

# Project Management - Jira & Risk Assessment

CMQ Project

Risk Assessment

Version 1.0

Risk Category Key:

Probability (how likely is risk to occur)

Severity (what is the impact of the risk if it occurs)

1 = Unlikely

2 = Possible

3 = Probable

1 = Minor

2 = Moderate

3 = Major

Overall risk (probability x severity)

1-2 = Low

3-4 = Moderate

5-7 = High

8-9 = Very high

Initial Risk Assessment:

ID	Risk Description	Cause	Outcome	Probability (1-3)	Severity (1-3)	Overall risk (1-9)	Mitigating actions
1	Lack of time	Tight timescales / time management	Incomplete project	2	3	6	Focus on MVP. Plan daily / sprint tasks and set goals. Review progress. Ensure non-code deliverables are updated after sufficient progress even if they may be amended later.
2	Lack of experience	New to some of the tools and methodologies. Not fully familiar with other areas	Incomplete project due to impact on time taken to complete some aspects of project	2	3	6	Additional practice in other less familiar areas. Ask for trainer help if stuck. Team members to take tasks in areas of expertise where possible.
3	Utilities failure	Power and/or internet unavailable	No shared access & minimal project progress during outage	2	2	4	Ensure laptop and phone charge maintained and local copy of resources for each team member where possible.
4	External disruption to resource availability	COVID-19 / home environment	Possible reduced internet speeds (noise remote workers) / illness	3	2	6	Link to the router via cable to minimise issues, turn off camera if internet slow, use data/hotspot if required and available. Regular hand washing etc. to reduce risk of illness. Asking other team members for support
5	Lack of progress	Overfired / overworking / overcomplicating project	Stress / difficulty completing project	1	2	2	Schedule breaks and spend some of each outside with the permitting, stay hydrated.
6	Unreliable / non-working system	Insufficient testing	Substandard project	2	3	6	Allocate adequate testing time, save tested working copy before working on should/could-have features.
7	Team Management	Sub-par communication and conflicting views or understanding	Incomplete or sub-par project. Friction could break the group	2	3	6	Be respectful of other members without talking over each other. Disagreements are settled as and when they occur.

January 2021

Team 1

Browser tabs: Email - Bluck Sue - Outlook, Network Graph - EmreCakmakG..., CMQ board - , jira view amend sprint goal - Bing, jira view sprint goal - Bing, Solved: How can I edit the sprint...

URL: <https://jiraqaoc.atlassian.net/secure/RapidBoard.jspa?rapidView=4&projectKey=CMQ&view=planning&selectedIssue=CMQ-69&issueLimit=100>

Jira Software | Your work | Projects | Filters | Dashboards | People | Apps | Create

Choozn-Music-QA | Classic software project

CMQ board | Board | Roadmap | Backlog | Active sprints | Reports

Issues | Components | Code | Releases | Project pages | Planning Poker | Add item | Project settings

Projects / Choozn-Music-QA / CMQ board

### Backlog

CMQ Sprint 1 14 issues

Get basic version of app working with essential user functionality.  
18/Jan/21 10:50 AM • 22/Jan/21 9:00 AM

Only My Issues | Recently Updated

VERSIONS | CMQ-69

18/Jan/21 10:50 AM • 22/Jan/21 9:00 AM

EPICS | CMQ-69

As a user, I can sign up to the system along side other users, so that I can have access | General | CMQ-1 | 8

As a user, I can CRUD albums, artists, tracks and genres. | User Home Screen | CMQ-10 | 8

As a user, I can CRUD as many playlists as I want on my home screen, so that I can manage | Playlist | CMQ-12 | 5

As a user I can browse the system without logging in but will not be able to CRUD so that | General | CMQ-40 | 3

As a user, I should see consistent styling throughout the entire site | General | CMQ-3 | 3

As a team, we must utilise the feature-branch model within a version | Project Requirements | CMQ-42 | -

As a developer, I should use a static analysis tool, so that code smells | Project Requirements | CMQ-38 | 5

As a product owner I want to see an ERD so that I can confirm the plan | Project Requirements | CMQ-54 | 2

As a client, I must see unit, integration, user-acceptance, functional and non | Project Requirements | CMQ-36 | 34

