CEN 4010 Principles of Software Engineering, Summer 2021

Team 1, Gopher

Team #1

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**Milestone 1: Project Proposal and High-Level Description**

1. Executive Summary [Josh]

In essence, this is a website, called Gopher, which connects people based on their common interests. When you sign up, you choose from a list of popular interests, such as sports, movies, music, video games, etc. Then, the website will offer suggestions for people you might be interested in meeting based on your interests. When it recommends a person, it shows that person’s profile image, name, age, contact information (e.g., Twitter, Instagram, Facebook, phone #), location, and a short bio.

When a user creates an account, the website will require that he or she creates a username and password, which he or she will use when signing in to the website. This is important because we do not want our users to be concerned about someone logging into their account without their knowledge/consent.

Once you have signed into your account, you can either view and edit your own profile or view suggested connections. In order to not show the same connection twice, we will store a list of already suggested connections, and filter the suggestions so that they do not include those. There will also be a page that displays the connections that have already been suggested. When the website runs out of not previously seen suggested connections, it tells the user there are no more connections, and provides a link to the already suggested connections.

1. Competitive Analysis [Ania-Rodrigue]

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| --- | --- | --- |
| Competitors | Competitor’s Features | Gopher’s Features |
| Unblnd | * Connect with like-minded people (based on hobbies, interests) * Anonymous * Smart group matching * Automatically suggest groups * Integrated chat * Based on location | * Sign up (username & password) * Fill form with list of popular interest * Suggest people * Ability to have a short bio, keep link of social media, contact information, name, age and location (you can only see those from people on suggested list) * Keeps track of suggested people |
| Meetup | * Groups people with similar interests * Join scheduled events * You can make plans yourself to go to events etc. * Integrated messenger * Advance analytics * Branding (allows you to create logo, put links, etc.) | * Sign up (username & password) * Fill form with list of popular interest * Suggest people * Ability to have a short bio, keep link of social media, contact information, name, age and location (you can only see those from people on suggested list) * Keeps track of suggested people |
| We3 | * Connects you with like-minded people * Private profiles (only your tribe can see you) * Groups of only 3 * Allows you to track/manage your mutual interest/traits * All 3 people in the group must be the same gender * Integrated chat | * Sign up (username & password) * Fill form with list of popular interest * Suggest people * Ability to have a short bio, keep link of social media, contact information, name, age and location (you can only see those from people on suggested list) * Keeps track of suggested people |
| Tinder | * You can login using Facebook or create an acc * You create a profile with and but information about yourself * You swipe if you don’t like person and click heart if you do * Meet with them and get to know them | * Sign up (username & password) * Fill form with list of popular interest * Suggest people * Ability to have a short bio, keep link of social media, contact information, name, age and location (you can only see those from people on suggested list) * Keeps track of suggested people |
| Bumblebee | * Edit your profile, including your advanced filters. * Add new photos. * Verify your profile. * Message your matches. * Backtrack on accidental left swipes. * View your Beeline. * Super Swipe folks you're interested in. * Subscribe to Bumble Boost. | * Sign up (username & password) * Fill form with list of popular interest * Suggest people * Ability to have a short bio, keep link of social media, contact information, name, age and location (you can only see those from people on suggested list) * Keeps track of suggested people |

Gopher is similar to those apps listed above in many ways. All those apps match you to people with similar interests. Gopher has the same purpose but it differs in the sense that it keeps track of past suggestions and if it runs out of current suggestions it will provide you a list of past suggestions. Gopher also allows you to get in touch with as many people as you want as long as you have similar interests.

1. Data Definition [Summer]

* **Gopher:** the name of the software product.
* **Arrays:** A data structure that consists of a collection of elements.
* **HTML:** Hypertext Markup Language which provides a web designer the ability to tell the web browser what to do.
* **CSS:** Cascading Style Sheets which go hand in hand with HTML as a set of rules that determine the visual appearance of the webpage.
* **JavaScript:** A language allowing users to create interactive web pages.
* **Responsive Design:** A design that allows the website to adapt to the user’s device.
* **Frontend:** The client-side of the website such as what the user sees and interacts with.
* **Backend:** The server-side of development where everything behind the scenes goes on. This powers what happens on the front-end. Main components of the backend are: the server, the database, the software, and the operating system.
* **MySQL:** An open-source database management system.
* **SQL Server:** A software that is a database management system allowing the storage and retrieval of data.
* **Database:** A set of data stored in a computer.
* **API:** Application Programming Interface that enables two programs to interact and communicate with each other.
* **Bootstrap:** A free open-source framework for users to download for web design.
* **Cache:** A temporary storage for data. Files are automatically stored in the cache upon visiting a website.
* **Domain Name:** A website’s address on the world wide web.
* **Git:** A version control system allowing users to store and edit their code.
* **GitHub:** A cloud interface for git. GitHub is a host for source code.
* **UI Design:** User Interface Design, allowing screens and interactions to make up the website or app.
* **Java:** A high-level object-oriented programming language used for backend development.
* **Python:** A popular programming language that can be used on the frontend or backend development.
* **PHP:** Hypertext Preprocessor, a server-side scripting language.
* **Text Editor:** A type of software used for writing plain text.

