

MICHIGAN STATE

U N I V E R S I T Y

Project Plan
Healthier Communities Time Banking
The Capstone Experience

Team Spectrum Health

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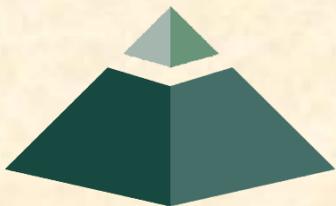
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*From Students...
...to Professionals*

Functional Specifications

- Connect the Homebound Patients with the available volunteers
- Patients can request services that they need by spend “time points” in their “Time bank”
- Patients can also provide their skills to help others and earn “time points”
- Help Homebound Patients to find their own values.

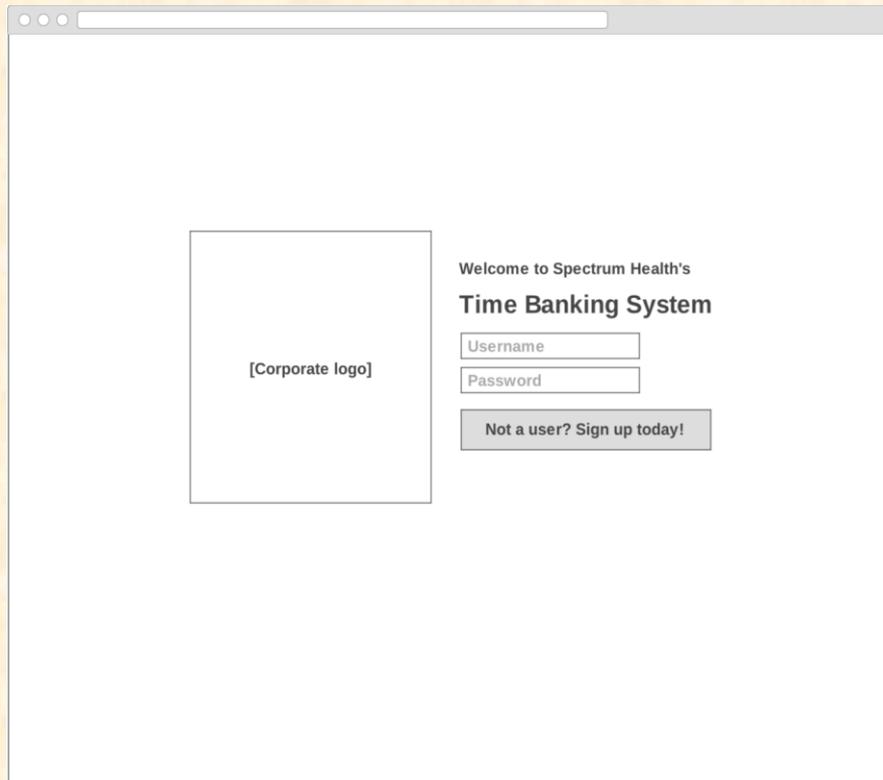


