

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

Selected Project: Appointment Manager.

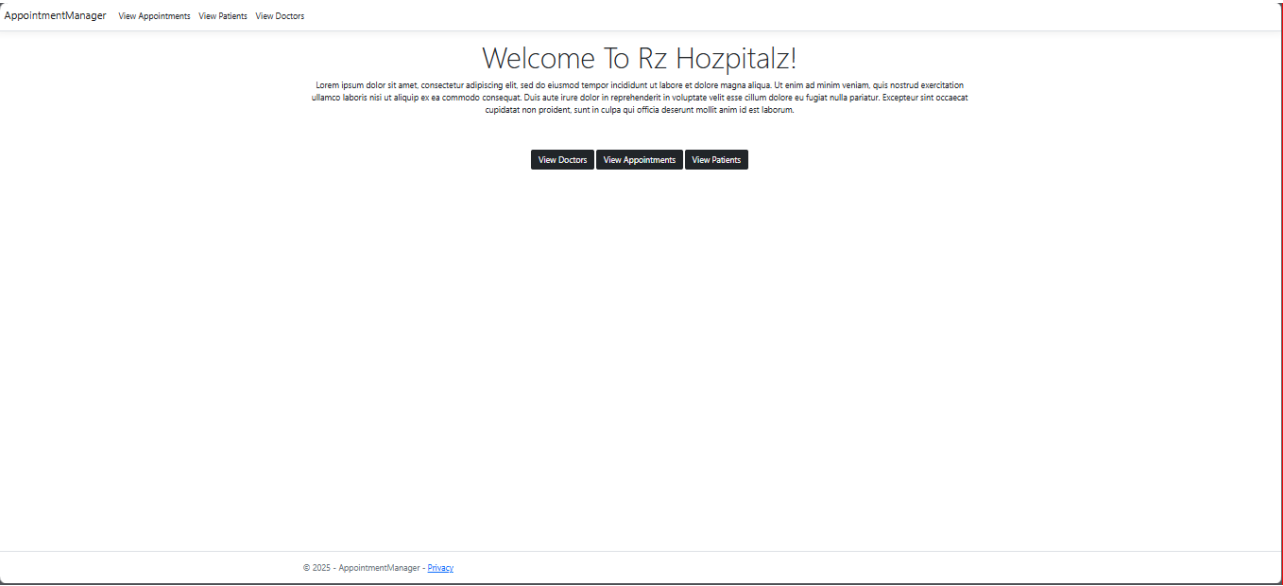
Coder: Nisanth Saravanan

Reviewer: Ranjithkumar Palanisamy

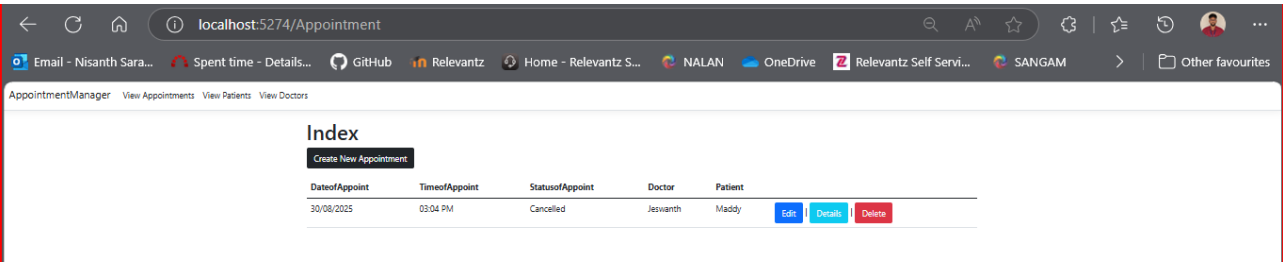
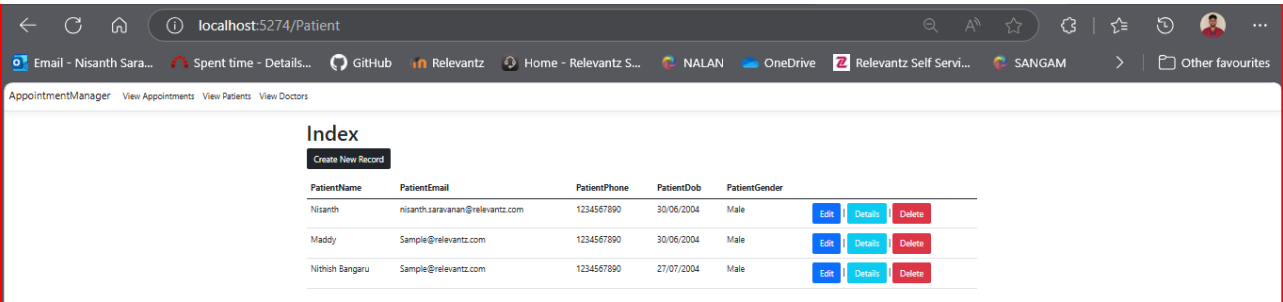
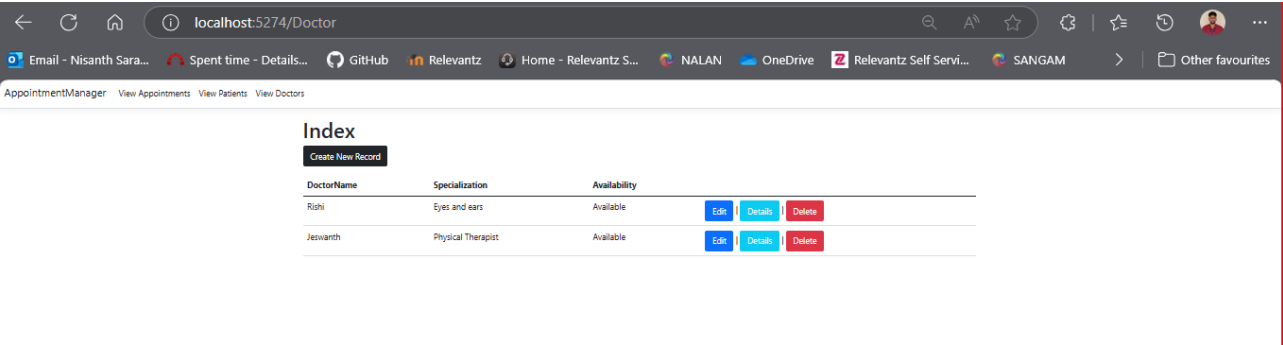
Project Description:

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.

Create

Patient

Patient Name:

Email:

Contact Number:

Date of Birth: (YYYY-MM-DD Format)

Gender:

[Back to List](#)

Create

Doctor

Doctor Name:

Specialization:

Availability:

[Back to List](#)

Create

Appointment

Patient Name:

Doctor Name:

Date of Appointment: (YYYY-MM-DD Format)

Time of Appointment: (24 Hour Format)

Status of Appointment:

[Back to List](#)

