SHRI VILEPARLE KELAVANI MANDAL'S
DWARKADAS J. SANGHVI COLLEGE OF ENGINEERING
(Autonomous College Affiliated to the University of Mumbai)
NAAC ACCREDITED with "A" GRADE (CGPA : 3.18)

Academic Year: 2023-24

Software Engineering

Experiment-2

Div: B **Batch:** C22

Team Members:
Shashwat Shah : 60004220126
Aagam Shah : 60004210176
Deep Gohil : 60004220122

Aim: To develop Software Requirement Specification (SRS) document in IEEE format for the project.

Theory:

SRS Software Requirements Specification

A document that specifies most of the requirements as required by the customer and as understood by the software engineer.

A well formatted document that includes scope, purpose, product perspective, software and hardware requirements, functional and non-functional requirements for the product.

Performance:

1. Identify a suitable case study with the scope for software engineering process.
2. Explain the abstract in one page clearly explaining the project with their functionalities.
3. Each project should have atleast 4 functional requirements clearly explaining each functionality by referring to the given SRS template.
4. Prepare a well-formatted document

Conclusion:

In this experiment we were able to make an SRS for our case study and clearly understood the process and requirements for an SRS.

Software Requirements Specification

for

Inshorts

Version 1.0

Prepared by

Shashwat Shah : 60004220126 **shashwatshah02@gmail.com**
Aagam Shah : 60004210176
Deep Gohil : 60004220122

Instructor: Dr. Meera Narvekar
Course: Software Engineering
Lab Section:
Teaching Assistant:
Date: 18th March 2024

Contents

Revisions

Version	Primary Author(s)	Description of Version	Date Completed
Draft Type and Number	Full Name	Information about the revision. This table does not need to be filled in whenever a document is touched, only when the version is being upgraded.	00/00/00

<In this template you will find text bounded by the "<>" symbols. This text appears in italics and is intended to guide you through the template and provide explanations regarding the different sections in this document. There are two types of comments in this document. These comments that are in black are intended specifically for that course. These comments that are in blue are more general and apply to any SRS. Please, make sure to delete all of the comments before submitting the document.

The explanations provided below, do not cover all of the material, but merely, the general nature of the information you would usually find in SRS documents. It is based on the IEEE requirements and was adapted specifically for the needs of Software Engineering 3K04/3M04 courses. Most of the sections in this template are required sections, i.e. you must include them in your version of the document. Failure to do so will result in marks deductions. Optional sections will be explicitly marked as optional.

1 Introduction

The main aim of this project is to develop a news application which provides handy news data to the consumers based on their geolocation, making the application interactive and appealing to the consumers while keeping them notified about all the latest news updates. It also gives accurate knowledge about the authenticity of the news and thus predicting whether the news is fake or not. Vast amount of news data is available every minute throughout the internet. It often happens that the important news heads are missed in this huge lake of data. Hence it becomes quite important to have a platform that can segregate the news which is most relevant to the users depending on the immediate impact it is creating on the user and his/her preferences. Users living in a certain area, based on their location can be directly notified in bulk about news such as train mega blocks, severity of pollution or locality hit health problems. The huge chunk of news can also make the users life easy by having the required checks on the quality of data. This application can also be particularly useful for travel enthusiasts who can get the gist of happenings in their surroundings of which they are totally unaware. All in all it can make the user experience quite rich with the quality linking of news with the users data

1.1 Document Purpose

This is a SRS for the project Inshorts- Version 1.0. The purpose of this Software Requirement Specifications document is to clearly define the technical aspect of the product we intend to build. It covers how the first version of the application will interact with the users, hardware, software and other interconnecting applications. It specifies the requirements, technical details and the limitations of the project which shall help us ensure we utilize all the factors correctly, satisfy all product requirements and provide the best possible product to our users.

