

# **Group Project Technical Report**

CSCI 4100U: Mobile Devices

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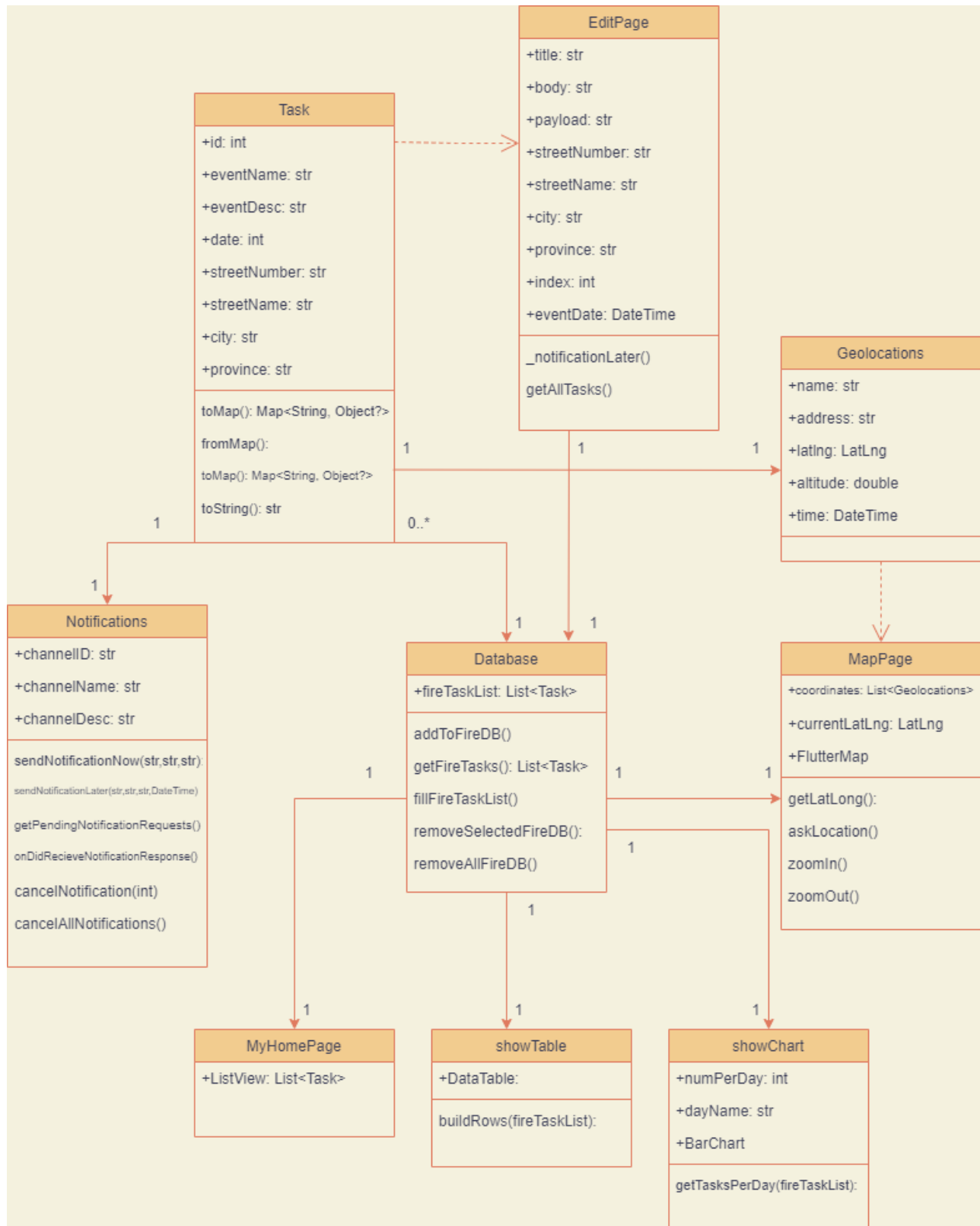
## **Project Overview:**

Our mobile development project is the “InaBit” application. This project embarks upon providing users with reminders to aid them with their everyday activities. Although there are numerous reminder apps available, ours takes the fundamental formula and adds additional features and functionalities that users will find useful and convenient. Some of these capabilities include automated scheduling, which adds each reminder to a weekly schedule and allows users to see an ordered timeline of their reminders. Another example is the ease of displaying the location of a task on maps, which the user can simply examine and receive directions there with a single swipe and button click.

