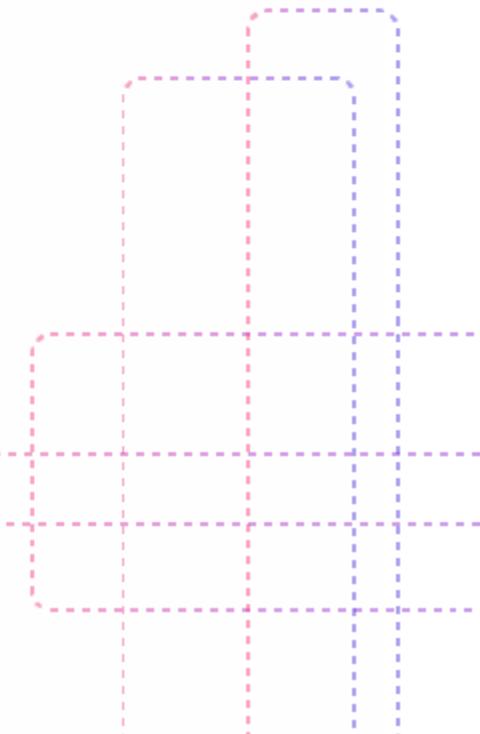
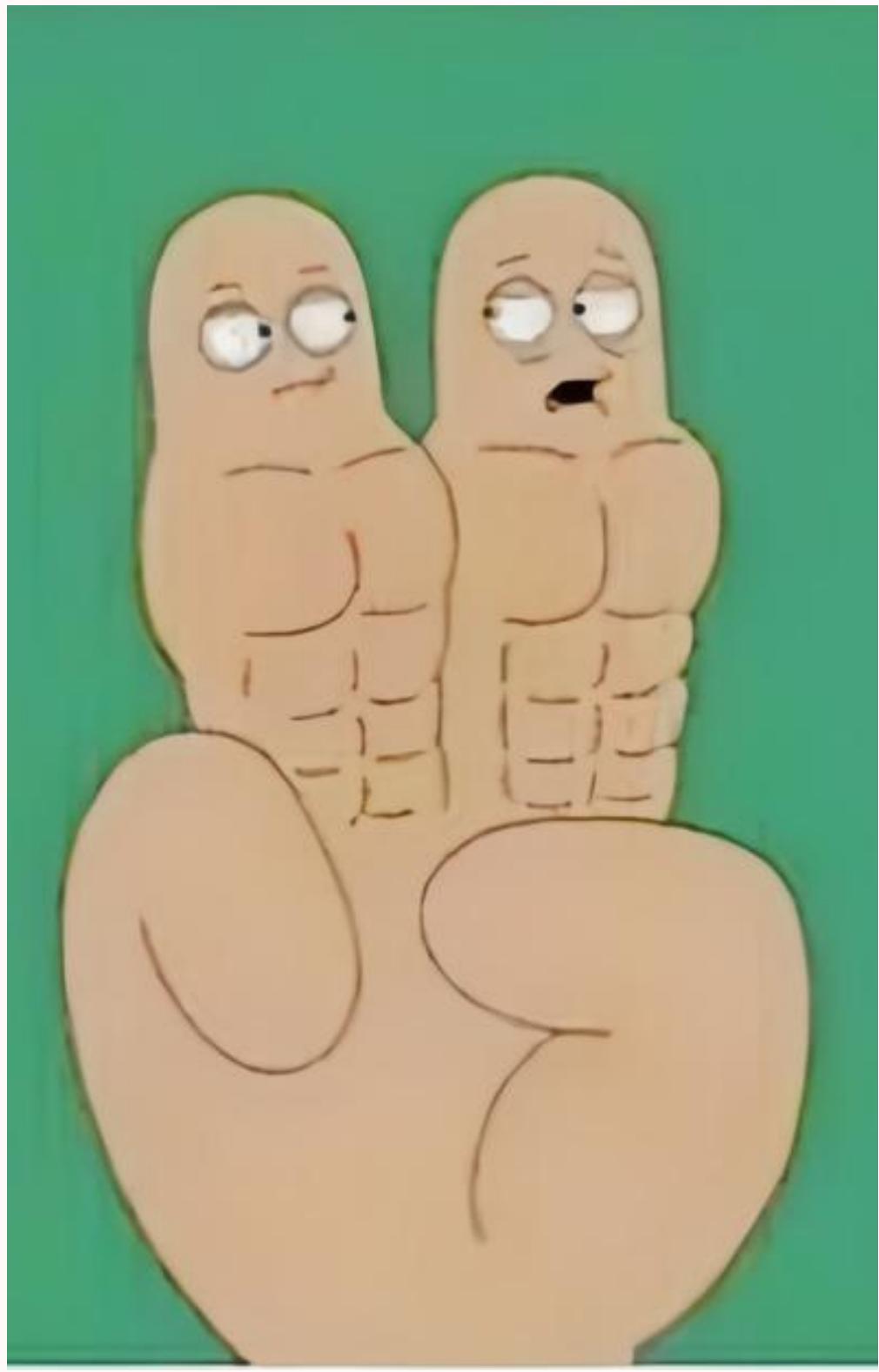


Embarcadero Conference 2023

SonarQube – Vida longa e próspera ao seu Código

{ Kivian Ana Cristaldo Emerim





Qualquer idiota pode escrever código que um computador possa entender.
Bons programadores escrevem código que seres humanos podem
entender.

Martin Fowler.



**kidelp
hi**

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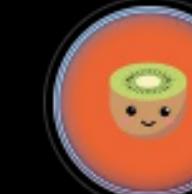
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Kivian Emerim | MVP Embarcadero | Delphi | Tecnologia
Criador(a) de conteúdo digital

- Compilando projetos incríveis há +12 anos.
- Vem debugar o mundo do Delphi comigo?
- RS, Brasil
- @aquasoft.ti
- linktr.ee/kidelphi

 Delphi 5 😊

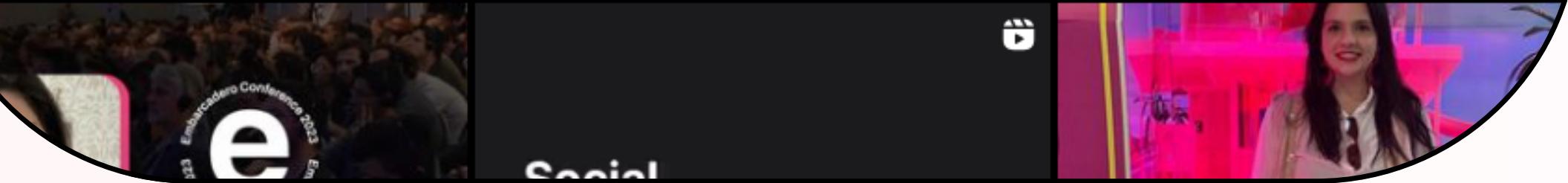
 TDC 2022

 Sobre me

 Conference 2...

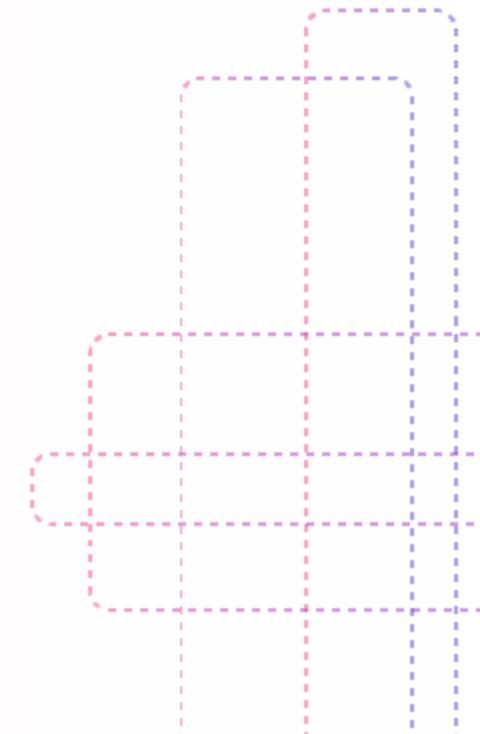
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Kivian Ana Cristaldo Emerim

- MVP Embarcadero
- Dev Delphi Sênior na Aquasoft.
- Criadora de conteúdo na página [@kidelphi](#)
- Delphi +12 anos.



Objetivo

- O que é Análise estática do código e porque isso dará vida longa e próspera ao seu código.
- Sobre o Sonarqube.
- Sonarqube e o Delphi.
- Como começar iniciar com Sonarqube.
- Análises e métricas.
- Perguntas e Respostas!

