

# SPRINT 7

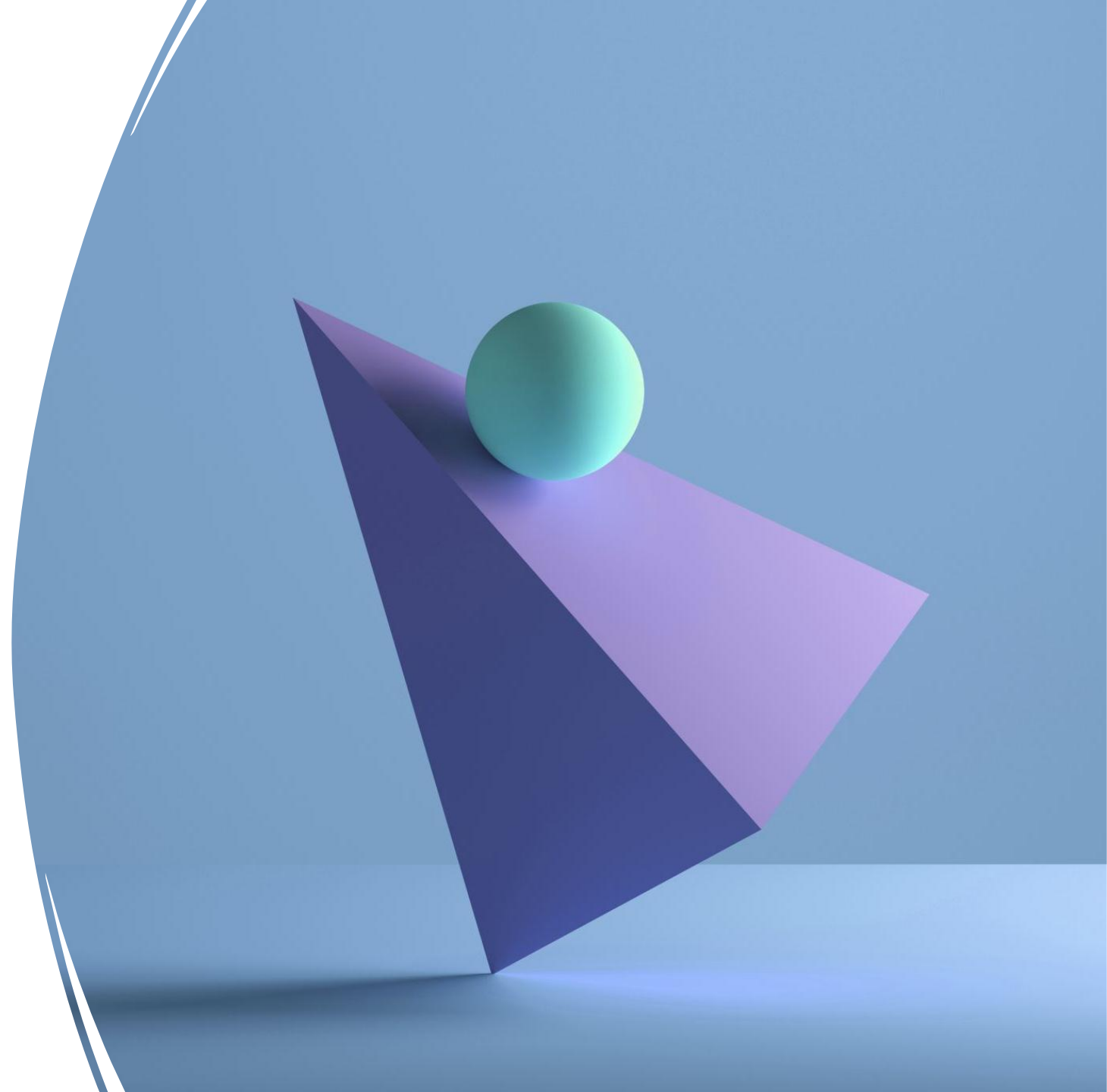
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Miro Valtonen