## **Group Members and their Contributions:**

- Abdullah Sarwar
  - Handled maps, geolocation, and geocoding functionality
  - Refined user interface design and usability
- Evan Curtis
  - Completed local and cloud storage, and internationalization
  - Polished user interface design and usability
- Adyan Reza
  - Compiled and wrote technical report
  - Built data tables and charts

## Code Design – UML Diagram:



## **User's Guide (for non-developers):**

### **1 – Introduction**

#### **What is the InaBit app?**

InaBit is a mobile application that allows you to set reminders and tasks to provide you with notifications, scheduling and more. Using a mobile smartphone, this app enables you to easily assist you in tracking various tasks, reminders, and events with features such as automatic weekly schedules and easy access to directions while being simple to navigate around.

#### **What devices does the mobile app support?**

InaBit supports any mobile device that has iOS(iPhone, iPad, iPod) and Android (mobile phones and tablets) operating systems. InaBit also contains French and Spanish support.

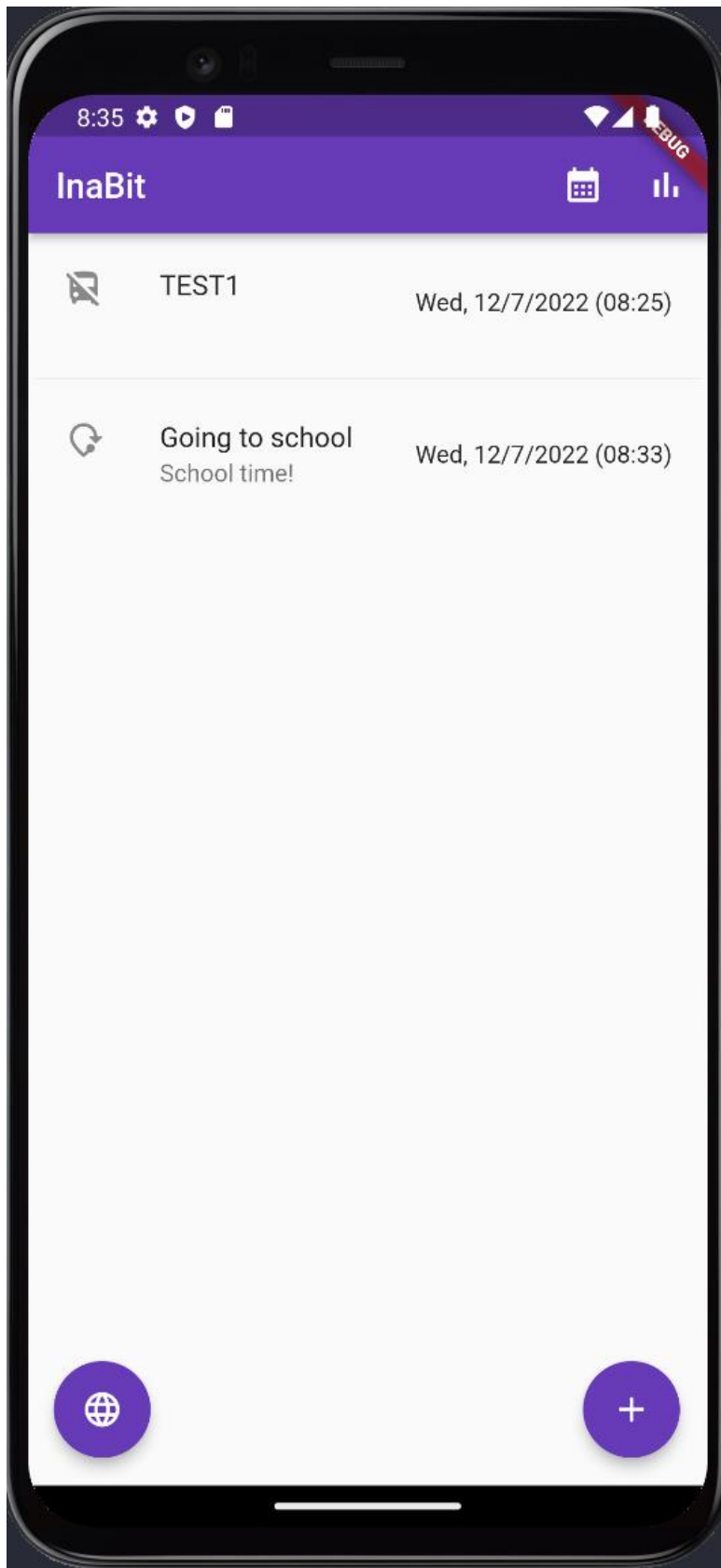
#### **InaBit mobile app allows you to:**

