# First Project Proposal

## General Overview

Family Gift Planner. This app will help family members coordinate gift shopping.
Each family member can log in and create their own gift wishlist. Everyone else
in the group will be able to see their wishlist and check off gifts that they've bought without them seeing it. This will help so different family members don't accidentally buy the same thing, and help each family member know what to buy.

## Technical Challenges

- In the Firebase Realtime database we will need to use the family/group reference saved in the users data to then query the groups data.
- Understanding who can see what will be difficult and very important for the project so you can't see who has selected your own gifts.
- Finding a balance between popups and pages to guide the user in the correct direction. We don't want to take too many steps for the user to add a new item.

## Requirements

1. **Follow the Model-View-ViewModel design pattern:** We plan to do a Gift Model and a Gift View Model. We might also do a Family Model and a Family View Model.
2. **Require users to authenticate before interacting with the app's major features**: We will require users to log in before using any of the app's features.
    - 2.1 **All data must be secure:** Only users in the group can see any information. We will only use the Firebase SDK, so that the data is encrypted.
    - 2.2 **Users should be able to log out of the application**: We will use Firebase authentication to sign users out

3. **The app should use the device's speech-to-text API in a meaningful way:** We plan to use the speech-to-text API to type the names of the gifts.
4. **The app must use Firebase in some meaningful way besides authentication:** We plan on using the realtime database, and if time allows, we may also use Firebase Cloud Functions.
    - 4.1 You must provide proper firebase access rules:

```
“rules” {
  “gifts”: {
    “$gift” {
      “purchased”: {  // The purchased field can be read by the members, but not the owner
        “.read”: “auth != null && data.child(“members”).val().contains(auth.uid)”
        “.write”: “auth != null && data.child(“owner”).val() == auth.uid”
      } // The gift can be edited by the owner
      “.read”: “auth != null && data.child(“owner”).val() == auth.uid
                && data.child(“members”).val().contains(auth.uid)”
      “.write”: “auth != null && data.child(“owner”).val() == auth.uid”
    }
  }
}
```

5. **Your app should follow the Material Design standard for the UI:** We plan to use only Material Design components.
6. **Your app should have multiple activities:** Our app will include a gift input activity, where a user can input and see their gift ideas, and it will also have a group activity where users can view others’ gifts and check them off.
7. **Your app must be useful:** Our app will help solve the problem of not knowing what gift to give your family members, and it will help family members to not buy the same gifts for the same person.

# Time Estimation

The goal is to implement the project in 12 hours (per person), so we broke it up into 4 sections that should take roughly 3 hours each: authentication/authorization, individual gift input, family gift view, and speech to text functionality.

# Group Members

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