Design Specifications

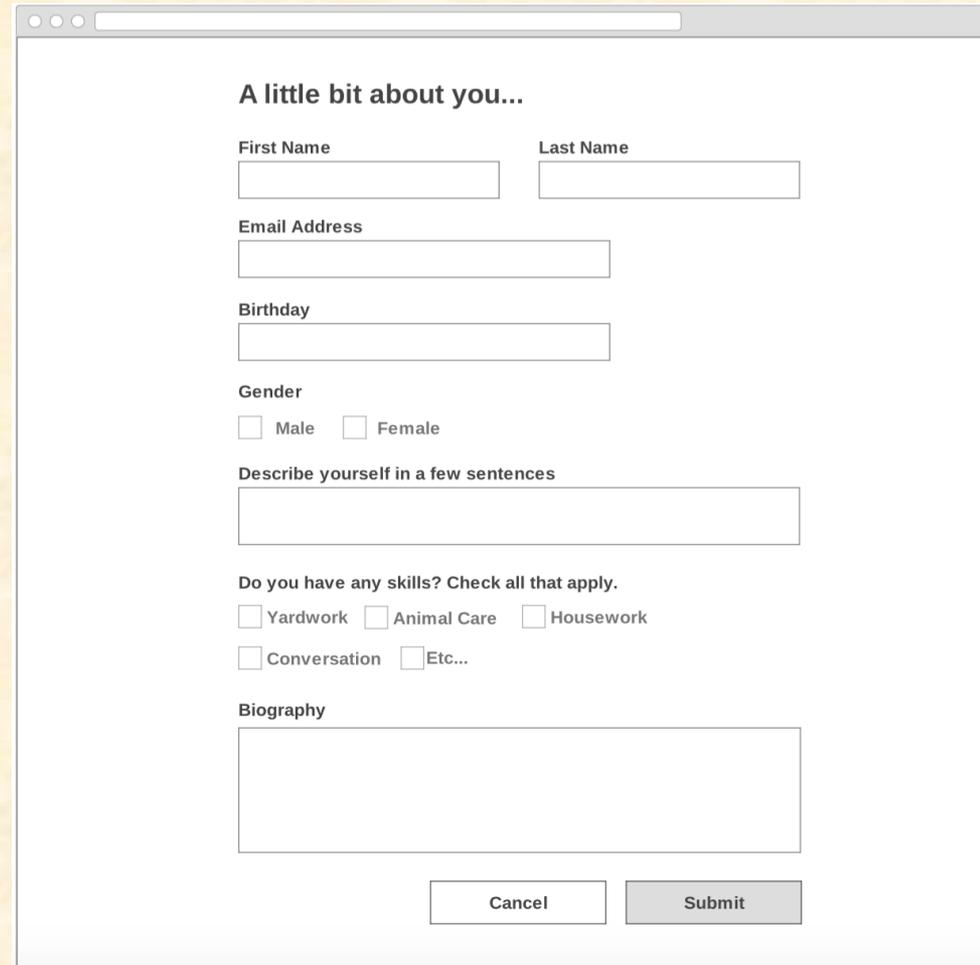
- Responsive web app
- Concepts from Google's material design guidelines
- Intuitive user experience aimed towards potential non-technical users



Screen Mockup: User Login Page



A browser window mockup showing a login page. On the left is a large rectangular box labeled "[Corporate logo]". To the right of the logo, the text "Welcome to Spectrum Health's" is positioned above the bolded title "Time Banking System". Below the title are two input fields: "Username" and "Password". A button labeled "Not a user? Sign up today!" is located below the password field.



