

Project Agora

By Team Swan

HACKING FORWARD, TOGETHER

Although our world has experienced a lot of turmoil since last year, Winfo continues to **bridge** diverse values and experiences to **cohesively lead** technological innovations.

In this hackathon, we challenge participants to utilize their diverse skills and perspectives to produce a project that **connects people** for the betterment and advancement in technology and the world. Our mission is to build upon each other and **hack forward, together**.

Post-Mortem

The Good	The Coulda Gone Better	Not Our Fault
<ul style="list-style-type: none">• The largest scope of project we've ever attempted (and mostly pulled off)• Most technically complicated project (MongoDB, Java Spring, ReactJS, Material UI)• Good fun<ul style="list-style-type: none">◦ Alan: Learned a lot more than last time, especially Material UI and Typescript◦ Elbert: Learned more about MongoDB, Spring, REST APIs◦ Jono: Got to contribute more this time around◦ Helen: First Hackathon• Better topic and project proposals, felt more personally relevant and passionate	<ul style="list-style-type: none">• Needed an integration engineer<ul style="list-style-type: none">◦ Due to inexperience• Potential need for a Project Manager<ul style="list-style-type: none">◦ Elbert as a Technical Manager, Alan as a Program Lead• Determining API endpoints ahead of time• Inexperience with technologies (MongoDB, React funnies)• Time efficiency (blocking tasks)• One problem, one goal<ul style="list-style-type: none">◦ Alan wanted a sellable product• More Showers, Better Team Hygiene• Estimations of time needed to implement certain features or functionality• FatJar and Production	<ul style="list-style-type: none">• Event details were miscommunicated, ending times and progression of events was unclear• The ways that we submitted our work was ngl kinda scuff• Lack of mentorship

<ul style="list-style-type: none"> • Presentation skills • First hackathon for Helen • Good work splitting (everyone was consistently working on their own parts) • Brainstorming and documentation quality, and duration spent on such tasks • Co-leadership • Jono is more assertive • Jonathan tried his best 	<p>Versions to facilitate testing between teams</p>	
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Post-Post Mortem

Result: Did not place in finals

- Applications that were chosen as finalists for Best Impact or Best Overall
 - Focused on a specific, currently relevant issue
 - Addressed problems with close personal connection
 - Designed for a marginalized group or audience
- None of the finalists for Best Impact or Best Overall had a GitHub repository

Takeaways for Next Event

- Team Roles
 - Primary Roles
 - Front-end Engineer
 - Back-end Engineer
 - Integration Engineer
 - Test Engineer
 - Secondary Roles
 - Project Manager
 - Handles the creation and presentation of project materials to judges
 - Manages the final submission of project materials for judging
 - Communicates event updates to team
 - Technical Lead
 - Delegates and coordinates the completion of technical tasks
 - Manages project utilities (VCS, Postman, standardizing IDEs, etc.)
- Project Map/Timeline
 - Identification of blocking tasks to increase time efficiency
 - Estimate the time needed to implement various functionality for better scoping of the MVP
- Development Builds
 - Having standalone, executable builds of front-ends and back-ends such that they need not be launched in an IDE to function (to facilitate integration testing)
 - FatJars, Builds
- Problem Statement

- **Next project should do as many of the following:**
 - **Address a specific, currently relevant issue**
 - **Be personally relevant to some or all members of the team**
 - **Designed to help a marginalized target audience**

Ideas

Problem	Solution	Votes
CSE 14X classes aren't that interactive	Better introductory coding teaching software Collaborative programming software PollEv-style question	E
Mental health in COVID-19 is a struggle	Website Day-by-Day	
People who speak other languages can't collaborate with each other on code	Multi-lingual collaboration platform	
Finding Discord servers for your classes is hard without knowing someone in the class	Website that congregates University class discords	A
Member engagement in RSOs during Covid has decreased massively	Website that tells you what RSOs your friends are in and encourages you to join	
No friends :(Facebook.com	
Zoom calls are exhausting compared to IRL interaction	sadge	
You wanna know what songs all of your friends are listening to on Spotify	Gives you a network of artists and tracks that your friends listen to	
Teamwork is hard	App to solve team collaboration issues via secret powers of psychology	H
Finding new people and projects to work on	"Casual" LinkedIn~~ Social media for programmers <ul style="list-style-type: none"> - Advertise projects - Changelogs - Open-world network of projects - Can still form a circle -> friends - Volunteering ANGLE 	A E J H
Developers need a way to get their changelogs to their users, current ways are basically up to the dev	Website that serves changelogs to users	
	"First impression" video <- introductory Encourage the use of direct voice chat	
Finding volunteering opportunities in your area	Website that organizers can post to to find volunteers for various events, keeps track of volunteer experience, etc	
People voice chat on phone (China)		
Social media consistently pushes you to extremism		
Social media sites are being used to promote violence and hateful rhetoric		
Social media can act as a replacement for real social interaction		
As you get older you have less time for friends		