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

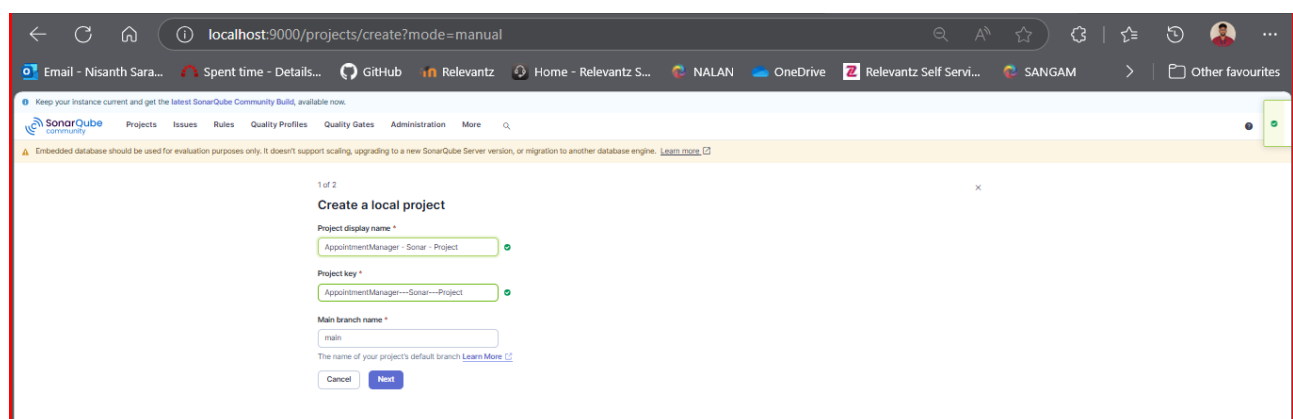
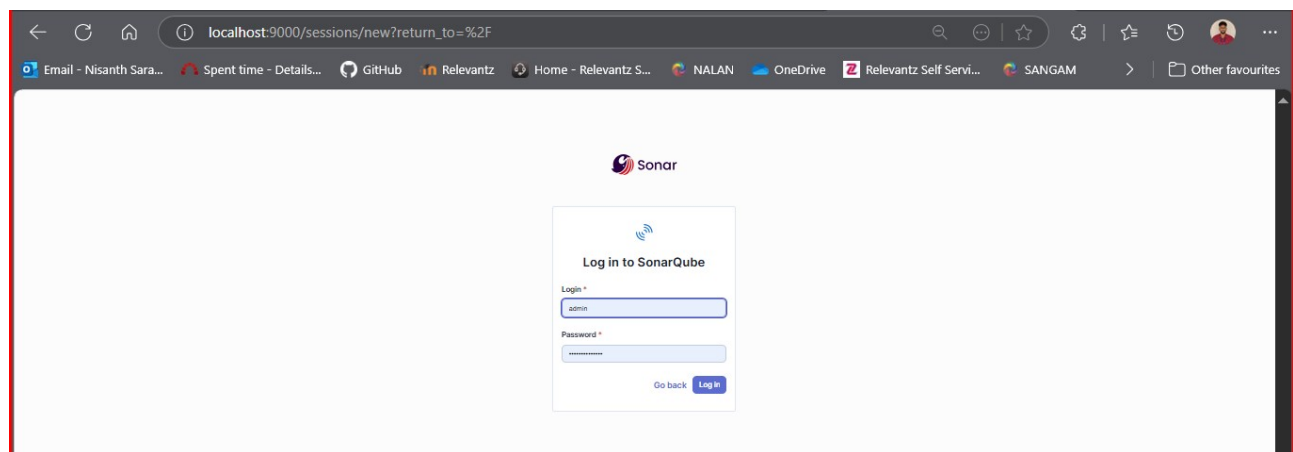
DateofAppoint	TimeofAppoint	StatusofAppoint	Doctor	Patient			
30/08/2025	03:04 PM	Cancelled	Jeswanth	Maddy	Edit	Details	Delete
30/08/2025	03:04 PM	Completed	ABC	XYZ	Edit	Details	Delete

