

**MAT 128B: Project I: Using iteration methods to understand fractal geometry**

**Wednesday, Feb. 19th**

**To get full credit show all your work and explain in your words the results you obtain**

**Names:** Cole Warner, Michael-River Rose, Nishad Mulay

**[100 pts]**

Our team is organized in the following way: Cole and Michael-River focused on the questions about generating Julia sets and Mandelbrot sets as well as determining the fractal dimension, roughly parts one through four, and eight; Nishad focused on the questions concerning the orbit of a Julia set, coloring said orbits, and Newton's method - roughly parts five through seven. In terms of writing up this project, Michael-River published the code for parts one and eight and did much of the writing and document proofreading and organizing; Cole published code for parts two through four; Nishad published code for parts five through seven.

Additionally, we made use of Github to track our progress, maintain a code base, and keep our work and resources straight. On the following page is a screen capture of our collaboration on Git.

MATH128B / projectOne

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Issues 0

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72 commits

1 branch

0 packages

0 releases

3 contributors

Branch: master

New pull request

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mrr24 Add files via upload

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references	Delete pdfs	16 hours ago
128B GROUP PROJ.pdf	Add files via upload	now
README.md	Update README.md	17 hours ago
part1.pdf	Add files via upload	13 minutes ago
part2a.pdf	Add files via upload	13 minutes ago
part2b.pdf	Add files via upload	13 minutes ago
part3.pdf	Add files via upload	13 minutes ago
part4.pdf	Add files via upload	12 minutes ago
part5.pdf	Add files via upload	13 minutes ago
part6.pdf	Add files via upload	13 minutes ago
part7.pdf	Add files via upload	13 minutes ago
part8.pdf	Add files via upload	13 minutes ago
project1-photos-as-pdf.pdf	Add files via upload	17 hours ago

README.md

# Project One

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## Fractals

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By Cole, Michael-River, and Nishad

All code is separated filewise by question.

*References* holds all our sources and reading for the code and definitions for answers.

### Additional References:

- 1.) Dynamical Systems with Applications using MATLAB 2nd Edition by Stephen Lynch [Chapters 3 & 4]
- 2.) Efficient Computation of Julia Sets and Their Fractal Dimension. Dietmar Saupe.