STINT Test Manual

STINT Project

Software Engineering

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Test B

STINT needs to be able to accurately determine the start and completion times of stints within a match. From the data provided to the program, start/finish times of a match, a specified ground and a .csv containing GPS/accelerometer data, STINT is to make accurate predictions as to the start and finish times of separate stints and then output this as a .vid file.
This test is for correctness of choosing the start and completion times of stints by STINT.

Test Specification

This test is to ensure that STINT is not creating unusable .vid files that have separate stints that are too far outside the actual times of a player being active on the pitch. This test will test the times made by STINT using an external testing method to the main program that will produce a .txt file detailing the variance between the stint times.
Acceptance for this test is for STINT to select all the times for the stints within 5 seconds of a humanly modified .vid file.

Test Description

- **Means of Control**: A correctness testing method/class
- **Input Data**: A human created .vid file using Catapult Sprint, A STINT created .vid file for the same player.
- **Input Commands**: Run correctness testing method with 2 .vid input files.
- **Output Data** – Outputted text file that shows the variance between the 2 inputs. File gives the separate times of the difference between the stint times.
- **System Messages** – No system errors

Procedures:
1. Process a given file in STINT
2. Process same .csv file in Catapult Sprint manually
3. Run correctness method
4. Visually inspect the outputted text file.

Test Analysis Report

- **Function:** Positive test result is defined as the outputted times as shown in the .txt file are all within 5 seconds of a user created .vid file. Users are to visually inspect he output file to ensure there are no times that are greater than 5 seconds. Additionally averages of the times are also given at the end of the text file.
- **Performance**: The test will show the difference in times for the stints as well as allowing users to observe the average difference between the times.
- **Data Measures:** Outputted .txt file should only show times less than 5 seconds and have an average well below 5 seconds.

Test C

STINT is to be a program that reduces the processing time of selecting the start and finish times of stints within a match. Currently, the task takes about 10 minutes per match for an experienced analyst to manually select the start and finish times of stints for further analysis in Catapult Sprint.

This test tests the time performance of STINT, that is, how long the program takes to process a given match.

Test Specification

This test will ensure optimality is maintained when creating the program and allow for a balance between time performance and actual performance of STINT.

Requirements for acceptable pass are defined, as the reported processing time for a match is 10mins. The program however, should aim for a much lower value.

Test Description

- **Means of Control:** Data is fed manually into STINT with an additional timer java method to display the processing time of the program.
- **Input Data**: The .csv file to be inputted into the testing methods which implements STINT and displays the processing time for the program.
- **Input Commands:** Input into the timer test method with the .csv file as an argument.
- **Output Data**: Display time taken in command line/text file
- **System Messages**: Displays the time taken

Procedures:
1. Input .csv into STINT with input command test time
2. Manually inspect value outputted by the timer to assess performance

Test Analysis Report

- **Function:** A positive test result is defined, as the entire processing time for a match is less than 10 minutes. Users are to inspect the time taken for the outputted processing time for a match to be less than 10 minutes.
- **Performance:** This will show the time taken for the entire process of converting the .csv to an appropriate .vid file is within the acceptable times.
- **Data Measures:** Data visually inspected on the window to show that the time taken for the processing time is less than 10 minutes.

Test F

Users are able to input data into STINT via the graphical user interface provided. The inputs required to run STINT are: Grounds Selection, Start Time, Finish Time and the directory of .csv files to be processed.

Manual input would bring extra room for error. Hence checks to make sure the user is entering correct data is required.

This test is to ensure that the input data is inputted correctly, and checks for the functionality of a checker that prompts the user when there is an irregularity in the input data.

Test Specification

These tests include making sure the user prompts appear in each of the following cases: Invalid grounds, invalid start time, invalid finish time, abnormal game period, incorrect .csv file and a warning for the user for large/deep folders.

Test Description

- **Means of Control:** Data will be manually entered into the program
- **Input Data:** Input data is to be the various manual input into the graphical user interface, each to test for the appearance of the checkers.
- **Input Commands:** Run STINT with strange/incorrect user inputs.
- **Output Data:** Pop-up windows or prompts to appear when incorrect input is received
- **System Messages**: System will halt processing and prompt user to change input.

Test Analysis Report

- **Function:** This test will make sure all the user interface prompts are appearing when required.
- **Performance:** This test will prove that prompts always appear when a user inputs strange data. Users are able to change the data or proceed with given data.
- **Data Measures**: Acceptance for the test involves prompts always appearing when bad inputs are received.