

System and Unit Test Report

Team Name - FRTeam

Members -

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User Stories

- User Story 1.1: As a user I need a webpage to access this software tool
- Scenario:
 - Startup webpage using Localhost.
 - Use our initial frontend input test to see our keyboard input.
 - Use keyboard input and verify that our webpage is displaying the same keyboard input we are inputting.
- User Story 2.2: As a user, I need a webpage that allows me to play different keys and also allows me to upload my own mp3 files.
- Scenario:
 - Startup webpage using Localhost.
 - Use our initial frontend file upload test to see our uploaded file.
 - Use the upload file button to upload a sound file
 - Verify that our uploaded file is in a specific folder in our repository.
- User Story 3.1: As a user, I need my visual keyboard to play the correct notes on the keyboard.
- Scenario:
 - Startup webpage using Localhost.
 - Use our synth keyboard and test out each keyboard input we have assigned.
 - Verify that when we press a keyboard input, we get a sound corresponding to that key.
 - Check to see if the octave buttons functioning correctly by both displaying the right octave, and changing the keyboard playback octave.
 - Repeat the test above using the mouse to click the buttons.
- User Story 4.2: As a user, I want to be able to get an accurate resynthesis of my uploaded sound.

- Scenario
 - Select spectral features to test.
 - Run genetic algorithm using selected spectral features for fitness function.
 - Record final fitness of best individual in final generation.
 - Select spectral features with best performance for production algorithm.

Genetic Algorithm Unit Test

- Scenario
 - a. Open ../test_assets/ directory with static testing wav files
 - b. Loop through filenames in test assets directory and:
 - Get test parameters from dictionary
 - Initialize genetic algorithm with default values
 - Run Genetic Algorithm using test parameters and filename
 - Assert fitness is within testing threshold