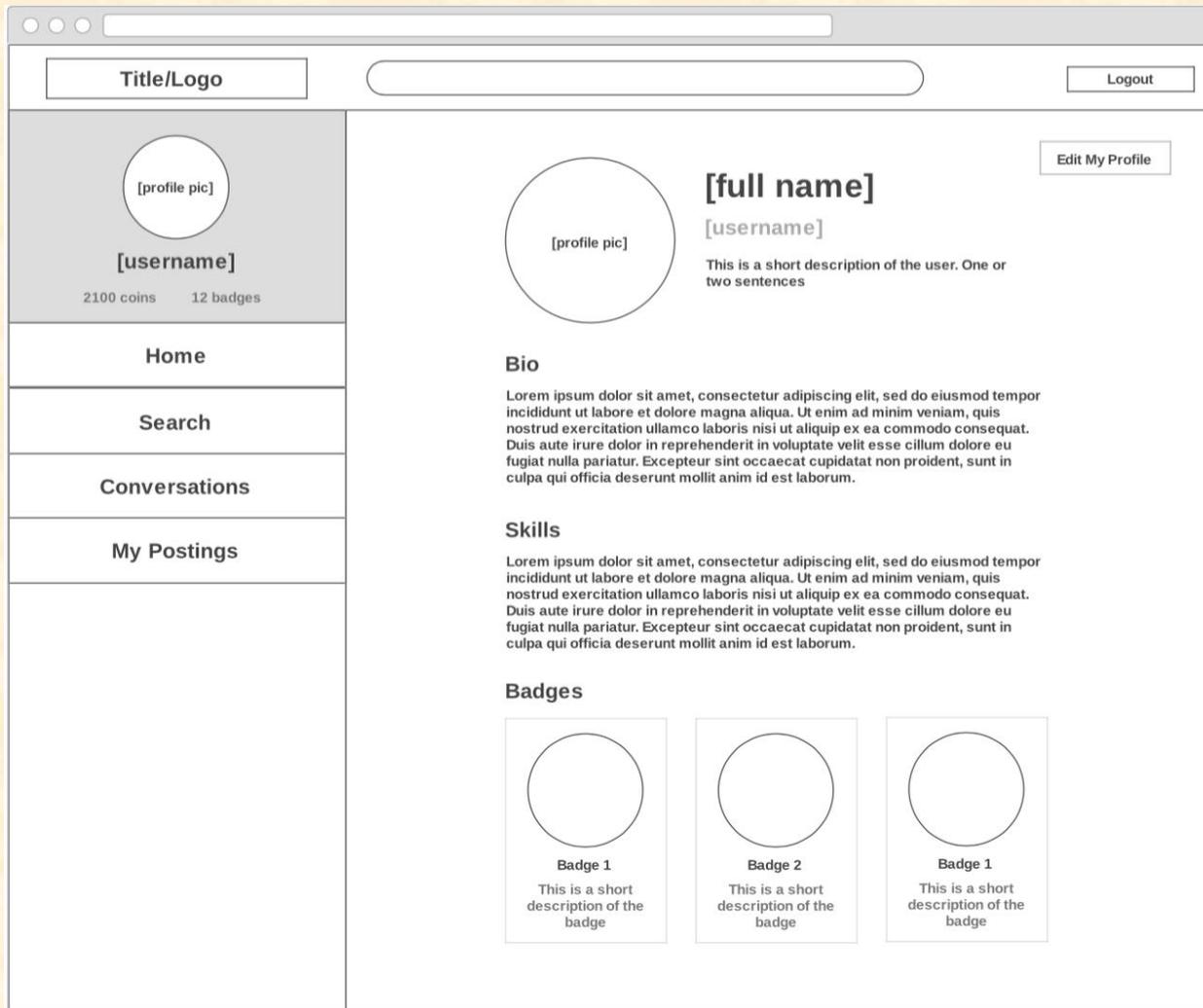
A browser window mockup showing a registration form titled "A little bit about you...". The form contains the following fields and options:

- First Name** and **Last Name**: Two separate text input fields.
- Email Address**: A single text input field.
- Birthday**: A text input field.
- Gender**: Two radio button options, "Male" and "Female".
- Describe yourself in a few sentences**: A large text area.
- Do you have any skills? Check all that apply.**: A list of checkboxes for "Yardwork", "Animal Care", "Housework", "Conversation", and "Etc...".
- Biography**: A large text area.

