

MASTER UNIVERSITARIO EN DESARROLLO ÁGIL DE SOFTWARE PARA LA WEB

ASIGNATURA: INTEGRACIÓN CONTINUA EN EL DESARROLLO ÁGIL

CURSO 2020-21

TRABAJO FINAL

AUTOR/A: Luis Alberto Cobo Salgado

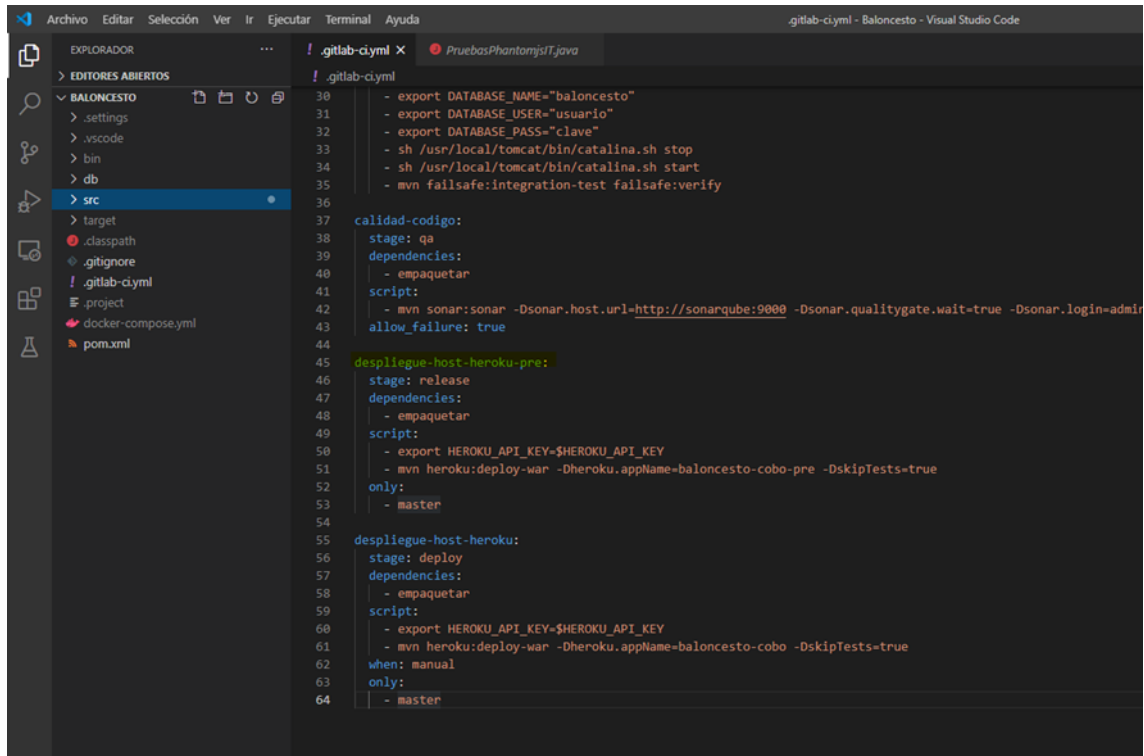
## Contenido

1. Realizar la práctica del tema 5 de la asignatura sobre Baloncesto. ....	3
2. Añadir al pipeline nueva fase “release”. ....	3
3. Crear un nuevo sprint (milestone) con los siguientes issues. ....	4
3.1. REQ-1 Poner votos a cero.....	5
3.2. REQ-2 Ver Votos. ....	5
3.3. PF-A poner votos a cero y ver votos.....	6
3.4. PF-B votación otro jugador.....	8
3.5. PU actualizarJugador. ....	10
3.6. QA límite de problemas importantes (major issues) de 20. ....	12
4. Programar los issues en dos ramas (req-1 y req2). ....	15

1. Realizar la práctica del tema 5 de la asignatura sobre Baloncesto.

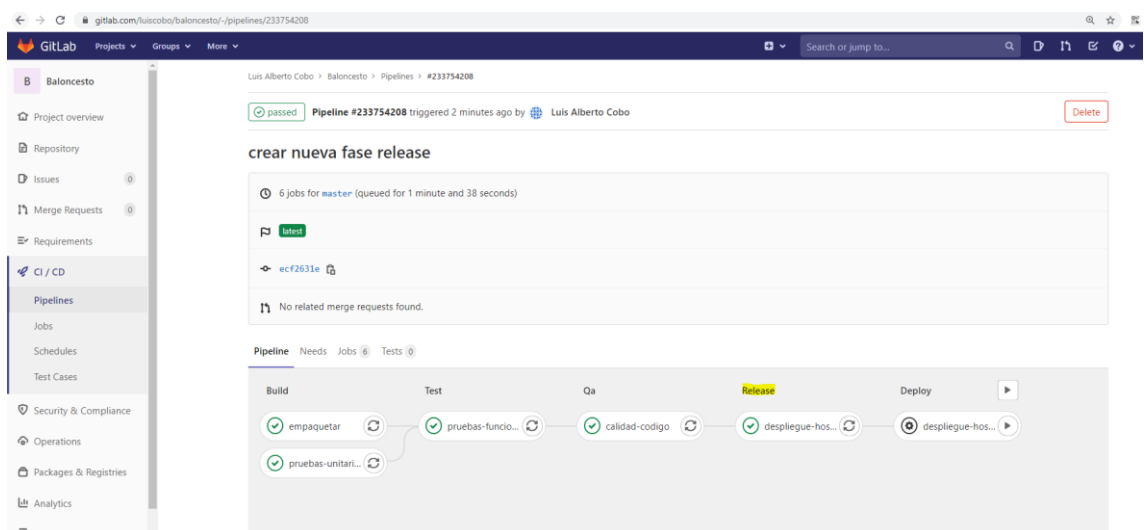
2. Añadir al pipeline nueva fase “release”.