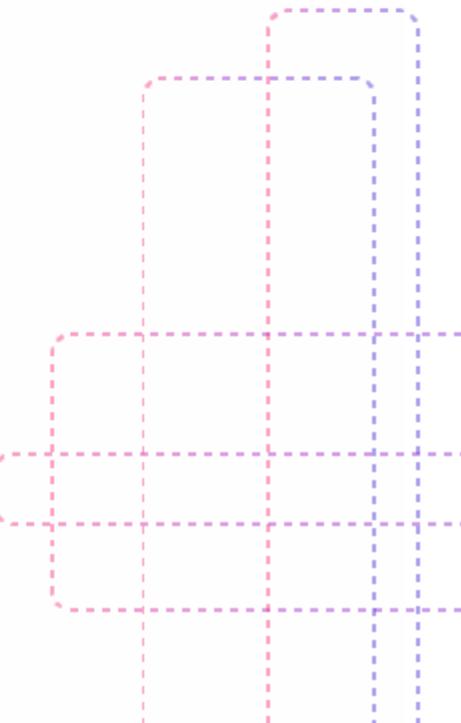
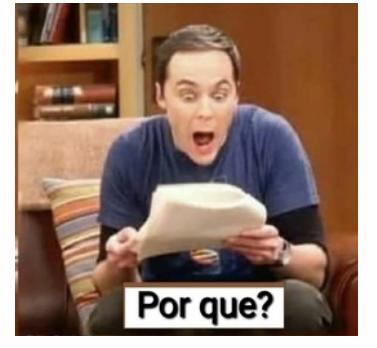
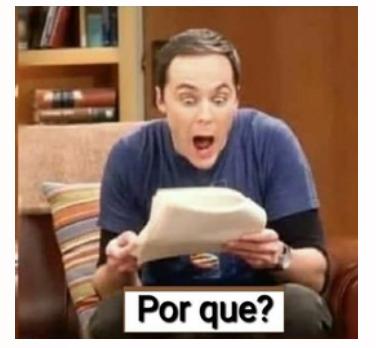
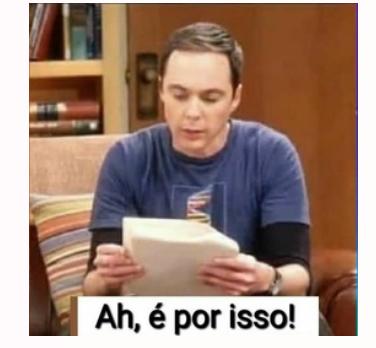
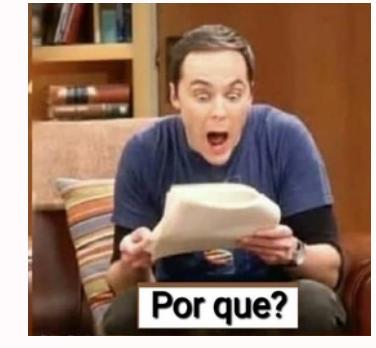
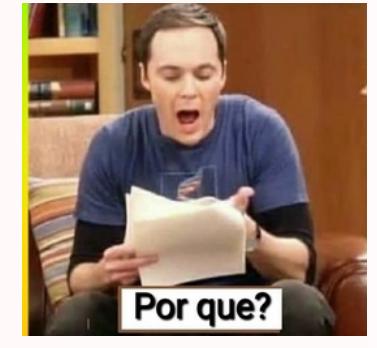
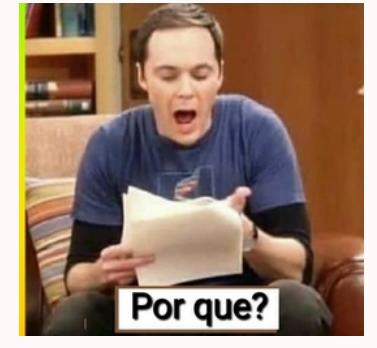
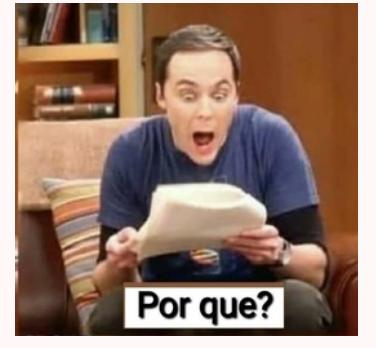
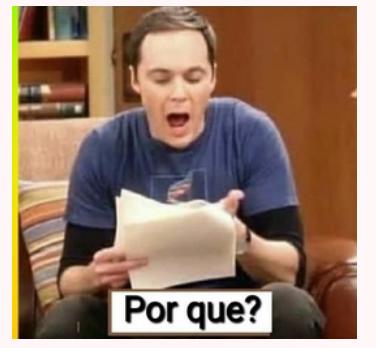
Clean Code

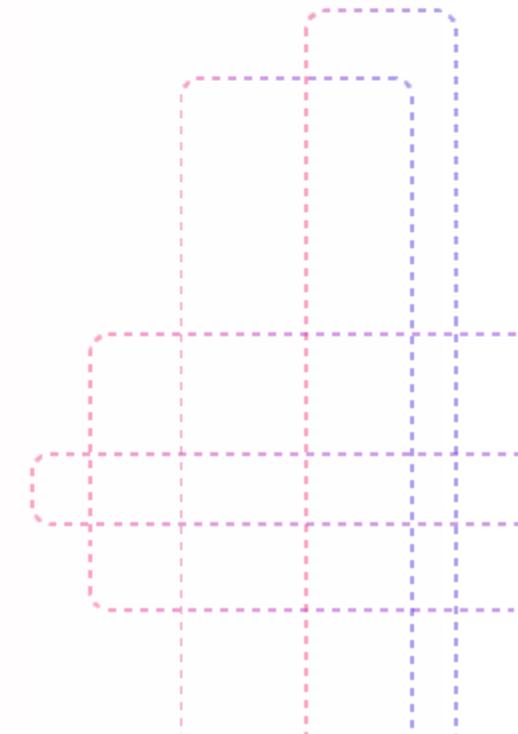
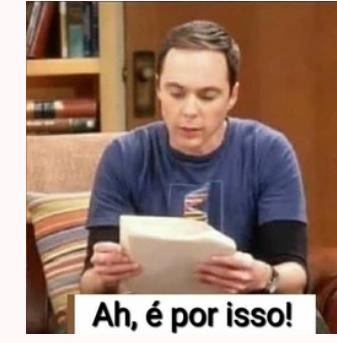
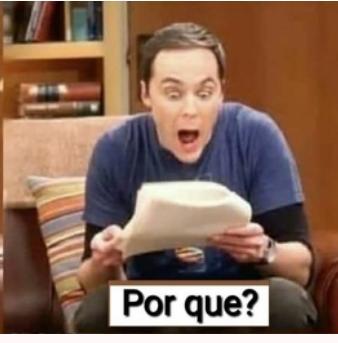
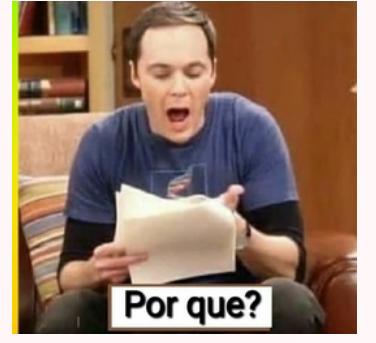
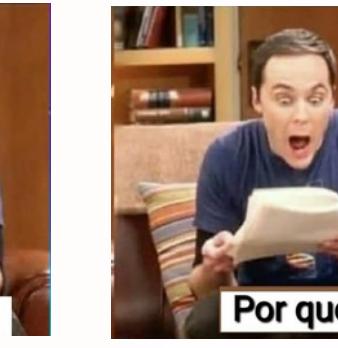
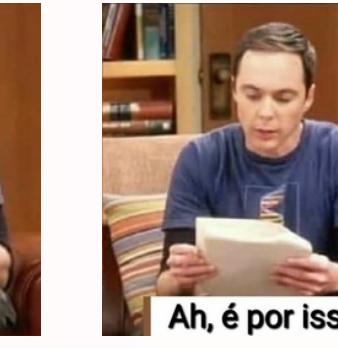
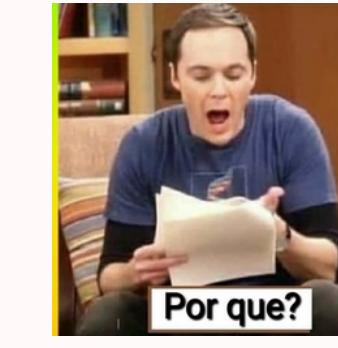
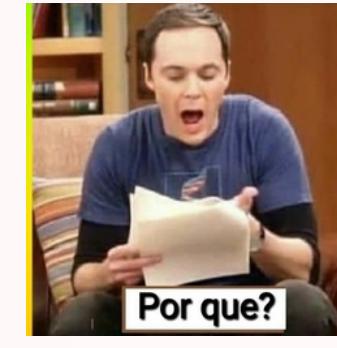
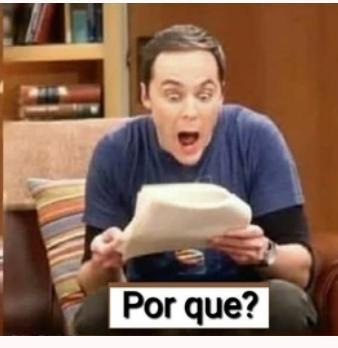
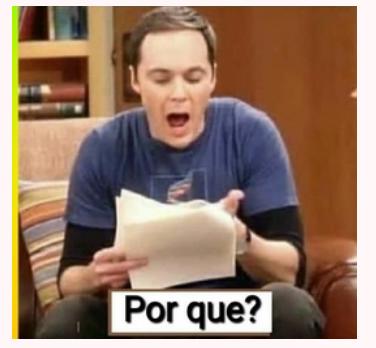


Sonar..Oque?