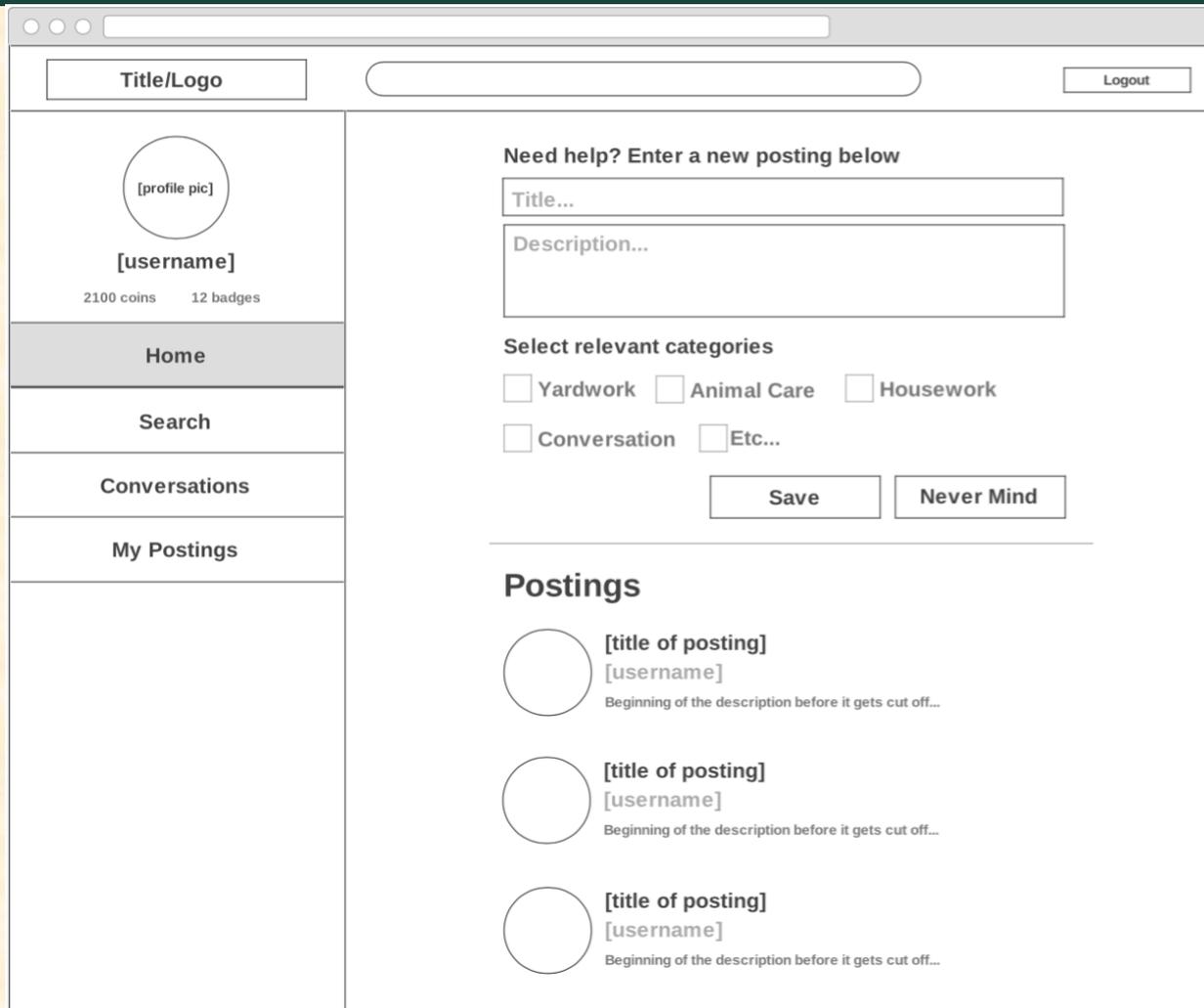
At the bottom right of the form are two buttons: "Cancel" and "Submit".