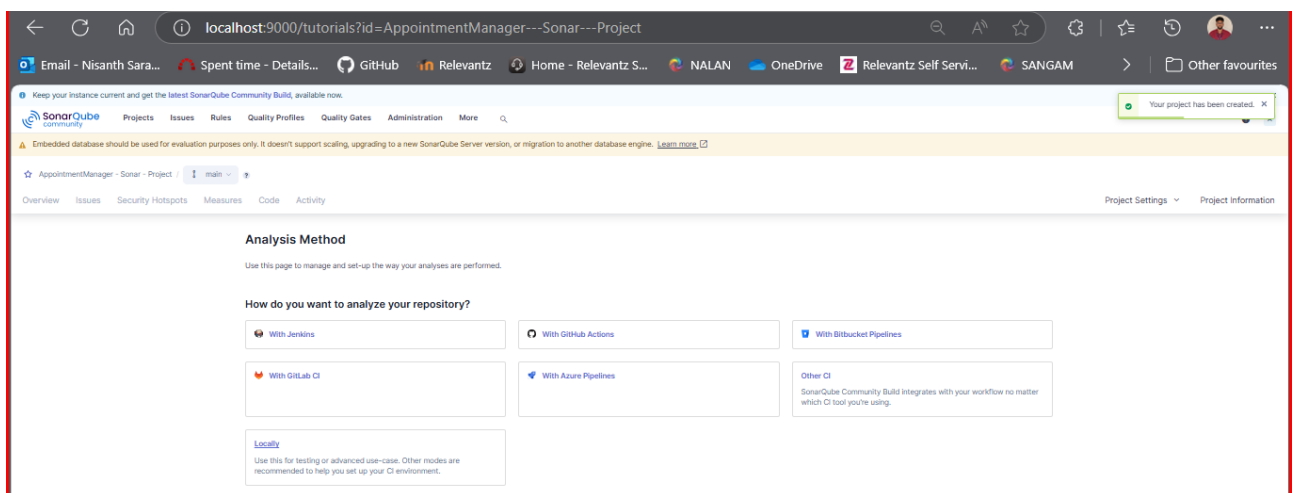
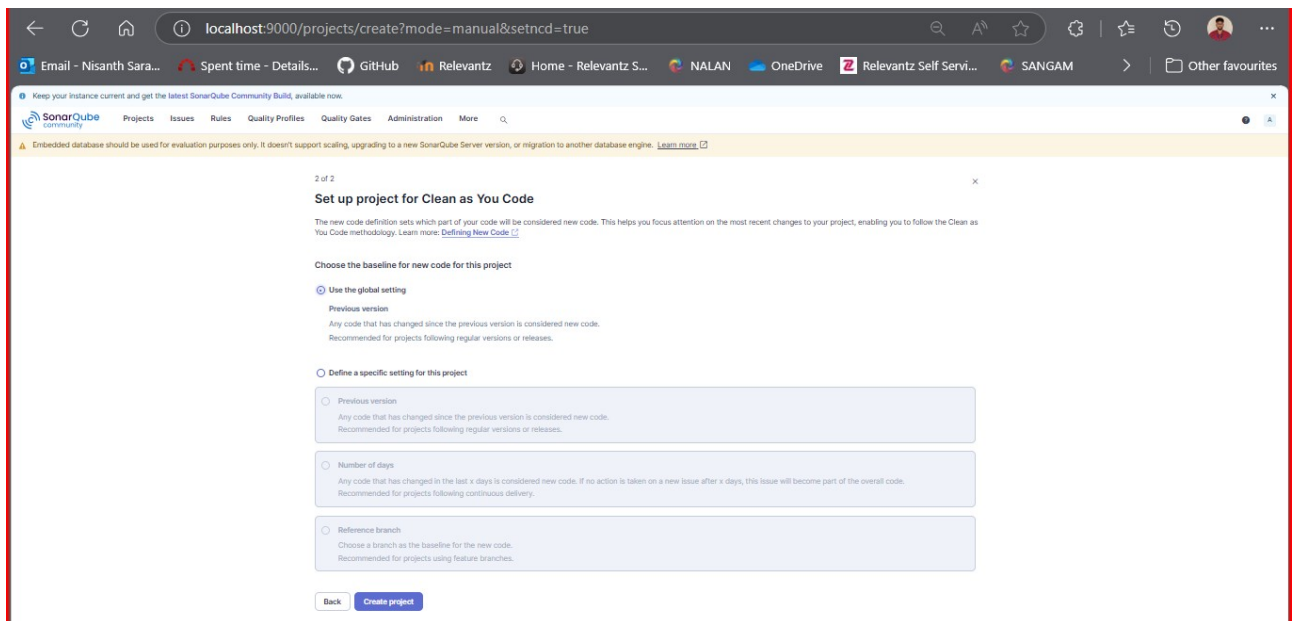
SonarQube Setup:

```
C:\Windows\System32\cmd.exe - StartSonar.bat
Microsoft Windows [Version 10.0.19045.6093]
(c) Microsoft Corporation. All rights reserved.

D:\sonarqube-25.1.0.102122\sonarqube-25.1.0.102122\bin\windows-x86-64>StartSonar.bat
Starting SonarQube...
2025.08.01 17:16:20 INFO app[][o.s.a.AppFileSystem] Cleaning or creating temp directory D:\sonarqube-25.1.0.102122\sona
rque-25.1.0.102122\temp
2025.08.01 17:16:20 INFO app[][o.s.a.es.EsSettings] Elasticsearch listening on [HTTP: 127.0.0.1:9001, TCP: 127.0.0.1:{}]
]
2025.08.01 17:16:20 INFO app[][o.s.a.ProcessLauncherImpl] Launch process[ELASTICSEARCH] from [D:\sonarqube-25.1.0.10212
2\sonarqube-25.1.0.102122\elasticsearch]: C:\Program Files\Java\jdk-17\bin\java -Xms4m -Xmx64m -XX:+UseSerialGC -Dcli.na
me=server -Dcli.script=./bin/elasticsearch -Dcli.libs=lib/tools/server-cli -Des.path.home=D:\sonarqube-25.1.0.102122\sona
rque-25.1.0.102122\elasticsearch -Des.path.conf=D:\sonarqube-25.1.0.102122\sonarqube-25.1.0.102122\temp\conf\es -Des.d
istribution.type=tar -cp D:\sonarqube-25.1.0.102122\sonarqube-25.1.0.102122\elasticsearch\lib\*;D:\sonarqube-25.1.0.1021
22\sonarqube-25.1.0.102122\elasticsearch\lib\cli-launcher\* org.elasticsearch.launcher.CliToolLauncher
2025.08.01 17:16:20 INFO app[][o.s.a.SchedulerImpl] Waiting for Elasticsearch to be up and running
Standard Commons Logging discovery in action with spring-jcl: please remove commons-logging.jar from classpath in order
to avoid potential conflicts
```

```
2025.08.01 17:33:34 INFO app[][o.s.a.SchedulerImpl] Process[ce] is up
2025.08.01 17:33:34 INFO app[][o.s.a.SchedulerImpl] SonarQube is operational
```