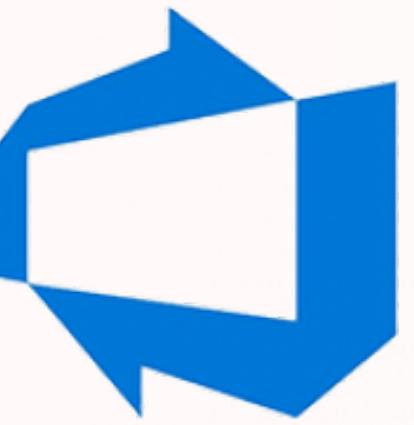




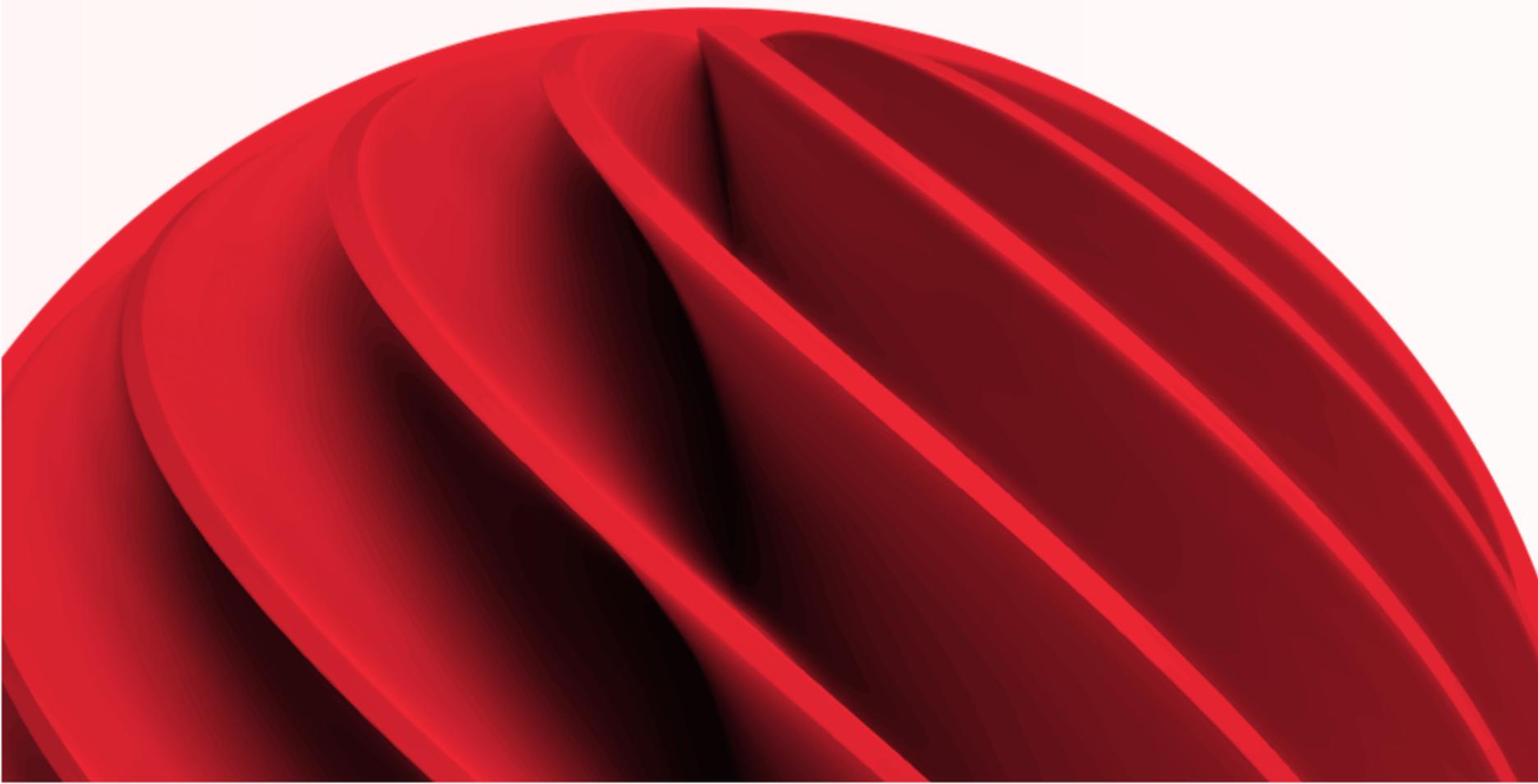
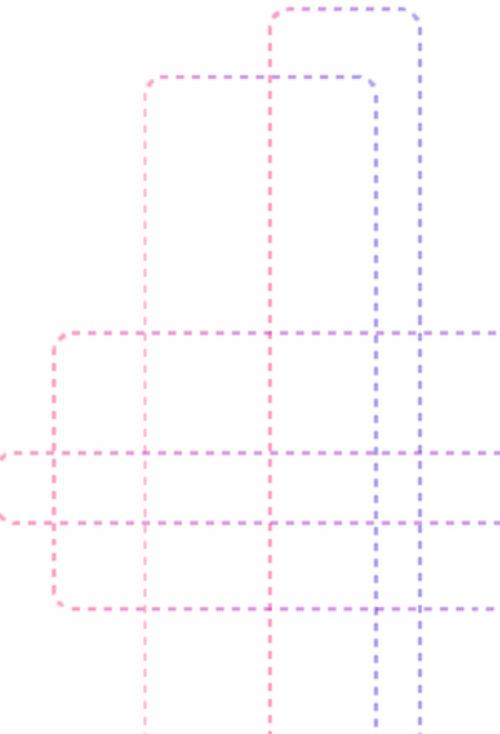




Bitbucket

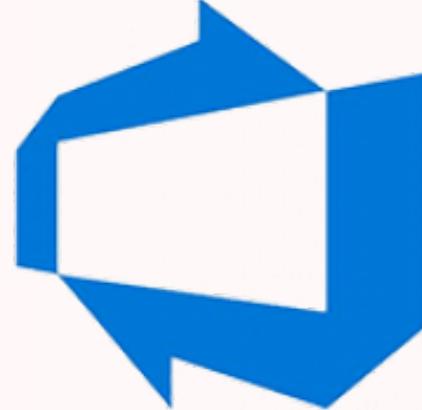


Azure **DevOps**





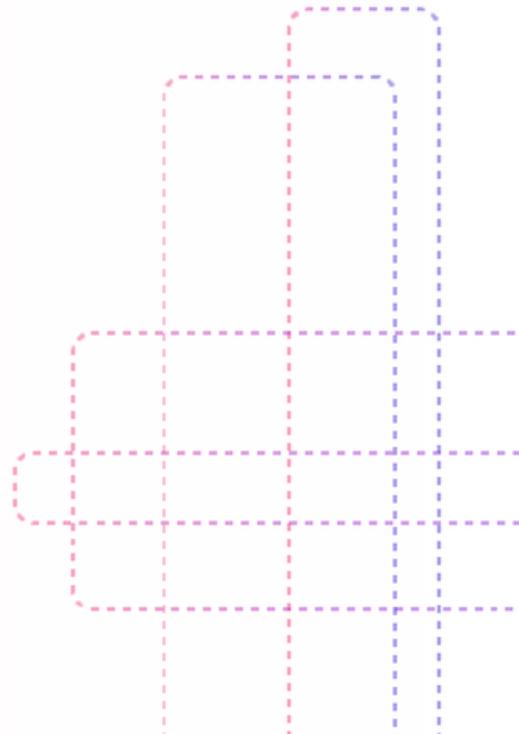
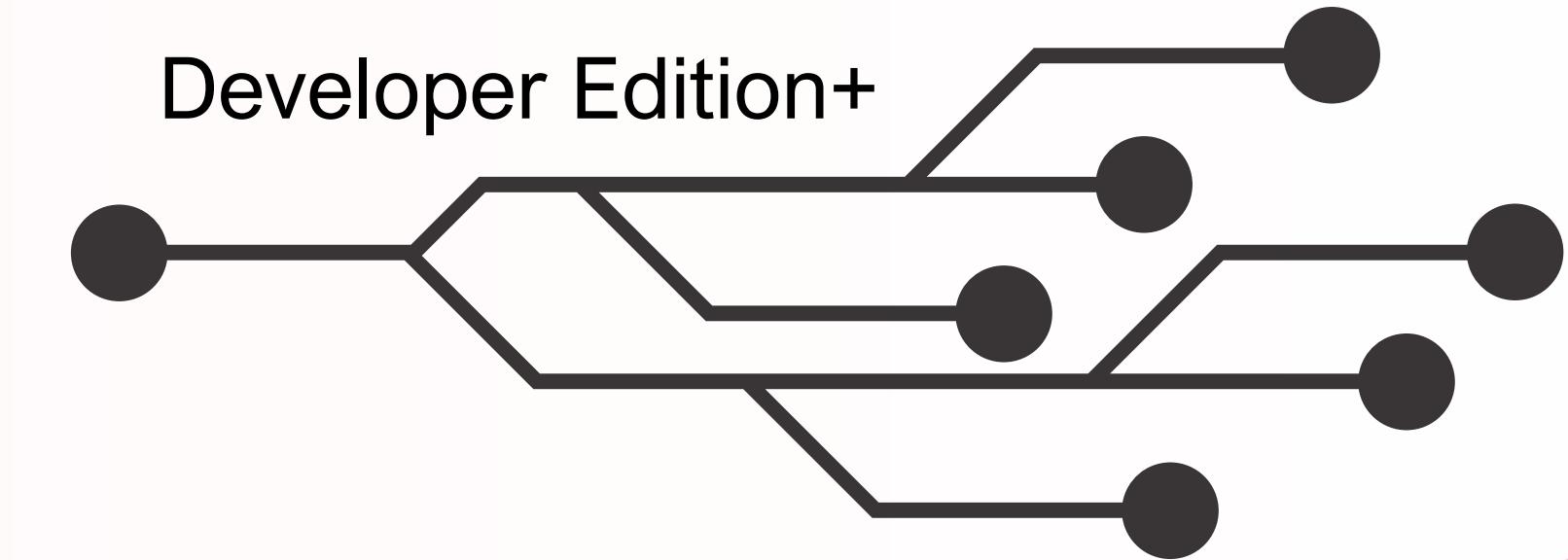
Bitbucket