1.2 Product Scope

A news application is a software product designed to provide users with the latest news and information from various sources. The scope of a news application can include features such as user profiles, a news feed, push notifications, search functionality, bookmarking, sharing, commenting, settings, analytics, and monetization. Users can create profiles on the news application to customize their news feed according to their interests, preferences, and location. The news feed displays the latest news stories from various sources, and users can filter their news feed based on categories such as politics, sports, entertainment, business, and more. Push notifications are sent to users for breaking news stories or important events in their selected categories or from their preferred news sources. Users can also search for specific news stories or topics, bookmark their favorite news stories, and share them with others. The news application can also include features such as comments,

settings, and analytics to track user engagement and performance metrics. Finally, the news application can generate revenue through various monetization models, such as advertising, subscriptions, or in-app purchases.

1.3 Intended Audience and Document Overview

The document is organised in a climactic sequence. The document opens with a brief abstract that introduces the theme and sets the tone for the subsequent parts. Following that, the document describes its characteristics and introduces the issue statement. It then goes on to provide an overview of the project's users, environment, and limits. The document then goes on to describe the different interfaces and project needs. The document also includes references to pertinent research publications and sources. The document is intended for all users as well as the project's technical developers. The primary audience for documentation of a news application is typically the developers, testers, and other technical personnel who are responsible for building, maintaining, and supporting the application. This audience includes developers who are responsible for designing and building the news application, testers who ensure that the application works correctly and meets requirements, technical writers who create documentation, and support staff who provide technical assistance to users. Managers who oversee the development and maintenance of the news application may also need to understand how it works to make informed decisions about its future direction. Overall, the documentation should be clear and comprehensive, providing technical personnel with information on how the application works, how to install and configure it, and how to use its features effectively. By providing clear documentation, the technical personnel can ensure that the news application is built, tested, and supported correctly, leading to a successful and reliable application.

1.4 Definitions, Acronyms and Abbreviations

Some of the terms that can be frequently encountered in the SRS are listed below:

- **API** – Application Programming Interface
- **GCP** – Google Cloud Platform
- **GPS** – Global Positioning System
- **Behavior Analysis** - Finding recurring patterns in data for future recommendations.
- **GUI** – Graphical User Interface

1.5 Document Conventions

The following conventions were followed while creating the document:

- We have used the IEEE standards for document formatting.

- The font used is Arial, font size for title is 14 and font size for text is 12.
- Italics have been used for comments.
- 1" margin has been maintained throughout the document.
- The text is single spaced.

1.6 References and Acknowledgments

These are some of the references:
https://developer.apple.com/design/human-interface-guidelines/news/
https://material.io/design/guidelines-for-news/
https://reutersinstitute.politics.ox.ac.uk/digital-news-report
https://www.pewresearch.org/topics/journalism-and-media/
https://www.americanpressinstitute.org/
https://www.internationalnewsservices.com/
https://journalists.org/

2 Overall Description

2.1 Product Perspective

The app offers a personalized experience that caters to the user's preferences, allowing them to select topics of interest, save articles, and receive notifications for breaking news. The content is curated to provide high-quality, relevant news from trusted sources, with options for users to explore different perspectives and formats. Monetization strategies includes advertising, subscriptions, and is designed to balance user satisfaction with business goals. Analytics is used to measure engagement and identify areas for improvement, with regular updates and feature enhancements to keep the app fresh and compelling.

2.2 Product Functionality

- News Reels: Users can watch news reels to stay updated with the latest news.
- Personalization: Users can select their preferences and receive news tailored to their interests.
- Location-Based News: Users can receive news based on their location to stay informed about local news and events.
- User-Generated Content: Users can add news to the app, providing a platform for citizen journalism and community engagement.
- Breaking News Notifications: Users can receive notifications for breaking news stories, keeping them informed in real-time.
- Bookmarking and Saving: Users can bookmark and save articles for future reference, making it easy to come back and read articles at a later time.

- Search: Users can search for specific news stories, topics, or keywords to quickly find the information they need.
- Multilingual Support: The app can support multiple languages, making it accessible to a broader audience.
- Social Sharing: Users can share news articles on social media platforms, increasing the app's reach and engagement.

