

ECM2425 - README

Introduction

For my app, I decided to make a news app. Originally, I chose this because, from ECM1400, I already have experience with a news API, NewsAPI.org, so thought that a news app would be a logical choice.

The app allows users to browse current news articles, filter by category, as well as filter by their own search parameters.

Each article can be clicked on and will open the article and display all its contents.

Users can also save a favourite search query which can then be quickly called in the future to save retyping it out.

Design Rationale

The first choice I faced was whether to use fragments or not. I decided to stick with activities since, not only are they better suited to portrait mode on mobile devices - which is the orientation and device I had in mind when designing my app - but I wanted my app to have distinct sections/screens and activities lend themselves better to this. As such, I had two activities, activity_main which is the home screen of the app where users can browse articles, and filter by categories and search queries, as well as activity_web which is used for displaying whichever article a user has clicked on.

Another choice I had was how to incorporate data storage in the app. I decided letting the user enter and save a search query which can then be quickly called without having to be retyped - both in that session and upon returning to the app - would be a very helpful feature. I decided to use SharedPreferences for this as I am only storing a very small amount of non-personal data. When a user reopens the app, the SharedPreferences are checked and the saved query is fetched, assuming one has been set.

A RecyclerView seemed the perfect choice for displaying the list of articles fetched by the API call, as only a few will be visible on screen at once so they can be switched out for ones that are currently visible.

I decided to use a HorizontalScrollView for the category buttons over something like a menu as I did not want to clutter the toolbar with menus. I also feel the HorizontalScrollView looks nicer and allowed me to add more flair to the design of the app.

Novel Features of the App

One novel feature of my app is the aforementioned saved search query. I thought this was a good feature to add as it adds a unique charm to my app, as well as satisfies the requirement to have data storage.

Another novel feature my app has is a button that takes the user to my personal website. This was added again for two reasons, to satisfy the requirement of an implicit extent, and for users to be able to check out my other work if they enjoy the app.

Challenges & Future

One major challenge I faced was with the actual news API being used. Like previously stated, I was going to use NewsAPI.org's API as I had experience with it. But for some reason, my calls to it would not return key parts of the article like content or image, rendering the articles essentially empty apart from a few fields. To solve this, I decided to switch API and ended up using NewsData.io's API since it had the functionality desired but also succeeded in returning all the fields I needed.

Other than this, I didn't face any other significant challenges, one slight challenge was getting the images of the articles to load in my activity_main as lots of articles wouldn't have their image load. However, I found that for each source, either none of the articles' images loaded or all the images loaded, so I believe the fault lies with the sources rather than my code. However, I would want to further investigate this in the future and find a potential fix.

In the future, there are a few features I would want to add. The first of these would be a feature where users can download articles. This would allow users to save articles to then read later; perhaps when they no longer have an internet connection.

I'd also like to allow users to select which country their articles come from, as well as what language the article is in. At the moment, all articles are from the UK which limits the variety of articles a user can view.

Another feature I'd want to add is the ability for users to filter articles by the source i.e., only show articles from daily mail or don't show BBC news. This functionality is possible within the API so would be simple to implement.