Modificamos el fichero gitlab-ci.yml y añadimos la fase “release”.



```
30 - export DATABASE_NAME="baloncesto"
31 - export DATABASE_USER="usuario"
32 - export DATABASE_PASS="clave"
33 - sh /usr/local/tomcat/bin/catalina.sh stop
34 - sh /usr/local/tomcat/bin/catalina.sh start
35 - mvn failsafe:integration-test failsafe:verify
36
37 calidad-codigo:
38   stage: qa
39   dependencies:
40     - empaquetar
41   script:
42     - mvn sonar:sonar -Dsonar.host.url=http://sonarqube:9000 -Dsonar.qualitygate.wait=true -Dsonar.login=admin
43   allow_failure: true
44
45 despliegue-host-heroku-pre:
46   stage: release
47   dependencies:
48     - empaquetar
49   script:
50     - export HEROKU_API_KEY=$HEROKU_API_KEY
51     - mvn heroku:deploy-war -Dheroku.appName=baloncesto-cobo-pre -DskipTests=true
52   only:
53     - master
54
55 despliegue-host-heroku:
56   stage: deploy
57   dependencies:
58     - empaquetar
59   script:
60     - export HEROKU_API_KEY=$HEROKU_API_KEY
61     - mvn heroku:deploy-war -Dheroku.appName=baloncesto-cobo -DskipTests=true
62   when: manual
63   only:
64     - master
```

Hacemos un commit y push sobre la rama “Master” y vemos que aparece la nueva fase en el Pipeline.



Comprobamos que se despliega la aplicación en Heroku (<https://baloncesto-cobo->

[pre.herokuapp.com](http://pre.herokuapp.com)).

Nombre del Visitante:  eMail:

REAL MADRID:

- ☐ Carroll
- ☐ Lhull
- ☐ Reyes
- ☐ Rudy
- ☐ Otro

### 3. Crear un nuevo sprint (milestone) con los siguientes issues.

GitLab Issues page for Baloncesto project. The page shows a list of issues with their titles, IDs, and creation/update times. The issues are:

- QA Garantía Calidad SonarQube (#8) - opened just now by Luis Alberto Cobo - Sprint 2 - 10 - updated just now
- PU Programar en ModeloDatosTest.java (#7) - opened 1 minute ago by Luis Alberto Cobo - Sprint 2 - 15 - updated 1 minute ago
- PF-B Programar en PruebasPhantomJSIT.java (#6) - opened 2 minutes ago by Luis Alberto Cobo - Sprint 2 - 15 - updated 2 minutes ago
- PF-A Programar en PruebasPhantomJSIT.java (#5) - opened 3 minutes ago by Luis Alberto Cobo - Sprint 2 - 15 - updated 3 minutes ago
- REQ-2 Ver votos (#4) - opened 4 minutes ago by Luis Alberto Cobo - Sprint 2 - 20 - updated 4 minutes ago
- REQ-1 Poner votos a Cero (#3) - opened 5 minutes ago by Luis Alberto Cobo - Sprint 2 - 10 - updated 5 minutes ago

#### 3.1. REQ-1 Poner votos a cero.


Se implementa la funcionalidad y se hace el despliegue, se comprueba que aparece el nuevo botón “poner votos a cero” y que realizar la función correctamente consultado base de datos.

← → ↻ ⓘ localhost:8080/Baloncesto/


## Votación al mejor jugador de la liga ACB

Nombre del Visitante:  eMail:


REAL MADRID:




● Carroll



● Llull



● Reyes



● Rudy

● Otro

← → ↻ ⓘ localhost:8080/Baloncesto/ResultadoReiniciarVotos.jsp

## Votación al mejor jugador de la liga ACB

### Los votos se han reiniciado

[Ir al comienzo](#)

```
docker exec -it 2f9445de0429ae7cec24b3b196981e5dc563821028c170413b17e3cbfbc9dab /bin/sh

1 | Carroll | 1 |
2 | Llull | 0 |
3 | Reyes | 0 |
4 | Rudy | 0 |
+-----+
4 rows in set (0.00 sec)

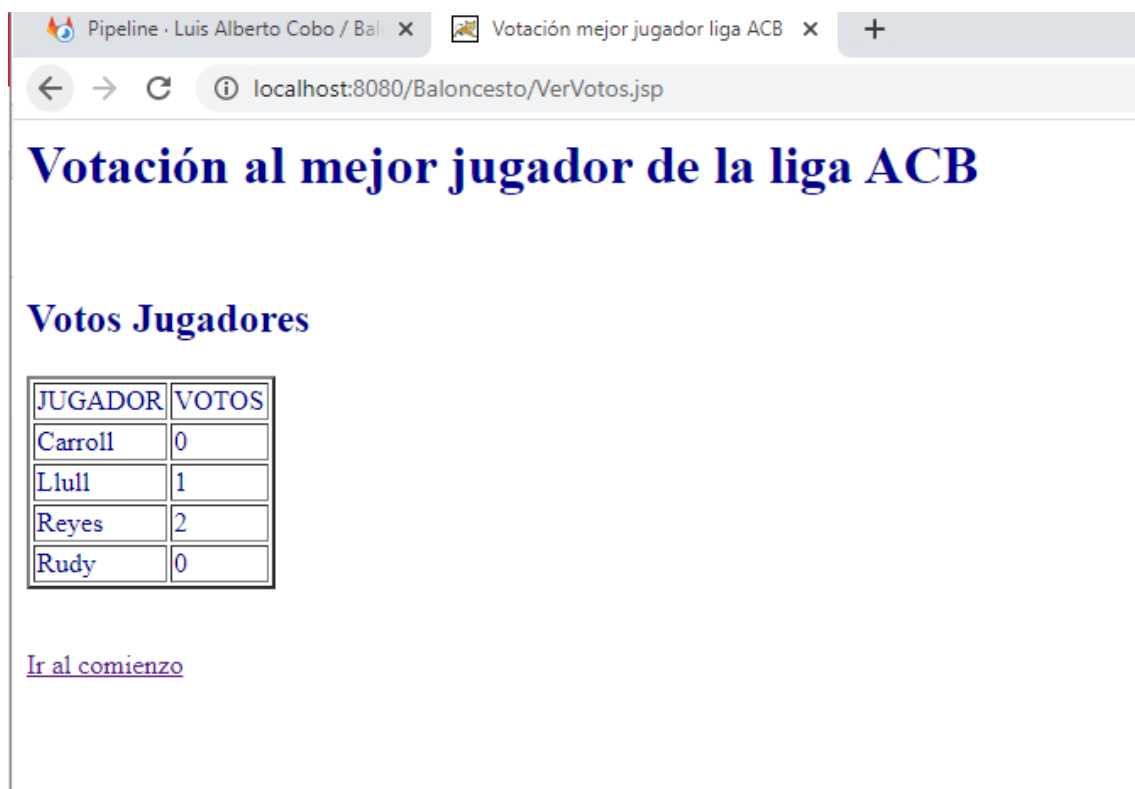
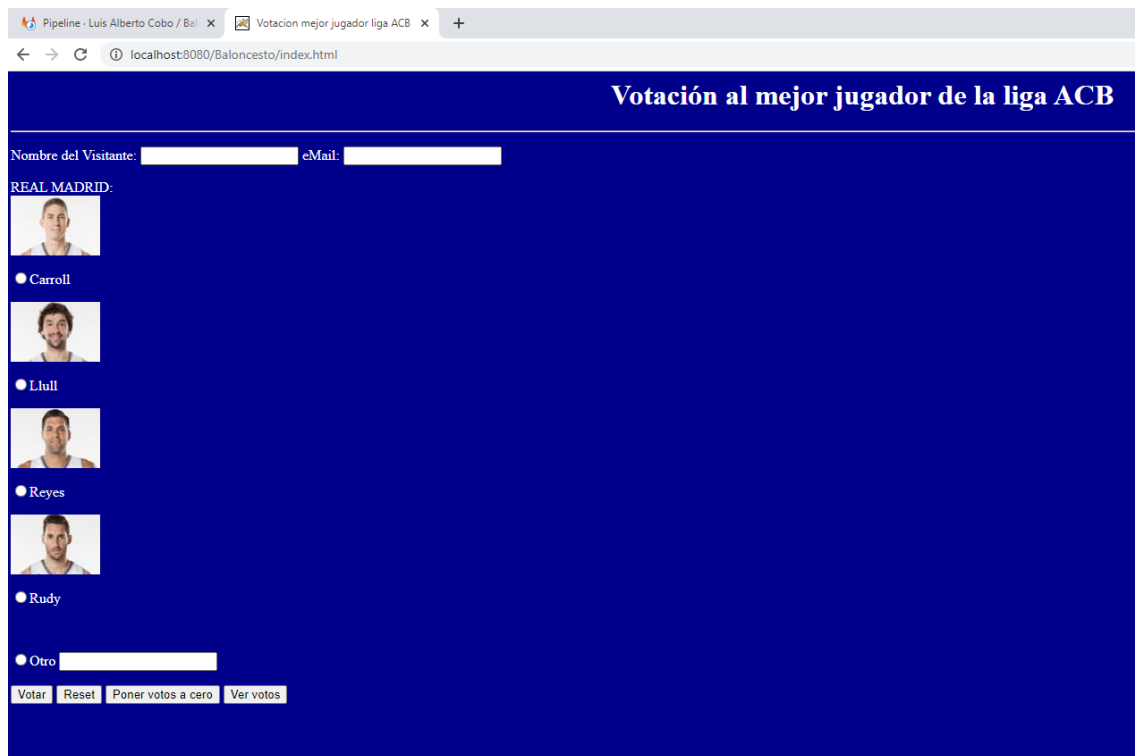
mysql> select * from Jugadores;
+----+-----+-----+
| id | nombre | votos |
+----+-----+-----+
| 1 | Carroll | 1 |
| 2 | Llull | 1 |
| 3 | Reyes | 1 |
| 4 | Rudy | 2 |
+----+-----+-----+
4 rows in set (0.00 sec)

mysql> select * from Jugadores;
+----+-----+-----+
| id | nombre | votos |
+----+-----+-----+
| 1 | Carroll | 0 |
| 2 | Llull | 0 |
| 3 | Reyes | 0 |
| 4 | Rudy | 0 |
+----+-----+-----+
4 rows in set (0.00 sec)

mysql>
```

### 3.2. REQ-2 Ver Votos.

Se habilita un nuevo botón en la página principal y al presionarlo se abre otra página con una tabla donde se visualizan todos los jugadores con sus votos.



