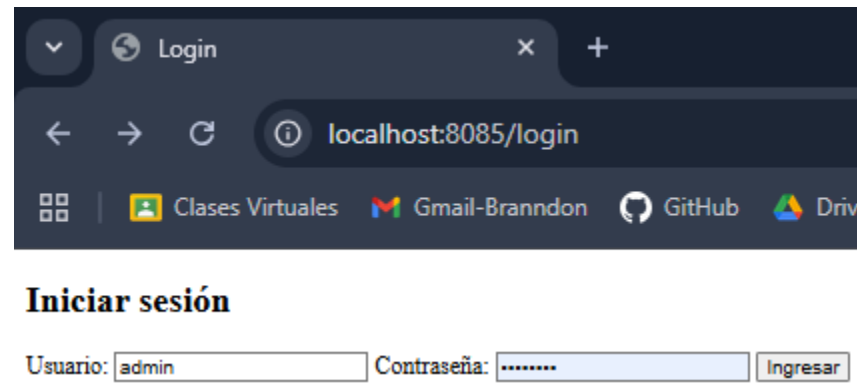
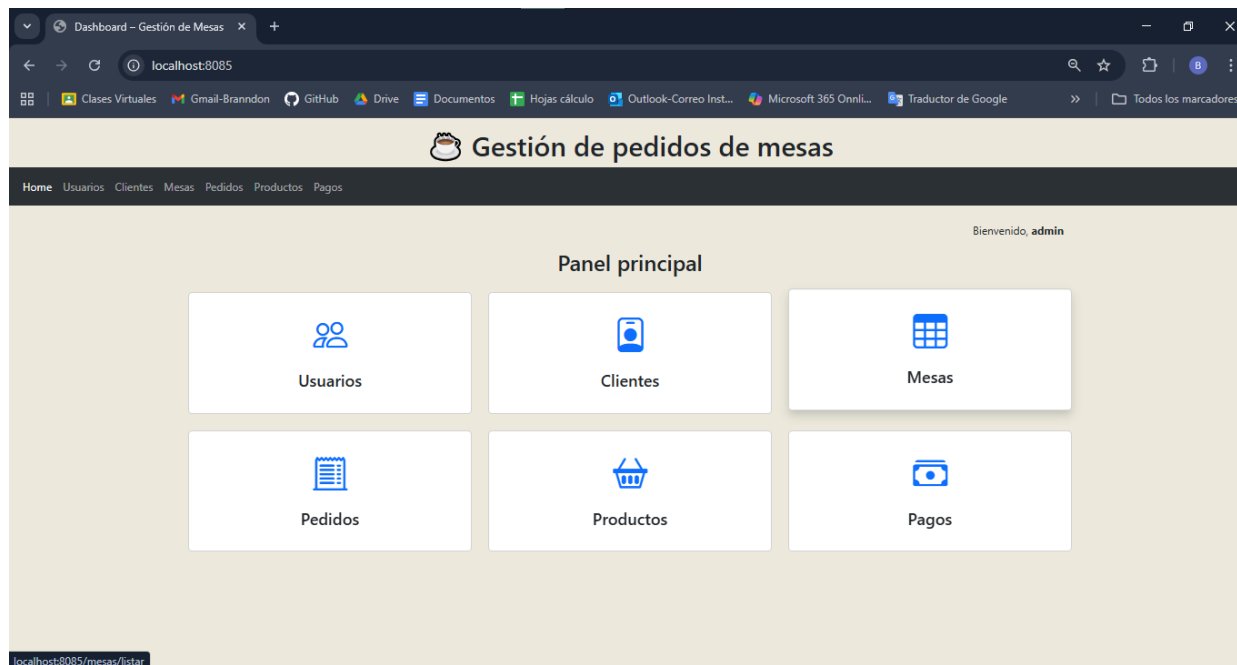


1. Interfaz del aplicativo

1.1.



1.2. Inicio del dashboard



1.3. Clientes

- Tabla Clientes

Clientes

Agregar Cliente

Documento	Nombre	Teléfono	Email	Acciones
1141316283	Ana María Update validacion	3134304238	ana@correo.com	Editar Eliminar

- Formulario crear

Agregar Cliente

Documento

5555555

Nombre

Cliente ejemplo

Teléfono

99999999

Email

9@gmail.com

Guardar

Cancelar

Cientes

Agregar Cliente

Documento	Nombre	Teléfono	Email	Acciones
1141316283	Ana María Update validacion	3134304238	ana@correo.com	<div>EditarEliminar</div>
5555555	Cliente ejemplo	9999999	9@gmail.com	<div>EditarEliminar</div>

- Formulario editar

Editar Cliente

Documento

5555555

Nombre

Cliente ejemplo-ACTUALIZAR

Teléfono

9999999

Email

9@gmail.com

Guardar

Cancelar

Cientes

Agregar Cliente

Documento	Nombre	Teléfono	Email	Acciones
1141316283	Ana María Update validacion	3134304238	ana@correo.com	<div>EditarEliminar</div>
5555555	Cliente ejemplo-ACTUALIZAR	9999999	9@gmail.com	<div>EditarEliminar</div>

- Eliminar

Drive Documentos Hojas cálculo Outlook-C

localhost:8085 dice
¿Eliminar cliente?

