

# Web Notification System with Alexa Integration

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## Design

We're creating a web notification system for our client, Karina, who was diagnosed with PTSD. Our goal is to develop a product that will allow her to become more self-reliant throughout her daily routine.

This application has the following features:

- Alexa integration to accommodate voice control
- Text-to-speech notifications
- Create and host calendar events from Google calendar and/or Outlook Calendar
- Personalized reminders that will occur in constant intervals leading up to the event
- All devices can receive notifications and be prioritized
- Detailed instructions and tutorials for users who are not familiar with technology

## Impact

Our sponsor, QL Plus, collaborates with universities to create solutions for veterans and first responders. We hope that the development of this application will extend beyond our client, benefiting many others who need assistance with daily tasks.

We focused on accessibility to accommodate a large range of users. Many designs that are on the market, are often too complex and distracting.

This platform allows users to access their calendar information and personalized reminders all in one place. The addition of voice control helps reduce time and minimize confusion when navigating the site. Our client has emphasized that regaining independence can have a profound impact on the lives of individuals in similar situations.



## Framework

- Phone and Computer are used to add, edit, and view calendar events and reminders
- Watch and Phone have Alexa capabilities to create reminders
- All devices display notifications that can also be read out loud
- Alexa Skills Kit creates a custom command for Alexa to use with our application
- ASK connects to AWS Lambda to send information to the database
- Back-end processes requests for AWS Lambda and website as well as making the API calls to Google/Outlook calendar
- Supabase Cloud Server / PostgreSQL Database is used to store reminders and easily handle notifications with real-time communication to update the website
- Firebase Cloud Messaging facilitates communication between Supabase server and user's devices by handling notification data and sending it to multiple devices