2.3 Users and Characteristics

- **Users:** They are the local users who want to be updated with the current local and global news.This includes all the Sports fans, Business professionals, Social media users, Local news enthusiasts, News junkies, Information seekers, Casual readers.

2.4 Operating Environment

- **Recommended browsers**: Chrome, Firefox, Safari, Edge and Brave.
- **Recommended Operating systems**: Windows, MacOS, IpadOS, iOS, wear OS, watchOS, Android and Linux.

2.5 Design and Implementation Constraints

Design and implementation constraints are essential factors that need to be considered during the development of a news application. The design constraints of a news application require it to have an intuitive and user-friendly interface that enables users to navigate and consume news stories seamlessly. Also, the application should be responsive and fast-loading, allowing for a smooth user experience. Customization is also an important design constraint to consider, as users may prefer different types of news, sources, and topics. Additionally, the application should be accessible to users with disabilities to ensure inclusivity.

Application constraints are also crucial considerations for a news application. The application may need to store large amounts of data, including news stories and user preferences, which can impact its performance and scalability. Security is another critical application constraint to consider, as the application should be designed to protect user data and prevent unauthorized access or data breaches. The application may also need to integrate with third-party services, which can introduce additional complexity and constraints. Performance is also an important application constraint, as the application needs to be optimized for handling large volumes of traffic and delivering news stories quickly and reliably.

2.6 User Documentation

- The user manual will contain all the guidelines for handling software as well as FAQ section for reference.

- Contact us & support center.

2.7 Assumptions and Dependencies

- User Preferences: If the assumed user preferences are incorrect, users may not find the content relevant or interesting, leading to lower engagement and retention.
- Content Quality: If the assumed quality of the news content does not meet the user's expectations, it can lead to lower engagement, lower retention, and negative reviews.
- Monetization Strategy: If the assumed monetization strategy is not effective, it can lead to lower revenue, user dissatisfaction, and the need to pivot the business model.
- Technical Requirements: If the assumed technical requirements for the app are wrong, it can lead to performance issues, user frustration, and negative reviews.
- Regulatory Compliance: If the assumed regulatory requirements are incorrect, it can lead to legal and financial repercussions, which can negatively impact the app's reputation and revenue.