Aceptar Cancelar

Cientes

Agregar Cliente

Documento	Nombre	Teléfono	Email	Acciones
1141316283	Ana María Update validacion	3134304238	ana@correo.com	Editar Eliminar
5555555	Cliente ejemplo-ACTUALIZAR	9999999	9@gmail.com	Editar Eliminar

Cientes

Agregar Cliente

Documento	Nombre	Teléfono	Email	Acciones
1141316283	Ana María Update validacion	3134304238	ana@correo.com	Editar Eliminar

1.4. Mesas

1.4.1. Tabla

Listado de Mesas

Registrar nueva mesa

Número	Capacidad	Estado	Pedidos	Acciones
1	4	LIBRE	Crear Pedido	Editar Eliminar

1.4.2. Crear

2. Iniciamos el servidor:

```
Starting SonarQube...
2025.12.04 21:00:23 INFO app[[o.s.a.AppFileSystem] Cleaning or creating temp directory F:\Sonarqube\sonarqube-25.7.0.110598\temp
2025.12.04 21:00:23 INFO app[[o.s.a.es.EsSettings] Elasticsearch listening on [HTTP: 127.0.0.1:9001, TCP: 127.0.0.1:{}]
2025.12.04 21:00:23 INFO app[[o.s.a.ProcessLauncherImpl] Launch process[ELASTICSEARCH] from [F:\Sonarqube\sonarqube-25.7.0.110598\elasticsearch]: C:\Program Files\Java\jdk-17\bin\java
a\jdk-17\bin\java -Xms4m -Xmx64m -XX:+UseSerialGC -Dcli.name=server -Dcli.script=./bin/elasticsearch -Dcli.libs=lib/tools/server-cli -Des.path.home=F:\Sonarqube\sonarqu
be-25.7.0.110598\elasticsearch -Des.path.conf=F:\Sonarqube\sonarqube-25.7.0.110598\temp\conf\es -Des.distribution.type=tar -cp F:\Sonarqube\sonarqube-25.7.0.110598\el
asticsearch\lib\*;F:\Sonarqube\sonarqube-25.7.0.110598\elasticsearch\lib\cli-launcher\* org.elasticsearch.launcher.CliToolLauncher
2025.12.04 21:00:23 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
2025.12.04 21:00:56 INFO app[[o.s.a.SchedulerImpl] Process[es] is up
2025.12.04 21:00:56 INFO app[[o.s.a.ProcessLauncherImpl] Launch process[WEB_SERVER] from [F:\Sonarqube\sonarqube-25.7.0.110598]: C:\Program Files\Java\jdk-17\bin\java
-Djava.awt.headless=true -Dfile.encoding=UTF-8 -Djava.io.tmpdir=F:\Sonarqube\sonarqube-25.7.0.110598\temp -XX:-OmitStackTraceInFastThrow --add-opens=java.base/java.uti
l=ALL-UNNAMED --add-opens=java.base/java.lang=ALL-UNNAMED --add-opens=java.base/java.io=ALL-UNNAMED --add-opens=java.rmi/sun.rmi.transport=ALL-UNNAMED --add-exports=jav
a.base/jdk.internal.ref=ALL-UNNAMED --add-opens=java.base/java.nio=ALL-UNNAMED --add-opens=java.base/sun.nio.ch=ALL-UNNAMED --add-opens=java.management/sun.management=A
LL-UNNAMED --add-opens=jdk.management/com.sun.management.internal=ALL-UNNAMED -Xmx512m -Xms128m -XX:+HeapDumpOnOutOfMemoryError -Dhttp.nonProxyHosts=localhost|127.*|[:
1] -cp ./lib/sonar-application-25.7.0.110598.jar;F:\Sonarqube\sonarqube-25.7.0.110598\lib\jdbc\h2\h2-2.3.232.jar org.sonar.server.app.WebServer F:\Sonarqube\sonarqube-2
5.7.0.110598\temp\sq-process12462105426867549655properties
Standard Commons Logging discovery in action with spring-jcl: please remove commons-logging.jar from classpath in order to avoid potential conflicts
2025.12.04 21:01:13 INFO app[[o.s.a.SchedulerImpl] Process[web] is up
2025.12.04 21:01:13 INFO app[[o.s.a.ProcessLauncherImpl] Launch process[COMPUTE_ENGINE] from [F:\Sonarqube\sonarqube-25.7.0.110598]: C:\Program Files\Java\jdk-17\bin\
java -Djava.awt.headless=true -Dfile.encoding=UTF-8 -Djava.io.tmpdir=F:\Sonarqube\sonarqube-25.7.0.110598\temp -XX:-OmitStackTraceInFastThrow --add-opens=java.base/java
.util=ALL-UNNAMED --add-exports=java.base/jdk.internal.ref=ALL-UNNAMED --add-opens=java.base/java.lang=ALL-UNNAMED --add-opens=java.base/java.nio=ALL-UNNAMED --add-open
s=java.base/sun.nio.ch=ALL-UNNAMED --add-opens=java.management/sun.management=ALL-UNNAMED --add-opens=jdk.management/com.sun.management.internal=ALL-UNNAMED -Xmx512m -X
ms128m -XX:+HeapDumpOnOutOfMemoryError -Dhttp.nonProxyHosts=localhost|127.*|[:1] -cp ./lib/sonar-application-25.7.0.110598.jar;F:\Sonarqube\sonarqube-25.7.0.110598\lib
\jdbc\h2\h2-2.3.232.jar org.sonar.ce.app.CeServer F:\Sonarqube\sonarqube-25.7.0.110598\temp\sq-process9081261274895927267properties
Standard Commons Logging discovery in action with spring-jcl: please remove commons-logging.jar from classpath in order to avoid potential conflicts
2025.12.04 21:01:18 INFO app[[o.s.a.SchedulerImpl] Process[ce] is up
2025.12.04 21:01:18 INFO app[[o.s.a.SchedulerImpl] SonarQube is operational
```

