How to Use this Template

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NewsFeed

Description

News application that uses the API from https://newsapi.org, offers a smooth and decluttered experience to explore the latest News around the world.
Sign up with your credentials and save bookmarks for later read.

Intended User

This app is intended to time-pressed people who wants to get the latest breaking news on the move / in public transport (students, businessman...) and offers them the possibility to save articles for later.

Features

- Offers Sign-in with your credentials
- Presents breaking news and articles from over 30,000 worldwide sources (ABC news, wired, BBC...)
- Categorizes news by entertainment, sports, Politics...
- Provides source link for the full article
- Bookmarks articles for later read

User Interface Mocks

These were created by https://www.fluidui.com

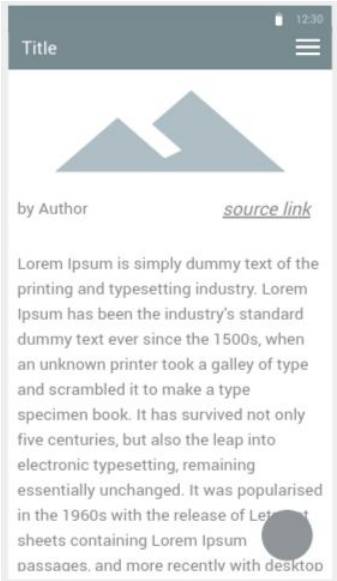
Login Screen

Simple login screen with app logo, to identify the current user (using Google Firebase authentication service). The Sign Up button is used to add a new user.

Main Screen (Phone)

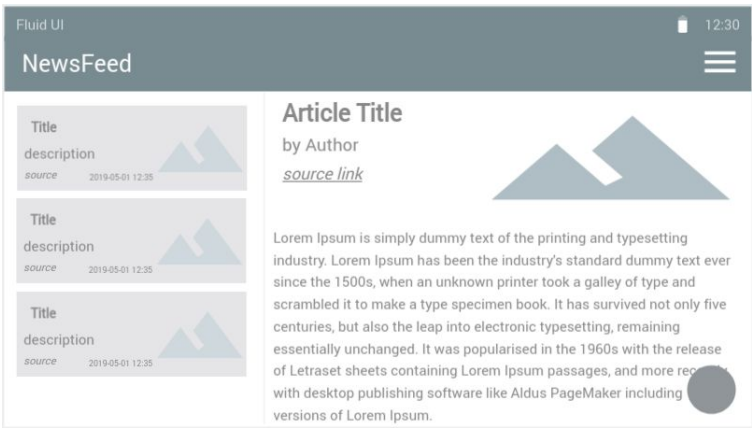
The main screen lists breaking news headlines from various sources, sorted by publish date. The Logout button is found in the options menu found in the toolbar.

Article Screen (Phone)



When the user taps an item on the list of the main screen, the app navigates to the article screen to read the content
The source link opens the full article using an intent to the internet browser.
The floating button offers the possibility to save the article in local database for later read.

Main Screen (Tablet)



In tablet size screen, the main screen presents the list of news headlines along with the selected article for better use of the space available.

App widget

App widget can be added to home screen that points to the latest breaking news article (First one in the list). Tapping the widget will take the user directly to article screen using an intentservice.

Technical steps

- App is written solely in Java programming language
- App needs to pull data from the web service or API only once, or on a per request basis.
- No unnecessary calls to the database are made (using ViewModels)
- App uses IntentService for app widget
- App keeps all strings in a strings.xml file and enables RTL layout switching on all layouts
- App supports accessibility using content descriptions

Key Considerations

How will your app handle data persistence?

The application will use local database for bookmarking the article (SQLite + Room)

Describe any edge or corner cases in the UX.

The application navigation is simple:

- Logout button (in the options menu on the main screen) returns to login screen
- Pressing the Back button in Article Screen returns to the Main Screen

Describe any libraries you'll be using and share your reasoning for including them.

- **IDE:** Android Studio v3.4
- **Build tool:** Gradle v5.1.1 + Android Gradle plugin v3.4.0

Library	**Version**	**Reason for inclusion**
Retrofit	2.5.0	to handle REST API from NewsAPI
Gson	2.5.0	to parse JSON to POJO
Glide	4.9.0	for loading and caching images
ButterKnife	9.0.0	to bind views and reduce boilerplate code
Room	1.1.1	data persistence abstraction layer over SQLite
Lifecycle (LiveData and ViewModel)	1.1.1	for MVVM architecture

Describe how you will implement Google Play Services or other external services.

- **Google Firebase:** to authenticate users
- **AdMob:** to monitorize the application with ad banners

Next Steps: Required Tasks

This is the section where you can take the main features of your app (declared above) and break them down into tangible technical tasks that you can complete one at a time until you have a finished app.

Task 1: Project Setup

- Setup the Android Project
- Add Google Firebase
- Add Gradle dependencies for libraries

Task 2: Implement UI for Each Activity and Fragment

- Build UI for LoginActivity
- Build UI for MainActivity
- Build UI for necessary main fragments

Task 3: Implement Google Firebase authentication service

- Save current user session
- Create a UI to sign up for new users (UI fragment or dialog)

Task 4: Implement the REST API

- Add Retrofit client
- Setup necessary models
- Setup Retrofit Calls with models

Task 5: Implement the local database

- Setup the App database
- Setup necessary entities
- Setup necessary DAOs

Task 6: Implement app widget

- Declare it in the Manifest
- Create widget UI
- Implement widget business logic

Task 7: Implement AdMob service

- Add free and paid flavors
- Add ad banners to UI layouts

Task 8: Handle output errors and exceptions

- Test the app
- Refine app behavior and UIs

Submission Instructions

- After you've completed all the sections, download this document as a PDF [File → Download as PDF]
    - Make sure the PDF is named "**Capstone_Stage1.pdf**"
- Submit the PDF as a zip or in a GitHub project repo using the project submission portal

If using GitHub:

- Create a new GitHub repo for the capstone. Name it "**Capstone Project**"
- Add this document to your repo. Make sure it's named "**Capstone_Stage1.pdf**"