


TEAM I AM NOT OK WITH THIS

PRESENTS

"ISOEIS"

(ISOEIS Is Searching the Online Encyclopedia of Integer Sequences)

INITIAL DESIGN DOCUMENT

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SoftDev pd9

P04 -- Let the Data Speak

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PROJECT DESCRIPTION

The Online Encyclopedia of Integer Sequences is a repository of mathematical formulations to generate various sequences. The Encyclopedia also stores the first several thousand members of these sequences. Our project will utilize PyOEIS to query the OEIS and return sequences whose members match the sequence of integers from the user's input. We will then utilize D3.js to visualize these sequences as nodes in a directed graph. When two sequences share a node that is in the same position relative to the user input nodes (root), it will be represented as an individual node that has a two-colored line. Each sequence will be linked with its own colored link that will tell more about the sequence when hovered upon.

TEAM ROLES

Ivan Galakhov

- Project Manager

Moody Rahman

- D3 and backend

Jude Rizzo

- Front End Development with HTML and CSS

COMPONENT MAP

From what we have designed so far, this project has two basic components described below. If we end up using more components, we will end up converting this into a diagram.

Backend

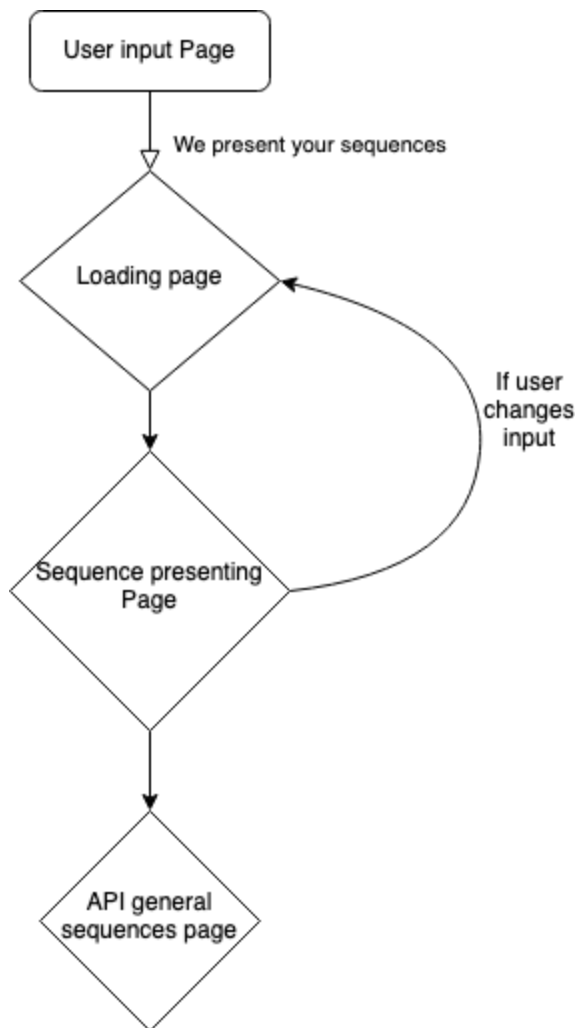
Use PyOEIS to gather information on integer sequences according to user input

(<https://pyoeis.readthedocs.io/en/latest/api.html#oeisclient-objects>)

The sequences can then be parsed and trimmed in order to create a directed acyclic graph

Frontend

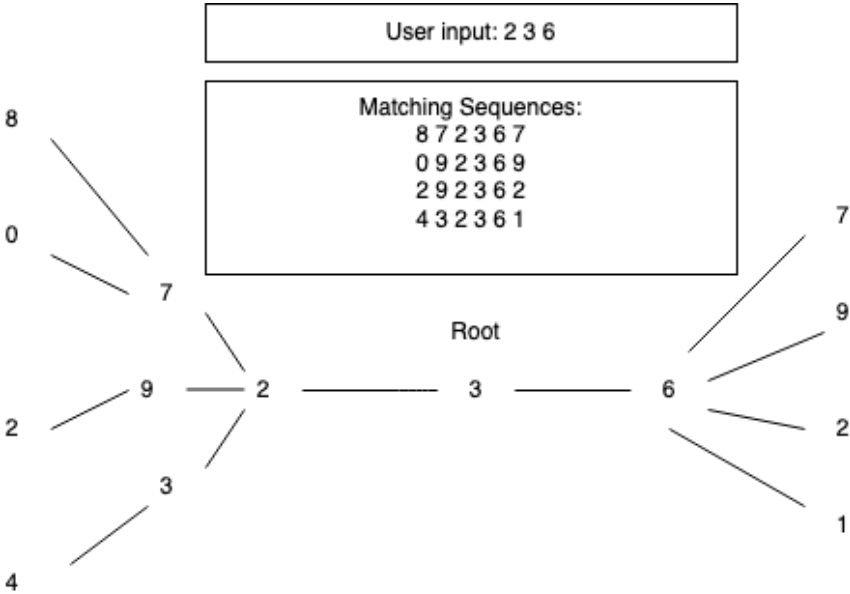
SITE MAP



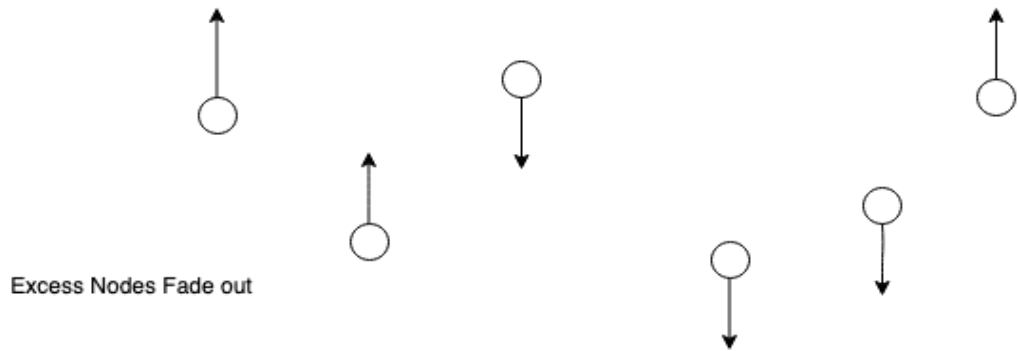
We will prompt users to input a sequence of n-integers, which will be fed into PyOeis to gather all the relevant sequences the input relates to. The information will be displayed as follows:

Display the user input in the middle
Draw nodes of preceding elements of sequences before the user input nodes (to now be referred to as the "root") and draw nodes of succeeding emojis after the root. Then draw colored lines through the preceding and succeeding nodes that each represent their own sequence.

The basic structure behind the project



Title Fades in
Nodes fade away unto a single line



Nodes travel up and down
Sinusoidally

Everything fades
out but data as
new inputs come
in

Title Page