3. Generamos un nuevo token:

SonarQube community

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A Administrator

Profile **Security** Notifications Projects

Generate Tokens

Name	Type	Expires in	
<input type="text" value="Enter Token Name"/>	<input type="text" value="Select Token Type"/>	<input type="text" value="30 days"/>	<input type="button" value="Generate"/>

✔ New token "ScannerLocal" has been created. Make sure you copy it now, you won't be able to see it again!

sqa_5ea777b423e14421bed9e6a19d47063f6634003e

4. Inicializamos el scanner

```
C:\Windows\System32\cmd.exe
Microsoft Windows [Versión 10.0.19045.6466]
(c) Microsoft Corporation. Todos los derechos reservados.

F:\1.TECNÓLOGO-ADSO-2025\3.Trimestre 5\3.Calidad Software II\gestion-Mesas\demo>F:\Sonarqube\sonar-scanner-7.1.0.4889-windows-x64\bin\sonar-scanner.bat
21:10:14.995 INFO Scanner configuration file: F:\Sonarqube\sonar-scanner-7.1.0.4889-windows-x64\bin\..\conf\sonar-scanner.properties
21:10:15.001 INFO Project root configuration file: F:\1.TECNÓLOGO-ADSO-2025\3.Trimestre 5\3.Calidad Software II\gestion-Mesas\demo\sonar-project.properties
21:10:15.022 INFO SonarScanner CLI 7.1.0.4889
21:10:15.024 INFO Java 17.0.13 Eclipse Adoptium (64-bit)
21:10:15.025 INFO Windows 10 10.0 amd64
21:10:15.056 INFO User cache: C:\Users\Anzaanza\.sonar\cache
21:10:15.810 INFO Communicating with SonarQube Community Build 25.7.0.110598
21:10:15.810 WARN Use of 'sonar.login' property has been deprecated in favor of 'sonar.token' (or the env variable alternative 'SONAR_TOKEN'). Please use the latter when passing a token.
21:10:15.811 INFO JRE provisioning: os[windows], arch[amd64]
21:10:17.203 INFO Starting SonarScanner Engine...
21:10:17.205 INFO Java 17.0.13 Eclipse Adoptium (64-bit)
21:10:18.638 INFO Load global settings
21:10:18.762 INFO Load global settings (done) | time=124ms
21:10:18.766 INFO Server id: 147B411E-AZhUKrt8f7p3cP-L9HGF
```

Luego esperamos el mensaje de éxito

```
21:10:37.852 INFO CPD Executor CPD calculation finished (done) | time=66ms
21:10:37.870 INFO SCM revision ID '958bee5e95f3503b7ee3ff85052794d9119da591'
21:10:38.327 INFO Analysis report generated in 389ms, dir size=429.6 kB
21:10:38.643 INFO Analysis report compressed in 316ms, zip size=168.2 kB
21:10:40.586 INFO Analysis report uploaded in 1943ms
21:10:40.593 INFO ANALYSIS SUCCESSFUL, you can find the results at: http://localhost:9000/dashboard?id=proyecto-mesas
21:10:40.594 INFO Note that you will be able to access the updated dashboard once the server has processed the submitted analysis report
21:10:40.595 INFO More about the report processing at http://localhost:9000/api/ce/task?id=c668836e-6026-44a2-a045-47699537e04e
21:10:40.814 INFO Analysis total time: 21.608 s
21:10:40.818 INFO SonarScanner Engine completed successfully
21:10:41.392 INFO EXECUTION SUCCESS
21:10:41.394 INFO Total time: 26.402s

F:\1.TECNÓLOGO-ADSO-2025\3.Trimestre 5\3.Calidad Software II\gestion-Mesas\demo>
```

5. Vamos a <http://localhost:9000/projects> y en los scanner vemos el de este proyecto, ‘proyecto-mesas’

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](#)

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Quality Gate

Passed 3

Failed 1

Security

A ≥ 0 Info issues 2

B ≥ 1 low issue 0

C ≥ 1 medium issue 0

D ≥ 1 high issue 0

E ≥ 1 blocker issue 2

Reliability

A ≥ 0 Info issues 1

Search projects (minimum 2 characters) Perspective Overall Status Sort by Name 4 project(s)

Security 1 Reliability 857 Maintainability 1.6k Hotspots Reviewed 0.0% Coverage 0.0% Duplications 13.9%

☆ proyecto-mesas Public Passed

Last analysis: 3 minutes ago • 2.1k Lines of Code • Java, HTML, ...