Farnaz Jamilpanah

Amir Saeid Taebnia

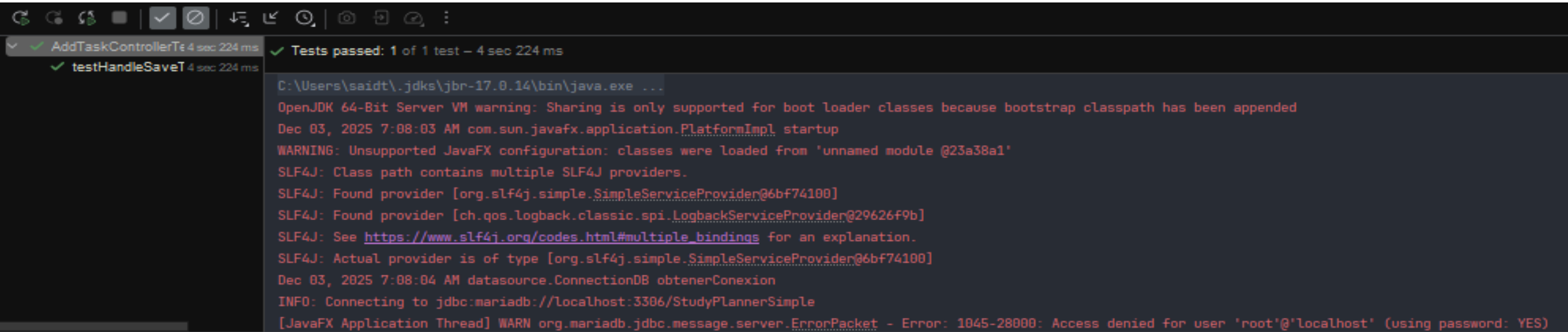
Michael Blas Palpa



No	Heuristic	Description of the Issue	Screenshot	Severity	Recommendation
1	H1-1: Simple & natural flows	The program starts directly with the login screen, without any introduction. Users cannot tell what kind of application it is.	1,2	3	
2	H1-2: Speak the users' language	The app uses clear and familiar terms for actions like signing up, logging in, adding tasks, etc. However, the language selection feature is not uniformly presented throughout every app's page and only is available in log in page, which might confuse users expecting consistent terminology across languages.	Language picker only contained here: 2,3 and not contained here: 1,4,5,6,7,8,9,10	3	
3	H1-3: Minimize users' memory load	Buttons are too close together and confusing, which may hinder navigation.	5	2	See and data
4	H1-4: Consistency	Language picker is only available on the login page, not on signup or other pages. After login, language cannot be changed. Back buttons are missing inconsistently across pages. Program needs better colors for user guidance, e.g. for buttons and info messages.	Language picker only contained here: 2,3 and not contained here: 1,4,5,6,7,8,9,10 Separate back and forward button missing: 1,2,3,4,5,6,7,8,9,10	3	Add a all app to login post-log choosing consistent forward b throughout. <del>app</del> . Use stands pages.
5	H1-5: Feedback	The app provides successful feedback for actions like account creation, login, task addition, and updates. No issues noted in the test cases.	8	0	No improve suggested.
6	H1-6: Clearly marked exits	No separate back buttons on various pages (signup, add/edit task, calendar, done tasks). No sign-out function available.	Separate back and forward button missing and no sign out button: 1,2,3,4,5,6,7,8,9,10	3	Add dedicated buttons to all and implement out button for exits.
7	H1-7: Shortcuts	The app lacks advanced navigation shortcuts. No keyboard shortcuts.	1,2,3,4,5,6,7,8,9,10	1	Consider add keyboard and/or gesture-based shortcuts if app to the platform.
8	H1-8: Encourage & constructive error messages	Validation messages are too generic. Info messages should not be popup.	8	2	Specify exact errors. Change the messages to <del>not field</del> me use colors.
9	H1-9: Prevent errors	Date picker allows selection of past dates, which could lead to unintended "done" tasks, but noted as acceptable. No other app prevention issues. The "name" field allows numbers when creating an account, which may lead to errors.	7,11,12	4	Add option or warning dates to p potential/ Restrict: if accept o
10	H1-10: Help and documentation	No help or documentation features in the app. Users may lack guidance for features like language changes or navigation.	1,3,5,4,5,6,7,8,9,10	2	X 2 / 10 / 11 / 12 /