Azure **DevOps**

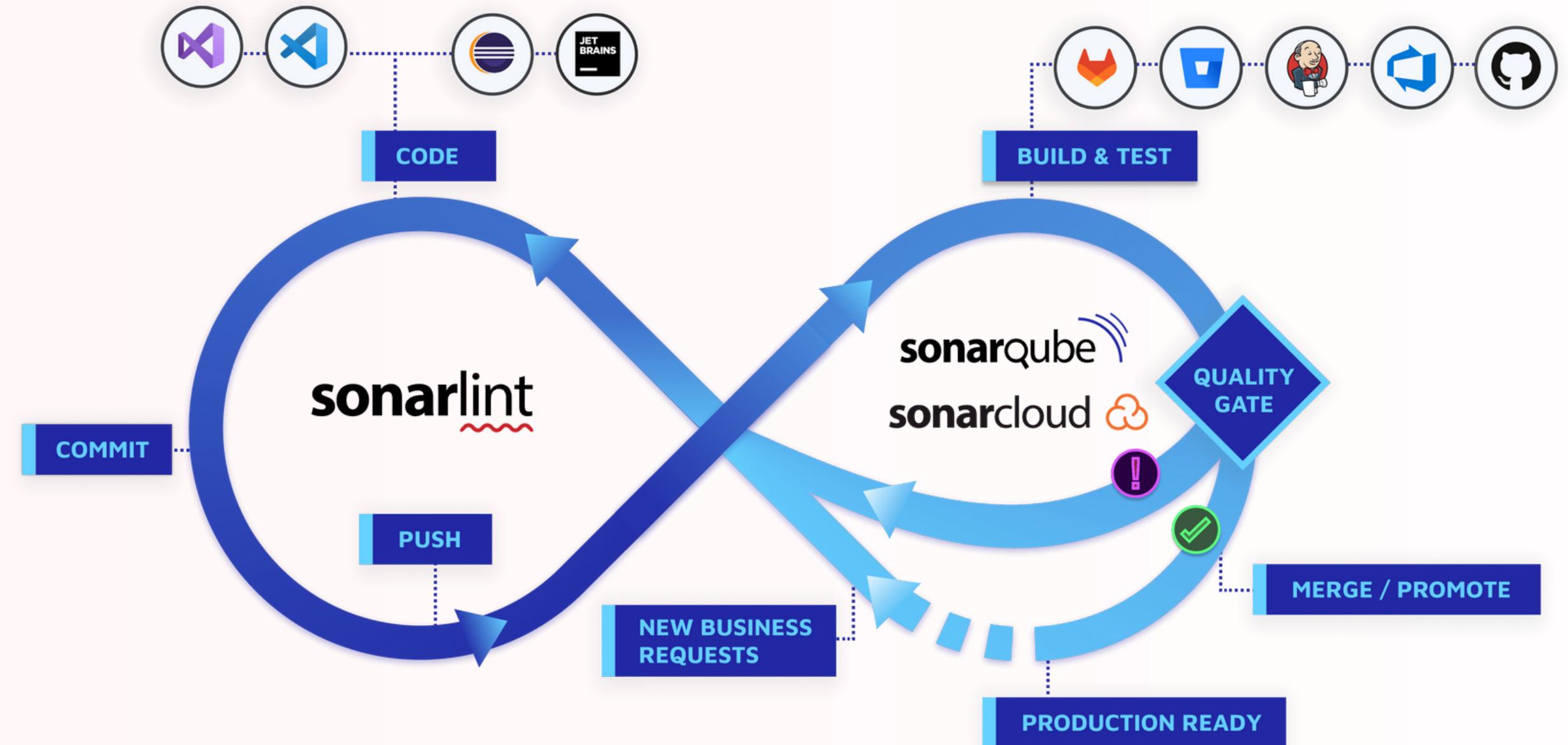


Developer Edition+





sonar





The SonarQube logo consists of the word "sonarqube" in a bold, black, sans-serif font. A blue soundwave icon is positioned to the right of the letter "e", consisting of three curved lines of varying lengths.

 docker hub Explore Pricing Sign In Sign up

Explore Official Images sonarqube

 **sonarqube** Docker Official Image · 500M+ · 2.3K
SonarQube is an open source platform for continuous inspection of code quality.

`docker pull sonarqube` 

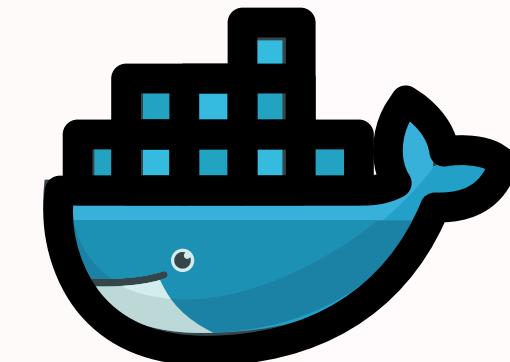
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Quick reference

- Maintained by:
[SonarSource](#)

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Embarcadero/ SonarDelphi



Embarcadero's official version of the Sonar-Delphi plugin for use to analyze Delphi projects with SonarQube. Working to collect updates and...

1

10

49

10

Contributor

Issues

Stars

Forks



Embarcadero/SonarDelphi: Embarcadero's official version of the Sonar-Delphi plugin for use to analyze Delphi projects with SonarQube....

Embarcadero's official version of the Sonar-Delphi plugin for use to analyze Delphi projects with SonarQube. Working to collect updates and contributions from other versions into this one a...

 GitHub

Cobertura de Código

A cobertura de código é uma métrica que avalia a proporção do código-fonte de um programa que é exercida por testes automatizados. Ela indica quais partes do código foram executadas durante os testes e quais partes não foram. Quanto maior a cobertura de código, maior a confiança na testagem abrangente do software, identificando áreas não testadas e potencialmente sujeitas a erros.



sonarqube

Projects Issues Rules Quality Profiles Quality Gates Administration More ?

Create Project

My Favorites All

Search for projects... Perspective Overall Status Sort by Name 3 project(s)

Filters

Quality Gate

- Passed 2
- Failed 1

Reliability

- A 3
- B 0
- C 0
- D 0
- E 0

Security

- A 3
- B 0
- C 0
- D 0
- E 0

Project Details

ArduinoDelphi PUBLIC Failed

Last analysis: 4 days ago • 817 Lines of Code • Delphi

0 Bugs	0 Vulnerabilities	— Hotspots Reviewed	12 Code Smells	— Coverage	4.2% Duplications
--------	-------------------	---------------------	----------------	------------	-------------------

Terapia Ocupacional PUBLIC Passed

Last analysis: 28 minutes ago • 8.5k Lines of Code • Delphi

0 Bugs	0 Vulnerabilities	— Hotspots Reviewed	122 Code Smells	— Coverage	12.4% Duplications
--------	-------------------	---------------------	-----------------	------------	--------------------

TesteCobertura PUBLIC Passed

Last analysis: 40 minutes ago • 208 Lines of Code • Delphi, XML

0 Bugs	0 Vulnerabilities	— Hotspots Reviewed	9 Code Smells	— Coverage	0.0% Duplications
--------	-------------------	---------------------	---------------	------------	-------------------

3 of 3 shown

Quality Gate Status ?