- ✓ Easily view set reminders and events, providing easy-to-view key information
- ✓ Add a location attached to a reminder which can efficiently provide a map and directions to the destination
- ✓ View all set reminders in a weekly schedule
- ✓ Use a bar chart to view which days are the busiest
- ✓ View in English, French, or Spanish

#### **How much does the mobile app cost?**

InaBit for mobile devices is completely free!

### **2 – App Overview**



## **Home Screen:**

The main screen of the InaBit app displays your scheduled reminders with key information such as the task, task description, day, date, and time. In addition, there is an icon to the left of the task's name and description that varies depending on whether the task had a location added when it was created. A "+" button at the bottom right corner of the screen allows the user to add a task, and a "globe" symbol adjacent to it allows you to change the app's language. Finally, there are two buttons in the upper right corner. The "calendar" icon generates a weekly plan based on all the reminders, whereas the chart icon generates a bar chart that shows the user which days have the most tasks for the week.

## **Adding a Reminder:**

You can add a reminder by tapping the "+" icon in the lower right corner of the home screen.

Following that, you will be asked if you want to associate a location with the new task.

Following your pick, you may enter all the essential information. If you choose to go back to the home screen, an "arrow" in the upper left corner of the screen will take you there; if not, tapping "save" will display a notice above your phone's keyboard indicating that a notification will be delivered to you when the properly entered date/time comes. The reminder will also be shown on the main home screen.

