

Final Project – Develop App for Social Good

Goals

- Create an Android app of that provides a social benefit
- App should demonstrate mastery of the concepts discussed in the course
- App should include elements not explicitly covered in class

Overview

Technology is tool—it can dazzle and delight, but it also has the power to significant improve someone’s life. For example, receiving notifications about upcoming parties or how many steps you took today is convenient, but helping a visually impaired person navigate the world independently or helping provide access to clean drinking water is life-changing.

For your final project, you will create an original app of your own design whose primary purpose is to provide a social benefit. The social impact may be focused on a small or large community, socioeconomic group, underrepresented group, a geographic region, etc.

You will submit a proposal that explains the social need you plan to address as well as explanation how the app will help. The proposal will also include wireframes of the initial idea / design and a general description of the app.

You final app will be graded on how it fulfills the requirements and the quality / completion of the code. Along with the final project code, you will conduct user tests and submit the results. Finally, you will demonstrate the app (individually) at a time to be determined later

Required naming convention *(replace # with the current assignment number)*

- **Application Name / Project Name**
 - *Final.Project.Lastname.Firstname*
- **Company Domain**
 - *firstname.lastname.itp341*
- **Package Name** *(should be automatically generated)*
 - *itp341.lastname.firstname.final.project.app*
- **Zip File** *(include entire project folder)*
 - *Final.Project.Lastname.FirstName.zip*

Project Requirements

- Create new Android Application Project

- Must have **meaningful use** persistent storage (*useful, relevant data must be stored and used throughout the app*)
 - JSON / GSON (local storage)
 - SQLite / SugarORM (local storage)
 - Firebase (or other cloud storage)
- SharedPreferences
- Minimum 4 activities
- Must include app icon
- Must include images within the app
- Must include custom adapter and a connected ViewGroup (e.g. *ListView, GridView, RecyclerView*) with custom view / layout
- Must follow design patterns discussed in class. Data must be in a model class (or classes). Use a singleton to share data across activities where appropriate. (*Note: If you're using local storage, you will most likely need a singleton. If you're using Firebase, you most likely will not need a singleton. In both cases, you will need models*)
- Must use a third-party API / web service / REST service (*complexity level of API will be considered in grading*). Some examples are:
 - [Android Vision](#)
 - [Dialogflow](#)
 - [Facebook](#)
 - [Fabric](#)
 - [Instagram](#)
 - [Twitter](#)
 - [Ticketmaster](#)
 - [Firebase](#) (*must use a feature other than data persistence*)
 - [Google Maps](#) (*recommended to develop/test with physical device*)
 - [Google Maps Web Service APIs](#)
 - [AdMob](#)
 - [Google Sign-In](#)
 - [Google Analytics](#)
 - [Google Cloud Messaging](#)
 - FitBit
 - JAWBONE UP
 - Spritz
 - If you want to use something not on this list, let me know
- Must use at least one item technology item that we did not cover in-depth in class (*complexity level of API will be considered in grading*). Some examples are:
 - An additional third-party API / web service / REST service
 - Location services (*recommended to develop/test with physical device*)
 - Camera and photo library

- Audio recording
- Accessing cloud storage service
- Contacts / content providers
- Localization and Internationalization
- Phone or SMS (*recommended to develop/test with physical device*)
- Broadcast receivers
- Services
- Notifications
- Android Wear / Auto
- Electronic devices interfaced with Android
- Material Design: Coordinator Layout + Bottom Sheets
- If you want to use something not on this list, let me know
- User interface must follow good design principles
 - In other words, *your app must look good*
- Comment your code and follow consistent coding convention
- Your project has to compile and run (*projects that fail to run will receive a 50% penalty*)
- If your app needs to be tested on a device, please specify in your submission.
- No late submission will be accepted

Possible Project Ideas

- App that provides customized ACT/SAT training to low-income high school students
- App that measures your carbon footprint throughout the day (this is more ecological-focused, but fits under social consciousness)
- App focused on connecting underserved communities with access to legal services, social work services, media focused on alternative and marginalized social narratives
- App similar to Waze to raise awareness where users can post any time an injustice is experienced or witnessed on campus
- App that helps veterans with re-entry (links to services, USC resources, etc.)

Deliverables

Proposal – due 4/9/18 at 11:59 pm

- Write a proposal document with following details:
 - Motivation and need (**1-2 typed pages**)
 - Describe the social need you have identified, why you believe it is necessary to address, and how your app would address this need. Include at least two reputable sources as support

- App description (**1 typed page**)
 - App name, key features, target audience, and technology items it will use
- Visual wireframes / prototypes of the main screens of your app
 - For some useful software tools, see <http://www-bcf.usc.edu/~trinagre/itp140/Prototyping.html> or <https://www.cooper.com/prototyping-tools>
- *Note: If you later modify your project from your original proposal, you **must** submit a revised proposal which describes any changes. Failure to do will lose 10%*

Project Milestone – in-class 4/18/19 (please note this is an **earlier date than in the syllabus**)

- Requirements
 - All UI elements
 - MVC

Project – code due on Blackboard 4/30/19 at 11:59 pm;

15 min in-person app demonstration TBD (probably 5/1 or 5/3)

sign up on piazza poll

- App code
- UX testing report
 - You must ask five (5) different people (non-programmers) to use your app to complete at least three (3) tasks.
 - Incorporate any changes they describe into the UI / design.
 - Submit a Word document / PDF describing (with screenshots) what issues they encountered and how you changed it.
 - Report should look clean and professional—see sample reports
- In-person demonstration

Submission

- Submit all written documents via Blackboard (e.g. app proposal and usability report)
- Submit your app final code via Blackboard
- Sign up for in-person project demonstration

Grading

Item	Points
App proposal	
Motivation / Need	4
Design / wireframes	4
App description	4
Project Milestone	4
Final App	
Minimum four activities	12
Data persistence	10
Technology item	12
Third-party API / web service / REST	12
App icon and images	4
Custom adapter with ViewGroup	5
Design patterns (MVC required; singleton as needed*)	5
Design aesthetics	10
Coding style and organization	5
UX testing document	4
Total	95