

# VISVESVARAYA TECHNOLOGICAL UNIVERSITY BELAGAVI



*Mini Project Report on*

## **“NEWSFEED”**

*Submitted in the partial fulfillment for the requirements of Mobile Application Development  
Laboratory of 6<sup>th</sup> semester CSE requirement in the form of the Mini Project work*

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**CERTIFICATE**

This is to certify that the Project work entitled **“NEWSFEED”** is a bonafide work carried out by **SHRUTHILAYA K (1BY19CS147), SRIPRIYA R (1BY19CS158) and TEJASWINI S RAO (1BY19CS169)** in partial fulfillment for *Mini Project* during the year 2021-2022. It is hereby certified that this project covers the concepts of *Mobile Application Development*. It is also certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in this report.

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**External Examiner**

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To emerge as one of the finest technical institutions of higher learning, to develop engineering professionals who are technically competent, ethical and environment friendly for betterment of the society.

### **INSTITUTE MISSION**

Accomplish stimulating learning environment through high quality academic instruction, innovation and industry-institute interface.

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1. Lead a successful career by designing, analyzing and solving various problems in the field of Computer Science & Engineering.
2. Pursue higher studies for enduring edification.
3. Exhibit professional and team building attitude along with effective communication.
4. Identify and provide solutions for sustainable environmental development.

### **PROGRAM SPECIFIC OUTCOMES**

1. Analyse the problem and identify computing requirements appropriate to its solution.
2. Apply design and development principles in the construction of software systems of varying complexity.

## ACKNOWLEDGEMENT

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## **ABSTRACT**

As world's technology is rapidly growing, we have fast connection and network to instantly connect to another person. Day to day use of mobile, tablets and laptop is increasing, most of the people already have these facilities. In this fast and information-oriented world we need to stay updated with every incident and news too. This News app is android mobile application where user have access to latest news from The Guardian API. The main focus of this application is to connect news articles from all around the world and deliver it to user as fast as possible in best visualize way. Keeping oneself updated with the happenings around the world is a need and this can be easily done with the news app. Through this any user can gain knowledge of the world and its surrounding with just a couple of clicks. The user need not visit multiple sites for different genre of information. All the information can be accessed in the same app. The main objective of this project is to provide a people friendly android application through which people can access various information. Different categories such as World, Science, Sport, Environment etc., can be viewed by the user. It is a user-friendly application that is easy to use by people of all ages. Thus, people can stay updated with the latest news with this app.

## **TABLE OF CONTENTS**

<b><u>CHAPTER NO</u></b>	<b><u>TITLE</u></b>	<b><u>PAGE NO</u></b>
<b>CHAPTER 1</b>	<b>INTRODUCTION</b>	<b>1</b>
	1.1 Objectives	2
	1.2 Scope and Motivation	2
	1.3 Problem Statement	2
	1.4 Proposed System	3
	1.5 Limitations	3
<b>CHAPTER 2</b>	<b>LITERATURE SURVEY</b>	<b>4</b>
<b>CHAPTER 3</b>	<b>SYSTEM REQUIREMENTS</b>	<b>5</b>
<b>CHAPTER 4</b>	<b>SYSTEM ANALYSIS</b>	<b>6</b>
<b>CHAPTER 5</b>	<b>SYSTEM IMPLEMENTATION</b>	<b>7-10</b>
<b>CHAPTER 6</b>	<b>INTERPRETATION OF RESULTS</b>	<b>11-15</b>
	<b>CONCLUSION</b>	<b>16</b>
	<b>FUTURE ENHANCEMENTS</b>	<b>17</b>

## CHAPTER 1

# INTRODUCTION

Android provides simple application structure and requires Java and Mark-up languages knowledge to work with. Such as, a discrete movement delivers a solitary screen for a user interface and a service whole completes work in the contextual. We can work on different module separately and can combine at the end, we can also add future modules easily afterwards. API (Application Programming Interface) which is an intermediate interface between different applications. It provides automation, immediacy, adaption and personalization. News API provides us the source of news articles from many different sources at one place and updates it. To expand the sources old fashioned Admin panel can be used where writers will fill the gap of API. In 2014, a design language has been created by google named Material Design which is based on “cards” uses grind-based layouts, responsive animation, padding and depth effects like shadow to create a responsive, attractive and easy user interface. With the use of different libraries and material design it is possible to use attractive UI.