8:37

DEBUG

←

Add Task with Location

Task

Description

Street Number

Street Name

City

Province

Date

2022/12/06

Time

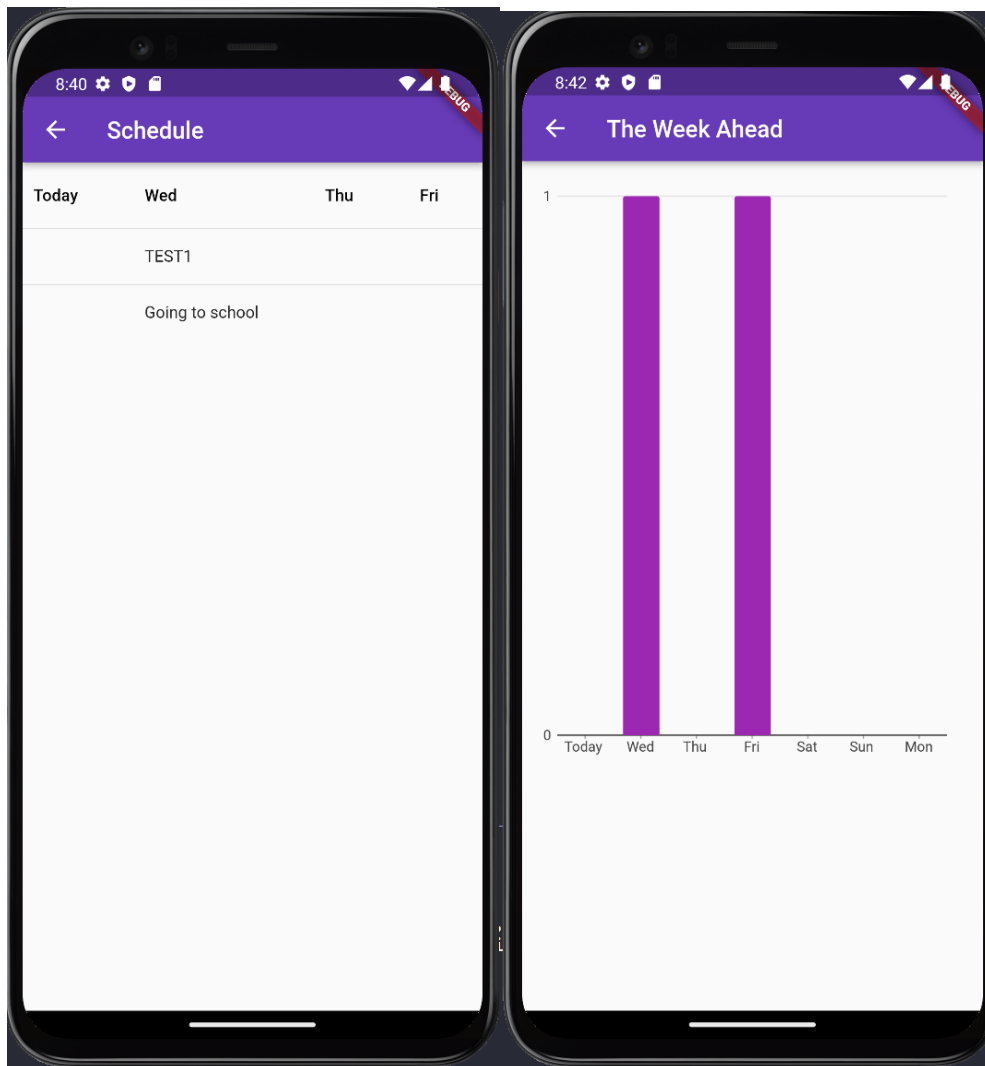
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Save