As a user, I should be able to see cards for each playlist, so that it appears on | User Home Screen | CMQ-13 | 3

Create Track DTO | CMQ-63 | 1

Add getters and setters to Genre class | CMQ-64 | 1

Fixing back-end functionality | CMQ-68 | 1

Set up separate sql environment to aid testing (allow running h2 or local sql) | CMQ-69 | 1

Backlog 19 issues

Create sprint

As a user, it would be nice to be able to search for a specific track, album, or artist. | General | CMQ-9 | 5

As a user, I should see each album on it's own page, so that I can view album details | Albums | CMQ-2 | 2

Share | ...

Set up separate sql environment to aid testing (allow running h2 or local sql)

In Progress

Description

Add a description...

Assignee

Sue Bluck

Reporter

Sue Bluck

Development

1 commit

12 hours ago

Labels

None

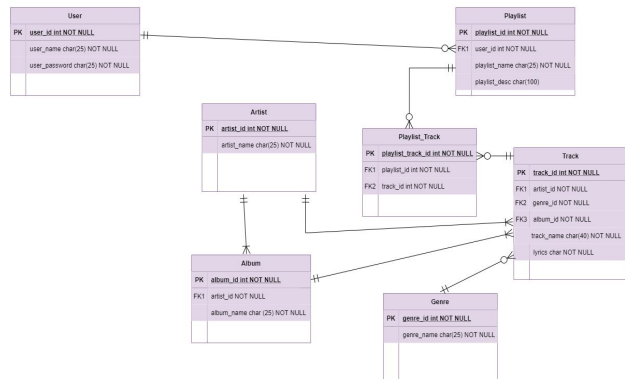
Sprint

Add a comment...