Feeds are designed to be machine-readable so they can they can transfer information from one computer to another without human intervention. Browser plug-ins, client-side applications called readers or application program interfaces (APIs) translate the code into human-readable text. Typically, each item in a news feed consists of a headline that links to the actual content and a brief summary. Many social networking sites, including Facebook, Twitter and LinkedIn have proprietary news feeds that provide site members with status updates, tweets and updates from LinkedIn colleagues.

News feeds are useful for aggregating Web content by topic, author or website. Instead of visiting multiple Web pages to check for new content, the user can look at the summaries and choose which links to follow for the full versions. There are two popular

formats for creating news feeds: Atom and RSS. Items can be organic, which means they are user generated --or they can be sponsored, which means a client has paid to have the content included in the feed.

### **1.1 OBJECTIVES**

- To provide a user-friendly android application to access information.
- To design a machine-readable feed.
- To aggregate web content based on topic, author, or website instead of visiting multiple web pages for getting new content.
- To transfer information from one system to another without human intervention.

### **1.2 SCOPE AND MOTIVATION**

The goal of News Feed is to show people the stories that are most relevant to them. In this busy world nobody has time to go through pages of newspaper to stay updated of what's happening around them. Hence, a quick glance at their phones can help them know what is happening around the world.

The motivation behind this project is to keep people updated of the happening news on the go without spending much of their time with a simple application.

### **1.3 PROBLEM STATEMENT**

The problem statement is to develop a newsfeed app that helps users stay updated of the latest news without having to spend time on going through pages and pages of newspaper content.



## 1.4 PROPOSED SYSTEM

One of the factors in successful news app development is visualization of news and its feature with user. For the development of an android app material design is very useful and provides smooth experience with custom layout, views and animations. For this news app user should be able to select from different categories, countries and newspaper.

Short News as list view with header, little description and image before showing full article can be helpful to user to determine what type of news they are looking for. View Holder can be used for this list view for better and fast experience. Library like Picasso can be used for better image handling. This User interface will be connected to API and Admin Panel database which will give full article in form of web view of that article. Because of this structure the integrity of writer of that article will not be in harm. on their own.

## 1.5 LIMITATIONS

- Since the application is using the Guardian API, it requires internet access to fetch the news.
- The user should have Guardian API key for frequent access to the application.

## CHAPTER 2

### LITERATURE SURVEY

It has been observed that now a days most of the people are using Android devices like mobile, smartphone and tablet. The android operating System has become one of the most popular operating system based on Linux kernel and it currently developed by Google. These days, millions of new users use Android platforms every year. There are four basic part of Android Operating System i.e., the kernel, libraries, application framework and Application.

Native news apps are expensive and difficult to maintain. Native Publishers like BBC News or NY Times uses their own writers to manage articles and manage it. Many native newspapers are divided because of this which causes in lack of resources from one side. Android structure provides great capability with frameworks, libraries and APIs, with the help of it we can provide better user experience and combine this sources at one place while maintaining integrity of its owner.

In the recent years, the advances in mobile technology have brought an exorbitant change in daily lifestyle of individuals. Smartphones/mobile devices are rampant in all aspects of human life. This has led to an extreme demand for developing software that runs on mobile devices. The developers have to keep up with this high demand and deliver high-quality app on time and within budget. For this, estimation of development and testing of apps play a pivotal role. In this paper, a Systematic Literature Review (SLR) is conducted to highlight development and testing estimation process for software/application. The goal of the present literature survey is to identify and compare existing test estimation techniques for traditional software (desktop/laptop) and for mobile software/application. The characteristics that make mobile software/application different from traditional software are identified in this literature survey. Further, the trend for developing the software is towards agile, thus this study also presents and compares estimation techniques used in agile software development for mobile applications. The analysis of literature review suggests filling a research gap to present formal models for estimating mobile application considering specific characteristics of mobile software.