Go Back

## Scheduling and reminders per day:

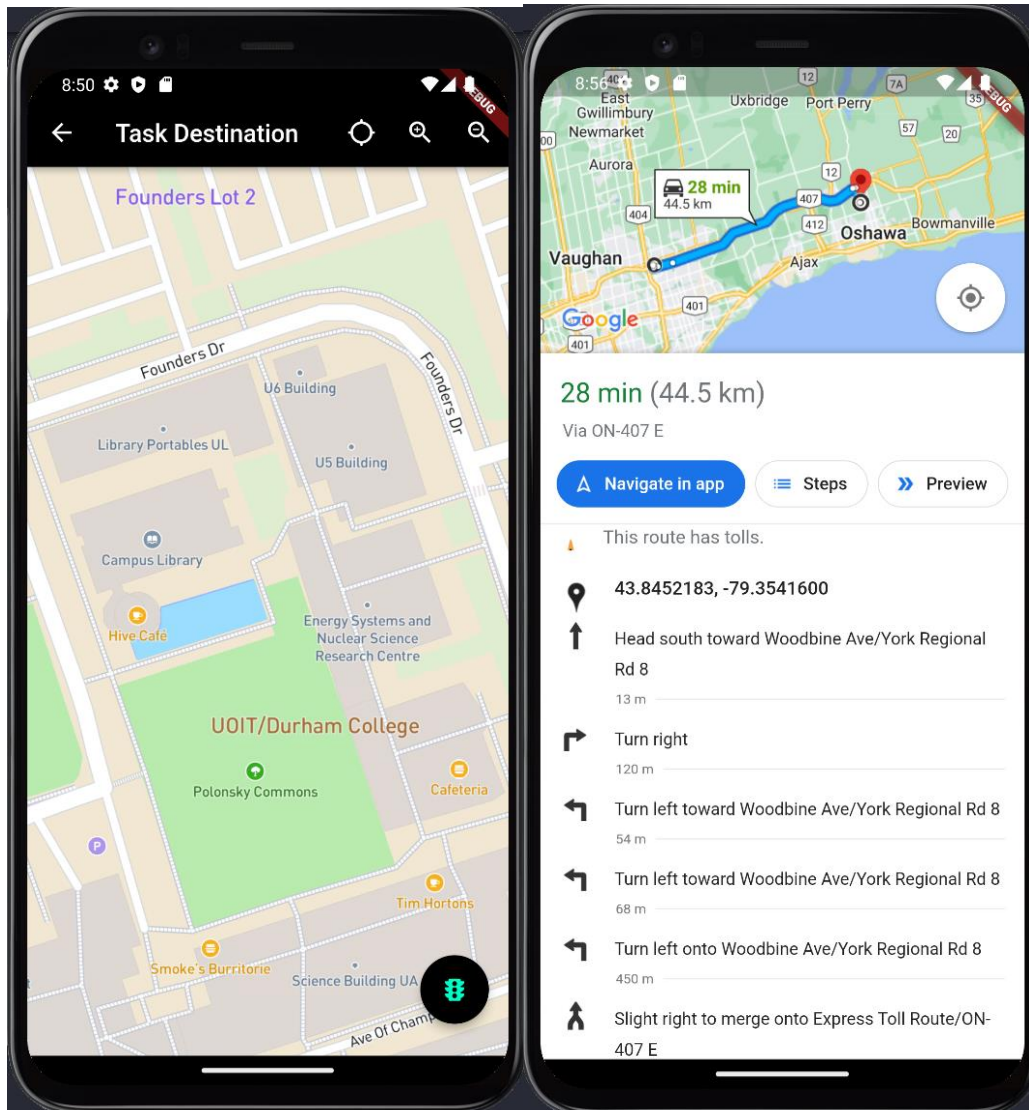
The "calendar" icon on the home screen will take you to a new screen with a layout of all your scheduled activities for the week. They will be shown based on the day and hour you choose when you create the reminders. Each day, the chores are also classified by time, from earliest to last. You may scroll to subsequent days of the week by swiping right on the schedule. Following that, clicking the "chart" button on the main screen will take you to a new screen where you may examine a bar chart. This chart will show you how many tasks you have every day throughout the week, as well as which days are the busiest.