### 3.3. PF-A poner votos a cero y ver votos.

Para esta prueba se ha desarrollado el test "reiniciarVotos". Primero que todo se en el test se ha puesto la verificación de que el numero de votos de cada jugador sea "1" para comprobar que da un KO en el Pipeline, en la fase "test".

```
@Test
Run Test | Debug Test | x
public void reiniciarVotos() {
    DesiredCapabilities caps = new DesiredCapabilities();
    caps.setJavascriptEnabled(true);
    caps.setCapability(PhantomJSDriverService.PHANTOMJS_EXECUTABLE_PATH_PROPERTY, "/usr/bin/phantomjs");
    caps.setCapability(PhantomJSDriverService.PHANTOMJS_CLI_ARGS, new String[] {"-web-security=no", "--ignore-ssl-errors=yes"});
    driver = new PhantomJSDriver(caps);
    driver.navigate().to("http://localhost:8080/Balconcesto/");
    driver.findElement(By.cssSelector("input:nth-child(3)")).click();
    driver.findElement(By.linkText("Ir al comienzo")).click();
    driver.findElement(By.cssSelector("input:nth-child(4)")).click();
    assertEquals("1", driver.findElement(By.xpath("//tr[2]/td[2]")).getText(), "Valor diferente de 0");
    assertEquals("1", driver.findElement(By.xpath("//tr[3]/td[2]")).getText(), "Valor diferente de 0");
    assertEquals("1", driver.findElement(By.xpath("//tr[4]/td[2]")).getText(), "Valor diferente de 0");
    assertEquals("1", driver.findElement(By.xpath("//tr[5]/td[2]")).getText(), "Valor diferente de 0");

    driver.close();
    driver.quit();
}
```

gitlab.com/luisco/balconcesto/-/pipelines/234784496

GitLab Projects Groups More

B Baloncesto

- Project overview
- Repository
- Issues 4
- Merge Requests 0
- Requirements
- CI / CD
  - Pipelines
  - Jobs
  - Schedules
  - Test Cases
- Security & Compliance
- Operations
- Packages & Registries
- Analytics

Luis Alberto Cobo > Baloncesto > Pipelines > #234784496

failed Pipeline #234784496 triggered 3 minutes ago by Luis Alberto Cobo

### PF-A Poner votos a cero KO

4 jobs for req-2 in 1 minute and 27 seconds

latest

26fcfbfb

No related merge requests found.

Pipeline Needs Jobs 4 Failed Jobs 1 Tests 0

Build Test Qa

empaquetar pruebas-unitari... pruebas-funcio... calidad-codigo

```
80 [ERROR] Tests run: 2, Failures: 1, Errors: 0, Skipped: 0, Time elapsed: 5.835 s <<< FAILURE! - in PruebasPhantomjsIT
81 [ERROR] PruebasPhantomjsIT.reiniciarVotos Time elapsed: 4.369 s <<< FAILURE!
82 org.opentest4j.AssertionFailedError: Valor diferente de 0 ==> expected: <1> but was: <0>
83     at PruebasPhantomjsIT.reiniciarVotos(PruebasPhantomjsIT.java:41)
84 [INFO]
85 [INFO] Results:
86 [INFO]
87 [ERROR] Failures:
88 [ERROR]   PruebasPhantomjsIT.reiniciarVotos:41 Valor diferente de 0 ==> expected: <1> but was: <0>
89 [INFO]
90 [ERROR] Tests run: 2, Failures: 1, Errors: 0, Skipped: 0
91 [INFO]
92 [INFO]
93 [INFO] --- maven-failsafe-plugin:3.0.0-M5:verify (default-cli) @ Baloncesto ---
94 [INFO]
95 [INFO] BUILD FAILURE
96 [INFO]
```

Después ya se ha realizado la modificación en el test para dejarlo de forma correcta y que verifique que el valor de los votos en cada jugador se “0” y de esta manera continuar el Pipeline correctamente.

```
@Test
Run Test | Debug Test | x
public void reiniciarVotos() {
    DesiredCapabilities caps = new DesiredCapabilities();
    caps.setJavascriptEnabled(true);
    caps.setCapability(PhantomJSDriverService.PHANTOMJS_EXECUTABLE_PATH_PROPERTY, "/usr/bin/phantomjs");
    caps.setCapability(PhantomJSDriverService.PHANTOMJS_CLI_ARGS, new String[] { "--web-security=no", "--ignore-ssl-errors=yes" });
    driver = new PhantomJSDriver(caps);
    driver.navigate().to("http://localhost:8080/Baloncesto/");
    driver.findElement(By.cssSelector("input:nth-child(3)")).click();
    driver.findElement(By.linkText("Ir al comienzo")).click();
    driver.findElement(By.cssSelector("input:nth-child(4)")).click();
    assertEquals("0", driver.findElement(By.xpath("//tr[2]/td[2]")).getText(), "Valor diferente de 0");
    assertEquals("0", driver.findElement(By.xpath("//tr[3]/td[2]")).getText(), "Valor diferente de 0");
    assertEquals("0", driver.findElement(By.xpath("//tr[4]/td[2]")).getText(), "Valor diferente de 0");
    assertEquals("0", driver.findElement(By.xpath("//tr[5]/td[2]")).getText(), "Valor diferente de 0");

    driver.close();
    driver.quit();
}
```

The screenshot shows the GitLab web interface for a project named 'Baloncesto'. The left sidebar contains navigation links for Project overview, Repository, Issues (4), Merge Requests (0), Requirements, CI / CD, Pipelines, Jobs, Schedules, Test Cases, Security & Compliance, Operations, and Packages & Registries. The main content area displays the 'Pipelines' section for the project. A specific pipeline, #234786191, is highlighted, showing it was triggered 2 minutes ago by Luis Alberto Cobo and has a 'passed' status. Below this, the pipeline details are shown, including the commit hash d6703b83. The pipeline stages are Build, Test, and Qa. The Build stage has two jobs: 'empaquetar' and 'pruebas-unitari...'. The Test stage has one job: 'pruebas-funcio...'. The Qa stage has one job: 'calidad-codigo'. All jobs are marked with a green checkmark, indicating they passed successfully.

