

News App: Android Application-News DE

Prof. Dr. David Sommer

Hochschule Schmalkalden
Department of Computer Science

Shetu Chowdhury

Matrikelnummer : 312594
Master's in Applied Computer
Science

Resources:

FRAMEWORK: ANDROID – APP

Version: Android
Studio Flamingo
2022.2.1
API: 31
SDK: Android 12.0
Language: JAVA

Content:

1. Overview
2. Layouts
3. Sources
4. Development
5. Visualization
6. Challenges
7. Limitation
/Future work
8. References

PROJECT GOAL / OVERVIEW:

This is a complete News Application. This app contains only news from Germany. And it includes total five segments. Each section carries the individual category of news. This is a standard app which can be run on android smart phones and as well as in web browser.

LAYOUTS:

The layout of this app is simple and understandable. You can change or move to next section by swiping it and on touch. In Home section all the top news headlines are visualized. You can find news related topic like - sports, health, science, and entertainment etc.

Every news bulletin shows the author's name, publication date, time, and image. You can see detail news by tapping on screen according to your choice.

SOURCES:

To complete this project, I used several tutorials from YouTube. Studied about android studio and gathered several knowledge from different websites, blogs etc. At the end, I will provide all the links of the source which I used to complete this project.

DEVELOPMENT:

For the internet connection to this app, firstly need to set Internet permission in the AndroidManifest.xml file.

XML FILE:

In main activity xml, I used simply Relative layout and add a toolbar that contains the name of the app. Inside this Relative layout, I used Linear layout as for adding so many things in it such as search view option. Under the toolbar create a tab layout for all the tab items and create all the individual fragment for those items. In of this section create view pager to functionate swiping and manage lifecycle of each page. This view pager will hold all the fragments.

Layout xml contains the design of the visualization of news articles including headlines, author name, images and news published date.

Web view activity xml file is the layout of the conception of specific news in details.

JAVA FILE:

Create java class for all the fragments and create a model class named **Pager Adapter** to handle those fragments. Inside **fragment** class implement an override method called inflate on create view and return the view.

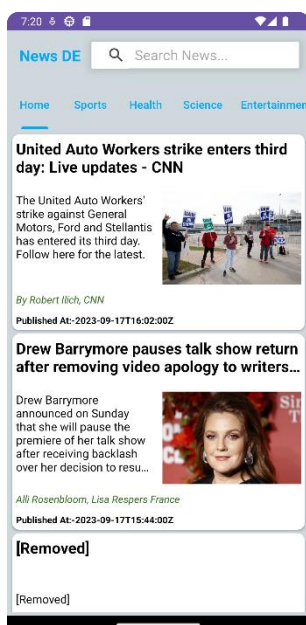
Inside the pager adapter create constructor matching super and write switch case code to manage those fragments.

To work on API, I simply create two java classes called **model class** and **main news** class. Model class carry the details about author, image, published date, URL, and description. And to fetch all information from the array list used another main news class.

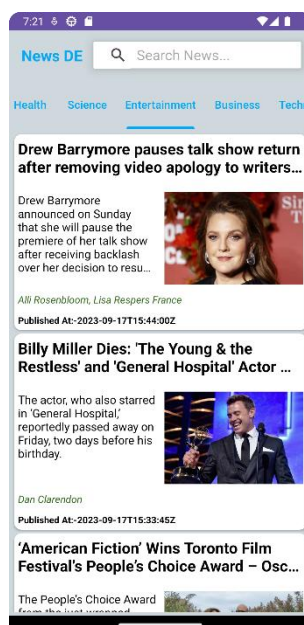
Initiate Retrofit object in the **Api utilities** create an **Api interface** and return in the utilities class. Api interface will work with base URL and get the news according to country. Create an **Adapter** to work on Recycler view.

In the fragment classes, set the API, country code, and Recycler view and all the necessities. Finally for fetching data create a function called **findNews**.

VISUALIZATION:



1.. Home page view



2.. Individual sigment



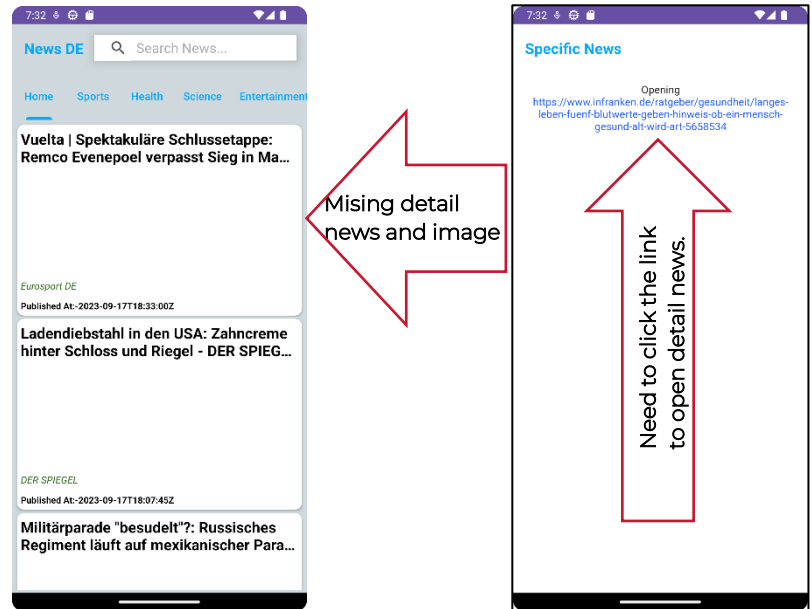
3.. Details news

CHALLENGES:

- Before starting this application, I didn't work on android studio platform.
- Learning new technology in short time.
- Facing complexity to show images in the application.

LIMITATION/FUTURE WORK:

This complete News app has some limitation during run the project. As this app contains news from Germany. The used API for Germany cannot load the images and news description. Another issue showed after liking specific news. It shows the link instead of viewing news description. And need to select or click again to the link then it shows the result. Could not find proper News API for Germany to disregard those errors. To show the appropriate result displayed in **Visualization** part, used another country API e.g., USA and the application looks complete.



For further work, looking for an API which can lookout those kind of image issues. Planning to increase better looks and add additional language chosen option so that foreign people can also read the daily news from Germany. And complete task for the search option.

REFERANCES:

1. developer.android.com.
2. newsapi.org.
3. Getting Started: WebView-based Applications for Web Developers - Chrome Developers.
4. Android Development for Beginners - Full Course - YouTube.
5. How to Make a News App in Android Studio? | GeeksforGeeks - YouTube.
6. How to Make a News App | REST API | Android Project - YouTube.
7. Create News App in Android Studio || Design Layout And Retrieve Data From News Api - Part 1 - YouTube.
8. The color system - Material Design.
9. android - FragmentPagerAdapter deprecated - Stack Overflow
10. java - No speakable text present at Android Studio - Stack Overflow
11. Retrofit (square.github.io).
12. Text scaling - Accessibility for Android Help (google.com).
13. stacktuts.com
14. android - Error while waiting for device: Timed out after 300seconds waiting for emulator to come online - Stack Overflow