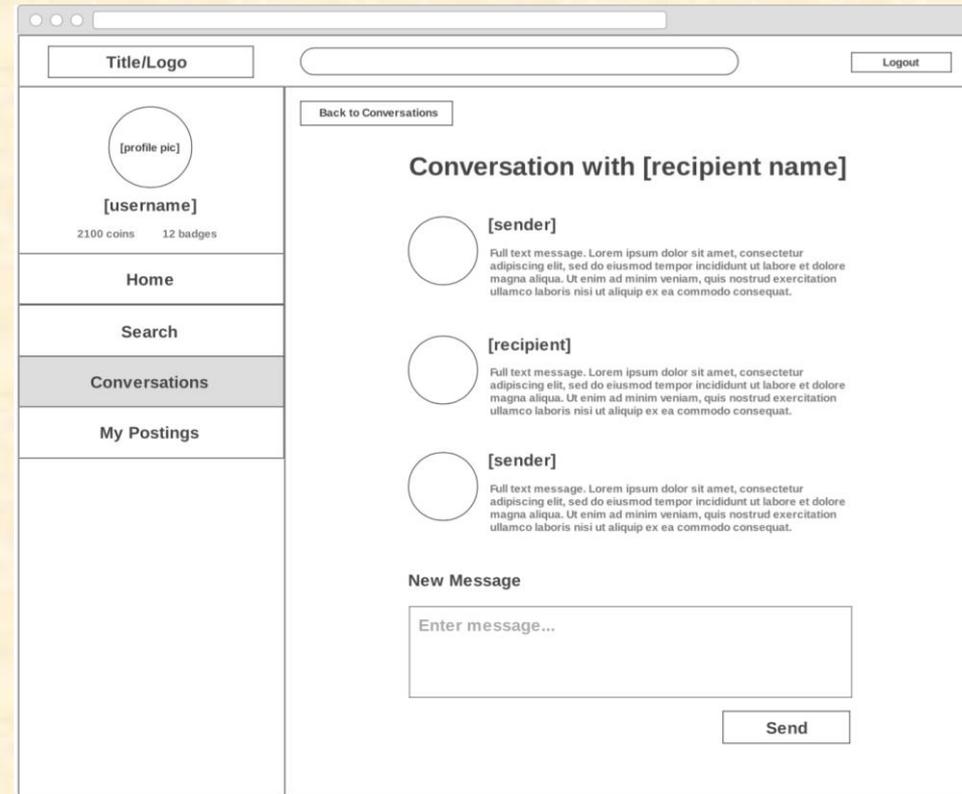
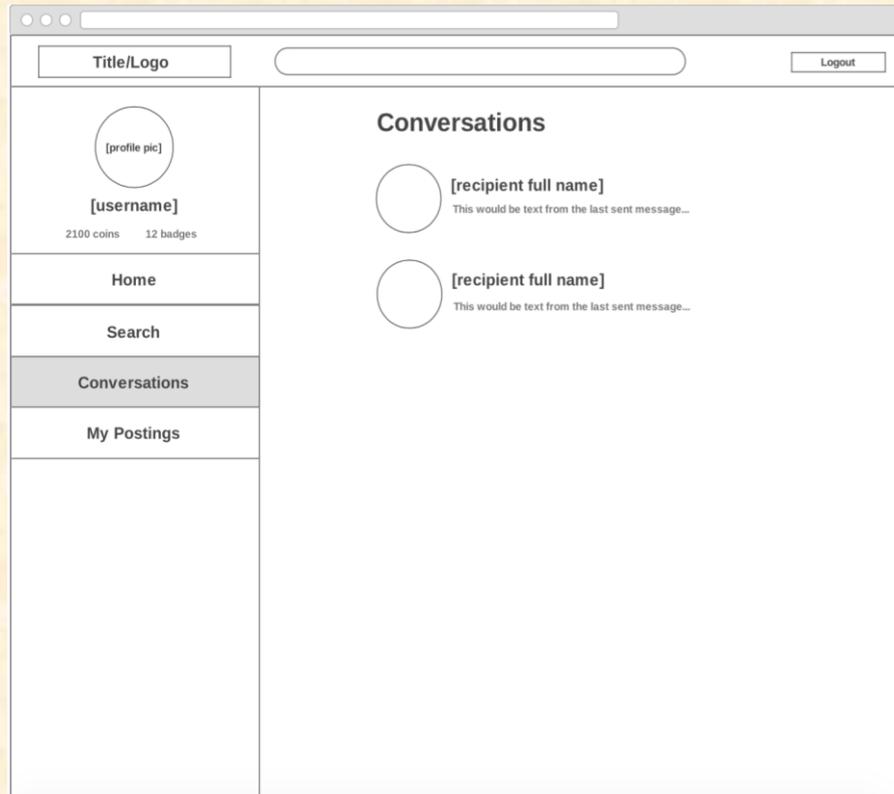
Screen Mockup: Profile Page



