

DPS924 Assignment 2

In Human Terms

Submitted by: Carlos Mo

Email: cmo3@myseneca.ca

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1 Basic App Features

In Human Terms will contain the following basic app features:

Manage Offline Dictionaries

In the “My Dictionaries” menu option of the navigation drawer, users are able to pick and choose from a list of 22 dictionaries to install or delete by tapping the plus or minus icon. The available dictionaries included in the app are listed below:

- | | |
|---|---|
| - Administration | - Medicine and Health |
| - Agriculture | - Metallurgy |
| - Names and Titles | - Military and Security |
| - Arts, Recreation and Sports | - Mines and Quarries |
| - Law and Justice | - Petroleum |
| - Home Economics and Accommodation Science | - Humanities and Social Sciences |
| - Economy | - Environmental Sciences |
| - Electricity | - Construction |
| - Electronics and Informatics | - Industries |
| - Mathematics, Physics and Natural Sciences | - Telecommunications and Postal Service |
| - Mechanics and Heat | - Transportation and Materials Handling |

Search Terminology

Using the search box in the action bar, users are able to search terminology within all of their currently installed dictionaries. As they input a search term, smart suggestions will appear in a dropdown list below the search box.

View Dictionary

In the “My Dictionaries” menu option of the navigation drawer, users can view all the terms from a specific dictionary by tapping the item in the list (provided that the selected dictionary is installed).

Text to Speech Capabilities

Whenever a detailed view of a term is displayed within the app, users will have the option of hearing a verbal pronunciation of the term by tapping the sound icon.

Keep Track of Favourited Terms

Whenever a detailed view of a term is displayed within the app, users will be able to favourite or unfavourite a term. Favourited terms can be displayed and managed from the “Favourites” menu option of the navigation drawer.

View Recently Searched Terms

In the “Recent” menu option of the navigation drawer, users can view terms that they have recently searched using the search box in the action bar.

2 Additional Notes

The major, unforeseen challenge that I encountered while developing this app was optimizing performance. It was difficult trying to achieve efficiency due to the size of my dataset. In total, the csv's of the 22 provided dictionaries was an aggregate 363 mb (with the largest dictionary being 50 mb and containing over 300,000 items). To handle persistence, I originally used an ORM (Sugar ORM) because of its ease of implementation. This was great for a small dataset, but once I tried to use the ORM to handle my actual dataset, operations would take so long to complete that they would crash my phone. This is when I opted back to using traditional SQLite in Android. Still, operations would still take minutes at a time to complete. After a lot of research, I was able to dramatically reduce the time it took to insert csv's into the database by using database transactions along with AsyncTask. However, improving efficiency for retrieval of records from the database was another challenge on its own. My initial approach of using a custom array adapter to load the listview yielded very poor results. After much more research, I decided to use a custom cursor adapter approach to load the listview, along with an AsyncTask. This improved the operation dramatically, but I was still not quite satisfied. After endlessly searching for more solutions, I found that using a Cursor Loader along with a Loader Manager and Content Provider may yield even better results, but there was too much of a time constraint to learn and implement this into my app.

3 Unimplemented Features

All the features that were proposed have been implemented into the app.

4 Marketing Strategy

Target Market

The expected demographics for In Human Terms include high school students, university students, and also new/inexperienced members of the workforce. For example, a university student studying nursing may want to use this app's medicine and health dictionary as a supplemental resource to their education. New/inexperienced members of the workforce may be initially unfamiliar with the terminology being used in their field and an offline dictionary app based on the Government of Canada's linguistic data bank may prove to be a valuable, accurate tool.

Product Differentiation

In Human Terms will be viewed as a unique, mobile application because there is currently no app on the Google Play store that offers support of multiple, field-specific terminology dictionaries. While there are already existing apps that offer terminology in one specific field, In Human Terms would be a first-to-market application that provides 22 available dictionaries in various fields. Users will be attracted to the elegant user interface as well as accuracy of information provided by the application due to the terminology being extracted directly from the Government of Canada's linguistic data bank.

Pricing

I will adopt a freemium pricing strategy as I believe that most people are hesitant when paying money for an app without any trial beforehand. In Human Terms would be free to download, but advertisements will be included. Users can also pay \$0.99 for the premium version which would eliminate ads and perhaps include some premium features that could be developed in the future. I chose this pricing strategy as freemium has become a highly popular model, with notable success in the Google Play store.

Distribution

As In Human Terms is an Android application, it will be distributed through the Google Play store.

Advertising and Promotion

Because dictionaries and terminologies are not particularly interesting topics, I don't think employing a strategy that revolves around viral marketing would be effective. Instead, I feel that maybe a point-of-sale promotion strategy would be more likely to succeed. Because one of the major demographics is students, I could approach professors at universities and colleges to pitch them my app. For example, I could talk to a professor who is teaching law and if he/she likes the Law and Justice dictionary on my app, they can promote my app to their class. If they wanted to, I could even create a separate dictionary exclusively for their class, based on recommended terms from the professor. Alternatively, I could also directly approach students at the university/college (at a location such as the library) to introduce them In Human Terms and also gather feedback on the app. This way, I could get students to spread the app through word of mouth, while getting real feedback on how to improve my app for users. At a higher level, because my app is built based on an Open Canada dataset, I could request to share my app on the Open Canada official apps gallery. After that, I could approach a school board such as TDSB to convince them that they could use In Human Terms as a valuable resource on their virtual library catalogues for high school students. This way, I could leverage the public school system to promote my app for me.