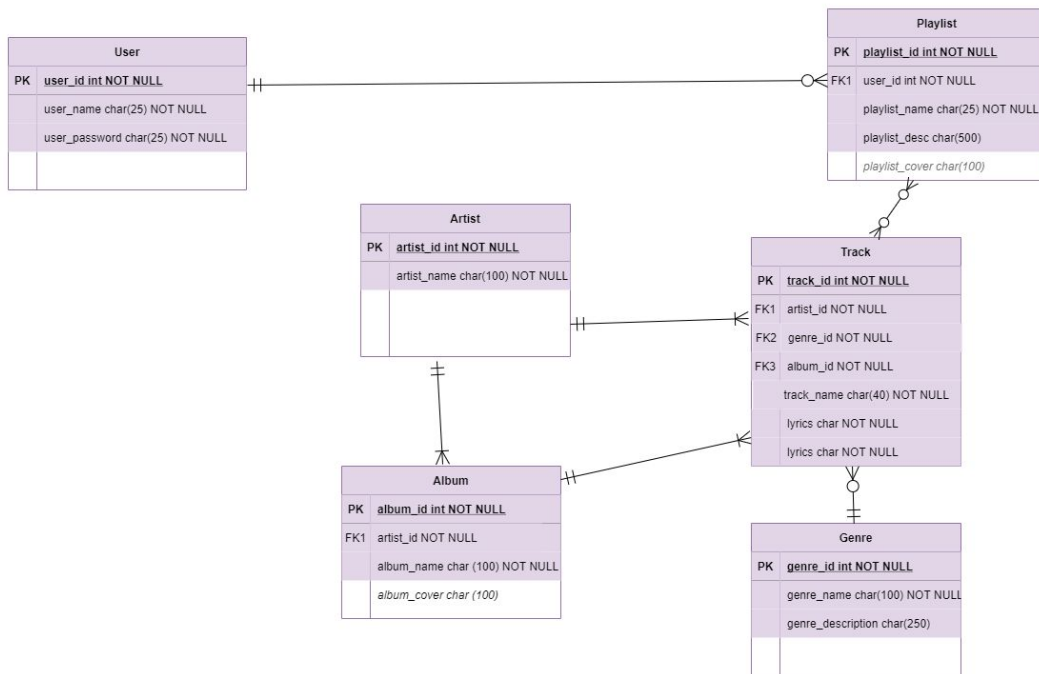
Pro tip: press **h** to comment

# Design - ERD from Client Requirements

CMQ - Entity Relationship Diagram



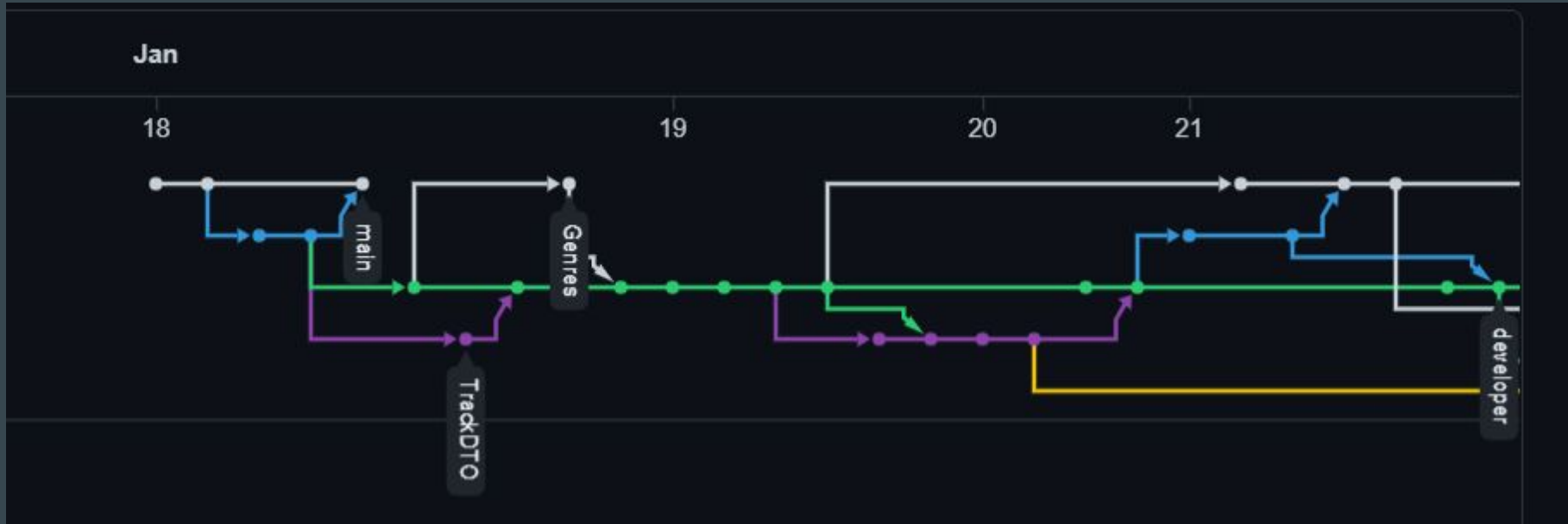
CMQ - Entity Relationship Diagram v1-1



## Additional Design

- User Stories (Jira)
- Sketches of page layouts
- MVC Design Pattern

# Choonz Application - Development approach and Demo Time



# Testing strategy

## Functional Back end Testing

- Unit Testing (JUnit, SpringBoot)
- Integration Testing
  - Spring MVC test framework (MockMVC - controller testing)

## Functional Front end Testing

- Selenium
- POM (Page Object Model ) Design Pattern

## User Acceptance Testing

- Cucumber /Gherkin
  - Given-When-Then
  - Testing against user stories

## Non-Functional Testing

- Performance Testing
  - Load, Stress, Spike, Soak (JMeter)
- Security Testing
  - Identify vulnerabilities (SonarQube)