### 3.4. PF-B votación otro jugador.

Se ha implementado el test “votacionOtro”.



```

50  @Test
    Run Test | Debug Test
51  public void votacionOtro() {
52      String jugadorNuevo = "Gasol";
53      DesiredCapabilities caps = new DesiredCapabilities();
54      caps.setJavaScriptEnabled(true);
55      caps.setCapability(PhantomJSDriverService.PHANTOMJS_EXECUTABLE_PATH_PROPERTY, "/usr/bin/phantomjs");
56      caps.setCapability(PhantomJSDriverService.PHANTOMJS_CLI_ARGS, new String[] { "--web-security=no", "--ignore-ssl-errors=yes" });
57      driver = new PhantomJSDriver(caps);
58      driver.navigate().to("http://localhost:8080/Baloncesto/");
59      driver.findElement(By.xpath("//input[@name='txtOtros']")).click();
60      driver.findElement(By.xpath("//input[@name='txtOtros']")).sendKeys(jugadorNuevo);
61      driver.findElement(By.xpath("//input[@name='R1']")[5]).click();
62      driver.findElement(By.xpath("//input[@name='accion']")).click();
63      driver.findElement(By.xpath("//a[contains(text(),'Ir al comienzo')]")).click();
64      driver.findElement(By.xpath("//input[@name='accion']")[4]).click();
65      assertEquals(jugadorNuevo, driver.findElement(By.xpath("//tr[6]/td")).getText(), "Valor diferente de " + jugadorNuevo);
66      assertEquals("1", driver.findElement(By.xpath("//tr[6]/td[2]")).getText(), "Valor diferente de 1");
67      driver.close();
68      driver.quit();
69  }
70  }
71
72
73

```

Primero que todo se ha modificado la función “insertarJugador”, para hacer que inserte 2 votos en lugar de 1 cuando se vota por otro jugador de los que no están en la lista. Esto se hace para hacer fallar el test en el Pipeline, ya que el test espera encontrar el valor “1” en el voto del jugador de prueba.

```

68  public void insertarJugador(String nombre) {
69      try {
70          set = con.createStatement();
71          set.executeUpdate("INSERT INTO Jugadores " + " (nombre,votos) VALUES ('" + nombre + "',2)");
72          rs.close();
73          set.close();
74      } catch (Exception e) {
75          // No inserta en la tabla
76          System.out.println("No inserta en la tabla");
77          System.out.println("El error es: " + e.getMessage());
78      }
79  }
80

```

gitlab.com/luis-cobo/baloncesto/-/pipelines/234789247

**GitLab** Projects Groups More Search or jump to...

**B** Baloncesto

- Project overview
- Repository
- Issues 4
- Merge Requests 0
- Requirements
- CI / CD**
  - Pipelines**
  - Jobs
  - Schedules
  - Test Cases
- Security & Compliance
- Operations
- Packages & Registries
- Analytics
- Wiki

Luis Alberto Cobo > Baloncesto > Pipelines > #234789247

**failed** Pipeline #234789247 triggered 1 minute ago by Luis Alberto Cobo

### PF-B VotacionOtro KO

4 jobs for req-2 in 1 minute

latest

0d609156

No related merge requests found.

Pipeline Needs Jobs 4 Failed Jobs 1 Tests 0

**Build** **Test** **Qa**

empaquetar pruebas-unitari... pruebas-funcio... calidad-codigo

```

93 Votacion mejor jugador liga ACB
94 [INFO - 2020-12-27T14:32:14.180Z] ShutdownReqHand - _handle - About to shutdown
95 [ERROR] Tests run: 3, Failures: 1, Errors: 0, Skipped: 0, Time elapsed: 7.985 s <<< FAILURE! - in PruebasPhantomjsIT
96 [ERROR] PruebasPhantomjsIT.votacionOtro Time elapsed: 3.961 s <<< FAILURE!
97 org.opentest4j.AssertionFailedError: Valor diferente de 1 ==> expected: <1> but was: <2>
98     at PruebasPhantomjsIT.votacionOtro(PruebasPhantomjsIT.java:66)
99 [INFO]
100 [INFO] Results:
101 [INFO]
102 [ERROR] Failures:
103 [ERROR]   PruebasPhantomjsIT.votacionOtro:66 Valor diferente de 1 ==> expected: <1> but was: <2>
104 [INFO]
105 [ERROR] Tests run: 3, Failures: 1, Errors: 0, Skipped: 0
106 [INFO]
107 [INFO]
108 [INFO] --- maven-failsafe-plugin:3.0.0-M5:verify (default-cli) @ Baloncesto ---
109 [INFO] -----
110 [INFO] BUILD FAILURE
111 [INFO] -----
112 [INFO] Total time: 12.354 s
113 [INFO] Finished at: 2020-12-27T14:32:15Z
114 [INFO] -----