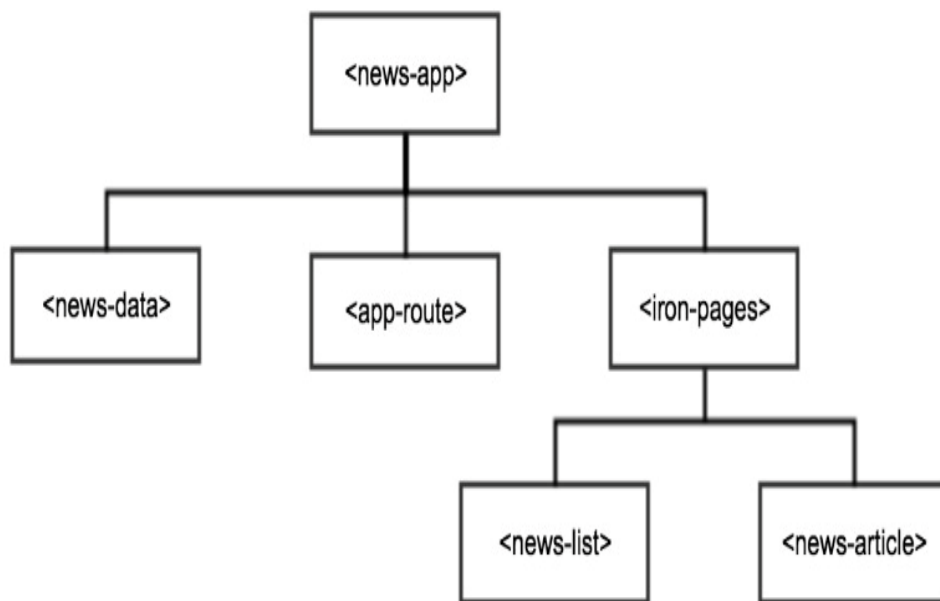
## CHAPTER 3

# SYSTEM REQUIREMENTS

- News feed is generated using the posts from other entities in the system that the user followed, or the user might be interested in.
- Posts might have text, image and video.
- The new posts generated by others should be appended to the news feed of the user.
- News feed generation: should happen near-real-time. The latency seen by the end user should be just a few seconds.
- Appending new post: After a new post is sent to the system, it shouldn't take more than 5 seconds to be able to show up in a news feed request.
- The news feed consists of posts from connections.
- Posts can contain photos and description.

## CHAPTER 4

# SYSTEM ANALYSIS



**Figure 1** System Analysis

The system analysis consists of a flow diagram that explains how the project works. The system analysis consists of a activity Uml Diagram of the news feed system which shows the flow between activity of types.

News API has been used for collecting different news sources at one spot. On sending request it will give response in JSON format which contains source id, title, description, image URL, article URL, author, time etc. We need to handle and parse this JSON into string format which is our required format.

## CHAPTER 5

# SYSTEM IMPLEMENTATION

Android Studio is the official Integrated Development Environment (IDE) for Android app development, based on IntelliJ IDEA . On top of IntelliJ's powerful code editor and developer tools, Android Studio offers even more features that enhance your productivity when building Android apps, such as:

- A flexible Gradle-based build system
- A fast and feature-rich emulator
- A unified environment where you can develop for all Android devices
- Apply Changes to push code and resource changes to your running app without restarting your app
- Code templates and GitHub integration to help you build common app features and import sample code
- Extensive testing tools and frameworks
- Lint tools to catch performance, usability, version compatibility, and other problems
- C++ and NDK support
- Built-in support for Google Cloud Platform, making it easy to integrate Google Cloud Messaging and App Engine.

In this project, we create a News Feed app which gives a user regularly-updated news from the internet related to a particular topic, person, or location. In this project, we use Guardian API. This is a well-maintained API which returns information in a JSON format. Various features have been included such as Navigation bar, settings where color theme can be changed, various genre of news etc.