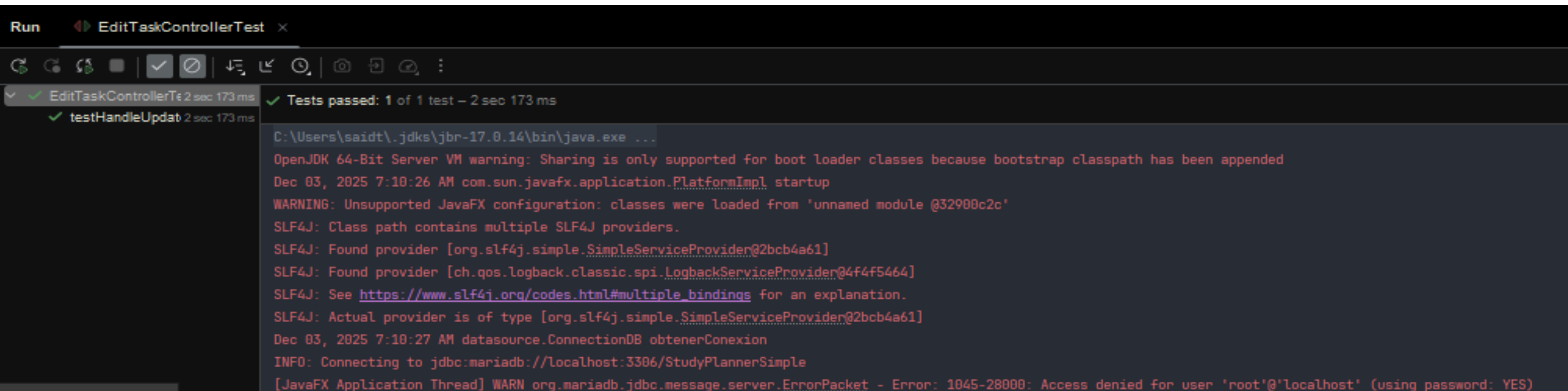
# HEURISTIC EVALUATION DONE:

# TEST FILES:



The screenshot shows the console output for a test run. The top bar indicates 'Tests passed: 1 of 1 test - 4 sec 224 ms'. The test name is 'AddTaskControllerTest' with a duration of 4 sec 224 ms. The test method 'testHandleSaveT' also took 4 sec 224 ms. The output log shows the following messages:

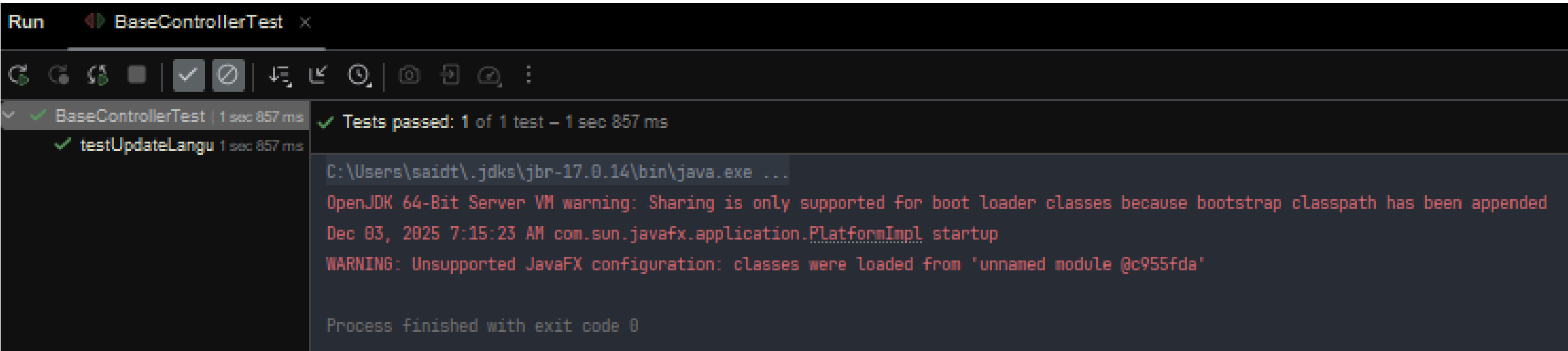
```
C:\Users\saidt\jdk\jbr-17.0.14\bin\java.exe ...
OpenJDK 64-Bit Server VM warning: Sharing is only supported for boot loader classes because bootstrap classpath has been appended
Dec 03, 2025 7:08:03 AM com.sun.javafx.application.PlatformImpl startup
WARNING: Unsupported JavaFX configuration: classes were loaded from 'unnamed module @23a38a1'
SLF4J: Class path contains multiple SLF4J providers.
SLF4J: Found provider [org.slf4j.simple.SimpleServiceProvider@6bf74100]
SLF4J: Found provider [ch.qos.logback.classic.spi.LogbackServiceProvider@29626f9b]
SLF4J: See https://www.slf4j.org/codes.html#multiple_bindings for an explanation.
SLF4J: Actual provider is of type [org.slf4j.simple.SimpleServiceProvider@6bf74100]
Dec 03, 2025 7:08:04 AM datasource.ConnectionDB obtenerConexion
INFO: Connecting to jdbc:mariadb://localhost:3306/StudyPlannerSimple
[JavaFX Application Thread] WARN org.mariadb.jdbc.message.server.ErrorPacket - Error: 1045-28000: Access denied for user 'root'@'localhost' (using password: YES)
```



