Lab 1 Draft - Set Up Formatting & Structure

Team Red

CS411W

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Version 1

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1. Introduction

1.1. Problem Background

● Increasing the number of choices can cause the decision-making process to become more complex, leading to lower satisfaction (Iyengar).

● Adding more choices contributes to an underestimation of perceived decision time, which increases the actual decision time (Fasolo).

● The number of attributes in a choice also influences the complexity of the choice (Greifeneder).

● The difficulty in making decisions coupled with the mass amount of information available, such as reviews on Yelp, justify the necessity of a solution to the problem.

1.2. Problem Description

Social groups often experience decision paralysis when choosing a location for gatherings. This indecisiveness can hinder participation and lead to the outright cancellation of events. As a result, this can cause feelings of frustration or antagonism among group members. The absence of a comprehensive decision-making process not only disrupts social cohesion but also diminishes the quality and frequency of social interactions. Consequently, the overall experience of group activities suffers, undermining the sense of community and connection within the group.

Figure 1: Current Process Flow

1.3. Solution Description

- GroupEats is a lightweight, responsive web application to plan and execute a group dining experience

- A form will collect information such as food preferences, availability, preferred price points, and other relevant details from each user

- GroupEats makes use of different APIs and algorithms to create a list of restaurants that best suits the group's overall preferences

2. Product Description

Arranging social gatherings can be challenging due to the diverse schedules and dining preferences of friends and family. GroupEats is a web application that collects the preferences and availability of a group of users. The app suggests restaurant options using advanced APIs and algorithms and is designed to reduce the time and effort involved, ensuring seamless planning for all participants. GroupEats enables everyone to fully relish their social gatherings.
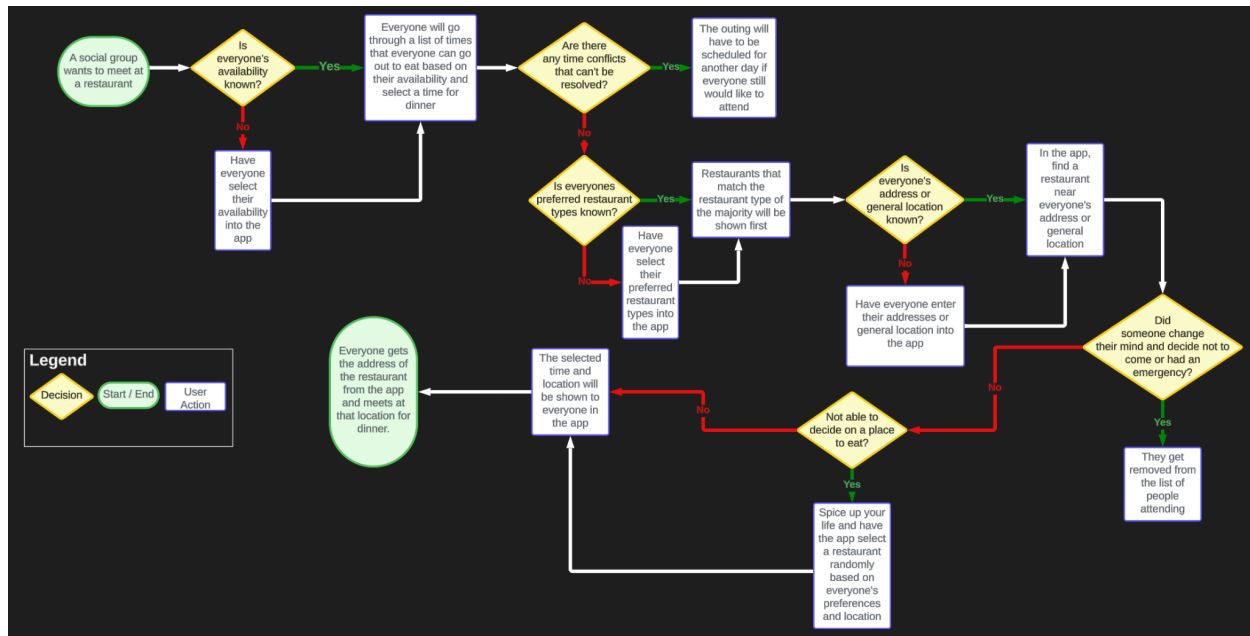
Figure 2: Solution Process Flow

2.1. Key Product Features and Capabilities

GroupEats facilitates group dining decisions by

- Collecting individual preferences and availability

- Using APIs and algorithms to suggest restaurants

- Providing a seamless shareable link for easy group coordination

- Reducing the time and effort needed to plan gatherings

2.2. Major Components

For the user, a network-attached device, such as a laptop or smartphone, is all that is needed.