Security 0 Reliability 50 Maintainability 24 Hotspots Reviewed 0.0% Coverage 0.0% Duplications 5.5%

4 of 4 shown

SonarQube™ technology is powered by [SonarSource SA](#) Community Build • v25.7.0.118598 • RQR RODE LGPL v3 Community Documentation Plugins Web API

main 2.1k Lines of Code • Version not provided • Set as homepage

Quality Gate: Passed Last analysis 4 minutes ago

The last analysis has warnings. [See details](#)

New Code Overall Code

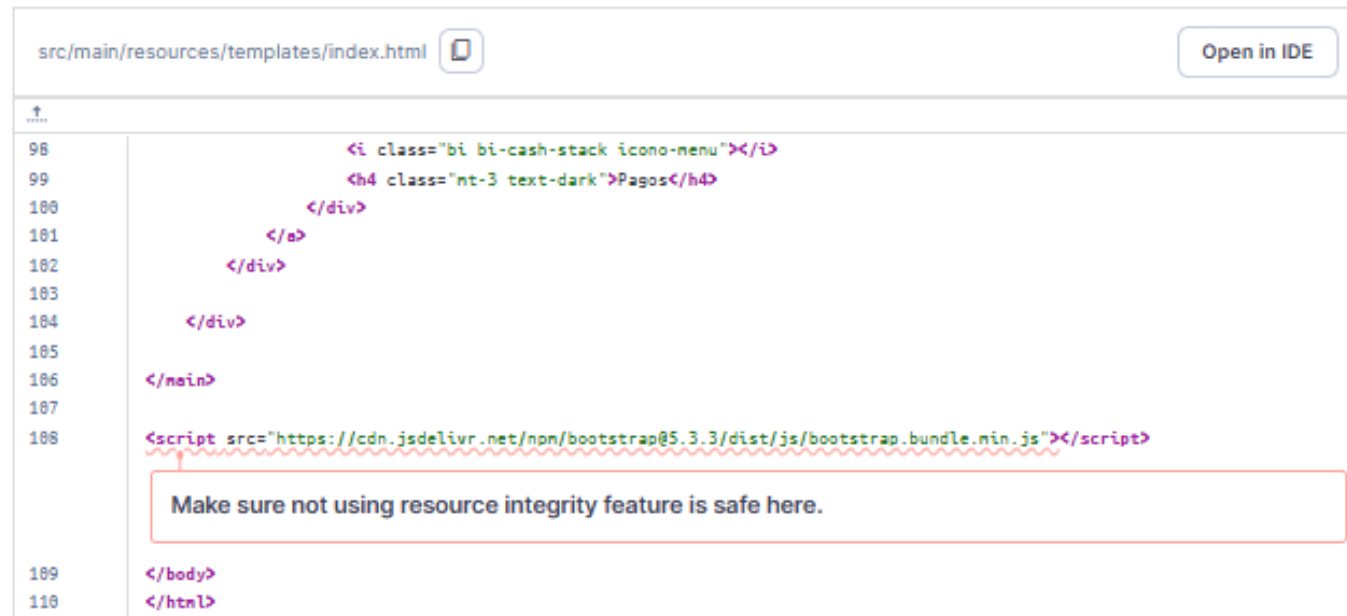
Security	0 Open Issues	A	Reliability	50 Open Issues	C	Maintainability	24 Open Issues	A
Accepted Issues	0		Coverage	0.0%		Duplications	5.5%	
Valid issues that were not fixed			On 444 lines to cover.			On 2.6k lines.		
Security Hotspot	1	E						

6. Correcciones.

6.1. Security Hospost



6.1.1. Error: “Make sure not using resource integrity feature is safe here.”



- Solución: Generar un hash para el archivo de JavaScript de Bootstrap con la herramienta <https://www.srihash.org/>

SRI Hash Generator

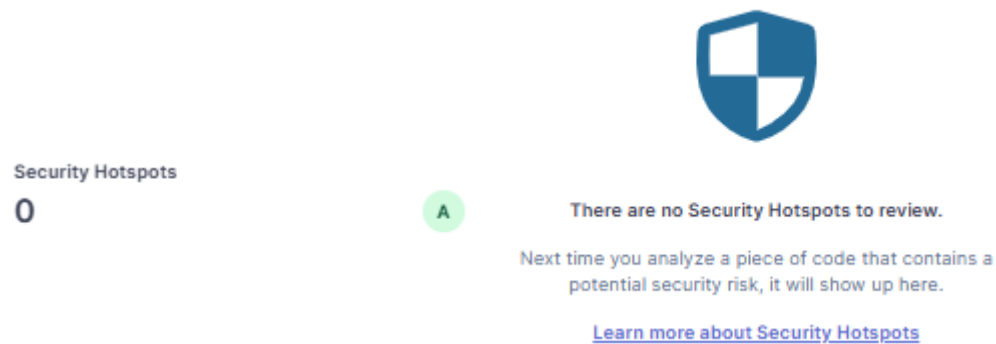
Enter the URL of the resource you wish to use:

SHA-256 Hash!

```
<script src="https://cdn.jsdelivr.net/npm/bootstrap@5.3.3/dist/js/bootstrap.bundle.min.js" integrity="sha256-CD0y6c0ibCWEdsRiZuaHf8dSGGJRYuBGC+mjoJimHGw=" crossorigin="anonymous"></script>
```