Parents of elementary school kids have to spend time watching their kids during school		
I can't read Japanese manga	Translate manga into English for me	
Learning of other people's cultures is hard due to the language barrier	A website where people from different cultures can come together and ask questions of one another's culture and offer translation services	

Project Structure

Roles

Alan	Front-end (UI design)
Helen	Front-end (Communication with services)
Elbert	Back-end
Jonathan	Back-end

Main Features:

Homepage/Timeline	<p>Devote a page (in the style of reddit?) for users to advertise their projects</p> <ul style="list-style-type: none">• Search bar<ul style="list-style-type: none">◦ Filter projects by open, closed, tags
Account Features	<ul style="list-style-type: none">• Name• Email?• Password• Username• Profile pictures
Project Details Page	<ul style="list-style-type: none">• Pictures? (placeholders)• Project status? (“accepting volunteers”, etc.)• Description• Github link• Project creators → single or multiple people(?)• Project Updates<ul style="list-style-type: none">◦ Only blog-style text updates (for now)
Project Creation Page	<ul style="list-style-type: none">• Project Title• Project picture?• Description• Open/Closed Status• Github link

Non-features:

- Volunteer Tab

Future scope:

- Likes/Follow

- Comments
- (Project following) Notifications/Announcements → announcing when something's is updated
- Profile pages → #3
 - Hyperlinks to github
 - The actual sending of the request to the project lead (messaging system? email?)
 - List of experiences → mini-resume
 - Friends
- Project tags (languages, APIs, technologies) - Hashtag → #1
- Following projects
- Edit Project Page → #2

Technologies:

- Frontend:
 - ReactJS + TypeScript
 - Material UI Framework
- Backend:
 - MongoDB
 - Spring

Service Endpoints

All requests will go through:

<https://localhost:3000/api/>

Action	Resource (JSON)	Endpoint
Retrieve items for timeline	Timeline Tile (Timeline) [Array]	
Retrieve project info for proj. page	Project (Project Info Page)	
Create new project	Project (Create Project Page)	

Data Object Structure

Timeline Tile	<pre>{ title: "asdf", author: "authorUsername", dateTime: 05:40:33 PST, projectId: 42069, content: "omg guys look i made a thing" tags: ["asdf", "jkl"], }</pre>
Project	<pre>{ title: "title", owner: "ownerUsername", volunteers: ["username0", "username1"], }</pre>

	<pre> description: "description", id: 42069, thumbnailUrl: "urlToThumbnail", acceptingVolunteers: boolean, timeline: [Timeline Tile, Timeline Tile], githubUrl: "https://...", tags: ["asdf", "jkl"], } </pre>
Create New Project Page	<pre> { owner: "ownerUsername", projectName: "projectName", githubUrl: "github.com/myProject", acceptingVolunteers: boolean, description: "my crowning achievement, pls congratulate me i want attention", tags: ["asdf", "jkl"], } </pre>

Data Storage:

- Account <- Data object name - all the attributes are labeled below
 - Name: string
 - Account ID: string
 - Email: string
 - Username: string
 - Password: string (HASH THO WE NEED TO ENCRYPT THIS - PLAINTEXT STORAGE IS BAD)
 - Profile Picture: image (Image object) or string/uri (image link)
- Project <- Data object name
 - Name/Title: string
 - Project ID: string
 - Post Date: date
 - Project Owner: user (singular)
 - Project Creators: user (ideally)
 - Need Volunteers: boolean (open or closed)
 - Pictures: image or string/uri (link)
 - Description: string
 - GitHub link: string/uri
 - Project Updates: string (may need a separate database object for this?)
 - Tags(?): List<String>
- Timeline Tile

