Test Plan

Bowlstrike.py

*Name: Vitor Antunes Cazella*

*Student ID: 91050051*

# The Product

The project is developing a 10 pin bowling game prototype that can be used to teach a variety of subjects, it is made by a company specialised in educational software.

**Rules of Play**

Each game of bowling consists of ten frames. In each frame, the bowler will have two chances to knock down as many pins as possible with their bowling ball. In games with more than one bowler, as is common, every bowler will take their frame in a predetermined order before the next frame begins. If a bowler knocks down all ten pins with their first ball, he is awarded a strike. If the bowler knocks down all 10 pins with the two balls of a frame, it is known as a spare. Bonus points are awarded for both a strike and a spare. The bonus points awarded depend on what is scored in the next 2 balls (for a strike) or 1 ball (for a spare). If the bowler knocks down all 10 pins in the tenth frame, the bowler is allowed to throw 3 balls for that frame. This allows for a potential of 12 strikes in a single game, and a maximum score of 300 points, a perfect game.

# Test Strategy

## Testing Scope

In Scope:

* Code formatting
* Functions
* Prototype

Out of Scope:

* Graphic UI
* Database
* Input data

## Testing Type

Which Testing Types should be focused for testing?

* Back-end Testing
* Component Testing
* Functional Testing

Which Testing Types should be ignored?

* Graphical User Interface Testing
* Compatibility Testing
* Performance Testing

## Test Logistics

Testing and Bug fixing are going to be performed by Vitor Cazella, during the period of a week.

# Testing Objective

List all the software features (functionality, performance, GUI…) which may need to test.

* Record throws
* Number of pins
* Calculate score
* Strike scoring

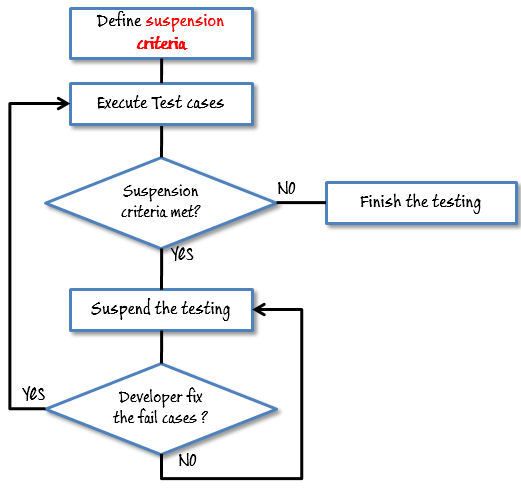
Target of testing:

* Find errors that prevent code from running
  + Syntax
  + Formatting
  + Missing information

# Test Criteria

Suspension Criteria

If 40% of test cases failed during testing, you should suspend testing until the development team fixes all the failed cases.



Exit Criteria

If tests reports 85% are successfully completed, testing can be finished.

# Resource Planning

Human resource

|  |  |  |
| --- | --- | --- |
| No. | Member | Tasks |
| 1. | Tester | Execute the tests, Log results, Report the defects. |
| 2. | Developer in Test | Implement the test cases, test program, test suite etc. |

System Resource

|  |  |  |
| --- | --- | --- |
| No. | Resources | Descriptions |
| 1. | Test tool | Testing will be automated through functions in the code, using debugging from VS Code Python |
| 2. | Computer | The PC that users will use the application. |

# Test Environment

A testing environment is a setup of software and hardware on which the testing team is going to execute test cases.

Tests are going to be conducted in the following system:

* Windows 10 Home (Version 20H2)
* 64-bit operating system, x64-based processor
* Intel® Core™ i5-9400F CPU @ 2.90GHz
* 16 GB RAM

Used software:

* Visual Studio Code (Version 1.51.1)
* Python 3.8.6 64-bit

# Schedule & Estimation

|  |  |
| --- | --- |
| Task | Estimate effort |
| Create the test specification | 170 man-hour |
| Perform Test Execution | 80 man-hour |
| Test Report | 10 man-hour |
| Test Delivery | 20 man-hour |
| Total | 280 man-hour |