The screenshot shows the console output for a test run. The top bar indicates 'Tests passed: 1 of 1 test - 2 sec 173 ms'. The test name is 'EditTaskControllerTest' with a duration of 2 sec 173 ms. The test method 'testHandleUpdat' also took 2 sec 173 ms. The output log shows the following messages:

```
C:\Users\saidt\jdk\jbr-17.0.14\bin\java.exe ...
OpenJDK 64-Bit Server VM warning: Sharing is only supported for boot loader classes because bootstrap classpath has been appended
Dec 03, 2025 7:10:26 AM com.sun.javafx.application.PlatformImpl startup
WARNING: Unsupported JavaFX configuration: classes were loaded from 'unnamed module @32900c2c'
SLF4J: Class path contains multiple SLF4J providers.
SLF4J: Found provider [org.slf4j.simple.SimpleServiceProvider@2bcb4a61]
SLF4J: Found provider [ch.qos.logback.classic.spi.LogbackServiceProvider@4f4f5464]
SLF4J: See https://www.slf4j.org/codes.html#multiple_bindings for an explanation.
SLF4J: Actual provider is of type [org.slf4j.simple.SimpleServiceProvider@2bcb4a61]
Dec 03, 2025 7:10:27 AM datasource.ConnectionDB obtenerConexion
INFO: Connecting to jdbc:mariadb://localhost:3306/StudyPlannerSimple
[JavaFX Application Thread] WARN org.mariadb.jdbc.message.server.ErrorPacket - Error: 1045-28000: Access denied for user 'root'@'localhost' (using password: YES)
```

# TEST FILES:



The screenshot shows the 'Run' window of an IDE with the tab 'BaseControllerTest'. The toolbar includes icons for running, debugging, and other test-related actions. The test results list shows 'BaseControllerTest' with a duration of 1 sec 857 ms and a status of 'Tests passed: 1 of 1 test - 1 sec 857 ms'. Below this, the 'testUpdateLangu' method is listed with a duration of 1 sec 857 ms. The console output shows the Java command being executed, followed by a warning from OpenJDK 64-Bit Server VM about sharing support for boot loader classes, a timestamped startup message for 'com.sun.javafx.application.PlatformImpl', a warning about unsupported JavaFX configuration, and a final message stating 'Process finished with exit code 0'.