```

Después volvemos a modificar la función “insertarJugador” para que lo inserte un voto y funcione de forma correcta tanto la función con el test en el Pipeline.

```

67
68 public void insertarJugador(String nombre) {
69     try {
70         set = con.createStatement();
71         set.executeUpdate("INSERT INTO Jugadores " + " (nombre,votos) VALUES ('" + nombre + "',1)");
72         rs.close();
73         set.close();
74     } catch (Exception e) {
75         // No inserta en la tabla
76         System.out.println("No inserta en la tabla");
77         System.out.println("El error es: " + e.getMessage());
78     }
79 }
80

```

← → ↻ gitlab.com/luisco/baloncesto/-/pipelines/234789484

**GitLab** Projects Groups More

B Baloncesto

- Project overview
- Repository
- Issues 4
- Merge Requests 0
- Requirements
- CI / CD
  - Pipelines
  - Jobs
  - Schedules
  - Test Cases
- Security & Compliance
- Operations
- Packages & Registries

Luis Alberto Cobo > Baloncesto > Pipelines > #234789484

passed Pipeline #234789484 triggered 2 minutes ago by Luis Alberto Cobo

### PF-B VotacionOtro OK

4 jobs for req-2 in 1 minute and 39 seconds

latest

b5a8ac69

No related merge requests found.

Pipeline Needs Jobs 4 Tests 0

Build Test Qa

- empaquetar
- pruebas-unitari...
- pruebas-funcio...
- calidad-codigo

### 3.5. PU actualizarJugador.

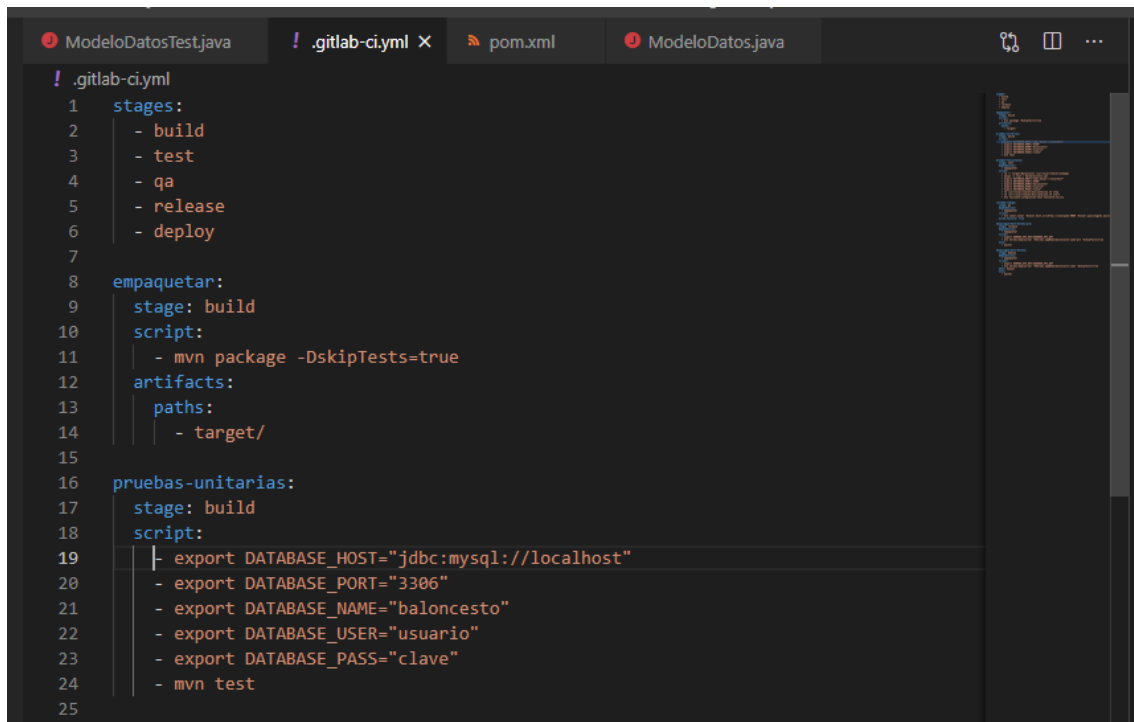
Para realizar esta prueba unitaria se ha utilizado AssertjDB, ya que permite realizar pruebas interactuando con la base de datos.

Durante la ejecución de la prueba se encontró un inconveniente, relacionado con las variables de entorno que se utilizan para la conexión a la base de datos, porque dichas variables solo se cargan en la fase “test” del Pipeline y las pruebas unitarias se realizan en la fase “build”. Lo anterior daba a error porque esos valores eran nulos y no se podía realizar la conexión a la base de datos.

