Technical Design

Name: Tony Jiang

Semester: 6

Project: Music trivia game

|  |  |  |
| --- | --- | --- |
| Version | Date | Notes |
| 0.1 | 18 March 24 | Initial document. |
| 0.2 | 12 April 24 | Add C4 UML. |
| 0.3 | 19 April 24 | Add CI pipeline diagram. |
| 0.4 | 05 May 24 | Add yml file. |

Contents

[System Architecture 3](#_Toc165819838)

[Level 1: System Context 3](#_Toc165819839)

[Level 2: Containers 3](#_Toc165819840)

[Level 3: Component 4](#_Toc165819841)

[Level 4: Code 6](#_Toc165819842)

[CI/CD pipeline 6](#_Toc165819843)

[YML file 7](#_Toc165819844)

# System Architecture

## Level 1: System Context

A screenshot of a computer

Description automatically generated

## Level 2: Containers

A diagram of a diagram

Description automatically generated

## Level 3: Component

A diagram of a company

Description automatically generated

## Level 4: Code

A diagram of a computer

Description automatically generated with medium confidence

# CI/CD pipeline

A diagram of a flowchart

Description automatically generated

## YML file

Yml file on GitHub action.

name: MusicTrivia

on:

push:

branches:

- development

jobs:

build:

runs-on: ubuntu-latest

steps:

- uses: actions/checkout@v4

- uses: actions/setup-java@v4

with:

distribution: 'temurin'

java-version: '21'

cache: 'gradle'

- name: Build with Gradle

run: |

cd MusicTrivia

chmod +x gradlew

./gradlew assemble --no-daemon

test:

runs-on: ubuntu-latest

needs: build

steps:

- uses: actions/checkout@v4

- uses: actions/setup-java@v4

with:

distribution: 'temurin'

java-version: '21'

cache: 'gradle'

- name: Test with Gradle

run: |

cd MusicTrivia

chmod +x gradlew

./gradlew test

docker:

runs-on: ubuntu-latest

needs: test

steps:

- uses: actions/checkout@v4

- uses: actions/setup-java@v4

with:

distribution: 'temurin'

java-version: '21'

cache: 'gradle'

- name: Build with Gradle

run: |

cd MusicTrivia

chmod +x gradlew

./gradlew assemble --no-daemon

- name: Set up Docker Buildx

uses: docker/setup-buildx-action@v3

- name: Login to Docker Hub

uses: docker/login-action@v3

with:

username: ${{ secrets.DOCKER\_USERNAME }}

password: ${{ secrets.DOCKER\_PASSWORD }}

- name: Build and push Docker image

run: |

cd MusicTrivia

docker build -t tonyj3/music-trivia-backend:latest .

docker push tonyj3/music-trivia-backend:latest