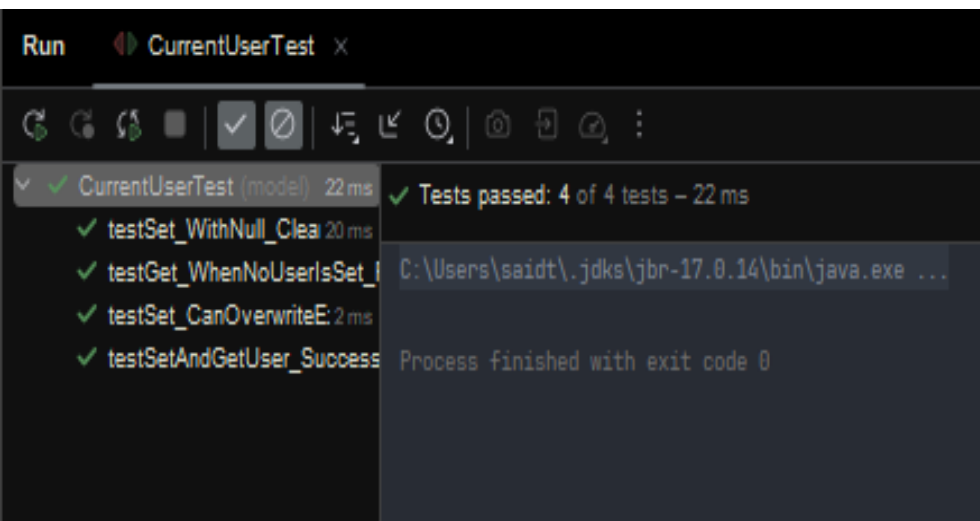
```
Run | BaseControllerTest x
```

✓ BaseControllerTest | 1 sec 857 ms

✓ Tests passed: 1 of 1 test - 1 sec 857 ms

✓ testUpdateLangu | 1 sec 857 ms

```
C:\Users\saidt\.jdk\jbr-17.0.14\bin\java.exe ...  
OpenJDK 64-Bit Server VM warning: Sharing is only supported for boot loader classes because bootstrap classpath has been appended  
Dec 03, 2025 7:15:23 AM com.sun.javafx.application.PlatformImpl startup  
WARNING: Unsupported JavaFX configuration: classes were loaded from 'unnamed module @c955fda'  
  
Process finished with exit code 0
```



The screenshot shows the 'Run' window of an IDE with the tab 'CurrentUserTest'. The toolbar includes icons for running, debugging, and other test-related actions. The test results list shows 'CurrentUserTest (model)' with a duration of 22 ms and a status of 'Tests passed: 4 of 4 tests - 22 ms'. Below this, four test methods are listed: 'testSet\_WithNull\_Clear' (20 ms), 'testGet\_WhenNoUserIsSet' (2 ms), 'testSet\_CanOverwriteE' (2 ms), and 'testSetAndGetUser\_Success' (2 ms). The console output shows the Java command being executed, followed by a final message stating 'Process finished with exit code 0'.

```
Run | CurrentUserTest x
```

✓ CurrentUserTest (model) | 22 ms

✓ Tests passed: 4 of 4 tests - 22 ms

- ✓ testSet\_WithNull\_Clear | 20 ms
- ✓ testGet\_WhenNoUserIsSet | 2 ms
- ✓ testSet\_CanOverwriteE | 2 ms
- ✓ testSetAndGetUser\_Success | 2 ms

```
C:\Users\saidt\.jdk\jbr-17.0.14\bin\java.exe ...  
  
Process finished with exit code 0
```

# TEST FILES:

```
30 FXMLLoader loader = new FXMLLoader(getClass().getResource(
31     Parent root = loader.load();
32
```

Run LoginControllerTest x

✓ LoginControllerTest (c 11 sec 256 ms) ✓ 4 tests passed 4 tests total, 11 sec 256 ms

- ✓ testWritingUsername 7 sec 163 ms
- ✓ testLoginButtonExists(FxR 315 ms)
- ✓ testValidLoginClick(F. 2 sec 836 ms)
- ✓ testEmptyFieldsShowAlert 942 ms

C:\Users\Fari\.jdk\jbr-17.0.14\bin  
Dec 02, 2025 10:21:25 PM com.sun.j  
WARNING: Unsupported JavaFX config  
Dec 02, 2025 10:21:28 PM datasourc  
INFO: Connecting to jdbc:mariadb://  
Dec 02, 2025 10:21:28 PM datasourc  
INFO: Connection established: true  
22:21:28.856 [JavaFX Application T

```
35 FXMLLoader loader = new FXMLLoader(getClass().getResource(
36     Parent root = loader.load();
37     controller = loader.getController();
38     Field daoField = SignUpController.class.getDeclaredFie
```

Run SignUpControllerTest x

✓ SignUpControllerTest (c 16 sec 40 ms) ✓ 4 tests passed 4 tests total, 16 sec 40 ms

- ✓ testSuccessfulSignU 8 sec 622 ms
- ✓ testCreateAccountB 2 sec 648 ms
- ✓ testUsernameAlread 3 sec 760 ms
- ✓ testEmptyFieldsShow 1 sec 10 ms

C:\Users\Fari\.jdk\jbr-17.0.14\bin  
Dec 02, 2025 10:20:30 PM com.sun.ja  
WARNING: Unsupported JavaFX config  
Dec 02, 2025 10:20:33 PM datasource  
INFO: Connecting to jdbc:mariadb://  
Dec 02, 2025 10:20:33 PM datasource  
INFO: Connection established: true  
22:20:33.620 [JavaFX Application Th

×

Quality Gate ⓘ

Last analysis 3 minutes ago

Failed

⚠

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

New Code 3 failed

Overall Code

New Code Since November 16, 2025 Started 16 days ago

3 conditions failed

35 Issues

24.1% Coverage is less than 80.0%

3.3% Duplicated Lines (%) is greater than 3.0%

New issues Failed

35

Required = 0

Accepted issues

0

Valid Issues that were not fixed

Coverage Failed

24.1%

Required ≥ 80.0%

On 391 New Lines to cover.