1. Overview, scenario, and use cases [Josh]

The use scenario of Gopher is very simple: a person (who has a basic understanding of how a website works) would like to expand his or her social network and find other people with similar interests. So, that user creates his or her account. To do this, the user must create a username and a password, and then confirm the password. Once that has been done, the user fills in the details of his or her profile. The required fields are name, age, location (zip code), and interests. To fill out the interests’ field, the user picks at least 3 from a large list of interests. These are general categories that are fairly common interests such as music, movies, food, sports, video games, etc. It will then ask a follow-up question about each interest. For example, if the user selects sports and movies, it will ask the user, “What are your favorite sports teams?” and “What are your favorite movies?” Then, if the user so desires, he or she can fill out the optional fields: profile image, a short bio, and contact information. In the bio, the user can describe his or herself for any connections to see. In the contact info field, the user may put their usernames to different social media platforms such as Instagram, Twitter, Facebook, Snapchat, etc. as well as other methods of communication such as their phone number and their email address so that when someone else connects with him/her, they can go on a platform they have in common and chat.

Now that the user has created a profile, he or she can begin connecting with other users. There will be a button to connect with someone, which when pressed will lead to the profile of another user. All of the discovered user’s account information (except the password obviously) will be displayed, so the user will learn all about that person. If the user would like to begin communicating with the other user, he or she must only click one of the social links (or the email address) and it will lead directly to the other user’s profile on that social media platform.

Previously suggested connections can be accessed through another link on the main page. When Gopher runs out of new people to suggest, only the suggested connections will be viewable; the link that suggests new connections will disappear. There will also be a link the user can select to view/edit his or her own profile at any time.

1. Initial list of high-level functional requirements [Carlos]

1). Basic login/logout, and account management features (linking to social media).

-Site should have basic login/signup features. User should be able to link to

their other social media accounts if desired.

-Basic security features for user's password and information (password and personal

info encryption).

-User’s name, profile picture, and lists of interest are the only things that should always

be accessible by other users who are not friends.

2). "Open forum" homepage

-An open forum homepage should greet the user, where open discussion of

any coronavirus updates can take place. (Perhaps FAU news as well?).

-A simple way to retweet CDC and FAU updates (simple python retweet bot?).

-Users can discuss the "topic of the day" on this homepage.

-User should be able to access their accounts and search for lobbies (or individual chat

rooms) based on interest filters in this homepage as well.

3). Filter based chat rooms lobbies/ Pairing

-Each major interest e.g., "cooking" will have a major chat room (like homepage).

-Users here can have conversations relevant to the room's subject matter.

-After entering their interests (these can be altered at any time) the user will be shown all

the chat rooms relevant to their interests as well as the number currently engaged in the

forum (a user can only be in one chat room at a time)

-Users can be paired with someone who shares their interests, after hitting the connect

button.

\*\*Note\*\* There is still ongoing discussion over whether the software will use a chatroom in order for people to interact with, or pair up users based on their common interests.

4). Direct messages

-Users can befriend other users to have private conversations with.

-Only friends will be able to see a user's linked social media (if the user allows it).

1. List of non-functional requirements [Ania, Carlos]

* Performance: The system will have a response time of 2 to 5 seconds
* Security requirements: Login username & password /User authentication
* Usability: It’s very user friendly, very easy for the user to learn/know what to do.
* Availability: The website is going to be available at any time that the user may need it unless it's going through maintenance. Which means it would be available to the user 98% of the time.
* Accessibility: The website will be accessible from any major web browser, and from laptops as well as tables and phones.
* Expected load: This software should not have a bigger level of implementation than at a university level, no more than a few thousand users. Chat rooms should be able to manage a few hundred people inside of them at a time (numbers not final).
* Storage: Usernames, e-mails, and passwords will be stored in a server database.

1. High-level system architecture [Summer]

* Bootstrap (open-source framework license for the UI design)
* MySQL Language (for the database)
* HTML Language (for the UI design/front end)
* CSS Language (for the UI design/front end)
* JavaScript Language (for the functionality of the website/front end)
* Brackets open-source code editor (for programming)
* Google Chrome (supported browser)
* Safari (supported browser)
* Figma (a tool to design the software)
* SQL Server (to host the database)
* Python, Java, or PHP (language for the backend development)

1. Team

* Ania → Scrum Master
* Josh → Product Owner
* Summer, Rodrigue, Carlos → Developers

Note: both Josh and Ania will be assisting in the development of the project.

1. Checklist
2. DONE
3. DONE
4. ON TRACK
5. DONE
6. ISSUE: We are not familiar with backend development. Therefore, we are not sure what framework to use.
7. ON TRACK
8. DONE