

Evaluation Form: Visualizing Complex Functions

Members:

Paul Giacchetto
Branden Dundey
Bradley Watson

pgiacchetto2009@my.fit.edu
bdundey2009@my.fit.edu
watsonb2008@my.fit.edu

Faculty Sponsor:

Ryan Stansifer

ryan@cs.fit.edu

Milestone 1 Task Matrix

Task	Completion %	Paul G	Branden D	Bradley W	To do
Requirement Document	100%	20%	60%	20%	0%
Design Document	100%	20%	20%	60%	0%
Test Document	100%	50%	30%	20%	0%
Research	60%	30%	15%	55%	40%

Milestone 1 Summary

Requirements Document

The requirements document defines what we hope to accomplish for this project. The main goals of this project are to allow a user to be able to input a function in a text field to graph. They will also be able to select patterns, shadings, and other parameters from a list, as well as choose what type of graph they want to draw.

Design Document

The design document shows how the program will run and what each step the program is in as it runs. The UML diagram shows the steps the program will take from Users to printing the pattern to screen and asking the user if he/she wants to save the resulting PNG image or GIF animation. The written document will further explain each step of the program. The class "Function Drawer" is a parameterized function that will take 3 parameters -- a valid function, an image pattern, and time (duration and frequency for animations) -- and will create an image to map the complex function.

Test Document

The test document defines how we will test multiple functions in our project. The primary goals of our testing includes validating accuracy in modeling complex functions, simplicity and usability of the program with relation to the end user, and functionality in different environments.

Research

Our research so far is derived from four different sources. Our main source is the book Visual Complex Analysis by Tristan Needham. This book features many complex functions and helps visualize what these functions would look like on a complex plane. We are also using Bombelli's java applet as well as an applet developed from a professor from UCLA. These applets give us a basic idea on how to map complex functions (links can be found in the reference section of the requirements document). Our last resource is from Dr. Gabdo's complex function visualization site, which shows a basic idea on how the graphs should be represented.

Milestone 2 Task Matrix

Task	Paul G	Branden D	Bradley W
Set Up Website	20%	70%	10%
Dummy GUI	30%	20%	50%
Functions and Patterns	50%	25%	25%

Milestone 2 Summary

Website

We will secure a domain name for the project. We will also begin to research html formats so that we may be able to attach an applet to a page in the future. Additional research will be done to find out how to work simple website functions such as linking to different websites and making pages within the website.

GUI

We hope to set up an interface that will be correctly formatted. Buttons are not required to work at this time, but it is possible for them to execute a sample piece of code. The time spent on the GUI will be to finalize how it will look and to ensure that all menus and buttons that will be in the final version of the project will be present.

Functions and Patterns

We will continue to research mapping complex functions and implementing sample functions. The most important functions we want to develop are reading the input string and tokenizing it so we can perform mathematical calculations on it. We will also begin to handle error checking with the input string.

Sponsor Feedback

[For Milestone 2]

- 1) Complex Arithmetic Package
- 2) One png created
- 3) Write an applet

Signature _____ Date _____

Sponsor Evaluation

Sponsor: detach and return this page to Dr. Chan (HC 322)

- Score (0-10) for each member: circle a score (or circle two adjacent scores for .25 or write down a real/float number between 0 and 10)

Paul G	0	1	2	3	4	5	5.5	6	6.5	7	7.5	8	8.5	9	9.5	10
Branden D	0	1	2	3	4	5	5.5	6	6.5	7	7.5	8	8.5	9	9.5	10
Bradley W	0	1	2	3	4	5	5.5	6	6.5	7	7.5	8	8.5	9	9.5	10

Additional Comments (if any)

Signature _____ Date _____