The screenshot shows the GitLab interface for the 'Baloncesto' project. The pipeline #234609514 is marked as 'failed'. The 'Prueba unitaria' section shows 4 jobs for 'req-1' in 31 seconds. The pipeline stages are Build, Test, and Qa. The 'Test' stage has a job 'pruebas-unitari...' that failed. The 'Build' stage has a job 'empaquetar' that succeeded. The 'Qa' stage has a job 'calidad-codigo' that is pending. The console output shows the following error:

```
45 [INFO] Compiling 2 source files to /builds/tKa5xDM7/0/luiscobo/baloncesto/target/test-classes
46 [INFO]
47 [INFO] --- maven-surefire-plugin:2.12.4:test (default-test) @ Baloncesto ---
48 [INFO] Surefire report directory: /builds/tKa5xDM7/0/luiscobo/baloncesto/target/surefire-reports
49
50 T E S T S
51 -----
52 Running ModeloDatosTest
53 Prueba de existeJugador
54 No lee de la tabla
55 El error es: null
56 No se ha podido conectar
57 El error es: No suitable driver found for null:null
58 No modifica la tabla
59 El error es: null
60 Tests run: 2, Failures: 1, Errors: 0, Skipped: 0, Time elapsed: 0.113 sec <<< FAILURE!
61 ModeloDatosTest.testActualizarJugador() Time elapsed: 0.09 sec <<< FAILURE!
62 org.assertj.db.exception.AssertJDBException: java.sql.SQLException: No suitable driver found for null:null
63     at org.assertj.db.type.Table.setNameFromDb(Table.java:522)
64     at org.assertj.db.type.Table.setName(Table.java:473)
65     at org.assertj.db.type.Table.<init>(Table.java:406)
66     at org.assertj.db.type.Table.<init>(Table.java:286)
67     at org.assertj.db.type.Table.<init>(Table.java:236)
68     at org.assertj.db.type.Table.<init>(Table.java:222)
69     at ModeloDatosTest.testActualizarJugador(ModeloDatosTest.java:39)
70 Caused by: java.sql.SQLException: No suitable driver found for null:null
71     at java.sql/java.sql.DriverManager.getConnection(DriverManager.java:702)
72     at java.sql/java.sql.DriverManager.getConnection(DriverManager.java:228)
73     at org.assertj.db.type.AbstractDbElement.getConnection(AbstractDbElement.java:228)
74     at org.assertj.db.type.Table.setNameFromDb(Table.java:498)
75     ... 24 more
76 Results :
77 Failed tests:  ModeloDatosTest.testActualizarJugador(): java.sql.SQLException: No suitable driver found for null:null
78 Tests run: 2, Failures: 1, Errors: 0, Skipped: 0
79 [INFO] -----
```

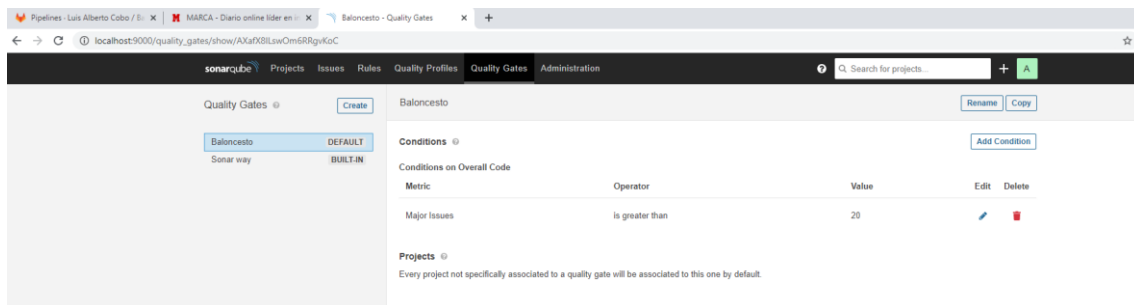
Para poder solucionar este error se modificó el archivo .gitlab-ci.yml añadiendo la creación de las variables en la fase “build”.



```
1  stages:
2    - build
3    - test
4    - qa
5    - release
6    - deploy
7
8  empaquetar:
9    stage: build
10   script:
11     - mvn package -DskipTests=true
12   artifacts:
13     paths:
14       - target/
15
16  pruebas-unitarias:
17    stage: build
18    script:
19     - export DATABASE_HOST="jdbc:mysql://localhost"
20     - export DATABASE_PORT="3306"
21     - export DATABASE_NAME="baloncesto"
22     - export DATABASE_USER="usuario"
23     - export DATABASE_PASS="clave"
24     - mvn test
25
```

### 3.6. QA límite de problemas importantes (major issues) de 20.

Se crea una nueva Quality Gate en SonarQube.



Se modifica también el fichero gitlab-ci.yml para que no continúe el Pipeline si falla en la fase “qa”.



```
1  calidad-codigo:
2    stage: qa
3    dependencies:
4      - empaquetar
5    script:
6      - mvn sonar:sonar -Dsonar.host.url=http://sonarqube:9000 -Dsonar.qualitygate.wait=true -Dsonar.login=admin
7    allow_failure: false
```

Se realiza un push sobre la rama y el Pipeline falla en la fase “qa” porque se encuentran 37 problemas y el limite definido es de 20.

The image shows two screenshots related to a CI/CD pipeline failure. The top screenshot is from GitLab, showing a failed pipeline for project 'Baloncesto'. The pipeline is named 'Pipeline #234792480' and was triggered 32 minutes ago by 'Luis Alberto Cobo'. It shows a 'QA' stage with 5 jobs for 'req-2' in 2 minutes and 12 seconds. The pipeline status is 'Failed'. The bottom screenshot is from SonarQube, showing the 'Quality Gate Status' for the project 'Baloncesto'. The status is 'Failed' with 1 condition failed. The 'On Overall Code' section shows 37 major issues, which is greater than the defined limit of 20. The 'Measures' section shows various metrics: 14 bugs, 0 vulnerabilities, 2 security hotspots, 0.0% reviewed, 4h 35min debt, 42 code smells, 0.0% coverage on 124 lines to cover, 0.0% duplications on 440 lines, and 0 duplicated blocks.

**GitLab Pipeline Status:**

- Project: Baloncesto
- Pipeline: Pipeline #234792480
- Status: Failed
- Triggered: 32 minutes ago by Luis Alberto Cobo
- QA Stage: 5 jobs for req-2 in 2 minutes and 12 seconds
- Jobs: 27d7174f
- No related merge requests found.