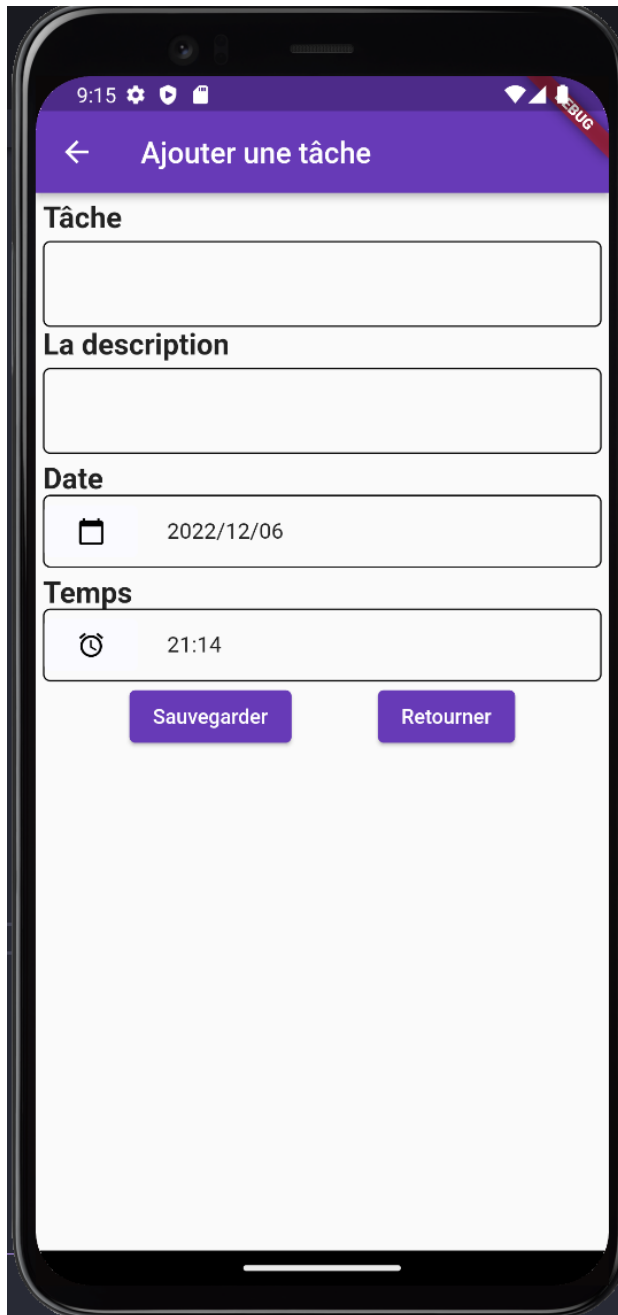
## **Reminder Gestures and Location:**

On the home screen, you may use gestures to carry out a task. To begin, swiping right on a reminder will remove it. Tapping on the desired task will allow you to edit the task. All the information sections are available to edit, when finished you may save which sends a notification above your device mentioning that you will be notified when the inputted date and time is reached. Also, tapping the “Go Back” button will take you back to the home screen, canceling the edit. Swiping left on a reminder with a location, on the other hand, will open a new screen. This page displays and focuses a map on your specified location. Swiping about on the map will allow you to see the surrounding region of your chosen place and explore the map from there. By tapping the icon in the bottom right corner of the screen, you will be sent to Google Maps, where you may get directions from your current position. Make sure to click the “target” icon prior to this, since that retrieves your location. Back on the map screen, there are three icons in the upper right corner. The "target" icon will place markers that indicate your distance from the destination. Finally, there are zoom in and zoom out icons right next to each other.



## Changing language:

By tapping the "globe" button in the bottom left corner of the home screen, you will be prompted to choose one of the three languages supported by InaBit, which are English, French, and Spanish.



### **List of Functional Requirements – How/where they were used:**

- Multiple screens and navigation
  - Multiple screens are used in various cases, mostly through app bar buttons
  - Navigation was used when a new page needed to be loaded

- Adding a new task (with or without location)
  - Viewing schedule
  - Viewing statistics chart
  - Viewing map
  - Returning to the homepage from every other page
- Dialogs and pickers
  - Dialogs come up from actions pertaining to the floating action buttons
    - Adding a new task, dialogue will pop up asking for location association
    - Language selection
  - Pickers were used for selecting the appropriate date and time for a new task
- Snackbars and notifications
  - Snackbars appear when saving a task
    - Information displayed tells the user if the date/time is invalid
    - Also displays confirmation regarding a notification being sent at the appropriate date/time
  - Notifications make a sound and appear when the reminder has reached its selected date/time
- Local storage
  - The tasks id, name, and description get saved in the SQLite local database
- Cloud storage
  - Firestone database loads the list of tasks
  - When adding a new task the database holds task id, name, description, date, street number, street name, city, and province

- Data tables and charts
  - A data table is used to display the user's customized schedule for the week ahead
  - A chart is used to display the number of tasks per day for the week ahead
- Maps
  - A flutter map is loaded and centered for the selected task with a location
- Geolocation
  - Gets the current location of the device
  - Uses data processed from geocoding to get the destination location
- Geocoding
  - Converts the task's associated address with the task to latitude and longitude for setting a location for Google Maps directions
- Internationalization
  - A floating action button prompts the user to select their desired language between English, French, and Spanish