Group Maker

Project Vision Document

Version 1.0

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Revision History

Revision	Date	Author	Reviewed By	Summary of Changes

Document Approval List

Version	Approved By	Signature	Date

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1   Introduction

1.1   Purpose

The purpose of this document is to collect, analyze, and define the general needs and features of the Group Maker software. It outlines the specific problems the software is attempting to solve and includes a high-level description of the methods for solving these problems.

1.2   Scope

1.2.1   In Scope
This document applies to the Group Maker software which will be developed by our capstone project group. The Group Maker software encompasses the database and database schema to store application information, the configuration of a server to support and host the software itself, and features of the software such as ranking algorithms, UI features, and both the online and mobile implementations.

1.2.2   Out of Scope
This document does not go into detail as to implementation details. The Group Maker software itself is not intended to interface with official College software in any way, other than to pull information freely available from its public website.

1.3   Definitions, Acronyms, and Abbreviations

Term	Explanation
QR code	Quick Response code. A checkerboard-like picture that allows for easy passage of data through image recognition
Short link	A small web code used to identify a longer resource
Subgroup	A group is contained in another group
Skeleton profile	A temporary, bare bones user profile for users who will not create a full profile
UI	User interface. The visual part of the app/page used to show data to a user and/or input data
URL	Uniform Resource Locator. A line of text identifying a resource of a networked computer
OAuth	A standard to allow users to grant access to their data without sharing their password
GBC	George Brown College. An educational institution

1.4   References

Name	Link
Discord	https://discord.com/why-discord-is-different
Blackboard	https://www.blackboard.com/
Zoom	https://zoom.us/meetings
Slack	https://slack.com/intl/en-ca/
Google Groups	https://support.google.com/groups/answer/46601?hl=en

2   Positioning

2.1   Business Opportunity

There are many software tools currently on the market which focus on providing tools for collaboration and forming online communities. Social media apps do this very well and provide an overwhelming number of tools and ways for connection. However, for all these existing tools, the flexibility and limitless options are more of a bug than a feature and they do not lend themselves well to creating specific and focused groups of people in which personal interaction can flourish.

The goal of Group Maker is to provide a focused, streamlined, and yet flexible connection tool specifically for colleges and college students which enables the kind of college group experience that is currently lacking.

The following table represents some research we have done on existing collaborative tools:

Collaborative Software Pros and Cons		
Software Name	**Pros**	**Cons**
Discord	-Discord is a great place for people to create their own groups for text/audio chat/video chat/podcasts.	- No automated and optimized group finding. - Not specific to a college/unified pool of students - Does not consider an individual's strengths/weaknesses/preferences and performance rating - Groups within groups is awkward with access -- need to manually configure permissions for each channel
Blackboard	- Instructors can create groups which students can join. - Students in the same course/project will all have access to the same group options.	- Students still need to coordinate with each other to arrive in the same group. - Possibility for random formulations of groups to be created - Possibility of accidental group joining - No automated and optimized group finding - Does not consider an individual's strengths/weaknesses/preferences and performance rating
Zoom	- Can host large group meetings audio/video.	- No automated and optimized group finding - Not specific to a college/unified pool of

	- Advanced screen sharing. - Engaging features i.e. filters, reactions, polls, hand raising, music/video sharing. - Recordings and transcripts of meetings.	students - Does not consider an individual's strengths/weaknesses/preferences and performance rating - Free version has 40min limit - Becomes expensive to upgrade from free version
Slack	- Students can create and enter channels for text/video/file sharing - Consolidated workflow - everyone sees the same information being shared on the channel - Can connect to other services like Google Drive/ Office 365 - Enterprise grade security	- No automated and optimized group finding - Not specific to a college/unified pool of students - Does not consider an individual's strengths/weaknesses/preferences and performance rating - Not all features available with free version
Google Groups	- File sharing in groups - Can create groups for others to join. - Can request to join another group. - Can create events/calendar - Can assign tasks/topics to specific groups or group members	- No automated and optimized group finding - Not specific to a college/unified pool of students - Does not consider an individual's strengths/weaknesses/preferences and performance rating

2.2   Problem Statement

The Problem of	Creating specific and focused college groups that are well-matched
affects	Students
the impact of which is	Leads to lack of community and difficulty facilitating group study especially in an online environment
a successful solution would be	The ability of a student to quickly and easily find a small group of students that is focused on some topic or task and have some mutual compatibility or commonality.