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 in
stall --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 sonarsc
anner begin /k:"AppointmentManager---Sonar---Project" /d:sonar.host.url="http://localhost:9000" /d:sonar.token="sqp_43dc78e354ed6b8d364f5b254c55add9
4b1c923a"
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\Apptm
ent\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\Apptm
ent\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\Apptm
ent\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 sonarsc
anner 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 imp
act 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 wa
nt 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\netcore
app3.1\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\AppointmentManag
er\AppointmentManager\.sonarqube\out\sonar-project.properties
INFO: SonarScanner 5.0.2.4997
INFO: Java 17.0.13 Eclipse Adoptium (64-bit)
INFO: Windows 10.0.0 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:

The screenshot shows the SonarQube dashboard for a project named 'AppointmentManager'. The interface is in a browser window at 'localhost:9000'. The top navigation bar includes links for 'Email', 'Spent time', 'Details', 'GitHub', 'Relevantz', 'Home', 'Relevantz S...', 'NALAN', 'OneDrive', 'Relevantz Self Servi...', 'SANGAM', and 'Other favourites'. The main header displays 'AppointmentManager - Sonar - Project' and 'main' with a dropdown menu. The dashboard shows a 'Quality Gate' status of 'Failed' with a warning icon. Below this, a table displays various metrics:

Security	Reliability	Maintainability
12 Open Issues	48 Open Issues	38 Open Issues
Accepted Issues: 0	Coverage: 0.0%	Duplications: 17.7%
Valid issues that were not fixed	On 207 lines to cover.	On 1.9k lines.
Security Hotspots: 2		

The 'Activity' section is visible at the bottom of the dashboard.

