

Software Test Report (STR)
Software It Counts (SWIC)
CMSC 447

Updated on November 20, 2015

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1 Scope

This section shall be divided into the following paragraphs.

1.1 Identification

For this project, we will be working with the web application, Parable of the Polygons. The software will simulate segregation levels between three different shapes, allowing them to move to different locations on the board in an attempt to be happy. The website will be programmed in HTML while the application will be programmed in JavaScript. The repository is located at <https://github.com/Kirkas1/polygons>, and branches off the source code at <https://github.com/dncnmcdougall/polygons>.

1.2 System overview

This project has tasked us with inserting a 3rd polygon, a red circle, into the game, allowing for relations between 3 different shapes to be shown. In addition, two new algorithms will be created. One such algorithm will be based around movement when based on the happiness levels of single polygons, henceforth known as the “happiness algorithm.” The second algorithm will be based around the happiness of single polygons, as well as the happiness of those in the 8 squares adjacent to them, henceforth known as the “collective happiness algorithm.”

The following document will address the test results produced by the system (in fulfillment of the requirements given by the customer Russ Cain). The subsequent test report for the project will thoroughly detail the test outcomes carried out by the group (SWIC). This document will also be uploaded to the project’s repository at <https://github.com/Kirkas1/polygons>, which has the history of system development thoroughly summarized.

1.3 Document overview

This document will assess the testing of the system and the results of each test (based on requirements for the project, as previously discussed by customer). The overview of the testing shall include an overall assessment of the software tested and recommended improvements. It will also discuss each test and result given by the STD, any problems encountered, and any deviations from the test case. The test results and handling shall be carried out by the group (SWIC), and the findings shall be traced back to the requirements and then published.

2 Referenced documents

1. Parable of Polygons, Revised Apr 18, 2015, <https://github.com/ncase/polygons>, Vi Hart and Nicky Case
2. Parable of Polygons Source Code, Revised Oct 25, 2015, <https://github.com/ncase/polygons>, Vi Hart and Nicky Case
3. Polygons, Revised Dec 9, 2014, <https://github.com/dncnmcdougall/polygons>, Duncan McDougall

3 Overview of test results

This section shall be divided into the following paragraphs to provide an overview of test results.

3.1 Overall assessment of the software tested

The tests able to be performed were successful except. The Red Circle Test was completed without flaws. The preliminary tests for the Happiness algorithms were complete given by the fact that they are selectable options on the website. However they could not be completed in full as the algorithms are not finished their development stage. The Customized Slider Test will be conducted when that phase of development is complete.

3.2 Impact of test environment

All tests were done on machines with similar environments to that which they will be run on with the exception of adding the radio buttons. That test was done on a computer running Linux, but the radio buttons proved to be functional on Windows as well.

3.3 Recommended improvements

- Finish implementing the Happiness Algorithm, the Collective Happiness Algorithm, and the Sliders so that they may be tested.

4 Detailed test results

This section shall be divided into the following paragraphs to describe the detailed results for each test. Note: The word "test" means a related collection of test cases.

4.1 (Project-unique identifier of a test)

The following test results will be ordered by test: Red Circle Test, Random Algorithm Test, Happiness Algorithm Test, Collective Happiness Algorithm Test, and Customized Slider Test.

4.1.1 Summary of test results

Red Circle Test – All results as expected. A third shape, a red circle, was implemented onto the polygon board with the same functionality as the other shapes. The red circle animates and interacts with the board environment as intended.

Random Algorithm Test – All results as expected. The radio buttons accurately default to the “Random” algorithm upon page loading. Likewise, the “Random” algorithm mimics random polygon movement when said polygon is unhappy. The “Random” algorithm was implemented and tested as intended.

Happiness Algorithm Test – Problems encountered, incomplete. The radio buttons accurately list a “Happiness” algorithm that is selectable. However, the “Happiness” algorithm follows the exact results from the “Random” algorithm, and does not accurately portray polygons moving to places where they are happy systematically. The “Happiness” algorithm results were not as intended and therefore not a success.

Collective Happiness Algorithm Test – Problems encountered, incomplete. The radio buttons accurately list a “Collective Happiness” algorithm that is selectable. However, the “Collective Happiness” algorithm follows the exact results from the “Random” algorithm, and does not accurately portray polygons moving to places by group systematically, in order to make the group (the collective neighborhood) happy. The “Collective Happiness” algorithm results were not as intended and therefore not a success.

Customized Slider Test – Not applicable, incomplete. The customized slider used to assess polygon bias between shapes (for happiness levels) is currently not implemented on the board interface. There is currently nothing to test which is unexpected, and the slider is still stuck in design. Thus, the results of this test are not available and therefore incomplete.

4.1.2 Problems encountered

During the testing process for the red circle it was first noted that the circles were not transparent. This occurred in our initial test. However this was a change required to the art assets and not to the code. This was changed once by making the background transparent as opposed to white (which was thought to symbolize transparent at the time).

During the testing for the two other algorithms we have been unable to get them to work with the radio buttons. Further work will be necessary to get these processes working

4.1.3 Deviations from test cases/procedures

Deviations in the testing schedule occurred due to the happiness algorithm and collective happiness algorithm not being finished on time. In subsequent weeks, this will be remedied and then tested until complete.

5 Test log

This section shall present, possibly in a figure or appendix, a chronological record of the test events covered by this report.

Test	Date	Location	Description/Results	Hardware/software configurations	Performers
Integrating red circle	November 20, 2015 8 PM-10 PM	UMBC Library, on each team member's laptop	Integrated a third shape, a red circle, to the sandbox. The red circle acted like the other shapes (e.g. moved if a certain amount of shapes were around it, and shook like the other shapes).	Latest version (as of November 2015) of Fire Fox, Internet Explorer, and Chrome on laptops with Windows 7 or Linux	Team SWIC
Adding the selected algorithm radio buttons	November 21, 2015 1 PM	Ian's laptop	Added three radio buttons for each algorithm (random, happiness, collective happiness)	Latest version (as of November 2015) of Fire Fox, Internet Explorer, and Chrome on laptops with Windows 7 or Linux	Team SWIC
Working on Internet Explorer, Fire Fox, and Chrome	November 23, 2015 7 PM	All of Team SWIC's laptops	Tested to see if the code ran on the browsers listed.	Latest version (as of November 2015) of Fire Fox, Internet Explorer, and Chrome on laptops with Windows 7 or Linux	Team SWIC

6 Notes

This section shall contain any general information that aids in understanding this document (e.g., background information, glossary, rationale). This section shall include an alphabetical listing of

all acronyms, abbreviations, and their meanings as used in this document and a list of any terms and definitions needed to understand this document.

A. Appendixes

Appendixes may be used to provide information published separately for convenience in document maintenance (e.g., charts, classified data). As applicable, each appendix shall be referenced in the main body of the document where the data would normally have been provided. Appendixes may be bound as separate documents for ease in handling. Appendixes shall be lettered alphabetically (A, B, etc.).