Copy

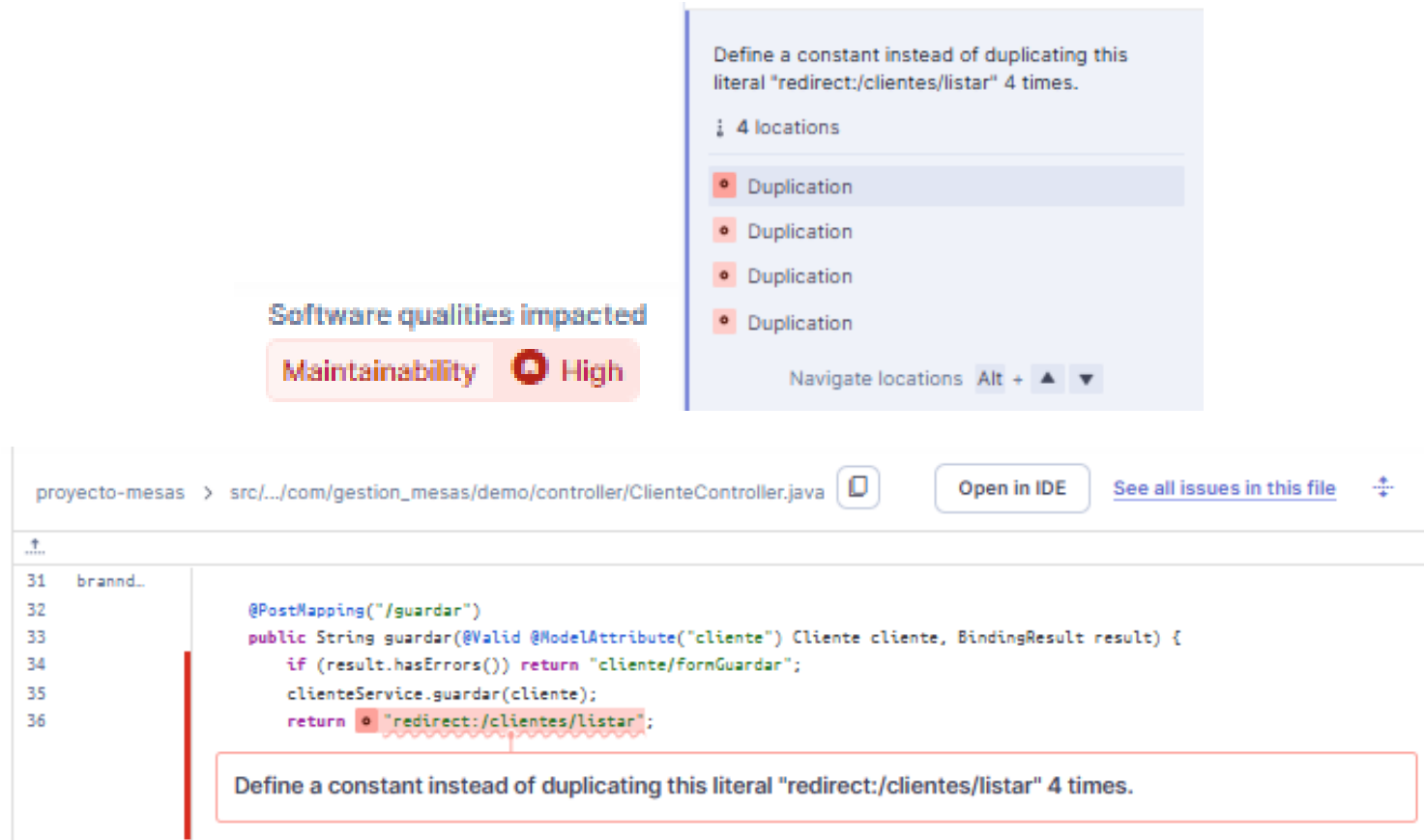
- Después de la corrección



6.2. Severity

6.2.1. Error “Define una constante en lugar de duplicar este literal "redirect:/clientes/listar" 4 veces.”

- Detalles del error



Software qualities impacted



Maintainability **High**

Define a constant instead of duplicating this literal "redirect:/clientes/listar" 4 times.

4 locations

- Duplication
- Duplication
- Duplication
- Duplication

Navigate locations Alt + ▲ ▼

proyecto-mesas > src/.../com/gestion_mesas/demo/controller/ClienteController.java  Open in IDE [See all issues in this file](#) 

31 brannd...
32 @PostMapping("/guardar")
33 public String guardar(@Valid @ModelAttribute("cliente") Cliente cliente, BindingResult result) {
34 if (result.hasErrors()) return "cliente/formGuardar";
35 clienteService.guardar(cliente);
36 return "redirect:/clientes/listar";

Define a constant instead of duplicating this literal "redirect:/clientes/listar" 4 times.

- Solución: Definir una constante para la URL de redireccionamiento.

```

ClienteController.java x
1 package com.gestion_mesas.demo.controller;
2
3 > import ...
10
11 @Controller no usages Brandon-Schneyder-Suarez-Jimenez*
12 @RequestMapping("/clientes")
13 public class ClienteController {
14     private static final String REDIRECT_LISTAR = "redirect:/clientes/listar"; 4 usages
15     private final ClienteService clienteService; 6 usages
16
17 > public ClienteController(ClienteService clienteService) { this.clienteService = clienteService; }
18
19
20
21 @GetMapping("/listar") no usages Brandon-Schneyder-Suarez-Jimenez
22 @
23 public String listar(Model model) {
24     model.addAttribute(attributeName: "listaClientes", clienteService.listar());
25     return "cliente/listar";
26 }
27
28 @GetMapping("/formGuardar") no usages Brandon-Schneyder-Suarez-Jimenez
29 @
30 public String formGuardar(Model model) {
31     model.addAttribute(attributeName: "cliente", new Cliente());
32     return "cliente/formGuardar";
33 }
34
35 @PostMapping("/guardar") no usages Brandon-Schneyder-Suarez-Jimenez*
36 @
37 public String guardar(@Valid @ModelAttribute("cliente") Cliente cliente, BindingResult result) {
38     if (result.hasErrors()) return "cliente/formGuardar";
39     clienteService.guardar(cliente);
40     return REDIRECT_LISTAR;
41 }