This image provides a detailed view of the SonarQube dashboard metrics. The 'main' section shows '1.6k Lines of Code' and 'Version not provided'. The 'Quality Gate' status is 'Failed' with a warning icon. Below this, a table displays various metrics:

Security	Reliability	Maintainability
12 Open Issues	48 Open Issues	38 Open Issues
Accepted issues: 0	Coverage: 0.0%	Duplications: 17.7%
Valid issues that were not fixed	On 207 lines to cover.	On 1.9k lines.
Security Hotspots: 2		

The 'Activity' section is visible at the bottom of the dashboard.

Peer-Review Comments:

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	STATUS MARK RESOLVED	
1	AuthService - line: 7	3	No	Yes	Yes	No	Class name must be pascal	change authService to Pascal case	RESOLVED	RESOLVED
2	PatientLoc - line: 6, 10, 12, 18	4	No	Yes	Yes	No	variable must be non-nullabile	add "!" to data type => string?	RESOLVED	RESOLVED
3	AppointmentLoc - line: 18, 20	4	No	Yes	Yes	No	variable must be non-nullabile	add "!" to data type => string?	RESOLVED	RESOLVED
4	PatientLoc - line: 6	3	No	Yes	Yes	No	Class name must be pascal	To pascal	RESOLVED	RESOLVED
5	AppointmentLoc - line: 6	3	No	Yes	Yes	No	Class name must be pascal	To pascal	RESOLVED	RESOLVED
6	DoctorLoc - line: 6	4	No	Yes	Yes	No	Class name must be pascal	To pascal	RESOLVED	RESOLVED
7	DoctorLoc - line: 10, 12, 14	4	No	Yes	Yes	No	variable must be non-nullabile	add "!" to data type => string?	RESOLVED	NOT RESOLVED
8	NewsHomeIndex.html	5	No	Yes	Yes	No	check the paragraph tag once	Add some simple and understandable sentence	The paragraph is a design placeholder	RESOLVED
9	General	4	No	Yes	Yes	No	Add some why comments	Add some why commands	RESOLVED	RESOLVED
10	General	3	No	Yes	Yes	No	Remove unwanted commands	Delete those commands	RESOLVED	RESOLVED
11	General	5	Yes	Yes	-	-	Proper Naming	Naming for Class	RESOLVED	RESOLVED
12	General	5	Yes	Yes	-	-	Proper Naming	Naming for Objects	RESOLVED	RESOLVED
13	General	5	Yes	Yes	-	-	Proper Naming	Naming for Variables	RESOLVED	RESOLVED
14	General	5	Yes	Yes	-	-	Proper Naming	Naming for Namespace	RESOLVED	RESOLVED
15	General	5	Yes	Yes	-	-	Proper Naming	Naming for label in html	RESOLVED	RESOLVED
16	General	5	Yes	Yes	-	-	Proper Naming	Naming for Placeholder in html	RESOLVED	RESOLVED
17	General	5	Yes	Yes	-	-	Proper Naming	Proper method naming	RESOLVED	RESOLVED
18	General	5	Yes	Yes	-	-	Proper Naming	Proper File Naming	RESOLVED	RESOLVED
19	General	5	Yes	Yes	-	-	Implemented asynchrouous	Implemented Asynchronous	RESOLVED	RESOLVED
20	General	5	Yes	Yes	-	-	Remove unused imports	check every import have used	RESOLVED	RESOLVED
21										



12576_Nisanth_Quality-Assurance-Audit-Checklist.xlsx

GitHub Link:

[Nisanth-Saravanan/AppointManager Code Review Repo](https://github.com/Nisanth-Saravanan/AppointManager_Code_Review_Repo)

https://github.com/Nisanth-Saravanan/AppointManager_Code_Review_Repo

Email - Nisanth Sara...Spent time - Details...GitHubRelevantzHome - Relevantz S...NALANOneDriveRelevantz Self Servi...SANGAMOther favourites

Nisanth-Saravanan / AppointManager_Code_Review_Repo

Type / to search

CodeIssuesPull requestsActionsProjectsWikiSecurityInsightsSettings

AppointManager_Code_Review_RepoPublic

PinWatch 0Fork 0Star 0

main1 Branch0 Tags

Go to file

Add fileCode

About

Nisanth-SaravananPDF Documentation Commit.c576b79 · 11 minutes ago6 Commits

AppointmentManagerFinal Resolved Code Commit.14 minutes ago

12576_Nisanth_Quality-Assurance-Audit-C...Final Resolved Code Commit.14 minutes ago

12576_Nisanth_Saravanan_CodeQuality.pdfPDF Documentation Commit.11 minutes ago

No description, website, or topics provided.

Activity

0 stars

0 watching

0 forks

Post Refactoring SonarQube Analysis:

The screenshot shows the SonarQube dashboard for a project named 'AppointmentManager'. The browser address bar indicates the URL is 'localhost:9000/dashboard?id=AppointmentManager---Sonar---Project&codeScope=overall'. The dashboard header includes navigation links for Projects, Issues, Rules, Quality Profiles, Quality Gates, Administration, and More. A notification bar at the top states: 'Keep your instance current and get the latest SonarQube Community Build, available now.' Below this, a warning message reads: '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](#)'.

The main section displays the project overview for 'AppointmentManager - Sonar - Project' with a dropdown menu showing 'main' as the selected branch. The 'Overview' tab is active, showing a 'Quality Gate' status of 'Passed' with a green checkmark. A warning message states: 'The last analysis has warnings. [See details](#)'. The last analysis was performed 3 minutes ago.

The dashboard provides a summary of code quality metrics:

Metric	Value	Quality
Security	10 Open issues	D
Reliability	30 Open issues	D
Maintainability	27 Open issues	A
Accepted issues	6 Valid issues that were not fixed	D
Coverage	0.0% On 207 lines to cover.	F
Duplications	17.6% On 1.9k lines.	F
Security Hotspots	2	E

The 'Activity' section is visible at the bottom but contains no data.

This image provides a detailed view of the SonarQube dashboard metrics. The project name 'main' is displayed at the top left, and the code size is '1.6k Lines of Code'. The version is 'Version not provided'. A 'Set as homepage' button is located at the top right. The 'Quality Gate' status is 'Passed' with a green checkmark. The last analysis was performed 3 minutes ago.


A warning message states: 'The last analysis has warnings. [See details](#)'.

The dashboard provides a summary of code quality metrics:

Metric	Value	Quality
Security	10 Open issues	D
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Maintainability	27 Open issues	A
Accepted issues	6 Valid issues that were not fixed	D
Coverage	0.0% On 207 lines to cover.	F
Duplications	17.6% On 1.9k lines.	F
Security Hotspots	2	E

The 'Activity' section is visible at the bottom but contains no data.

Reviewer Side Work:


customer_application
Public
Watch 0

main
1 Branch
0 Tags
Go to file
+
<> Code

ranjiththiloj	CodeResolvedCommit	4f1e64c · 25 minutes ago	5 Commits
.vs	CodeResolvedCommit	35 minutes ago	
CustomerwebApi	CodeResolvedCommit	35 minutes ago	
12560_Ranjith_Quality-Assurance-Audit-C...	CodeResolvedCommit	25 minutes ago	
Customer_webApi.sln	first	2 hours ago	
README.md	Initial commit	3 hours ago	