## 5.1 PSEUDO-CODE

### 5.1.1 XML

```
<?xml version="1.0" encoding="utf-8"?>
<manifest xmlns:android="http://schemas.android.com/apk/res/android"
    package="com.example.android.newsfeed">

    <uses-permission android:name="android.permission.INTERNET" />
    <uses-permission android:name="android.permission.ACCESS_NETWORK_STATE"
/>

    <application
        android:allowBackup="true"
        android:icon="@mipmap/ic_launcher"
        android:label="@string/app_name"
        android:roundIcon="@mipmap/ic_launcher_round"
        android:supportsRtl="true"
        android:theme="@style/AppTheme">
        <activity
            android:name=".MainActivity"
            android:label="@string/app_name"
            android:theme="@style/AppTheme.NoActionBar">
            <intent-filter>
                <action android:name="android.intent.action.MAIN" />

                <category android:name="android.intent.category.LAUNCHER"
/>

            </intent-filter>
        </activity>
        <activity
            android:name=".SettingsActivity"
            android:theme="@style/SettingsTheme"
            android:label="@string/action_settings"
            android:screenOrientation="portrait">
            <meta-data
                android:name="android.support.PARENT_ACTIVITY"
                android:value="com.example.android.newsfeed.MainActivity"
/>

            </activity>
        </application>
</manifest>
```

**FIGURE 2** XML code

## 5.1.2 JAVA

```
package com.example.android.newsfeed;

/**
 * An {@link News} object contains information related to a single news.
 */

public class News {

    /** Title of the article */
    private String mTitle;

    /** Section name of the article*/
    private String mSection;

    /** Author name in the article */
    private String mAuthor;

    /** Web publication date of the article */
    private String mDate;

    /** Website URL of the article */
    private String mUrl;

    /** Thumbnail of the article */
    private String mThumbnail;

    /** TrailText of the article with string type Html */
    private String mTrailTextHtml;

    /**
     * Constructs a new {@link News} object.
     *
     * @param title is the title of the article
     * @param section is the section name of the article
     * @param author is author name in article
     * @param date is the web publication date of the article
     * @param url is the website URL to find more details about the article
     * @param thumbnail is the thumbnail of the article
     * @param trailText is trail text of the article with string type Html
     */
    public News(String title, String section, String author, String date,
String url, String thumbnail, String trailText) {
        mTitle = title;
        mSection = section;
        mAuthor = author;
        mDate = date;
        mUrl = url;
        mThumbnail = thumbnail;
        mTrailTextHtml = trailText;
    }

    /**
     * Returns the title of the article
     */
    public String getTitle() {
        return mTitle;
    }
}
```

```
}

/**
 * Returns the section name of the article.
 */
public String getSection() {
    return mSection;
}

/**
 * Returns the author name of the article.
 */
public String getAuthor() {
    return mAuthor;
}

/**
 * Returns the web publication date of the article.
 */
public String getDate() {
    return mDate;
}

/**
 * Returns the website URL to find more information about the news.
 */
public String getUrl() {
    return mUrl;
}

/**
 * Returns the thumbnail of the article
 */
public String getThumbnail() {
    return mThumbnail;
}

/**
 * Returns the TrailText of the article with string type Html
 */
public String getTrailTextHtml() {
    return mTrailTextHtml;
}
}
```