3 Specific Requirements

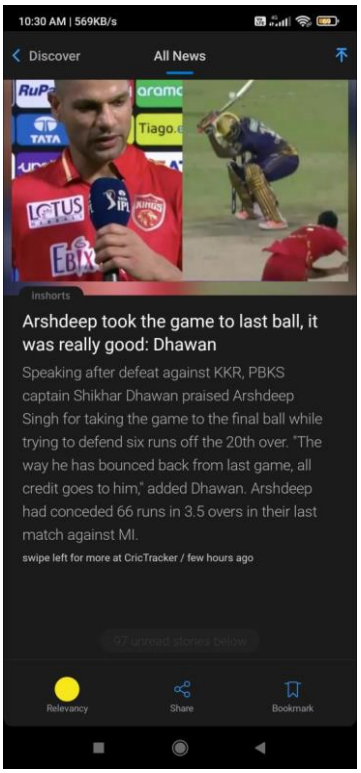
3.1 External Interface Requirements

3.1.1 User Interfaces

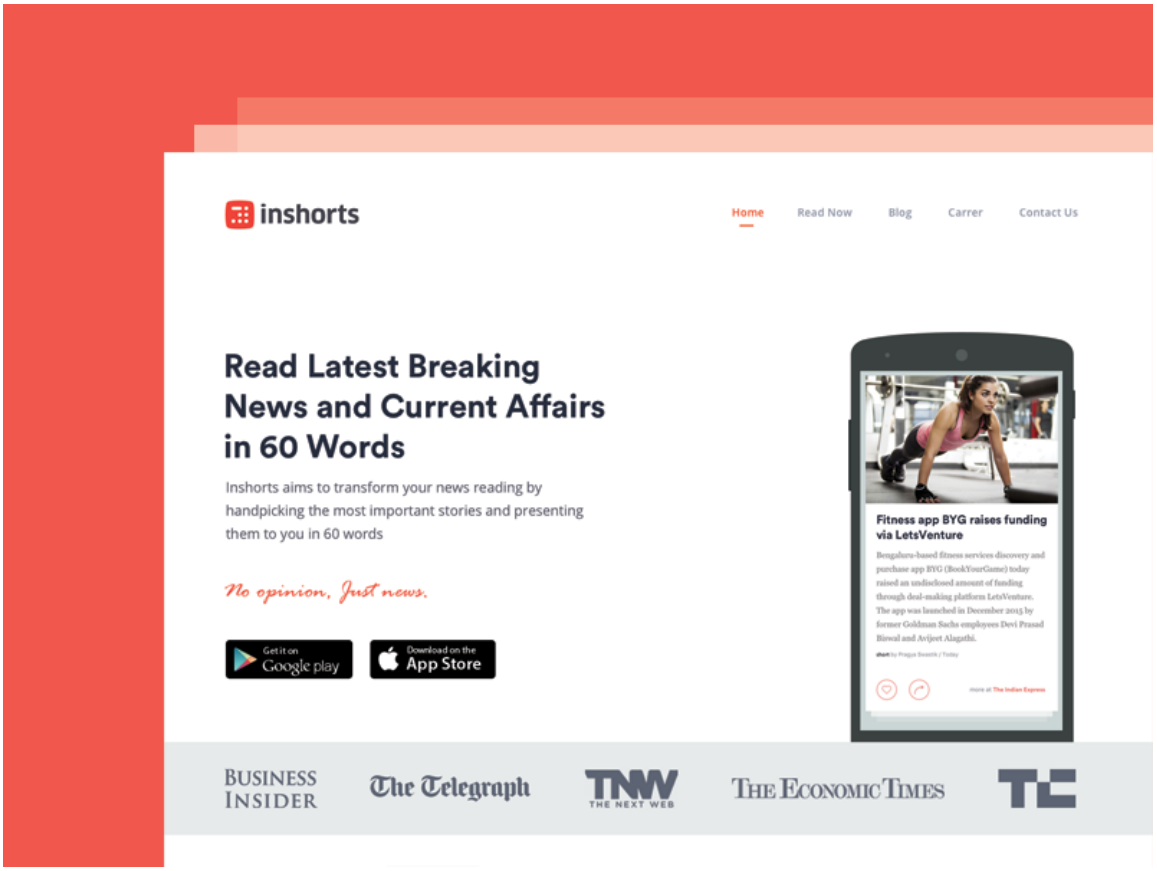
Mobile App Screenshots

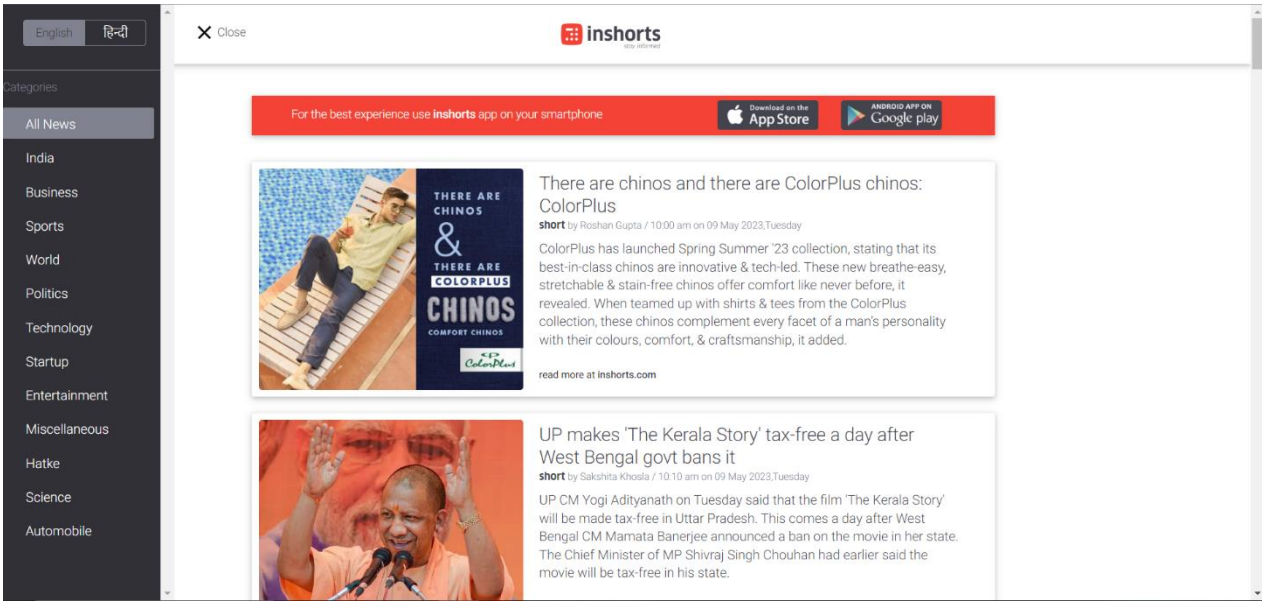
SHRI VILEPARLE KELAVANI MANDAL'S
DWARKADAS J. SANGHVI COLLEGE OF ENGINEERING