Duplications Failed

3.3%

Required ≤ 3.0%

On 878 New Lines.

Security Hotspots

0

A

×

Quality Gate ⓘ

Last analysis 3 minutes ago

Failed

⚠

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

New Code 3 failed

Overall Code

Security

1 Open issues

E

Reliability

0 Open issues

A

Maintainability

48 Open issues

A

Accepted issues

0

Valid issues that were not fixed

Coverage

35.6%

On 1k lines to cover.

Duplications

3.2%

On 2.4k lines.

Security Hotspots

8

E

×

Quality Gate ⓘ

Last analysis 3 minutes ago

Failed

⚠

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

New Code 2 failed

Overall Code

Security

1 Open Issues

E

Reliability

0 Open Issues

A

Maintainability

56 Open issues

A

Accepted issues

0

Valid issues that were not fixed

Coverage

34.5%

On 1.1k lines to cover.

Duplications

3.0%

On 2.6k lines.

Security Hotspots

8

E

New Code4 failed

Overall Code

Security

0 Open issues

A

Reliability

0 Open issues

A

Maintainability

36 Open issues

A

Accepted issues

0

Valid issues that were not fixed

Coverage

37.0%

On 1k lines to cover.

Duplications

3.2%

On 2.4k lines.

Security Hotspots

10

E

New Code2 failed

Overall Code

Security

1 Open Issues

E

Reliability

0 Open Issues

A

Maintainability

56 Open Issues

A

Accepted Issues

0

Valid issues that were not fixed

Coverage

34.5%

On 1.1k lines to cover.

Duplications

3.0%

On 2.6k lines.

Security Hotspots

8

E

New Code Since November 22, 2025 Started 10 days ago

4 conditions failed

23 Issues

0.0% Security Hotspots Reviewed is less than 100%

8.8% Coverage is less than 80.0%

4.2% Duplicated Lines (%) is greater than 3.0%

Fix issues before they fail your Quality Gate with SonarQube for IDE. Power up with connected mode!

New issuesFailed

23

Required = 0

Accepted issues

0

Valid issues that were not fixed

CoverageFailed

8.8%

Required ≥ 80.0%

On 291 New Lines to cover.

DuplicationsFailed

4.23%

Required ≤ 3.0%

On 686 New Lines.

Security HotspotsFailed

3

Required review: 100%

# Sign out button implemented

Login

Add TaskDelete TaskEdit TaskCalendar ViewDone Tasks

Title	Description	Due Date	Status	
rwerwer	wrewe	11/30/2025	IN_PROGRESS	

Login

Add TaskDelete TaskEdit TaskCalendar ViewDone TasksSign Out

Title	Description	Due Date	Status	

No content in table



```

package datasource;

import java.sql.Connection;
import java.sql.DriverManager;
import java.sql.SQLException;

public class ConnectionDB {
    public static Connection obtenerConexion() {
        try {
            Class.forName("org.mariadb.jdbc.Driver");

            String host = System.getenv("DB_HOST");
            if (host == null || host.isEmpty()) {
                host = "localhost"; // fallback
            }

            String url = "jdbc:mariadb://" + host + ":3306/Studyplanner";
            String user = "root";
            String password = "admin";

            System.out.println("Connecting to: " + url);
            Connection conn = DriverManager.getConnection(url, user, password);
            System.out.println("Connection established: " + (conn != null));
            return conn;
        } catch (ClassNotFoundException e) {
            System.err.println("Driver not found: " + e.getMessage());
        } catch (SQLException e) {
            System.err.println("Connection error: " + e.getMessage());
        }
        return null;
    }
}

```

```

DB_USER=root
DB_PASSWORD=admin
DB_HOST=localhost
SONAR_HOST_URL=http://localhost:9000
SONAR_TOKEN = squ_ee115d23eb1c8bbb651613f054c5dfca61739f7d