**SonarQube Quality Gate Status:**

- Project: Baloncesto
- Status: Failed (1 condition failed)
- On Overall Code: 37 Major Issues is greater than 20
- Measures:

  - New Code: Since December 26, 2020, Started yesterday
  - Overall Code:
  - 14 Bugs (Reliability: ⚠️)
  - 0 Vulnerabilities (Security: 🟢)
  - 2 Security Hotspots (0.0% Reviewed) (Security Review: 🛑)
  - 4h 35min Debt (42 Code Smells) (Maintainability: 🟢)
  - 0.0% Coverage on 124 Lines to cover (Unit Tests: -)
  - 0.0% Duplications on 440 Lines (Duplicated Blocks: 0)

The screenshot shows the SonarQube web interface. The top navigation bar includes 'sonarqube', 'Projects', 'Issues', 'Rules', 'Quality Profiles', 'Quality Gates', and 'Administration'. The main header shows 'Baloncesto' with a star icon and 'master' branch. Below the header, there are tabs for 'Overview', 'Issues', 'Security Hotspots', 'Measures', 'Code', and 'Activity'. The 'Issues' tab is active, showing a list of issues. On the left, there are filters for 'Type' (Bug, Vulnerability, Code Smell), 'Severity' (Major, Minor, Info), and 'Scope'. The main area displays a list of issues, including 'Remove this misleading mutable servlet instance field or make it static and/or final' and 'Add the @Override annotation above this method signature'.

Se procede a corregir algunos de los problemas encontrados para poder continuar en el Pipeline a la siguiente fase.

The screenshot shows the GitLab CI/CD interface. The top navigation bar includes 'GitLab', 'Projects', 'Groups', and 'More'. The main header shows 'Baloncesto' with a star icon. Below the header, there are tabs for 'Project overview', 'Repository', 'Issues', 'Merge Requests', 'Requirements', 'CI / CD', 'Pipelines', 'Jobs', 'Schedules', 'Test Cases', 'Security & Compliance', 'Operations', 'Packages & Registries', and 'Analytics'. The 'Pipelines' tab is active, showing a list of pipelines. The pipeline 'Pipeline #234803239' is highlighted, showing a status of 'passed'. The pipeline jobs are 'empaquetar', 'pruebas-unitari...', 'pruebas-funcio...', and 'calidad-codigo'.

localhost:9000/dashboard?id=ICN3ABaloncesto

sonarcube Projects Issues Rules Quality Profiles Quality Gates Administration

Search for projects... + A

Baloncesto master

Overview Issues Security Hotspots Measures Code Activity

Project Settings Project Information

QUALITY GATE STATUS

Passed  
All conditions passed

MEASURES

New Code  
Since December 26, 2020  
Started yesterday

Overall Code

10 Bugs Reliability C

0 Vulnerabilities Security A

2 Security Hotspots 0.0% Reviewed Security Review E

1h 51min Debt 24 Code Smells Maintainability A

0.0% Coverage on 111 Lines to cover Unit Tests

0.0% Duplications on 435 Lines Duplicated Blocks 0

localhost:9000/project/issues?id=ICN3ABaloncesto&resolved=false&severities=MAJOR&types=CODE\_SMELL

sonarcube Projects Issues Rules Quality Profiles Quality Gates Administration

Baloncesto master

Overview Issues Security Hotspots Measures Code Activity

Project Settings Project Information

My Issues All

Clear All Filters

Filters

Type CODE SMELL Clear

Bug 9

Security 8

Code Smell 7

Ctrl + click to add to selection

Severity MAJOR Clear

Blocker 0

Critical 0

Major 7

Minor 10

Info 7

Ctrl + click to add to selection

Scope

Resolution

Status

Security Category

Creation Date

Language

Rule

Tag

Bulk Change

1 to select issues

to navigate

1/7 Issues 40min effort

src/main/java/Modelos/Datos.java

Either remove or fill this block of code. Why is this an issue? 8 minutes ago L24 suspicious

Replace this use of System.out or System.err by a logger. Why is this an issue? 2 days ago L40 bad-practice, cert

Either remove or fill this block of code. Why is this an issue? 8 minutes ago L45 suspicious

Either remove or fill this block of code. Why is this an issue? 8 minutes ago L57 suspicious

Either remove or fill this block of code. Why is this an issue? 8 minutes ago L68 suspicious

Either remove or fill this block of code. Why is this an issue? 8 minutes ago L107 suspicious

Either remove or fill this block of code. Why is this an issue? 8 minutes ago L117 suspicious

7 of 7 shown

#### 4. Programar los issues en dos ramas (req-1 y req2).

Luis Alberto Cobo > Baloncesto > Repository > Branches

Overview Active Stale All

Filter by branch name

Delete merged branches

New branch

Protected branches can be managed in [project settings](#).

Active branches

master default protected

b72a6197 · Merge branch 'req-2' into 'master' · 20 hours ago

req-2 merged

3559246a · QA OK · 21 hours ago

3 0

Merge request

Compare

req-1 merged

6fa8e549 · Prueba unitaria · 1 day ago

17 0

Merge request

Compare

añadir-estilos-página-resultado merged

1ebefda4 · Corregidos conflictos estilo en página de resultado · 6 days ago

38 0

Merge request

Compare

añadir-estilos-página-principal merged

650babdb · Añadido estilo en página principal · 1 week ago

42 0

Merge request

Compare