(Autonomous College Affiliated to the University of Mumbai)
NAAC ACCREDITED with "A" GRADE (CGPA : 3.18)

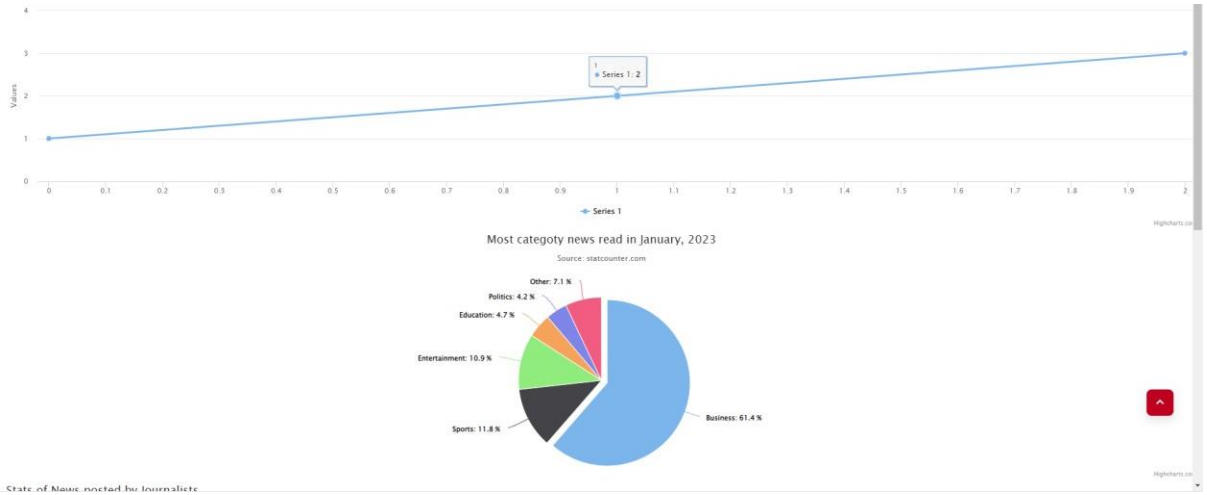
Academic Year: 2023-24



Website Screenshots:







3.1.2 Hardware Interfaces

Server:
RAM: 8GB
Storage : 1 TB SSD
Processor: Intel Pentium 4 processor or later that's SSE2 capable
GPU: Nvidia GTX 1050