```

```

public class ConnectionDB { 7 usages
    private static final Log log = LoggerFactory.getLog(ConnectionDB.class); 5 usages

    private ConnectionDB() { no usages
        throw new UnsupportedOperationException("Utility class");
    }

    public static Connection obtenerConexion() { 3 usages
        try {
            Dotenv dotenv = Dotenv.load();
            String host = dotenv.get("DB_HOST");
            String user = dotenv.get("DB_USER");
            String password = dotenv.get("DB_PASSWORD");

            if (host == null || user == null || password == null) {
                throw new IllegalStateException("Missing DB credentials in .env");
            }

            String url = String.format("jdbc:mariadb://%s:3306/Studyplanner", host);

            if (log.isInfoEnabled()) {
                log.info("Connecting to " + url);
            }

            Connection conn = DriverManager.getConnection(url, user, password);

            if (log.isInfoEnabled()) {
                log.info("Connection established: " + (conn != null));
            }
            return conn;
        } catch (SQLException e) {
            log.error("Connection error: " + e.getMessage(), e);
        }
        return null;
    }
}

```

```
@Test
void testCreateAccountButtonExists(FxRobot robot) {
    // correct fx:id in your FXML is btnCreateAccount
    Button btn = robot.lookup(♦ "#btnCreateAccount").queryAs(Button.class);

    Define a constant instead of duplicating this literal "#btnCreateAccount" 4 times.

    assertNotNull(btn, "btnCreateAccount should be present in FXML");
}

@Test
void testEmptyFieldsShowAlert(FxRobot robot) {
    // click the create account button with empty fields
    robot.clickOn(♦ "#btnCreateAccount");
```

```
when(mockDao.login(♦ "admin", ♦ "admin")).thenReturn(fakeUser);

stage.setScene(new Scene(root));
stage.show();
stage.toFront();
}

@Test
void testLoginButtonExists(FxRobot robot) {
    Button btnLogin = robot.lookup("#btnLogin").queryAs(Button.class);

    Define a constant instead of duplicating this literal "#btnLogin" 3 times.
```

src/test/java/controller/LoginControllerTest.java

☐ Define a constant instead of duplicating this literal "admin" 6 times. Adaptability  
Maintainability High design +  
Open Not assigned L39 • 14min effort • 2 days ago

☐ Define a constant instead of duplicating this literal "#btnLogin" 3 times. Adaptability  
Maintainability High design +  
Open Not assigned L48 • 8min effort • 2 days ago

☐ Define a constant instead of duplicating this literal ".dialog-pane" 3 times. Adaptability  
Maintainability High design +  
Open Not assigned L55 • 8min effort • 2 days ago

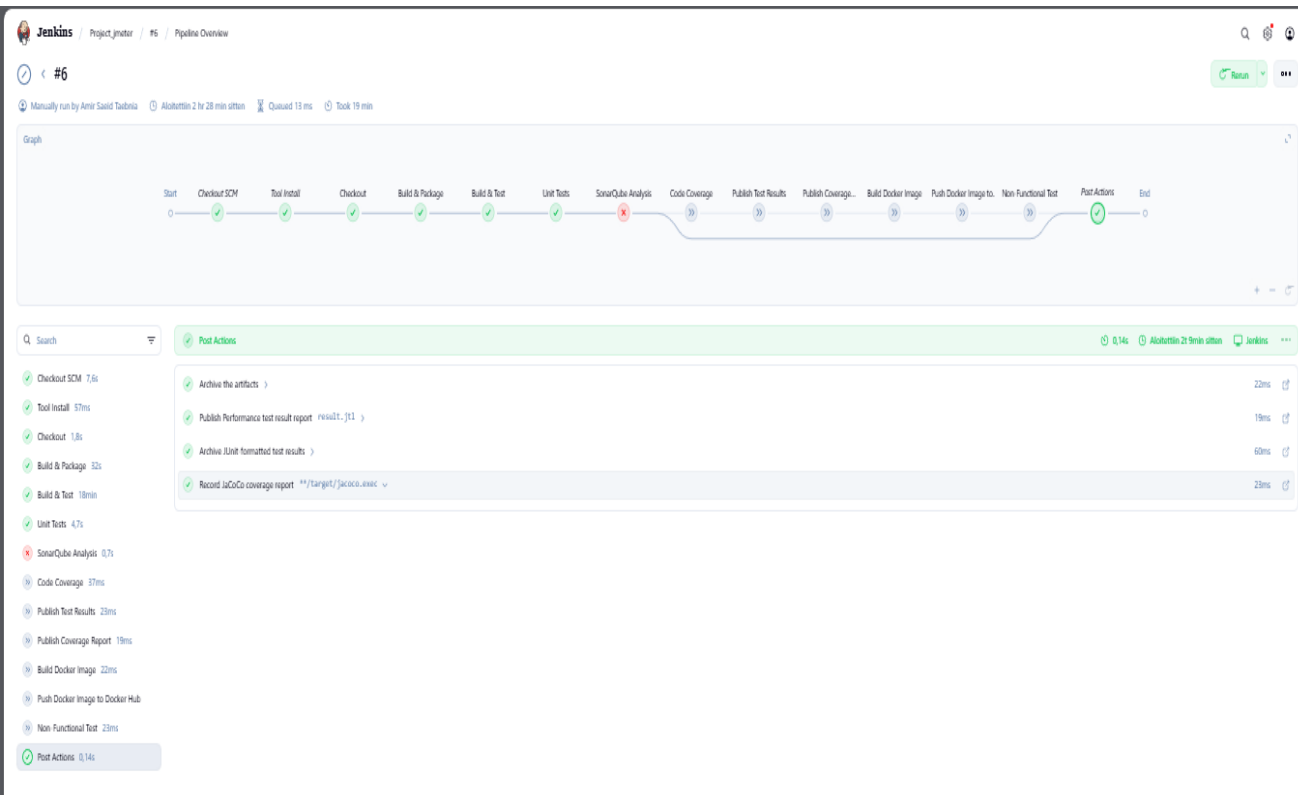
☐ Define a constant instead of duplicating this literal "#usernameField" 3 times. Adaptability  
Maintainability High design +  
Open Not assigned L61 • 8min effort • 2 days ago