# Functional Back End Unit Testing

```
// create
@Test // Test 1
void createTest() throws Exception {
    when(this.service.create(TEST_ALBUM_1)).thenReturn(this.mapToDTO(TEST_ALBUM_1));
    assertThat(new ResponseEntity<AlbumDTO>(this.mapToDTO(TEST_ALBUM_1), HttpStatus.CREATED))
        .isEqualTo(this.controller.create(TEST_ALBUM_1));
    verify(this.service, atLeastOnce()).create(TEST_ALBUM_1);
}

// Read one
@Test // Test 2
void readOneTest() throws Exception {
    when(this.service.readOne(TEST_ALBUM_1.getId())).thenReturn(this.mapToDTO(TEST_ALBUM_1));
    assertThat(new ResponseEntity<AlbumDTO>(this.mapToDTO(TEST_ALBUM_1), HttpStatus.OK))
        .isEqualTo(this.controller.readOne(TEST_ALBUM_1.getId()));
    verify(this.service, atLeastOnce()).readOne(TEST_ALBUM_1.getId());
}

// Read all
@Test // Test 3
void readAllTest() throws Exception {
    List<AlbumDTO> dtoList = ALBUM_LIST.stream().map(this::mapToDTO).collect(Collectors.toList());
    when(this.service.readAll()).thenReturn(dtoList);
    assertThat(this.controller.readAll()).isEqualTo(new ResponseEntity<>(dtoList, HttpStatus.OK));
    verify(this.service, atLeastOnce()).readAll();
}
```

```
// Update
@Test // Test 4
void updateTest() throws Exception {
    // rules WHEN... THEN DO....
    when(this.service.update(this.mapToDTO(TEST_ALBUM_1), TEST_ALBUM_1.getId()))
        .thenReturn(this.mapToDTO(TEST_ALBUM_1));

    // processes Store variables / perform requests....
    // assertions
    assertThat(new ResponseEntity<AlbumDTO>(this.mapToDTO(TEST_ALBUM_1), HttpStatus.ACCEPTED))
        .isEqualTo(this.controller.update(this.mapToDTO(TEST_ALBUM_1), TEST_ALBUM_1.getId()));

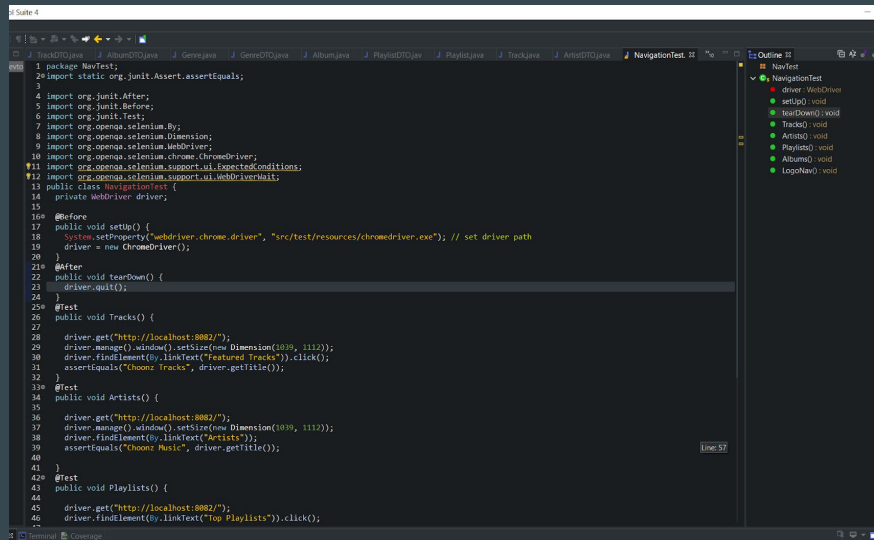
    // verification Check how many times rule has been applied
    verify(this.service, atLeastOnce()).update(this.mapToDTO(TEST_ALBUM_1), TEST_ALBUM_1.getId());
}

// Delete
@Test // Test 5
void deleteTest() throws Exception {
    when(this.service.delete(TEST_ALBUM_1.getId())).thenReturn(false);
    assertThat(this.controller.delete(TEST_ALBUM_1.getId()))
        .isEqualTo(new ResponseEntity<>(HttpStatus.INTERNAL_SERVER_ERROR));
    verify(this.service, atLeastOnce()).delete(TEST_ALBUM_1.getId());
}

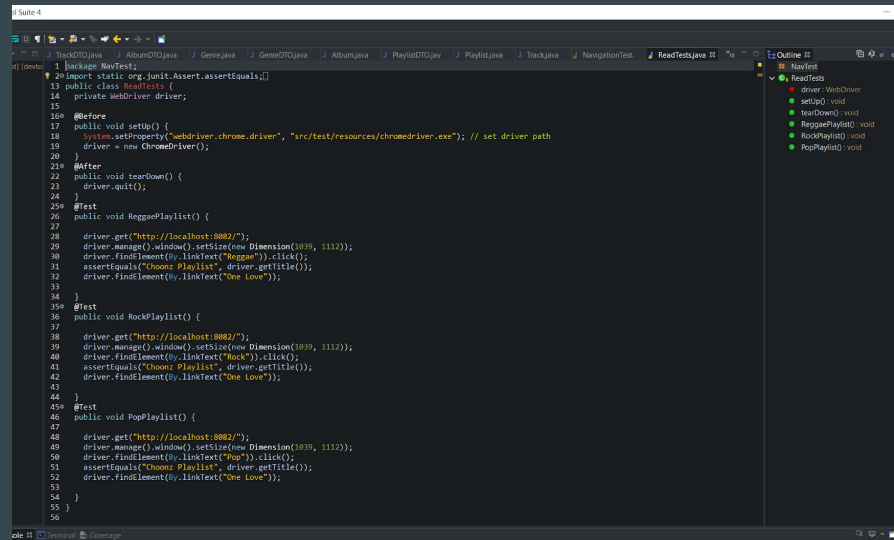
// Delete
@Test // Test 6
void deleteTest2() throws Exception {
    when(this.service.delete(TEST_ALBUM_1.getId())).thenReturn(true);
    assertThat(this.controller.delete(TEST_ALBUM_1.getId())).isEqualTo(new ResponseEntity<>(HttpStatus.NO_CONTENT));
    verify(this.service, atLeastOnce()).delete(TEST_ALBUM_1.getId());
}
```