Name	Date modified	Type
.git	01/08/2025 03:19 PM	File folder
.github	01/08/2025 03:01 PM	File folder
.vs	01/08/2025 03:00 PM	File folder
CustomerwebApi	01/08/2025 03:00 PM	File folder
12560_Ranjith_Quality-Assurance-Aud...	01/08/2025 04:21 PM	Microsoft Exc
Customer_webApi.sln	01/08/2025 03:00 PM	SLN File
README.md	01/08/2025 03:00 PM	Markdown So

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	CustomerWebApp\Models\Customer.cs	4	NO	YES	YES	NO	Lack of Key() Annotated Fields.	Add a Key() Annotated Field.
2	CustomerWebApp\Models\Customer.cs	4	NO	YES	YES	NO	Lack of (Required) Annotated Value in the model.	Add a (Required) Annotated Field.
3	CustomerWebApp\Controllers\CustomerController.cs	4	NO	YES	YES	NO	Casing issue for "MyApp.Controllers".	Rename with proper casing (PascalCasing).
4	CustomerWebApp\Controllers\CustomerController.cs	5	NO	YES	YES	NO	Lack of Comments to denote why the method is defined.	Add minimal Comments.
5	CustomerWebApp\Controllers\CustomerController.cs: Line 65	1	NO	YES	NO	YES	Improper namespace naming: "MyApp" / "Myapp".	Rename the namespaces with respect to the project: "CustomerWebApp".
6	CustomerWebApp\Controllers\CustomerController.cs: Line 65	3	NO	YES	NO	YES	The Delete Method lacks an "await" operator.	Add an "await" operator.
7	CustomerWebApp\Controllers\CustomerController.cs: Line 20	4	NO	YES	YES	NO	Vague naming convention: "GetStatus".	Rename to "GetCustomers".
8	CustomerWebApp\Controllers\CustomerController.cs: Line 26	4	NO	YES	YES	NO	Vague naming convention: "Get".	Rename to "InsertCustomers".
9	CustomerWebApp\Controllers\CustomerController.cs: Line 37	4	NO	YES	YES	NO	Vague naming convention: "InsertStatus".	Rename to "GetCustomerById".
10	CustomerWebApp\Assets\Content\Content.cs	5	YES	NO	NO	NO		
11	CustomerWebApp\Views\Views.cs	5	YES	NO	NO	NO		
12	CustomerWebApp\Controllers\CustomerController.cs	5	YES	NO	NO	NO	Property Declared as HttpGet Annotations.	
13	CustomerWebApp\Controllers\CustomerController.cs	5	YES	NO	NO	NO	Property Declared as HttpPost Annotations.	
14	CustomerWebApp\Controllers\CustomerController.cs	5	YES	NO	NO	NO	Property Declared as HttpDelete Annotations.	
15	CustomerWebApp\Controllers\CustomerController.cs	5	YES	NO	NO	NO	Property Declared as HttpPut Annotations.	
16	CustomerWebApp\Controllers\CustomerController.cs: Line 13	5	YES	NO	NO	NO	Property Declared private variable.	
17	CustomerWebApp\Controllers\CustomerController.cs: Line 32	5	YES	NO	NO	NO	Apptly Declared "await" agent.	
18	CustomerWebApp\Controllers\CustomerController.cs: Line 60	5	YES	NO	NO	NO	Apptly Declared "await" agent.	
19	CustomerWebApp\Program.cs: Line 12	5	YES	NO	NO	NO	Appt Usage of "ServerVersionAutoDetect".	
20	CustomerWebApp\Program.cs: Line 22	5	YES	NO	NO	NO	Appt Declaration of middleware for Swagger UI.	
21	CustomerWebApp\appsettings.json	5	YES	NO	NO	NO	Appt Usage of "RedirectConnection" and ConnectionStrings.	
22	CustomerWebApp\Migrations\20240801000000_Initial.cs	3	NO	YES	NO	NO	Partial Class Name is Declared as "Iris".	Could make use of a .env file as well for such hard codes. While declaring migrations name, use proper casing.