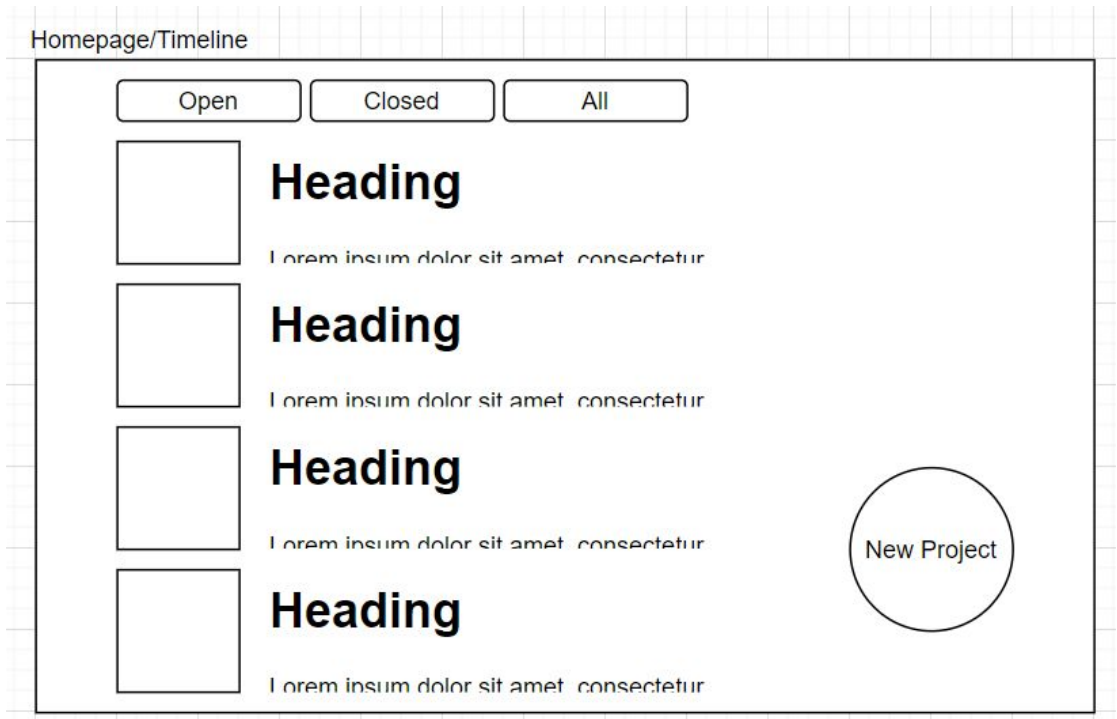
- **Title:** string
- **Owner:** user
- **Volunteers:** List<User>
- **Description:** string
- **ID:** string
- **Thumbnail:** image or string/uri
- **GitHub:** string/uri
- **Tags:** List<String> or List<Tag> (another data object)