Table 1 Problem Statement

2.3   Product Position Statement

For	New, introverted, or online-based students and, in more limited capacity, teachers
Who	Want to form connections with other students on a group basis in a flexible, yet focused manner
The Group Maker App	Is a web-based and mobile app to connect students with each other, assign ratings, track skills, help with scheduling and collaboration, and to help teachers organize group projects
That	Allows students to more easily connect with fellow classmates that are specifically verified from their school, at the level of their choosing - college, campus, program, semester, section course- in a quick and user-friendly manner
Unlike	Existing solutions such as Blackboard or Discord which do note have our level of focus
Our product	Will provide three ways for the college student to connect with small groups of other students. 1. Make a group: choose a level from which to pull other group members, define its focus, get suggested members 2. Find a group: choose level, view list of suggested groups based on your profile interests 3. Auto: automatically request to join top match group, or if there is none, create group for others to join Once a group is confirmed, our product will provide methods to quickly share contact information, and connect through the collaboration channels of their choice.

Table 2 Product Position Statement

2.4   SWOT Analysis

Strengths	Weaknesses
Direct experience	Lack of time
Low backend costs	Development knowledge
Opportunities	**Threats**
Competitors insufficient for our use case	Requires users
Expand beyond education	User privacy
	Bad actors disrupting groups

3   Stakeholder and User Descriptions

3.1   Stakeholder Summary

Stakeholder Name	Represents	Role
Developers	Owners of the idea and the project source code	Plan, research, effectively divide tasks, implement code, and track progress
Project advisor	Supervisor of the project	Make sure project is substantial enough, unique and solves an existing problem

Table 3 Stakeholder Summary

3.2   User Summary

User Name	Description	Responsibilities	Stakeholder
College student (Group maker)	Primary user of the system	Use system to form groups around specific idea or purpose at each level of the college	Self
College student (Group seeker)	Primary user of the system	Use system to find groups which align with their interests	Self
College professor (Group topic creator)	Secondary user of the system	Use system to organize groups for class group projects	Self
College admin	Secondary user	Use system to supervise college groups and to potentially customize features available for each institution	College

Table 4 User Summary

4   Stakeholder Requirements

ID	Requirement	Stakeholder
1	Mobile/web app	Developers
2	Back end	Developers
3	System	Users

Table 5 Stakeholder Requirements

5   System Features

ID	Feature	Stakeholder Requirement ID
1001	Group lobbies to organize groups	1, 3
2001	Matching system for improved group making	1, 3
3001	Admin management	1, 3
1002	Sign up system for users	1, 2, 3
2002	User info database	2
1003	QR recognition for easy group making	1
3002	Rating system to improve future matching	2, 3
1004	Subgroup lobbies to subdivide specific groups	1
3003	User profile personalization	3
2003	Communication method auto selection	1, 2
1005	Available member designation to fill every group	1, 2, 3
2004	Skeleton profiles for temporary users	2, 3
3004	Web short links for easy group setup sans mobile app	2, 3
	OAuth for profile connection/creation	

Table 6 System Features

6   Assumptions

- We chose to trade automation for customization in regards to course information so we are assuming that we can reasonably populate courses offered at a given college, campus, program, and semester number based on pulling that

information from the public college website, although this feature is not essential for the functioning of the app.
- We assume students will enter correct information about themselves (i.e. skills).
- We assume students will rate their peers appropriately

7   Constraints

- Must be designed in such a way that the app is customizable for each college that might use it
- Dependency on professor's willingness to update their courses in our website
- We are constrained by the amount and type of information we can get from GBC