 Quality Gate
Failed

1 failed condition

 4.2% Duplicated Lines (%) on New Code
is greater than 3.0%

Measures

New Code 1 Overall Code

1 failed condition

Reliability

0 Bugs

A

Maintainability

12 Code Smells

A

Security

0 Vulnerabilities

A

Security Review

0 Security Hotspots ?

A

Duplications

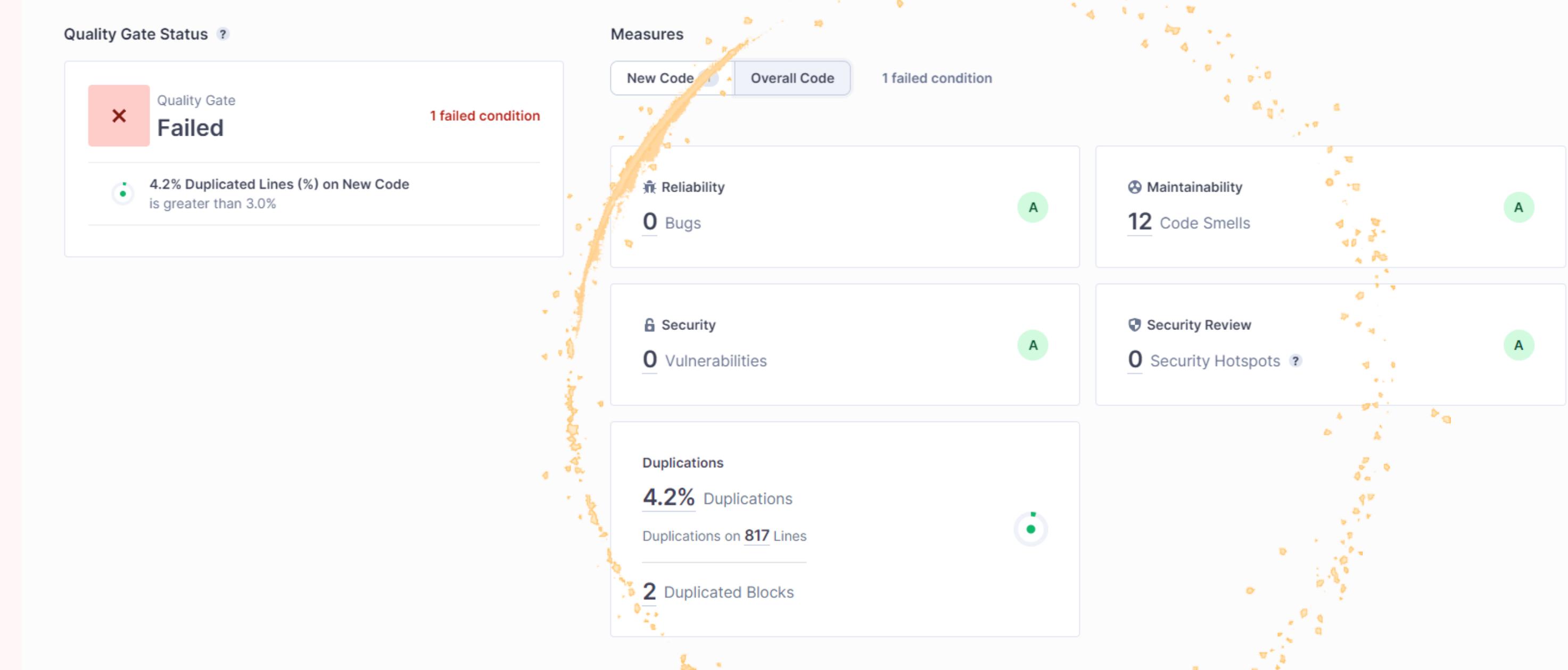
4.2% Duplications

Duplications on 817 Lines

A

2 Duplicated Blocks

Activity



Issues Security Hotspots Measures Code Activity Project Settings ▾

Responsibility

- Software Quality
 - Security 0
 - Reliability 0
 - Maintainability 12
- Severity ?
 - High 0
 - Medium 12
 - Low 0
- Type
- Scope
- Resolution
- Status

Bulk Change Select issues ▾ Navigate to issue ▾ 1 / 12 issues 2h 10min effort

CadSensor.pas

Consistency issue

[Unused argument: 'action' at TCSensor.FormClose](#) No tags +

Open ▾ Not assigned ▾ Maintainability ↗ Code Smell Major 5min effort • 14 minutes ago

CadValorKwh.pas

Consistency issue

[Unused argument: 'button' at TValueKWH.DBNavigator1Click](#) No tags +

Open ▾ Not assigned ▾ Maintainability ↗ Code Smell Major 5min effort • 14 minutes ago

Consistency issue

[Unused argument: 'action' at TValueKWH.FormClose](#) No tags +

Open ▾ Not assigned ▾ Maintainability ↗ Code Smell Major 5min effort • 14 minutes ago

ChartMenu.pas

Consistency issue

[Unused argument: 'action' at TChart.FormClose](#) No tags +

Open ▾ Not assigned ▾ Maintainability ↗ Code Smell Major 5min effort • 14 minutes ago

CadSensor.pas

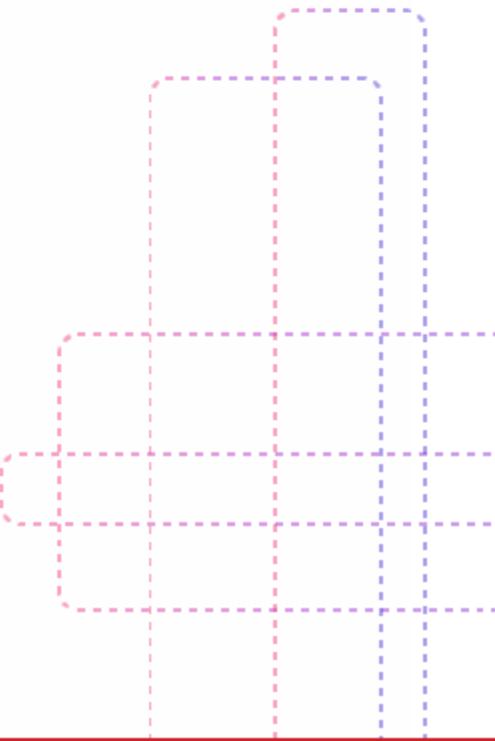
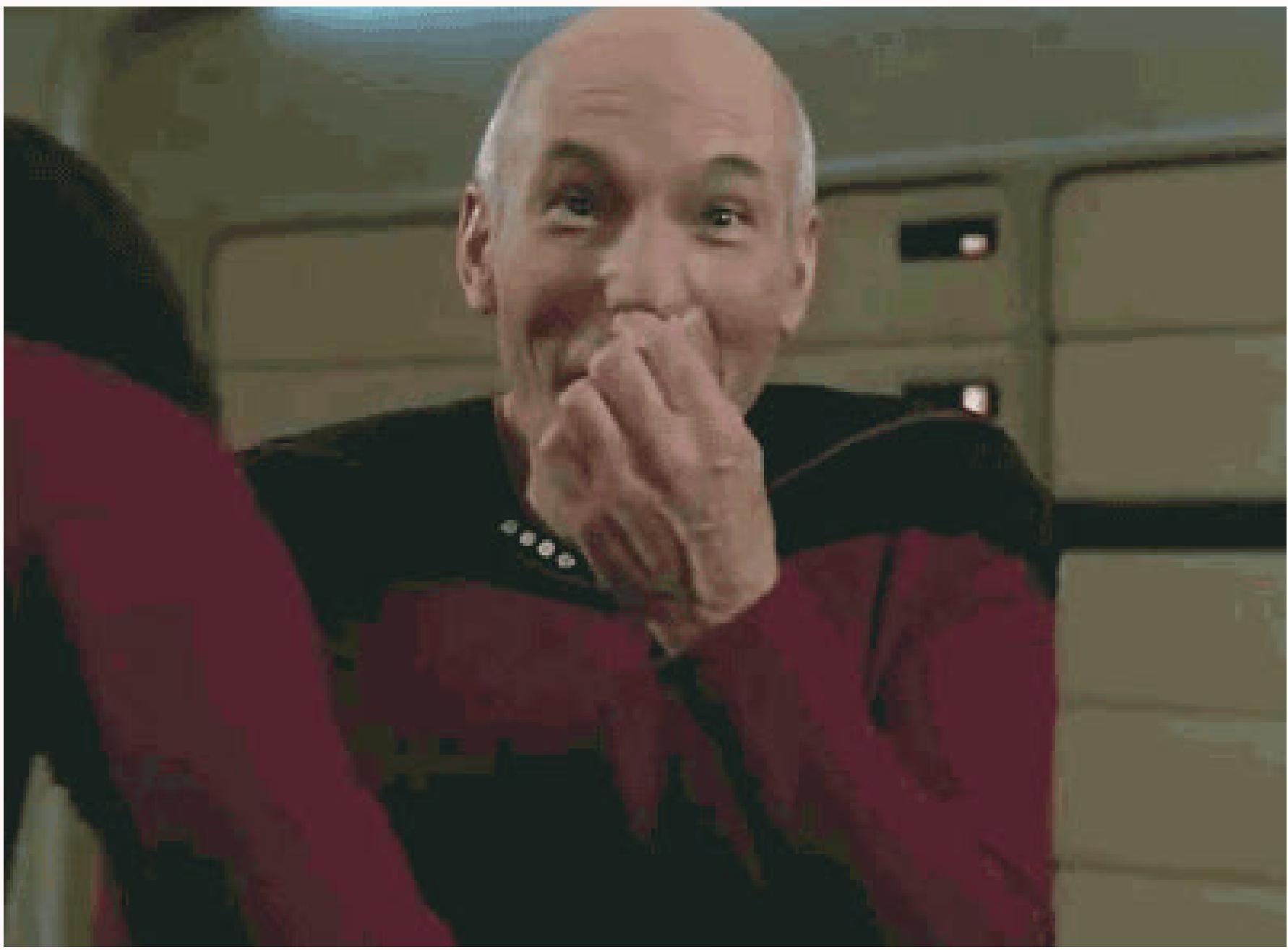
Consistency issue