Future Scope

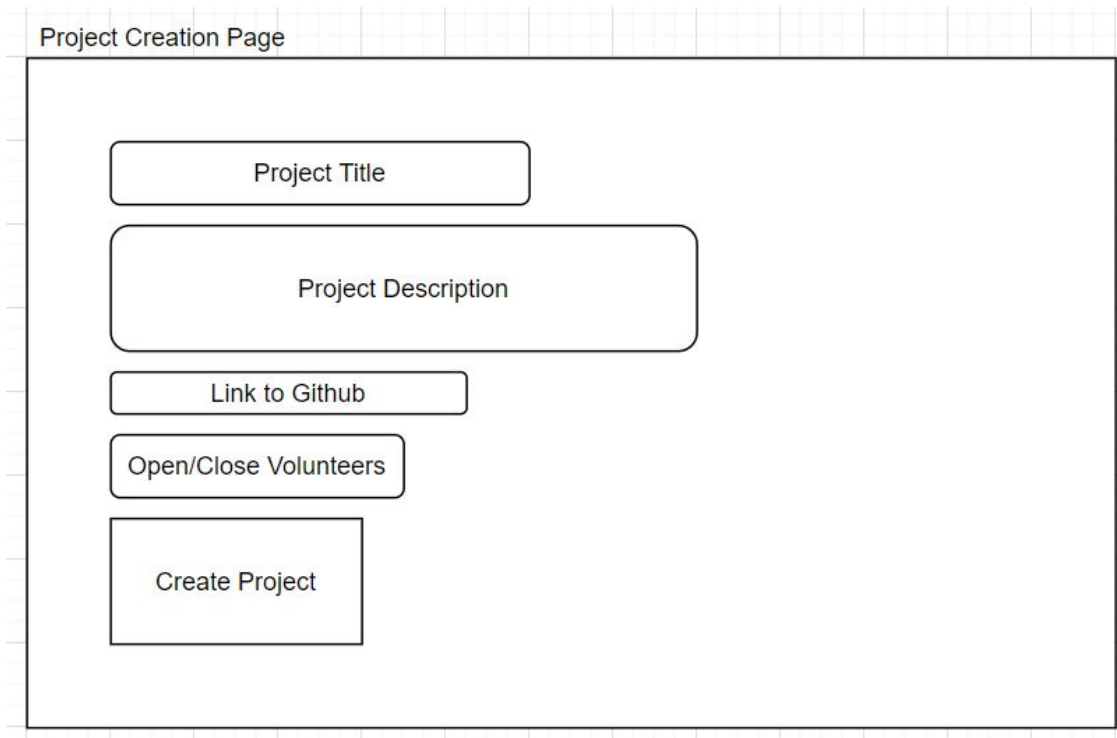
- **Comments**
 - **Owner:** user
 - **ID:** string
 - **Post Date:** date
 - **Body:** string
 - **Report Count:** int

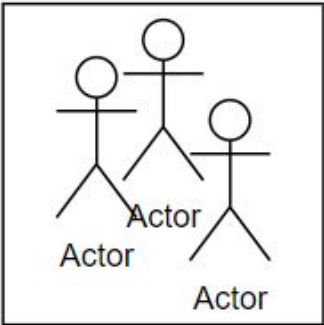
UI Mockups

/home



/newproject





Heading

Open to Volunteers

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Frontend Dependencies

Dependency	Link	Commands
Material UI Framework	https://material-ui.com/getting-started/installation/	npm install @material-ui/core npm install fontsource-roboto npm install axios

APIS

GET ACCOUNTS	/api/account
GET ACCOUNT BY ID	/api/account/id/{id}
GET ACCOUNT BY USERNAME	/api/account/username
CREATE NEW ACCOUNT URL	/api/account/create_account
GET PHOTO	/api/photos/get/{id}
ADD_PHOTO_URL	/api/photos/add
GET ALL TILES	/api/tile/getall
GET TILES BY ID	/api/tile/id/{id}
UPDATE Project	/api/tile/id/{id}
POST CREATE TILE	/api/tile/createtile
DELETE TILE	/api/tile/id/{id}
DELETE ALL TILES	/api/tile/deleteall

Current workflows of Account:

First, upload the profile image -> receive object ID

Utilize that ID in the request to make an account

2 steps

Elevator Pitch Drafting

Agora is a platform for people and organizations to promote their works and projects to new and experienced developers, promoting a more social and collaborative environment in the technology development space.

The way programming is taught is in isolation — beginner and intermediate programmers get little exposure to working with existing codebases or other programmers.

Agora is a social media platform for developers and organizations to share projects and ideas, encouraging a more collaborative environment in the technology space.

Oftentimes, coders start out in isolation, as institutions often do not teach the skills needed to evaluate diverse perspectives or work as part of a team. Agora aims to change how programming is approached by connecting skilled technologists with projects and teams that need their help. In providing a place where teams can share their ideas with the world, Agora aims to unite people around a vision of a better, more technologically advanced world.

Programming is not often viewed as a social activity, but that's far from reality -- teamwork is actually a key aspect of being a successful developer. We aim to encourage a more collaborative environment in the technology space by creating Agora, a social media platform for developers and organizations to share projects and ideas.

With Agora, developers can easily access innovations from around the world, and collaborate by requesting helpers or contributing their own skills to others' works. Non-profits can also use this space to recruit volunteers to their cause.

Developers lack a dedicated space where they can share their projects to an equally excited audience, and view many other independent works from around the world. That's where Agora comes in.