```

```


40 @GetMapping("/formAct/{id}") no usages Brandon-Schneyder-Suarez-Jimenez*
41 public String formAct(@PathVariable Long id, Model model) {
42     Cliente c = clienteService.buscarPorId(id);
43     if (c == null) return REDIRECT_LISTAR;
44     model.addAttribute(attributeName: "cliente", c);
45     return "cliente/formAct";
46 }
47
48 @PostMapping("/actualizar") no usages Brandon-Schneyder-Suarez-Jimenez*
49 @
50 public String actualizar(@Valid @ModelAttribute("cliente") Cliente cliente, BindingResult result) {
51     if (result.hasErrors()) return "cliente/formAct";
52     clienteService.guardar(cliente);
53     return REDIRECT_LISTAR;
54 }
55
56 @PostMapping("/eliminar/{id}") no usages Brandon-Schneyder-Suarez-Jimenez*
57 public String eliminar(@PathVariable Long id) {
58     clienteService.eliminar(id);
59     return REDIRECT_LISTAR;
60 }

```

6.2.2. Error: “Define a constant instead of duplicating this literal "redirect:/mesas/listar" 3 times.”

- Detalles del error

Software qualities impacted



Maintainability  **High**

src/.../MesaController.java

Define a constant instead of duplicating this literal "redirect:/mesas/listar" 3 times.

3 locations

- Duplication
- Duplication
- Duplication

Navigate locations **Alt** +  

proyecto-mesas > src/.../com/gestion_mesas/demo/controller/MesaController.java  [Open in IDE](#) [See all issues in this file](#) 

↑

66 brand... mesa.setCapacidad(Integer.parseInt(dto.getCapacidad()));

67 mesa.setEstado(dto.getEstadoMesa());

68

69 mesaService.guardarMesa(mesa);

70

71 return "redirect:/mesas/listar";

72 }

Define a constant instead of duplicating this literal "redirect:/mesas/listar" 3 times.

- Solución: Definir una constante para la URL de redireccionamiento.

```
MesaController.java x
1 package com.gestion_mesas.demo.controller;
2
3 > import ...
4
18
19 @Controller no usages Brandon-Schneyder-Suarez-Jimenez *
20 @RequestMapping("/mesas")
21 public class MesaController {
22     private static final String REDIRECT_LISTAR = "redirect:/mesas/listar"; 3 usages
23     public final MesaService mesaService; 7 usages
24     public final PedidoService pedidoService; 2 usages
25     public MesaController(MesaService mesaService, PedidoService pedidoService) {
26         this.mesaService = mesaService;
27         this.pedidoService = pedidoService;
28     }
29
30 @GetMapping("/listar") no usages Brandon-Schneyder-Suarez-Jimenez
31 public String listar(Model model) {
32     List<Mesa> listaMesas = mesaService.listarMesas();
33     Map<Long, Pedido> pedidosActivos = new HashMap<>();
34
35     for(Mesa m : listaMesas) {
36         Pedido activo = pedidoService.obtenerPedidoActivo(m.getIdMesa());
37         pedidosActivos.put(m.getIdMesa(), activo);
38     }
39
40     model.addAttribute(attributeName "listaMesas", listaMesas);
41     model.addAttribute(attributeName "pedidosActivos", pedidosActivos);
42     return "mesa/listar";
43 }
44
45 @GetMapping("/formGuardar") no usages Brandon-Schneyder-Suarez-Jimenez
46 @
47 public String mostrarFormGuardar(Model model) {
48     model.addAttribute(attributeName "mesaCreateDTO", new MesaCreateDTO());
49     // Enviar el enum a la vista del formulario de crear
50     model.addAttribute(attributeName "estadosMesa", Mesa.estadoMesa.values());
51     return "mesa/formGuardar";
52 }
53
54 @PostMapping("/guardar") no usages Brandon-Schneyder-Suarez-Jimenez *
55 @
56 public String guardarMesa(
57     @Valid @ModelAttribute("mesaCreateDTO") MesaCreateDTO dto,
58     BindingResult result,
59     Model model
60 ) {
```

```
MesaController.java x
21 public class MesaController {
22     public String guardarMesa(
23         @Valid @ModelAttribute("mesaCreateDTO") MesaCreateDTO dto,
24         BindingResult result,
25         Model model
26     ) {
27         if (result.hasErrors()) {
28             // Volver a enviar el enum a la vista del formulario de crear con el fin de
29             model.addAttribute(attributeName "estadosMesa", Mesa.estadoMesa.values());
30             return "mesa/formGuardar";
31         }
32
33         Mesa mesa = new Mesa();
34         mesa.setNumero(Integer.parseInt(dto.getNumero()));
35         mesa.setCapacidad(Integer.parseInt(dto.getCapacidad()));
36         mesa.setEstado(dto.getEstadoMesa());
37
38         mesaService.guardarMesa(mesa);
39
40         return REDIRECT_LISTAR;
41     }
42
43 @GetMapping("/formAct/{id}") no usages Brandon-Schneyder-Suarez-Jimenez
44 @
45 public String mostrarFormAct(@PathVariable Long id, Model model) {
46     Mesa mesa = mesaService.buscarById(id);
47
48     MesaUpdateDTO dto = new MesaUpdateDTO();
49     dto.setIdMesa(mesa.getIdMesa());
50     dto.setNumero(String.valueOf(mesa.getNumero()));
51     dto.setCapacidad(String.valueOf(mesa.getCapacidad()));
52     dto.setEstadoMesa(mesa.getEstado());
53
54     model.addAttribute(attributeName "mesaUpdateDTO", dto);
55     model.addAttribute(attributeName "estadosMesa", Mesa.estadoMesa.values());
56     return "mesa/formAct";
57 }
58
59 @PostMapping("/actualizar") no usages Brandon-Schneyder-Suarez-Jimenez *
60 @
61 public String actualizarMesa(
62     @Valid @ModelAttribute("mesaUpdateDTO") MesaUpdateDTO dto,
63     BindingResult result
64 ) {
65     if (result.hasErrors()) {
66         return "/mesa/formAct";
67     }
68 }
```

```
99         Mesa mesaActual = mesaService.buscarById(dto.getIdMesa());
100         mesaActual.setNumero(Integer.parseInt(dto.getNumero()));
101         mesaActual.setCapacidad(Integer.parseInt(dto.getCapacidad()));
102         mesaActual.setEstado(dto.getEstadoMesa());
103
104         mesaService.guardarMesa(mesaActual);
105
106         return REDIRECT_LISTAR;
107     }
108
109     @PostMapping("/eliminar/{id}") no usages Brandon-Schneyder-Suarez-Jimenez *
110     public String eliminarMesa(@PathVariable Long id) {
111         mesaService.eliminarMesa(id);
112         return REDIRECT_LISTAR;
113     }
114 }
115
```