[Unused argument: 'action' at TCsensor.FormClose](#)

No tags +

Open ▾ Not assigned ▾ Maintainability  Code Smell  Major

5min effort • 14 minutes ago



Consistency issue | Not conventional

Unused argument: 'action' at TCSensor.FormClose ⚡

Unused method parameters should be removed [delph:UnusedArgumentsRule](#)

Software qualities impacted: Maintainability ↗

Open ▾ Not assigned ▾ Code Smell Major

Where is the issue?

Why is this an issue?

Activity

```
52     begin
53       TipoEquip := TTipoEquip.Create(Application);
54       TipoEquip.ShowModal;
55     end;
56
57   procedure TCSensor.FormClose(Sender: TObject; var Action: TCloseAction);
```

Unused argument: 'action' at TCSensor.FormClose

```
58   begin
59     // Fecha a conexão ao fechar o form
60     DT_connection.FDcon.Connected := false;
61     DT_connection.qrySensor.active := false;
62     CSensor.Free;
63     DT_connection.qrySensor2.active := false;
64     DT_connection.qryEquip.active := false;
65     DT_connection.qryTipoEquip.active := false;
66     CadEquip.Free;
```

Você não precisa
escrever 'if x = true',
isso é redundante.
Em vez disso,
escreva 'if x'.

Open ▾ Not assigned ▾ ⚡ Code Smell ⚡ Minor 18

Where is the issue? Why is this an issue? Activity

ArduinoDelphi > /ConnectArduino.pas See all issues i

```
262 if Application.MessageBox('Deseja incluir mais um sensor?', 'Sensores', mb_YesNo + mb_iconquestion) = id_yes then
263     ComPort2.ShowSetupDialog
264 else
265     ComPort2.Connected := false;
266
267 if btnOpenCom.Enabled = true then
268     btnOpenConnect.Visible := true;
269 end;
270
271 procedure TcpControl.btnOpenConnectClick(Sender: TObject);
272 begin
273     try
```

IfTrueRule

You don't need to write 'if x = true', this is redundant. Instead write 'if x'.

Open ▾ Not assigned ▾ Code Smell Critical

20 mir

Where is the issue? Why is this an issue? Activity

```
109      end;  
110      end;  
  
111      procedure TcpControl.btnComunicarClick(Sender: TObject);  
112
```

The Cyclomatic Complexity of this method "btnComunicarClick" is 19 which is greater than 10 authorized.

TcpControl.btnComunicarClick is too long (143 lines). Maximum line count is 100

```
113      var  
114          Coletas: Integer;  
115          Data: String;  
116          hora: String;  
117          DataFim, HoraFim: String;  
118          begin  
119              if RBPorColeta.Checked then  
120                  begin  
121
```

Where is the issue? Why is this an issue? Activity

The cyclomatic complexity of methods should not exceed a defined threshold. Complex code can perform poorly and will in any case be difficult to understand and therefore to maintain.

A complexidade ciclomática dos métodos não deve exceder um limite definido. Código complexo pode ter um desempenho ruim e, de qualquer forma, será difícil de entender e, portanto, de manter.

Open ▾ Not assigned ▾ Code Smell Minor 20

Where is the issue? Why is this an issue? Activity

CatchingGeneralExceptionRule

NoBeginAfterDoRule

```
108     Memo.Text := Memo.Text + 'Erro, Detalhes: ' + E.Message;
109
110 end;
111
112 procedure TcpControl.btnComunicarClick(Sender: TObject);
```

The Cyclomatic Complexity of this method "btnComunicarClick" is 19 which is greater than 10 authorized.

TcpControl.btnComunicarClick is too long (143 lines). Maximum line count is 100

A instrução 'Begin' deve ser colocada após a instrução 'do' para evitar erros.

Open ▾ Not assigned ▾ Code Smell Minor

Where is the issue? Why is this an issue? Activity

'Begin' statement should be placed after 'do' statement to prevent errors.

Open ▾ Not assigned ▾ ⚗ Code Smell ⚡ Major

Where is the issue? Why is this an issue? Activity

```
112  
113     ShowMessage('O Valor de:' +temp+' KWh foi definido como base de calculo!');  
114   end;  
115 end;  
  
116 procedure TValorKWH.DBNavigator1Click(Sender: TObject; Button: TNavigateBtn);  
  
117  
  
118 begin  
119   EditCidade.Text := DT_connection.qryvalorKWHcity.FieldByName('Cidade').AsString;  
120   EditVKwh.Text := DT_connection.qryvalorKWHcity.FieldByName('ValorKWH').AsString;  
121   EditOBS.Text := DT_connection.qryvalorKWHcity.FieldByName('Obs').AsString;  
122   btnSalvar.Visible := false;  
123 end;  
  
124 procedure TValorKWH.EditVKwhKeyPress(Sender: TObject; var Key: Char);  
125 begin
```

Unused argument: 'button' at TValorKWH.DBNavigator1Click

Você deve sempre usar todos os argumentos de função passados.

Where is the issue? Why is this an issue? Activity

You should always use every passed function argument.

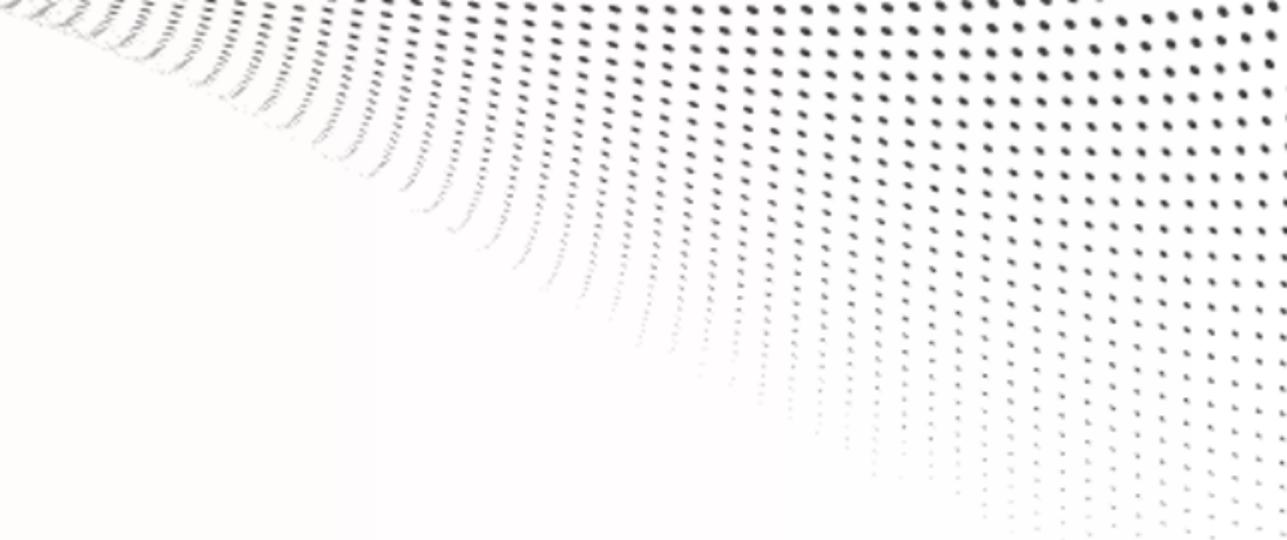
Where is the issue? Why is this an issue? Activity

```
1185      end;  
1186  
1187      procedure Tf_Avaliacao.btimprimeClick(Sender: TObject);  
  
          Tf_Avaliacao.btimprimeClick is too long (791 lines). Maximum line count is 100  
  
1188      var  
  
          Too many variables: 21 (max 10)  
  
1189      wlinha,widade,i,j,x:integer;  
1190      wano wmes wdia -Word -
```