**Figure 3** Java code



## CHAPTER 6

## INTERPRETATION OF RESULTS

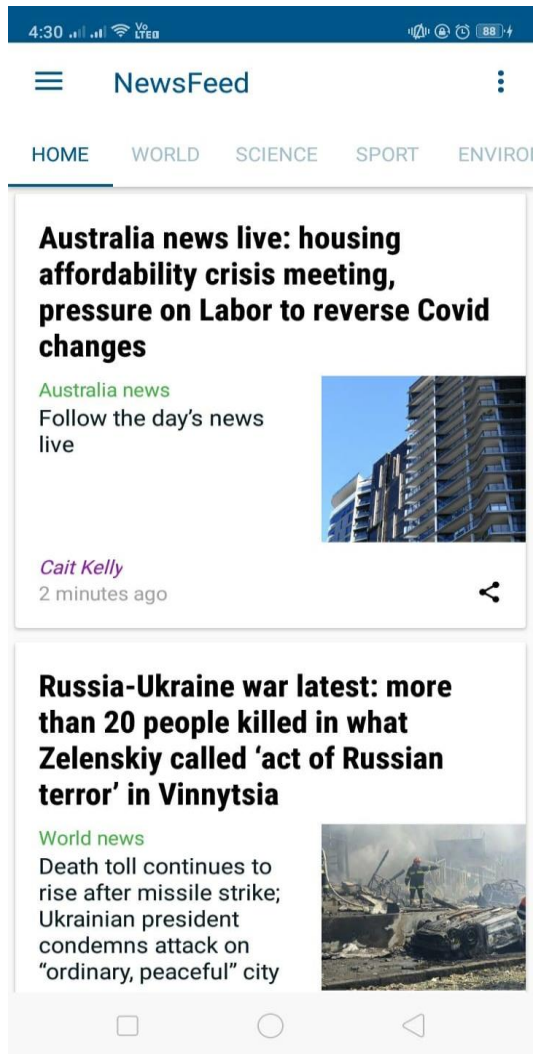


Figure 4 Home Page