6.2.3. Error: Rename this constant name to match the regular expression `^[A-Z][A-Z0-9]*(_[A-Z0-9]+)*$`

- Detalles del error:

Software qualities impacted

Maintainability



High



src/.../entity/DetallePago.java

Rename this constant name to match the regular expression `^[A-Z][A-Z0-9]*(_[A-Z0-9]+)*$`.

Rename this constant name to match the regular expression `^[A-Z][A-Z0-9]*(_[A-Z0-9]+)*$`.

Rename this constant name to match the regular expression `^[A-Z][A-Z0-9]*(_[A-Z0-9]+)*$`.

Rename this constant name to match the regular expression `^[A-Z][A-Z0-9]*(_[A-Z0-9]+)*$`.



- Solución: Renombrar los miembros del enum para que coincidan con el patrón solicitado por SonarQube (`^[A-Z][A-Z0-9]*(_[A-Z0-9]+)*$`)


Antes:


```
public enum MetodoPago { 4 usages Brannndon-Schneyder-Suarez-Jimenez
    Efectivo, no usages
    Tarjeta_Credito, no usages
    Tarjeta_Debito, no usages
    Neki no usages
}
```


Después:

```
public enum MetodoPago { 4 usages Brannndon-Schneyder-Suarez-Jimenez *  
    EFECTIVO, no usages  
    TARJETA_CREDITO, no usages  
    TARJETA_DEBITO, no usages  
    NEQUI no usages  
}
```

- Comprobante corregido:

 This issue is **Closed (Fixed)**. It was detected in the file below and is no longer being detected.

proyecto-mesas > src/.../com/gestion_mesas/demo/entity/DetallePago.java 

Open in IDE See all issues in this file 

New Code


1	brann...	package com.gestion_mesas.demo.entity;
2		
3		import jakarta.persistence.*;
4		
5		import java.time.LocalDateTime;
6		
7		@Entity
8		public class DetallePago {
9		@Id

↓

6.2.4. Error: Add a nested comment explaining why this method is empty, throw an UnsupportedOperationException or complete the implementation


- Detalles del error:


Software qualities impacted

Maintainability  High 

src/.../entity/Usuario.java

Add a nested comment explaining why this method is empty, throw an UnsupportedOperationException or complete the implementation.

proyecto-mesas > src/.../com/gestion_mesas/demo/entity/Usuario.java 

Open in IDE [See all issues in this file](#) 

19 brand...
20 @ManyToOne
21 @JoinColumn(name = "id_rol", nullable=false)
22 private Rol rol;
23
24 public Usuario() {
25 }
26
27 // getters y setters
28
29 public Long getIdUsuario() {
30 return idUsuario;
31 }
32 public void setIdUsuario(Long idUsuario) {
33 this.idUsuario = idUsuario;
34 }

Add a nested comment explaining why this method is empty, throw an UnsupportedOperationException or complete the implementation.

- Solución: Agregar un comentario anidado que explique por qué este método está vacío el constructor.


Antes


```
public Usuario() { 3 usages Brannndon-Schneyder-Suarez-Jimenez  
}
```

Después

```
public Usuario() { 3 usages Brannndon-Schneyder-Suarez-Jimenez +1  
    // Constructor requerido por JPA para crear instancias de la entidad.  
}
```

- Comprobante corregido:

 This issue is **Closed (Fixed)**. It was detected in the file below and is no longer being detected.

proyecto-mesas > src/.../com/gestion_mesas/demo/entity/Usuario.java 

1
2
3
4
5
6
7
8
9

brannnd...

package com.gestion_mesas.deno.entity;

import jakarta.persistence.*;

@Entity
@Table(name = "USUARIO")
public class Usuario {
 @Id
 @GeneratedValue(strategy = GenerationType.IDENTITY)
}

⌵

6.2.5. Error “Define a constant instead of duplicating this literal "ADMIN" 3 times.”

- Detalle del error:

Software qualities impacted

Maintainability High

src/.../config/AdminInitializer.java

Define a constant instead of duplicating this literal "ADMIN" 3 times.