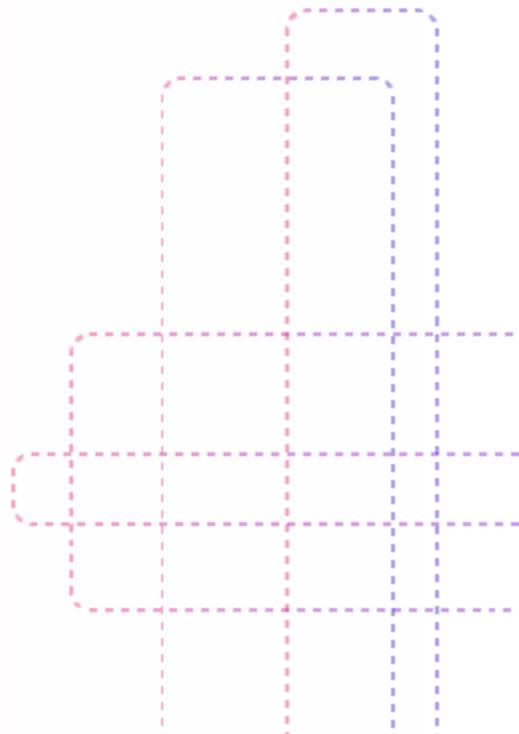
Open ▾ Not assigned ▾ Code Smell Major

Where is the issue? Why is this an issue? Activity

Function may have too many variables, maximum number of variables is 10



A função pode ter muitas variáveis, o número máximo de variáveis é 10



Issues **Security Hotspots** Measures Code Activity

— Security Hotspots Reviewed ?

To review Acknowledged Fixed Safe



There are no Security Hotspots to review.

Next time you analyze a piece of code that contain potential security risk, it will show up here.

[Learn more about Security Hotspots](#)

Issues Security Hotspots Measures **Code** Activity

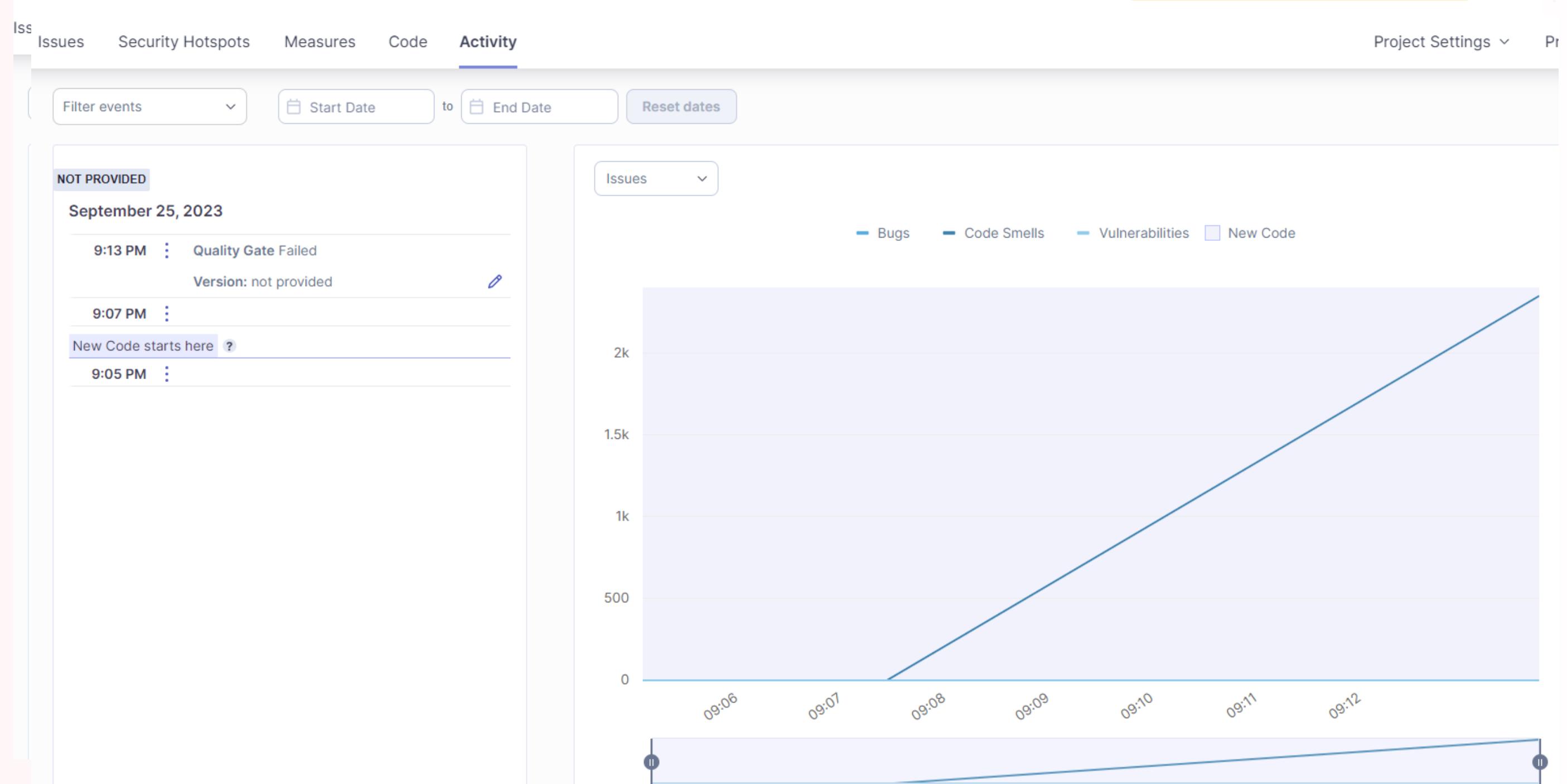
Project Settings ▾ Prc

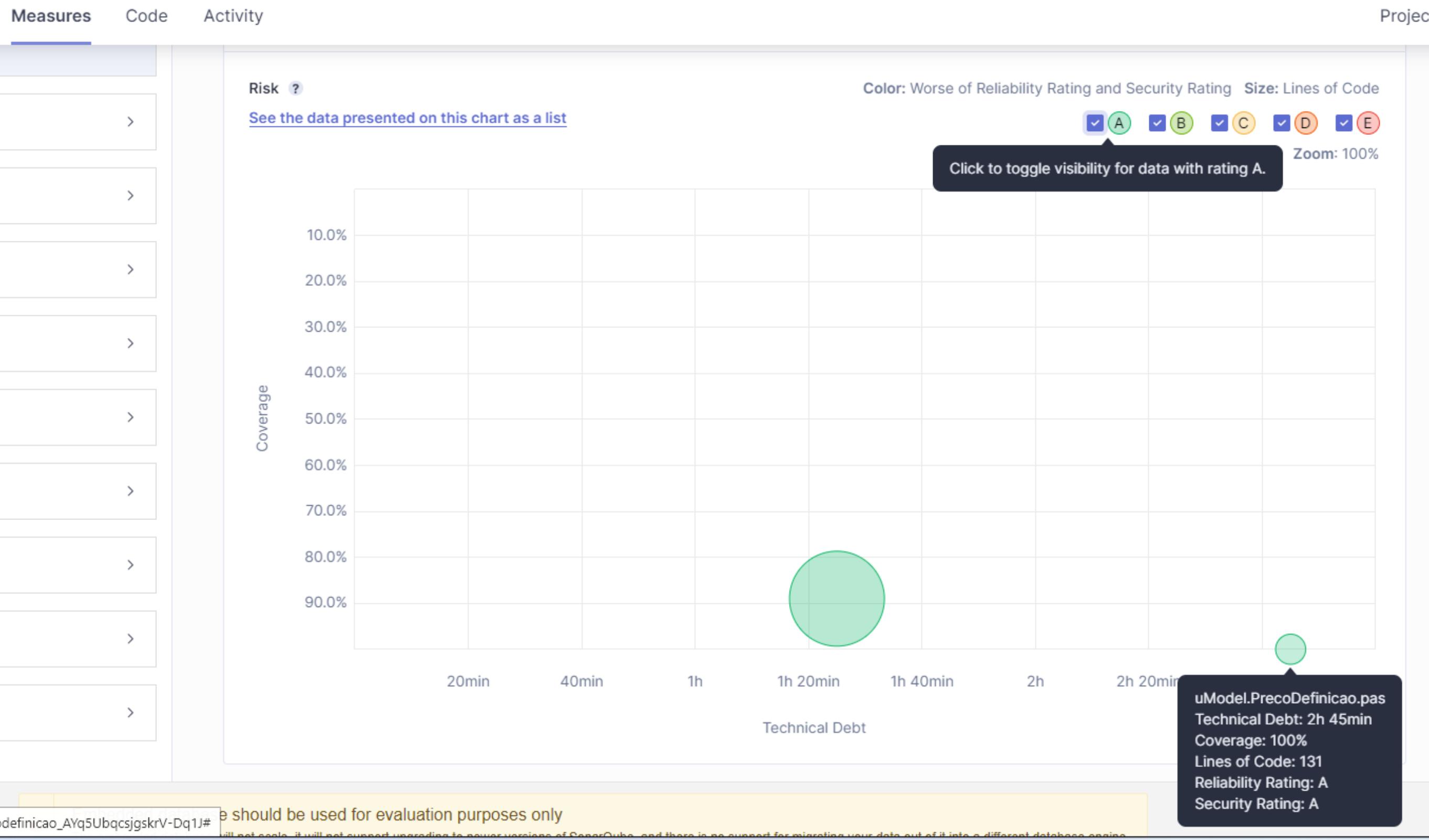
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	Lines of Code	Bugs	Vulnerabilities	Code Smells	Security Hotspots	Coverage	Duplications
--	---------------	------	-----------------	-------------	-------------------	----------	--------------