Screen Mockup: Home Page



Screen Mockup: Conversation Page

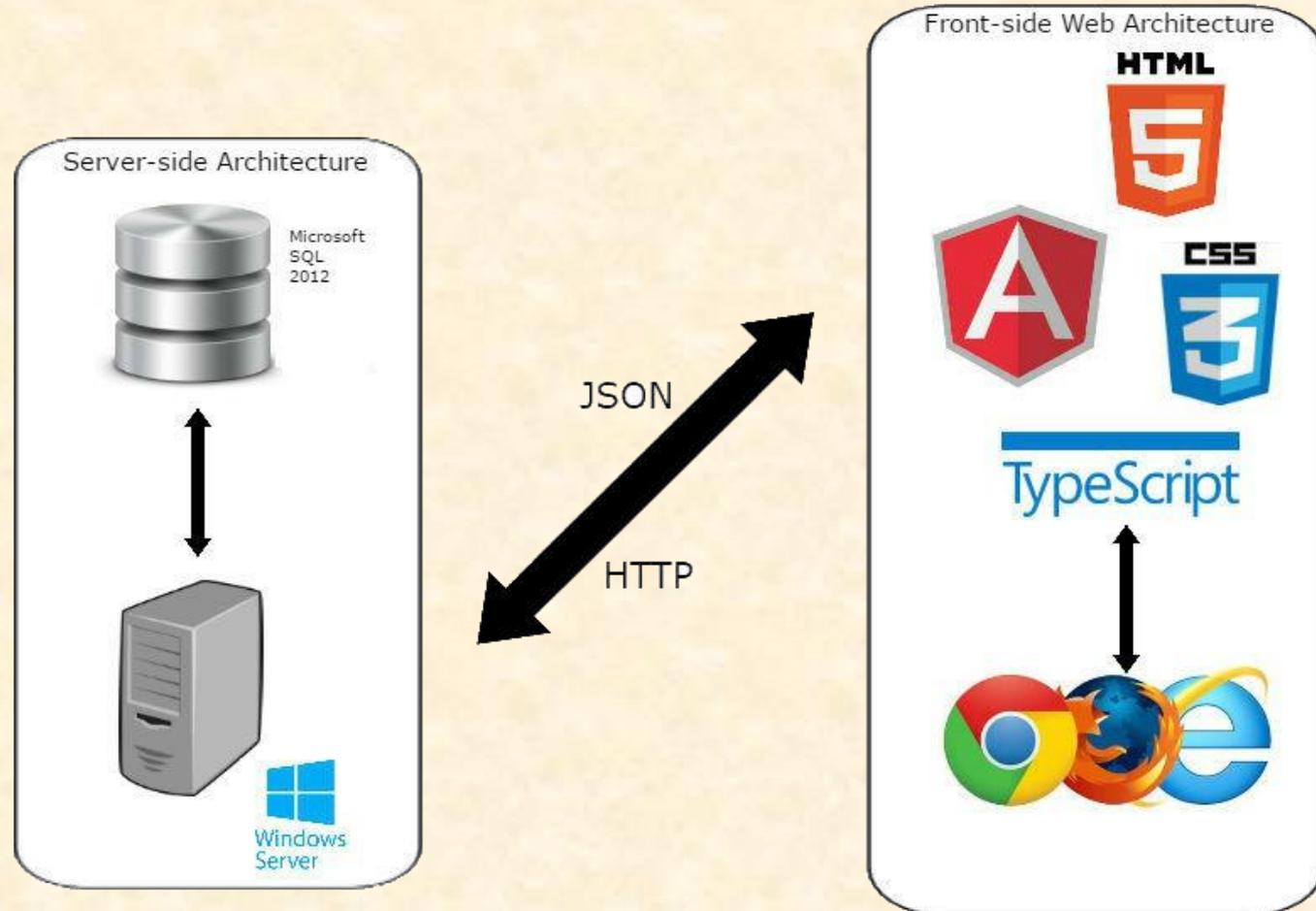


Technical Specifications

- Server Systems / Software
 - Windows Server 2012 with Microsoft SQL 2012
 - Main server framework works with .NET Core using C#
 - Entity framework handles database operations
 - Use of Angular 2 for front end development
- Development Systems / Software
 - Files are stored in private Github repositories
 - VS Code and Visual Studio Community 2015 is being used for code development and testing



System Architecture



System Components

- Hardware Platforms
 - Windows environment and SQL database
- Software Platforms / Technologies
 - .NET Core
 - Angular 2
 - TypeScript
 - C#
 - HTML5 /CSS3



Testing

- Front-End testing tools
 - Karma
 - Jasmine
- Back-End testing tools
 - NUnit
- User tested by non-computer science friends



Risks

- Limited knowledge of Angular 2 and .NET Core technologies
 - No members of the team are familiar with these technologies
 - Read online documentation and, if needed, contact corporate resource
- Limited experience with creating responsive web apps
 - No members of the team have created responsive web apps
 - Google provides documentation for their progressive web app framework
- News Feed Filtering
 - Unsure of how to execute filtering of postings for news feed
 - Left more time on our timeline for this task, keep in good communication with client about this task