▼ QA-Specialism-Project-Choonz-Team1	<div><div></div><div></div></div>	48.0 %	802	868	1,670
> src/main/java	<div><div></div><div></div></div>	23.3 %	234	770	1,004
> src/test/java	<div><div></div><div></div></div>	85.3 %	568	98	666

# Functional Front End Testing



```
1 package NavTest;
2 import static org.junit.Assert.assertEquals;
3
4 import org.junit.After;
5 import org.junit.Before;
6 import org.junit.Test;
7 import org.openqa.selenium.By;
8 import org.openqa.selenium.Dimension;
9 import org.openqa.selenium.WebDriver;
10 import org.openqa.selenium.chrome.ChromeDriver;
11 import org.openqa.selenium.support.ui.WebDriverWait;
12
13 public class NavigationTest {
14     private WebDriver driver;
15
16     @Before
17     public void setUp() {
18         System.setProperty("webdriver.chrome.driver", "src/test/resources/chromedriver.exe"); // set driver path
19         driver = new ChromeDriver();
20     }
21
22     @After
23     public void tearDown() {
24         driver.quit();
25     }
26
27     @Test
28     public void Tracks() {
29         driver.get("http://localhost:8082/");
30         driver.manage().window().setSize(new Dimension(1039, 1122));
31         driver.findElement(By.linkText("Featured Tracks")).click();
32         assertEquals("Choonz Tracks", driver.getTitle());
33     }
34
35     @Test
36     public void Artists() {
37         driver.get("http://localhost:8082/");
38         driver.manage().window().setSize(new Dimension(1039, 1122));
39         driver.findElement(By.linkText("Artists")).click();
40         assertEquals("Choonz Music", driver.getTitle());
41     }
42
43     @Test
44     public void Playlists() {
45         driver.get("http://localhost:8082/");
46         driver.findElement(By.linkText("Top Playlists")).click();
47     }
48 }
```



```
1 package NavTest;
2 import static org.junit.Assert.assertEquals;
3
4 import org.junit.After;
5 import org.junit.Before;
6 import org.junit.Test;
7 import org.openqa.selenium.By;
8 import org.openqa.selenium.Dimension;
9 import org.openqa.selenium.WebDriver;
10 import org.openqa.selenium.chrome.ChromeDriver;
11 import org.openqa.selenium.support.ui.WebDriverWait;
12
13 public class ReadTests {
14     private WebDriver driver;
15
16     @Before
17     public void setUp() {
18         System.setProperty("webdriver.chrome.driver", "src/test/resources/chromedriver.exe"); // set driver path
19         driver = new ChromeDriver();
20     }
21
22     @After
23     public void tearDown() {
24         driver.quit();
25     }
26
27     @Test
28     public void ReggaePlaylist() {
29         driver.get("http://localhost:8082/");
30         driver.manage().window().setSize(new Dimension(1039, 1122));
31         driver.findElement(By.linkText("Reggae")).click();
32         assertEquals("Choonz Playlist", driver.getTitle());
33         driver.findElement(By.linkText("One Love")).click();
34     }
35
36     @Test
37     public void RockPlaylist() {
38         driver.get("http://localhost:8082/");
39         driver.manage().window().setSize(new Dimension(1039, 1122));
40         driver.findElement(By.linkText("Rock")).click();
41         assertEquals("Choonz Playlist", driver.getTitle());
42         driver.findElement(By.linkText("One Love")).click();
43     }
44
45     @Test
46     public void PopPlaylist() {
47         driver.get("http://localhost:8082/");
48         driver.manage().window().setSize(new Dimension(1039, 1122));
49         driver.findElement(By.linkText("Pop")).click();
50         assertEquals("Choonz Playlist", driver.getTitle());
51         driver.findElement(By.linkText("One Love")).click();
52     }
53
54     }
55 }
```

