

**Project Title:** Digit Sums and Graphs

In each diagram, fill in the circle with positive whole numbers in such a way that each circle's number is the sum of the digits of all the numbers connected to it.

**Github Repository Link:** <https://github.com/fahmed0710/161-Individual-Project>

**Milestones with Deadlines:**

2/6 - 2/16: Learn Flask basics, set up Github repository, finalize technologies, finalize algorithms, finalize features and design

2/16 - 2/21: Set up initial DBs and backend

2/21 - 2/25: Design initial UI

2/25 - 3/1: Login/registration, account management

3/1 - 3/30: Implement game functionality and algorithm

3/30 - 4/5: Design functionality for user to view data from previous games

4/5 - 4/16: Testing

**Initial Technology Stack:**

-Frontend: HTML, CSS, JS, Node

-Backend: Flask

**Algorithms/AI schemes used in the core engine:**

- Generating answers algorithm: backtracking algorithm that adds up the digits connected to a node and determines if it's correct, meant to find all possible answers
- Hint algorithm: user gets up to 3 hints, each time the user guesses incorrectly after the hint is given, the time until the user can access the next hint is increased

**Market Space the application is related to and Product Selling Points:**

- The game is geared towards people of all ages. Math-oriented people are more likely to consistently engage with the game.
- The game is simple in the sense that the directions are very straightforward, but still challenging enough for users to be engaged.

**Github Account:** <https://github.com/fahmed0710>