3 locations

- Duplication
- Duplication
- Duplication

Navigate locations Alt + ▲ ▼

proyecto-mesas > src/.../com/gestion_mesas/demo/config/AdminInitializer.java

Open in IDE See all issues in this file

```
14  @Bean
15  CommandLineRunner initRolesAndAdmin(RolRepository rolRepo, UsuarioRepository userRepo, PasswordEncoder encoder) {
16      return args -> {
17
18          // Crear rol ADMIN si no existe
19          if (rolRepo.findByNombre("ADMIN").isEmpty()) {
20
21              rolRepo.save(new Rol(null, "ADMIN"));
22          }
23
24          if (rolRepo.findByNombre("EMPLEADO").isEmpty()) {
25              rolRepo.save(new Rol(null, "EMPLEADO"));
26          }
27
28          // Crear usuario ADMIN si no existe
29          if (userRepo.findByUsername("admin").isEmpty()) {
30              Usuario admin = new Usuario();
31              admin.setUsername("admin");
32              admin.setPassword(encoder.encode("admin123"));
33              admin.setRol(rolRepo.findByNombre("ADMIN").get());
```

- Solución: definir constantes para las cadenas "ADMIN" y "EMPLEADO" dentro de tu clase AdminInitializer


Antes:

```
AdminInitializer.java x
1 package com.gestion_mesas.demo.config;
2
3 > import ...
11
12 @Configuration no usages Brandon-Schneyder-Suarez-Jimenez
13 public class AdminInitializer {
14     @Bean no usages Brandon-Schneyder-Suarez-Jimenez
15     CommandLineRunner initRolesAndAdmin(RolRepository rolRepo, UsuarioRepository userRepo, PasswordEncoder encoder) {
16         return String[] args -> {
17
18             // Crear rol ADMIN si no existe
19             if (rolRepo.findByNombre("ADMIN").isEmpty()) {
20                 rolRepo.save(new Rol( idRol: null, nombre: "ADMIN"));
21             }
22
23             if (rolRepo.findByNombre("EMPLEADO").isEmpty()) {
24                 rolRepo.save(new Rol( idRol: null, nombre: "EMPLEADO"));
25             }
26
27             // Crear usuario ADMIN si no existe
28             if (userRepo.findByUsername("admin").isEmpty()) {
29                 Usuario admin = new Usuario();
30                 admin.setUsername("admin");
31                 admin.setPassword(encoder.encode( rawPassword: "admin123"));
32                 admin.setRol(rolRepo.findByNombre("ADMIN").get());
33                 userRepo.save(admin);
34                 System.out.println("Usuario ADMIN creado: admin / admin123");
35             }
36         };
37     }
```


Después:

```
AdminInitializer.java x
1  package com.gestion_mesas.demo.config;
2
3  > import ...
11
12  @Configuration no usages Brandon-Schneyder-Suarez-Jimenez *
13  public class AdminInitializer {
14      private static final String ROL_ADMIN = "ADMIN"; 3 usages
15      private static final String ROL_EMPLEADO = "EMPLEADO"; 2 usages
16
17      @Bean no usages Brandon-Schneyder-Suarez-Jimenez *
18      CommandLineRunner initRolesAndAdmin(RolRepository rolRepo, UsuarioRepository userRepo, PasswordEncoder encoder) {
19          return String[] args -> {
20
21              // Crear rol ADMIN si no existe
22              if (rolRepo.findByNombre(ROL_ADMIN).isEmpty()) {
23                  rolRepo.save(new Rol( idRol: null, ROL_ADMIN));
24              }
25
26              if (rolRepo.findByNombre(ROL_EMPLEADO).isEmpty()) {
27                  rolRepo.save(new Rol( idRol: null, ROL_EMPLEADO));
28              }
29
30              // Crear usuario ADMIN si no existe
31              if (userRepo.findByUsername("admin").isEmpty()) {
32                  Usuario admin = new Usuario();
33                  admin.setUsername("admin");
34                  admin.setPassword(encoder.encode( rawPassword: "admin123"));
35                  admin.setRol(rolRepo.findByNombre(ROL_ADMIN).get());
36                  userRepo.save(admin);
37                  System.out.println("Usuario ADMIN creado: admin / admin123");
38              }
39          };
40      }
41  }
```

- Comprobante corregido:

 This issue is **Closed (Fixed)**. It was detected in the file below and is no longer being detected.

proyecto-mesas > src/.../com/gestion_mesas/demo/config/AdminInitializer.java 

Open in IDE [See all issues in this file](#) 

1	brannd...	<code>package com.gestion_mesas.demo.config;</code>
2		
3		<code>import com.gestion_mesas.demo.entity.Rol;</code>
4		<code>import com.gestion_mesas.demo.entity.Usuario;</code>
5		<code>import com.gestion_mesas.demo.repository.RolRepository;</code>
6		<code>import com.gestion_mesas.demo.repository.UsuarioRepository;</code>
7		<code>import org.springframework.boot.CommandLineRunner;</code>
8		<code>import org.springframework.context.annotation.Bean;</code>
9		<code>import org.springframework.context.annotation.Configuration;</code>

⌵

7. Comparación de cantidad de errores altos antes y después de las correcciones

Antes

Severity ⓘ	1	×
Blocker	0	
High	15	
Medium	53	
Low	4	

Después

Severity ⓘ		
Blocker	0	
High	0	
Medium	53	
Low	4	
Info	0	

Nota: Los otros 15 errores altos se distribuían en los vistos en este documento, solo que en archivos diferentes.

8.