascal | change appdbcontext to Pascal case | RESOLVED |
| 2 | Patient.cs - line : 6 , 10 , 12 , 18 | 4 | No | Yes | Yes | No | variable must be non-nullable | add "?" to data type => string? | RESOLVED |
| 3 | Appointment.cs - line : 18 , 20 | 4 | No | Yes | Yes | No | variable must be non-nullable | add "?" to data type => string? | RESOLVED |
| 4 | Patient.cs - line : 6 | 3 | No | Yes | Yes | No | Class name must be pascal | To pascal | RESOLVED |
| 5 | Appointment.cs - line : 6 | 3 | No | Yes | Yes | No | Class name must be pascal | To pascal | RESOLVED |
| 6 | Doctor.cs - line:6 | 4 | No | Yes | Yes | No | Class name must be pascal | To pascal | RESOLVED |
| 7 | Doctor.cs - line: 10 , 12 , 14 | 4 | No | Yes | Yes | No | variable must be non-nullable | add "?" to data type => string? | RESOLVED |
| 8 | Views/Home/Index.cshtml | 5 | No | Yes | Yes | No | check the paragraph tag once | Add some simple and understandable sentence | NOT RESOLVED<br>The paragraph is a design placeholder. |
| 9 | General | 4 | No | Yes | Yes | No | Add some why comments | Add some why commands | RESOLVED |
| 10 | General | 3 | No | Yes | Yes | No | Remove unwanted commands | Delete those commands | RESOLVED |
| 11 | General | 5 | Yes | Yes | _ | _ | Proper Naming | Namings for Class | |
| 12 | General | 5 | Yes | Yes | _ | _ | Proper Naming | Namings for Objects | |
| 13 | General | 5 | Yes | Yes | _ | _ | Proper Naming | Namings for Variables | |
| 14 | General | 5 | Yes | Yes | _ | _ | Proper Naming | Namings for Namespace | |
| 15 | General | 5 | Yes | Yes | _ | _ | Proper Naming | Namings for label in cshtml | |
| 16 | General | 5 | Yes | Yes | _ | _ | Proper Naming | Namings for Placeholder in cshtml | |
| 17 | General | 5 | Yes | Yes | _ | _ | Proper Naming | Proper method namings | |
| 18 | General | 5 | Yes | Yes | _ | _ | Proper Naming | Proper File Namings | |
| 19 | General | 5 | Yes | Yes | _ | _ | Implemented asynchronous | Implemented Asynchronous | |
| 20 | General | 5 | Yes | Yes | _ | _ | Remove unused imports | check every import have used | RESOLVED |
| 21 | | | | | | | | | |

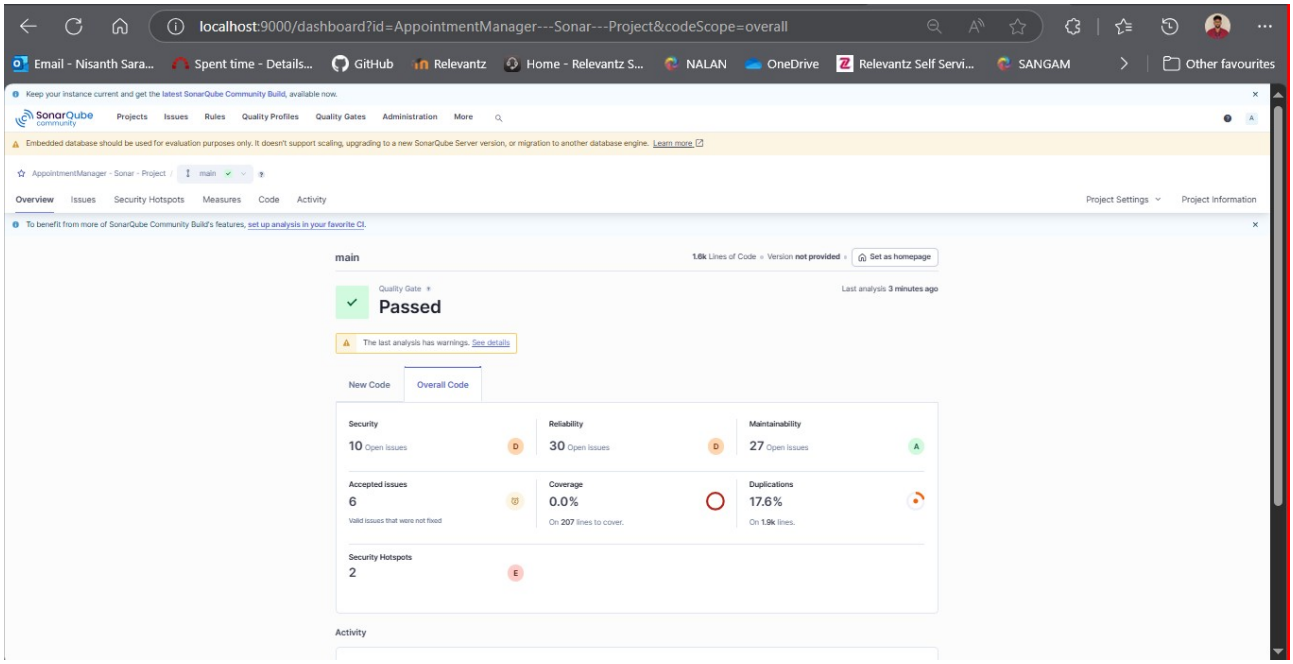
12576_Nisanth_Quality-Assurance-Audit-Checklist.xlsx