# SonarQube

Chooztz master January 20, 2021, 2:24 PM Version 6.0.1-SNAPSHOT

Overview Issues Security Hotspots Measures Code Activity Project Settings Project Information

My Issues All Bulk Change 1 to select issues to navigate 1 / 10 issues 1h 40min effort

Filters Clear All Filters

Type VULNERABILITY Clear

Vulnerability 10 Code Smell 55

Severity

Blocker 0 Minor 0 Critical 10 Info 0 More 0

Scope

Resolution

Status

Security Category

SonarSource 10 Others

CWASP Top 10

SANS Top 25

CWE

Creation Date

Language

Rule

Tag

Directory

File

Assignee

Author

10 of 10 shown

src/\_compta/choozt/rest/controller/AboutController.java

Replace this persistent entity with a simple POJO or DTO object. Why is this an issue? Vulnerability Critical Open Not assigned 10min effort Comment 4 days ago 133 cov. owasp-a5, spring

src/\_compta/choozt/rest/controller/ArticleController.java

Replace this persistent entity with a simple POJO or DTO object. Why is this an issue? Vulnerability Critical Open Not assigned 10min effort Comment 4 days ago 140 cov. owasp-a5, spring

src/\_compta/choozt/rest/controller/GenreController.java

Replace this persistent entity with a simple POJO or DTO object. Why is this an issue? Vulnerability Critical Open Not assigned 10min effort Comment 4 days ago 140 cov. owasp-a5, spring

src/\_compta/choozt/rest/controller/PayloadController.java

Replace this persistent entity with a simple POJO or DTO object. Why is this an issue? Vulnerability Critical Open Not assigned 10min effort Comment 4 days ago 133 cov. owasp-a5, spring

src/\_compta/choozt/rest/controller/PaymentController.java

Replace this persistent entity with a simple POJO or DTO object. Why is this an issue? Vulnerability Critical Open Not assigned 10min effort Comment 4 days ago 140 cov. owasp-a5, spring

src/\_compta/choozt/rest/controller/TrackController.java

Replace this persistent entity with a simple POJO or DTO object. Why is this an issue? Vulnerability Critical Open Not assigned 10min effort Comment 4 days ago 140 cov. owasp-a5, spring

Chooztz master January 20, 2021, 2:24 PM Version 6.0.1-SNAPSHOT

Overview Issues Security Hotspots Measures Code Activity Project Settings Project Information

QUALITY GATE STATUS 0

Passed All conditions passed

MEASURES

New Code Overall Code

0 Bugs Reliability

10 Vulnerabilities Security

5 Security Hotspots 0.0% Reviewed Security Review

5h 45min Debt 55 Code Smells Maintainability

0.0% Coverage on 514 Lines to cover Line Tests

32.0% Duplications on 1.5k Lines Duplicated Blocks

18

ACTIVITY

Coverage

January 20, 2021, 2:24 PM 6.0.1-SNAPSHOT

There isn't enough data to generate an activity graph