2.3. Development Tools

- IDE - VSCode

- Version Control - Git through GitHub

- Continuous Integration/Continuous Deployment - GitHub Actions and Workflows

- Back-end Language - JavaScript for Node.js

- Front-end Languages - HTML, CSS, and JSX

- Testing Framework - Jest

- Documentation - JSDoc

2.4. Major Functional Components

- Front-end Framework - React with JSX, structured and styled with HTML and CSS

- Back-end Framework - Express.js running on a Node.js server

- Database Management System - PostgreSQL

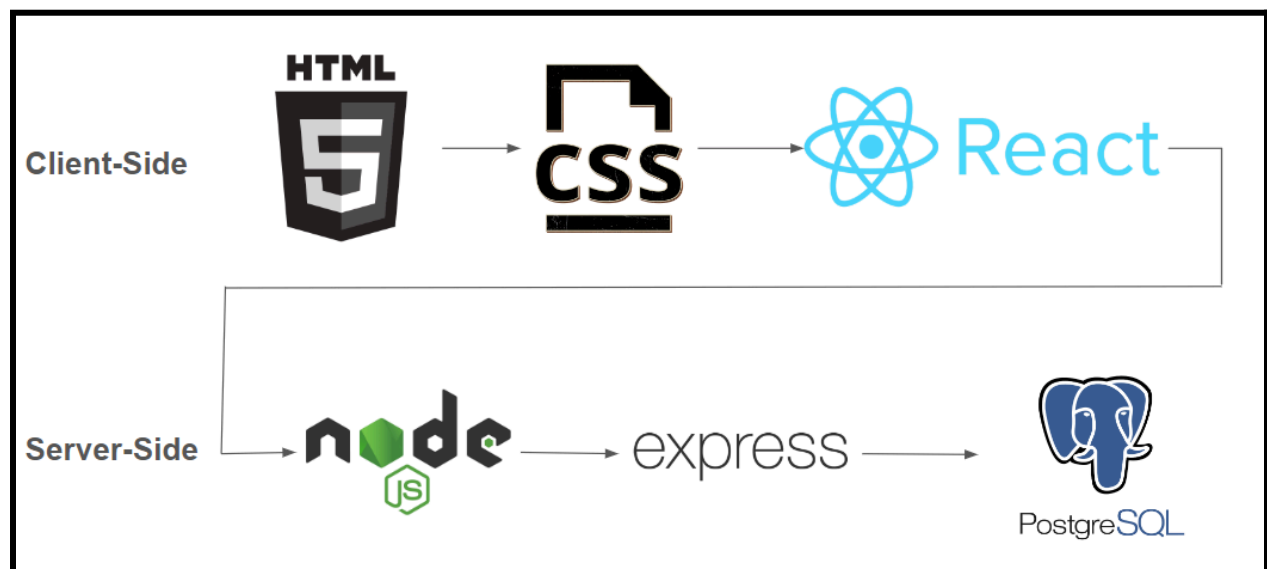- Deployment - Amazon Web Services (AWS)

Figure 3: Major Functional Components

3. Identification of Case Study

GroupEats is developed for friends and family groups who face difficulties in planning social

gatherings due to varied schedules and preferences. The primary users include those with basic

levels of understanding of network-attached devices who regularly participate in group activities.

4. Glossary

API (Application Programming Interface): a way for different computer programs or components to interact with one another.

CSS (Cascading Style Sheets): a style sheet language used for describing the presentation of a document written in a markup language like HTML or XML. CSS handles the look and feel of a web page, including layout, colors, fonts, and more.

HTML (Hypertext Markup Language): a markup language used for structuring and presenting content on the World Wide Web.

IDE (Integrated Development Environment): a software application that provides comprehensive facilities to computer programmers for software development.

JSDoc: a markup language used to annotate Java Script. It allows developers to document their code by adding comments.

JSX (JavaScript XML): a syntax extension for Javascript that allows developers to write HTML-like markup inside of a JavaScript file.

5. References

S. S. Iyengar, R. E. Wells, and B. Schwartz, "Doing Better but Feeling Worse," Psychological

    Science, vol. 17, no. 2, pp. 143–150, Feb. 2006. doi: 10.1111/j.1467-9280.2006.01677.x.

B. Fasolo, F. A. Carmeci, and R. Misuraca, "The effect of choice complexity on perception of

    time spent choosing: When choice takes longer but feels shorter," Psychology &

    Marketing, vol. 26, no. 3, pp. 213–228, Feb, 2009. doi: 10.1002/mar.20270.

R. Greifeneder, B. Scheibehenne, and N. Kleber, "Less may be more when choosing is difficult:

    Choice complexity and too much choice," Acta Psychologica, vol. 133, no. 1, pp. 45–50,

    Jan. 2010, doi: 10.1016/j.actpsy.2009.08.005.

S.-B. Yang, S. Hlee, J. Lee, and C. Koo, "An empirical examination of online restaurant reviews

    on Yelp.com," International Journal of Contemporary Hospitality Management, vol. 29,

    no. 2, pp. 817–839, Feb. 2017. doi: 10.1108/ijchm-11-2015-0643.