☐ Define a constant instead of duplicating this literal "#passwordField" 3 times. Adaptability  
Maintainability High design +  
Open Not assigned L62 • 8min effort • 2 days ago

# JMETER

Jmeter getting stuck in Jenkins build due to it trying to make the javafx tests in jenkins, but which is apparently not supported in Jenkins(Javafx tests).

We need guidance how to solve this issue for sprint 8.



```

// Jenkinsfile
pipeline {
    agent any

    stages {
        stage('Checkout SCM') {
            steps {
                checkout scm
            }
        }
        stage('Tool Install') {
            steps {
                // Install JavaFX
                sh 'java --module-path lib\jfx.jar --add-modules javafx.controls,javafx.fxml --version'
            }
        }
        stage('Checkout') {
            steps {
                checkout scm
            }
        }
        stage('Build & Package') {
            steps {
                sh 'mvn clean package -DskipTests'
            }
        }
        stage('Build & Test') {
            steps {
                sh 'mvn clean test -DskipTests'
            }
        }
        stage('Unit Tests') {
            steps {
                sh 'mvn test -DskipTests'
            }
        }
        stage('SonarQube Analysis') {
            steps {
                sh 'mvn sonar:sonar'
            }
        }
        stage('Code Coverage') {
            steps {
                sh 'mvn jacoco:report'
            }
        }
        stage('Publish Test Results') {
            steps {
                sh 'mvn jacoco:publish'
            }
        }
        stage('Publish Coverage') {
            steps {
                sh 'mvn jacoco:publish'
            }
        }
        stage('Build Docker Image') {
            steps {
                sh 'docker build -t jmeter:jmeter .'
            }
        }
        stage('Push Docker Image') {
            steps {
                sh 'docker push jmeter:jmeter'
            }
        }
        stage('Non Functional Test') {
            steps {
                sh 'mvn test -DskipTests'
            }
        }
        stage('Post Actions') {
            steps {
                // Archive artifacts
                archiveArtifacts '**/*.*'
                // Publish performance test result report
                sh 'mvn jacoco:publish'
                // Archive unit formatted test results
                sh 'mvn jacoco:publish'
                // Record JaCoCo coverage report
                sh 'mvn jacoco:publish'
            }
        }
    }
}
```

Sprint 7 backlog

- Bug fixing
- Performance testing
- Acceptance test
- Update technical specifications and architecture(Documentation)
- User Experience Review

+ Add a card

Työn alla

- Miro : works in the uni test files  
TaksController,  
DoneTaskController
- Michael works in the uni test files  
CanlendarController ,  
database, firstViewController
- Unit testing of key functions
- Review and refine user stories

+ Add a card

Done

- Integration testing
- Fari: works in the uni test files  
loginController,  
SignUpController
- Saeid worked in these unit test files:  
AddTaskController,  
EditTaskController,  
BaseControllerTest,  
CurrentUserTest. jmeter test
- Prepare final Sprint 7 report(Documentation)
- Validate SonarQube (A/B grade)

+ Add a card

+ Add another list