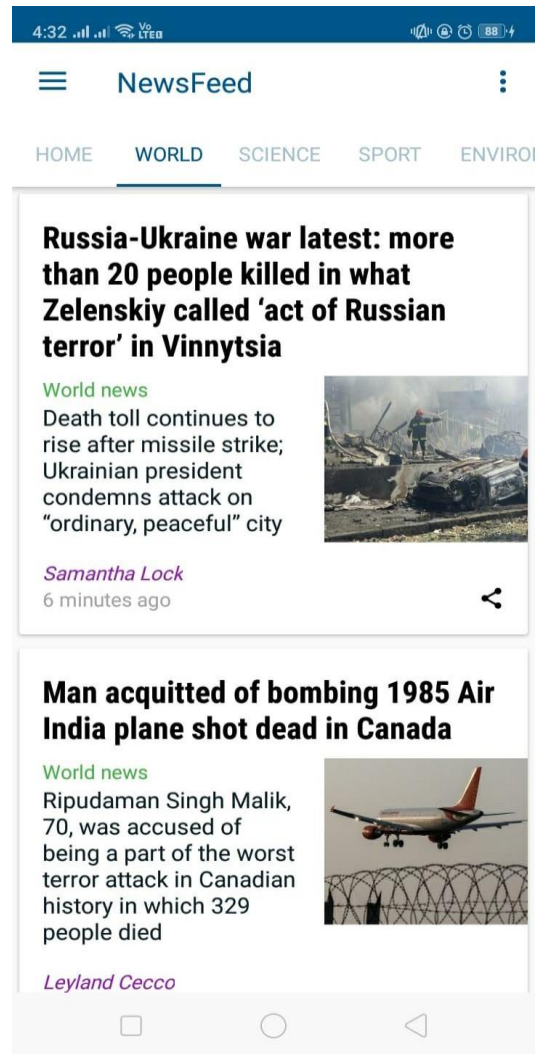
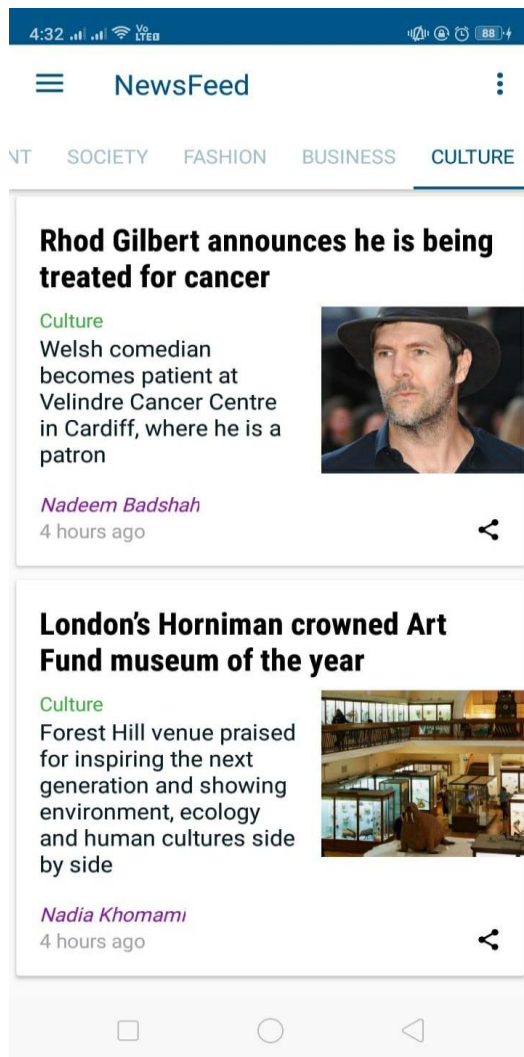
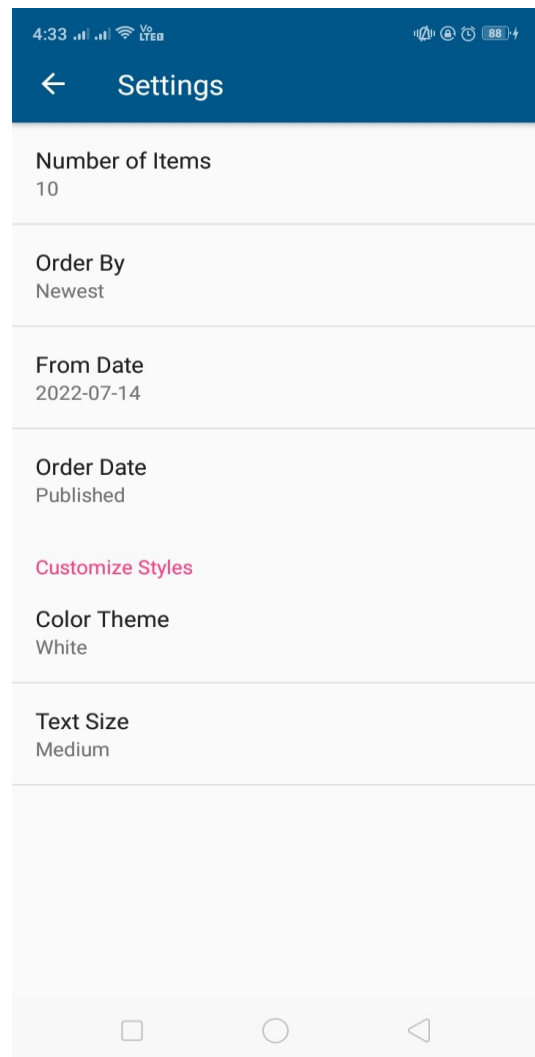