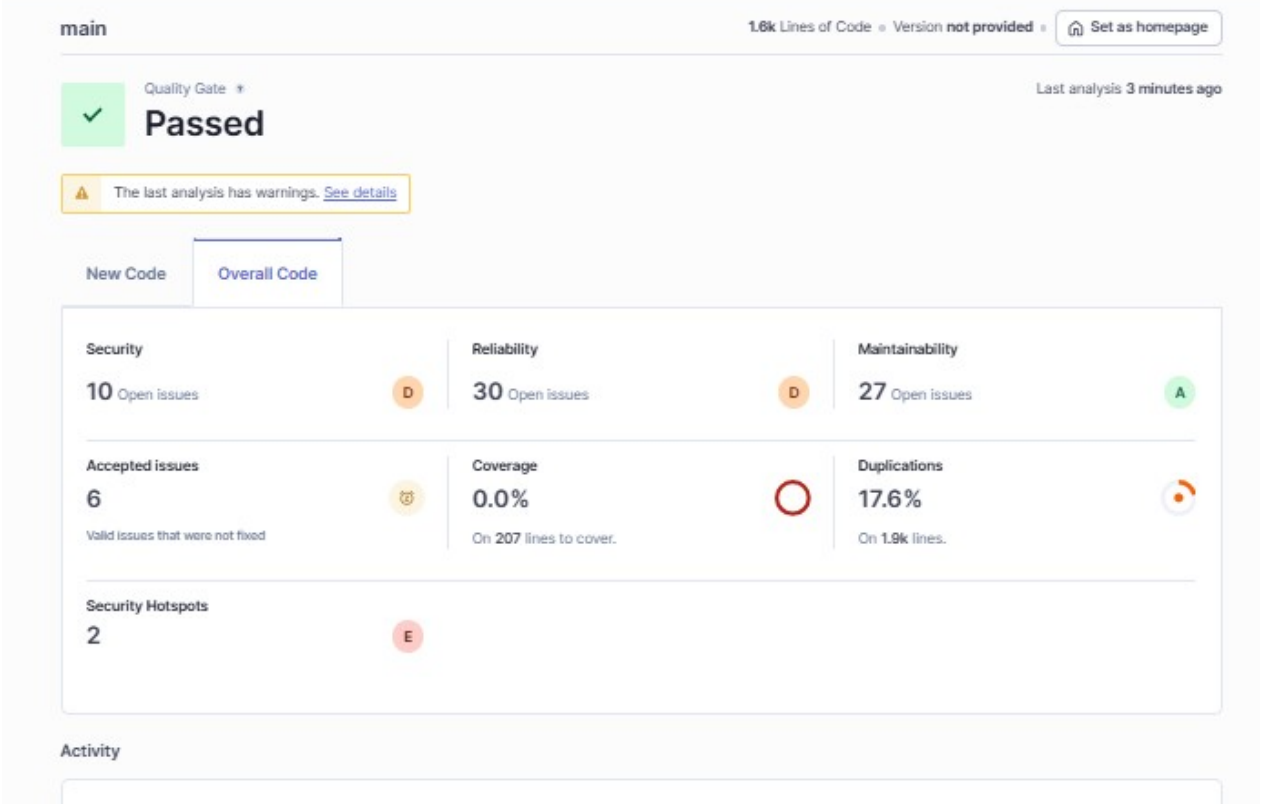
## GitHub Link:

[Nisanth-Saravanan/AppointManager_Code_Review_Repo]

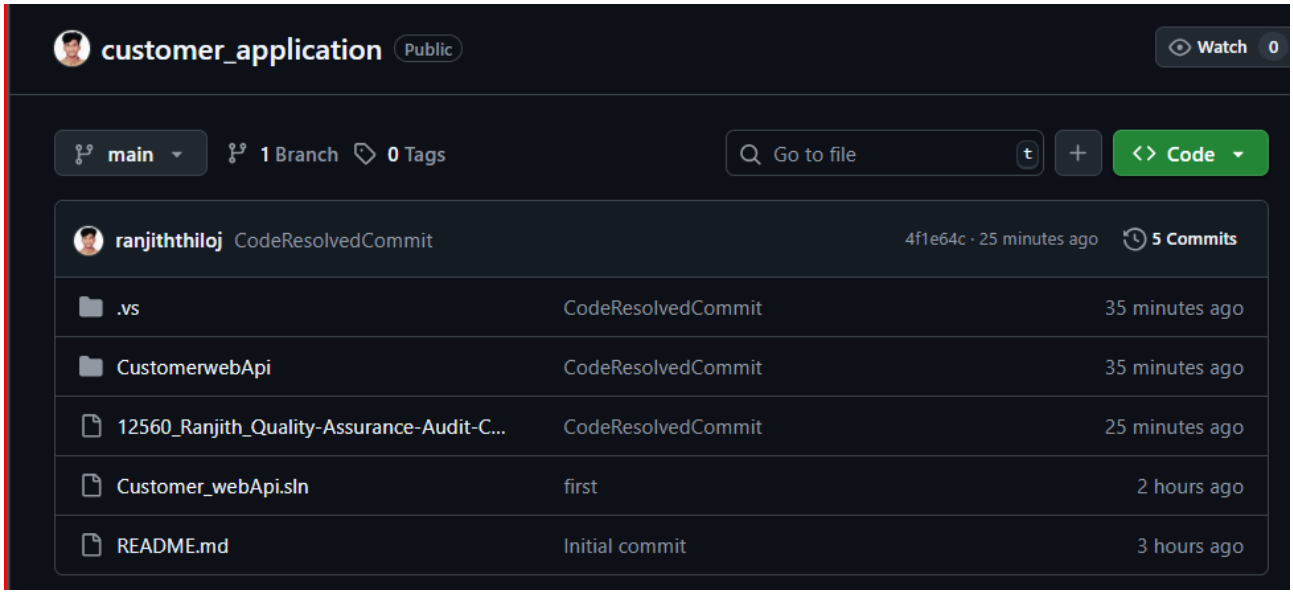


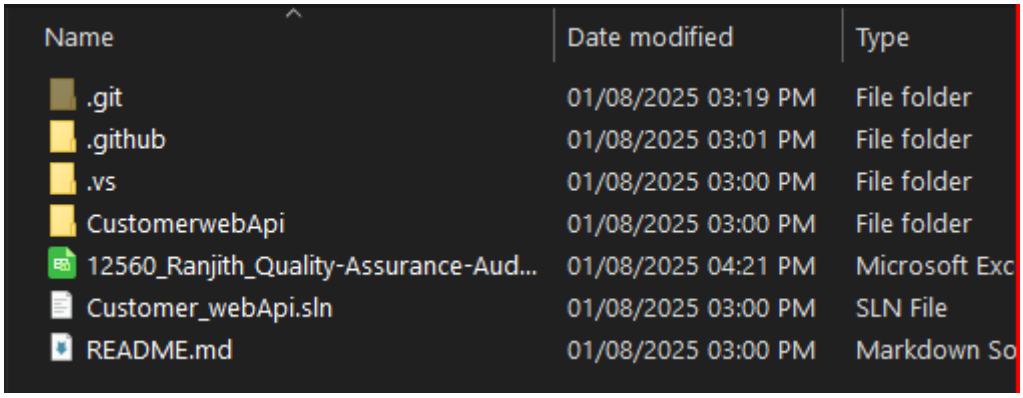
Post Refactoring SonarQube Analysis:



Reviewer Side Work:




## QUALITY ASSURANCE AUDIT CHECKLIST TEMPLATE

| Ref No. | Source[ Code File] Position (Code Line) | SCORE [1-5] | MEETS STANDARDS | OPPORTUNITIES FOR IMPROVEMENT | MINOR CONCERNS | MAJOR CONCERNS | NOTES | RECOMMENDATIONS |
|---|---|---|---|---|---|---|---|---|
| 1 | CustomerwebApi\Model\Customer.cs | 4 | NO | YES | YES | NO | Lack of [Key] Data Annotations | Add a [Key] Annoted Field. |
| 2 | CustomerwebApi\Model\Customer.cs | 4 | NO | YES | YES | NO | Lack of [Required] Annoted Value in the model. | Add a [Required] Annoted Field. |
| 3 | CustomerwebApi\Controllers\CustomerDbController.cs | 4 | NO | YES | YES | NO | Casing Issue for "Myapp.Controllers" | Rename with proper casing (Pascal Casing) |
| 4 | CustomerwebApi\Controllers\CustomerDbController.cs | 5 | NO | YES | YES | NO | Lack of Comments to denote why the method is defined. | Add minimal Comments. |
| 5 | CustomerwebApi\ | 1 | NO | YES | NO | YES | Improper Namespace naming: "MyApp" / "Myapp" | Rename the namespaces with respect to the project: "CustomerWebAPI" |
| 6 | CustomerwebApi\Controllers\CustomerDbController.cs: Line: 65 | 3 | NO | YES | NO | YES | The Delete Method lacks an "await" operator. | Add and "await" operator. |
| 7 | CustomerwebApi\Controllers\CustomerDbController.cs: Line: 20 | 4 | NO | YES | YES | NO | Vague naming convention: "GetDatas" | Rename to "GetCustomers" |
| 8 | CustomerwebApi\Controllers\CustomerDbController.cs: Line: 26 | 4 | NO | YES | YES | NO | Vague naming convention: "Get" | Rename to "InsertCustomer" |
| 9 | CustomerwebApi\Controllers\CustomerDbController.cs: Line: 37 | 4 | NO | YES | YES | NO | Vague naming convention: "InsertDatas" | Rename to "GetCustomerById" |
| 10 | CustomerwebApi\Data\ApplicationDBContext.cs | 5 | YES | NO | NO | NO | | |
| 11 | CustomerwebApi\Program.cs | 5 | YES | NO | NO | NO | | |
| 12 | CustomerwebApi\Controllers\CustomerDbController.cs | 5 | YES | NO | NO | NO | Properly Declared HttpGet Annotations. | |
| 13 | CustomerwebApi\Controllers\CustomerDbController.cs | 5 | YES | NO | NO | NO | Properly Declared HttpPost Annotations. | |
| 14 | CustomerwebApi\Controllers\CustomerDbController.cs | 5 | YES | NO | NO | NO | Properly Declared HttpDelete Annotations. | |
| 15 | CustomerwebApi\Controllers\CustomerDbController.cs | 5 | YES | NO | NO | NO | Properly Declared HttpPut Annotations. | |
| 16 | CustomerwebApi\Controllers\CustomerDbController.cs: Line 13 | 5 | YES | NO | NO | NO | Properly Declared private variable. | |
| 17 | CustomerwebApi\Controllers\CustomerDbController.cs: Line 32 | 5 | YES | NO | NO | NO | Aptly Declared "await" agent. | |
| 18 | CustomerwebApi\Controllers\CustomerDbController.cs: Line 60 | 5 | YES | NO | NO | NO | Aptly Declared "await" agent. | |
| | CustomerwebApi\Program.cs: Line: 12 | 5 | YES | NO | NO | NO | Apt Usage of "ServerVersion.AutoDetect". | |
| 20 | CustomerwebApi\Program.cs: Line: 22 | 5 | YES | NO | NO | NO | Apt Declaration of middleware for SwaggerUI. | |
| 21 | CustomerwebApi\appsettings.json | 5 | YES | NO | NO | NO | Apt Usage of "DefaultConnection" and ConnectionStrings. | Could make use of a .env file as well for such hard codes. |
| 22 | CustomerwebApi\Migrations\20250801081143_first.cs | 3 | NO | YES | NO | NO | Partial Class Name is Declared as "first". | While declaring migrations name, use proper casing. |
| 23 | | | | | | | | |