 Receitas	—	—	—	—	—	—	—
 FichaPesagemDLL	2,093	0	0	43	0	—	37.5%
  FC31.pas	10,020	0	0	293	0	—	2.3%
  FC31AgendamentoAraujo.pas	1,078	0	0	38	0	—	0.0%
  FC31CalculoExcipiente.pas	1,324	0	0	21	0	—	5.3%
  FC31Calendario.pas	260	0	0	10	0	—	0.0%
  FC31ConferenciaFormulas.pas	2,642	0	0	84	0	—	5.2%
  FC31ConferenciaFormulasREL.pas	163	0	0	8	0	—	0.0%
  FC31Dados.pas	3,857	0	0	0	0	—	0.5%





About this Project

Quality Gate used

(Default) [Sonar way](#)

Project Key ?

ArduinoDelphi 

Visibility

PUBLIC

Description

No description added for this project.

Notifications

 A notification is never sent to the author of the event.

Send me an email when:

Background tasks in failure

Changes in issues/hotspots assigned to me

Quality gate changes

Issues resolved as false positive or won't fix

New issues

My new issues

Badges

Show the status of your project metrics on your README or website. Pick your style:



Displays the current status of one metric of your project.

Quality Gate

FAIL



Displays the current quality gate status of your project.

Customize badge

Code Smells

Code format

Markdown

Image URL only

```
[![Code Smells](http://localhost:9000/api/project_badges/measure?project=ArduinoDelphi&metric=code_smells&token=sqb_5934eb1b6597595ff84eefd2229324c41f9eab08)](http://localhost:9000/dashboard?id=ArduinoDelphi)
```

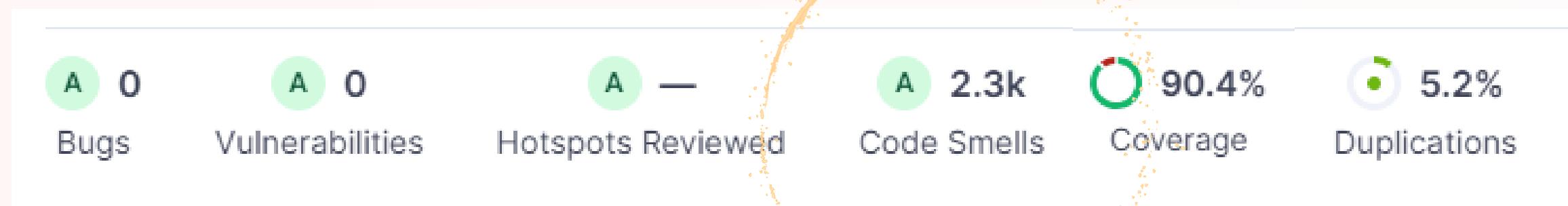
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If your project badge security token has leaked to an unsafe environment, you can renew it:

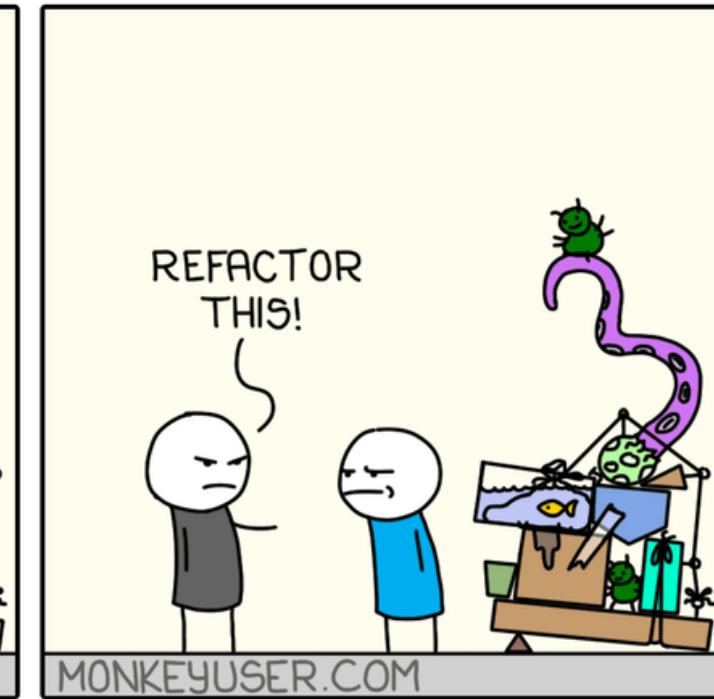
[Renew Token](#)

Criado por Kent Beck, engenheiro de software americano e criador do Extreme Programming e Test Driven Development, o “Code smell” é um termo para dizer que algo no código “não está cheirando bem”.



<p><input type="text"/> Search for rules...</p> <p>▼ Language DELPHI <input type="button" value="Clear"/></p> <p><input type="text"/> Search for languages...</p> <table> <tbody> <tr><td>Java</td><td>627</td></tr> <tr><td>C#</td><td>404</td></tr> <tr><td>JavaScript</td><td>312</td></tr> <tr><td>TypeScript</td><td>307</td></tr> <tr><td>PHP</td><td>257</td></tr> <tr><td>Python</td><td>230</td></tr> <tr><td>VB.NET</td><td>178</td></tr> <tr><td>Kotlin</td><td>114</td></tr> <tr><td>Flex</td><td>82</td></tr> <tr><td>HTML</td><td>65</td></tr> <tr><td>Terraform</td><td>50</td></tr> <tr><td>Delphi</td><td>49</td></tr> <tr><td>Ruby</td><td>48</td></tr> <tr><td>Scala</td><td>47</td></tr> <tr><td>Go</td><td>44</td></tr> </tbody> </table> <p>15 shown Show More</p> <p>Press Ctrl to add to selection</p> <p>▼ Type</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Bug 1 <input type="checkbox"/> Vulnerability 0 <input checked="" type="checkbox"/> Code Smell 48 <input type="checkbox"/> Security Hotspot 0 <p>➤ Tag</p>	Java	627	C#	404	JavaScript	312	TypeScript	307	PHP	257	Python	230	VB.NET	178	Kotlin	114	Flex	82	HTML	65	Terraform	50	Delphi	49	Ruby	48	Scala	47	Go	44	<p>'with' statement after 'do', 'begin' omitted Delphi <input checked="" type="checkbox"/> Code Smell ▾</p> <p>.dpr/.dpk file should not have procedures/functions. Delphi <input checked="" type="checkbox"/> Code Smell ▾</p> <p>.dpr/.dpk file should not have variables. Delphi <input checked="" type="checkbox"/> Code Smell ▾</p> <p>Avoid 'out' parameters, they are evil Delphi <input checked="" type="checkbox"/> Code Smell ▾</p> <p>Avoid using mixed names for functions / variables. Delphi <input checked="" type="checkbox"/> Code Smell ▾</p> <p>Avoid using public fields Delphi <input checked="" type="checkbox"/> Code Smell ▾</p> <p>Branches should have sufficient coverage by tests DEPRECATED Delphi <input checked="" type="checkbox"/> Code Smell <input checked="" type="checkbox"/> bad-practice ▾</p> <p>Catching general exception Delphi <input checked="" type="checkbox"/> Code Smell ▾</p> <p>Change from 'if (x=true)' to 'if x' Delphi <input checked="" type="checkbox"/> Code Smell ▾</p> <p>Change from 'if not (x=false)' to 'if not x' Delphi <input checked="" type="checkbox"/> Code Smell ▾</p> <p>Class Name should comply with a naming Delphi <input checked="" type="checkbox"/> Code Smell ▾</p> <p>Constructor without 'inherited' statement. Delphi <input checked="" type="checkbox"/> Code Smell ▾</p> <p>Destructor without 'inherited' statement. Delphi <input checked="" type="checkbox"/> Code Smell ▾</p> <p>Do not use type aliases Delphi <input checked="" type="checkbox"/> Code Smell ▾</p> <p>Don't cast then free. Delphi <input checked="" type="checkbox"/> Code Smell ▾</p> <p>Empty 'begin' statement Delphi <input checked="" type="checkbox"/> Code Smell ▾</p> <p>Empty 'else' statement Delphi <input checked="" type="checkbox"/> Code Smell ▾</p> <p>Empty 'except' block Delphi <input checked="" type="checkbox"/> Code Smell ▾</p> <p>Empty 'finally' block Delphi <input checked="" type="checkbox"/> Code Smell ▾</p>
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