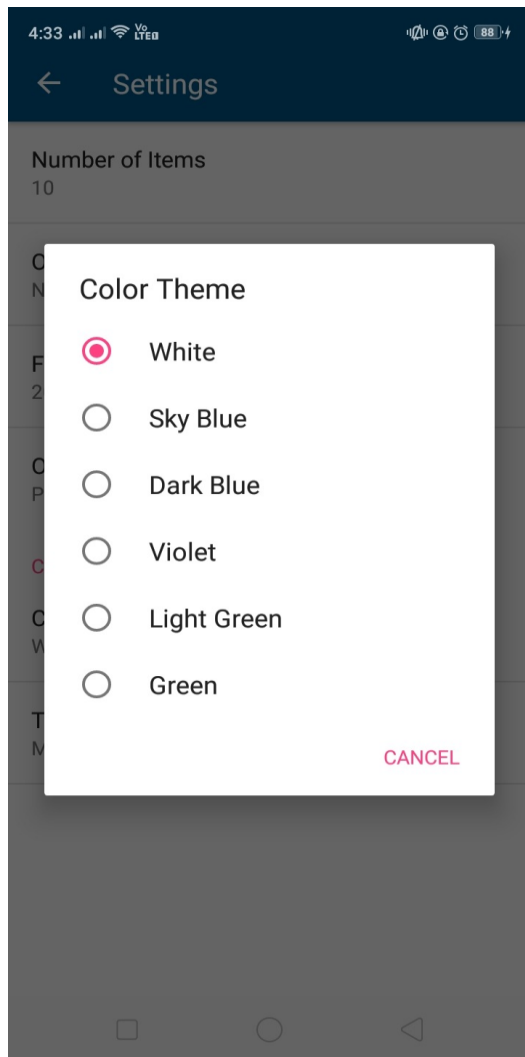
Figure 5 World Genre Page



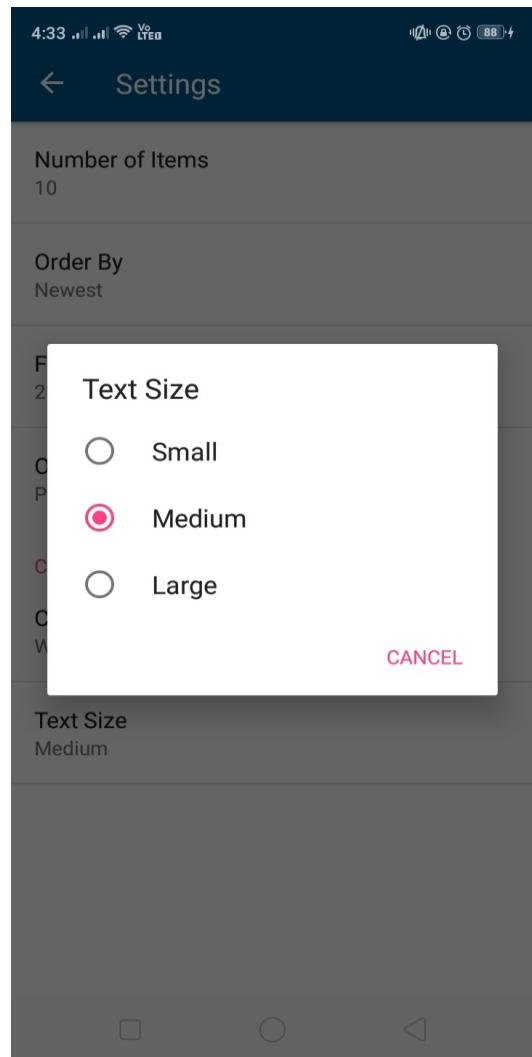
**Figure 6** Culture Genre Page



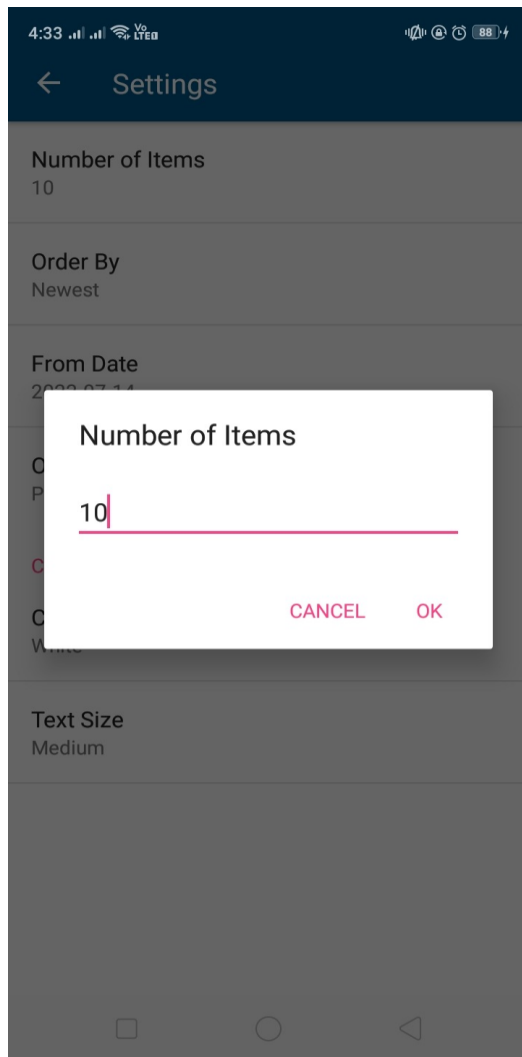
**Figure 7** Settings Page



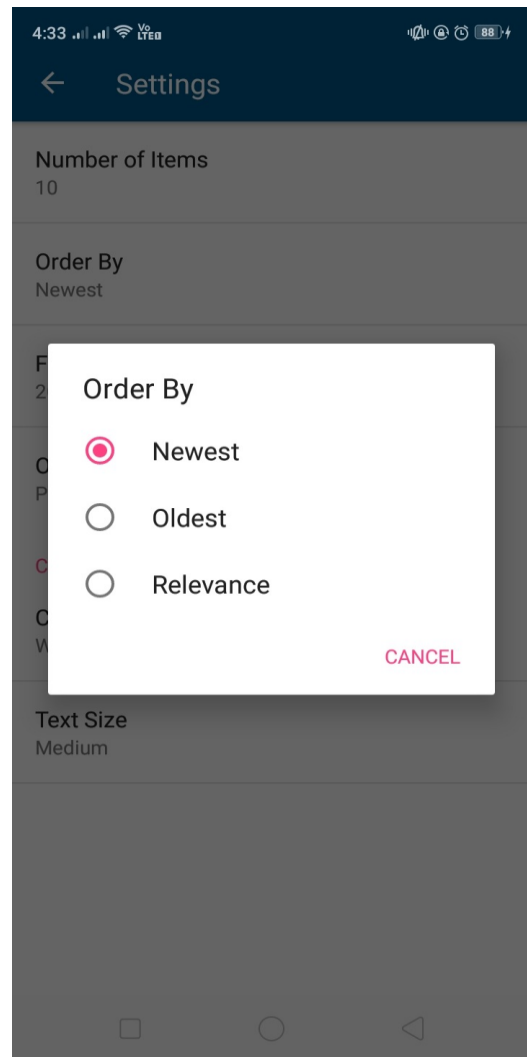
**Figure 8** Color Theme



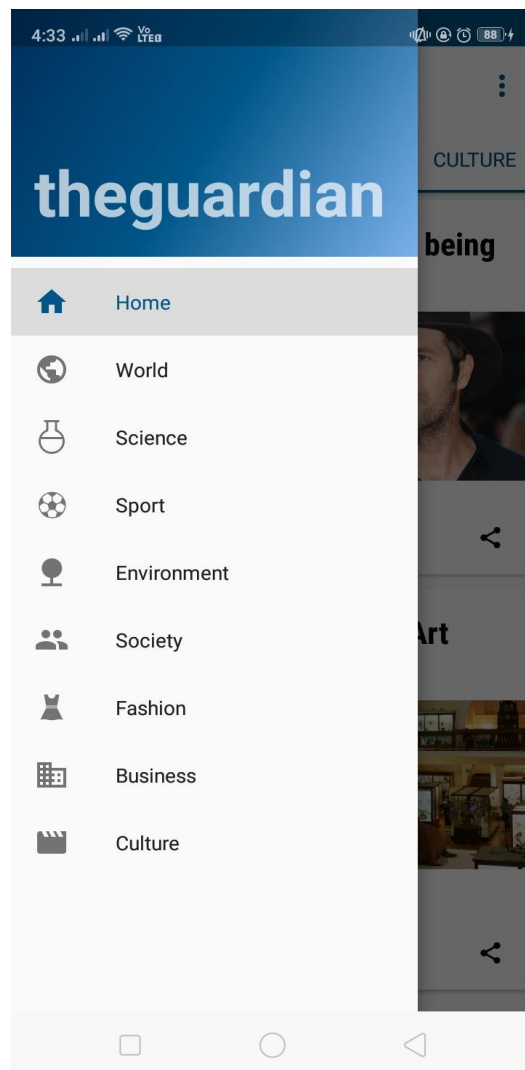
**Figure 9** Text Size



**Figure 10** Number of Items



**Figure 11** Order By



**Figure 12** Side Bar

## CONCLUSION

Using our project “News Feed” users can get access to both latest and oldest news of eight different genres i.e., World, Science, Sport, Environment, Society, Fashion, Business and Culture. The user can also customize the colour of the feed, adjust the font size and specify the number of items of the news feed. All these features give user friendly experience to users. This helps with the users gaining their knowledge regarding what is happening in different fields and can stay updated with the current news.

## **FUTURE ENHANCEMENTS**

- Location feature with automation can be implemented which means as user move from one city to other local news will change as per it.
- Offline Reading can be improved will more efficient way on full articles. Data quality check needed.
- If API can't reach to certain article source it gives null value which can cause problem in JSON parsing.

## REFERENCES

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