User Device:
RAM: 6 GB
Storage: 128 GB Storage
GPS Sensor

3.1.3 Software Interfaces

Browsers: Chrome, Firefox, Safari, Edge and Brave.
Operating systems: Windows, MacOS, IpadOS, iOS, wear OS, watchOS, Android and Linux.
Tools: Google Colab, Jupyter Notebook

3.1.4 Communications Interfaces

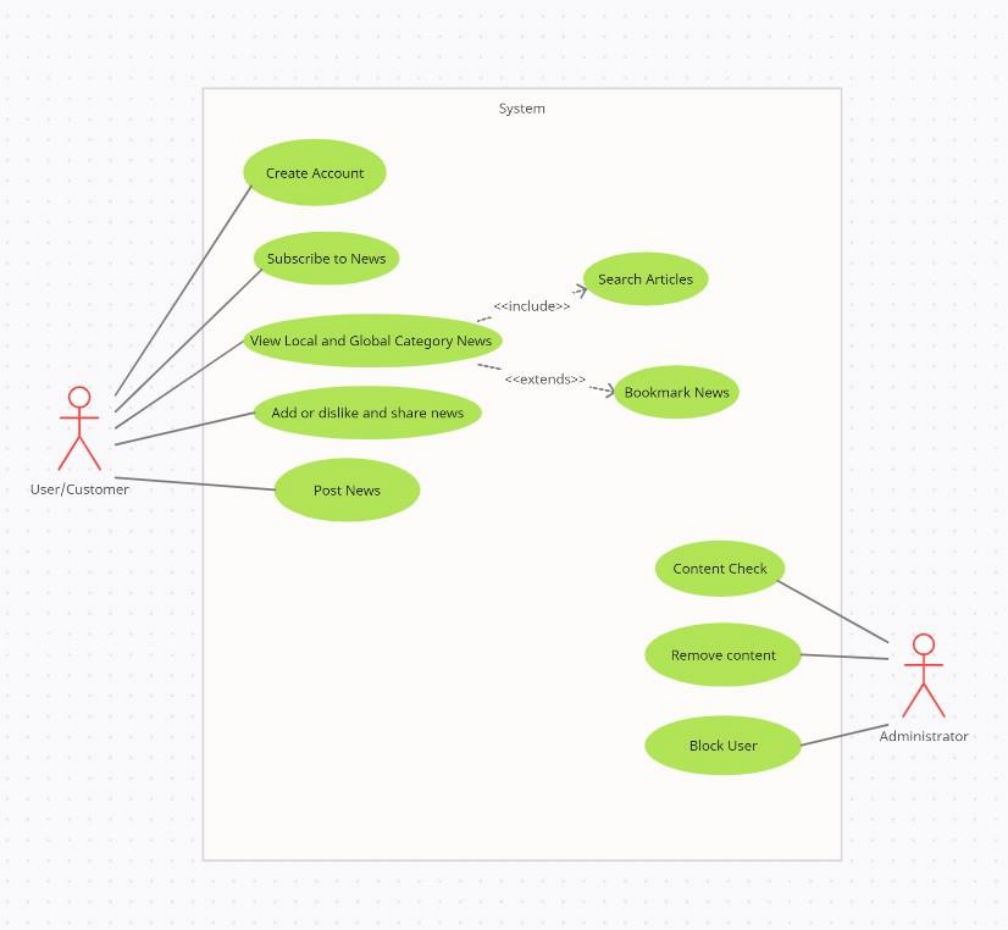
- Minimum 40 Kbps Internet Speed to ensure lossless connectivity.
- HTTP protocols for servicing the requests and for transmission of data in JSON format.
- AES protocol will be used to encrypt the sensitive data being transmitted.

3.2 Functional Requirements

- **Login / Signup** : This functionality will be used by users to register as well as to login in the platform. All the sensitive credentials will be transmitted and stored in a secure manner.
- **Data Collection** : Geotagged images from social media channels will be collected and stored along with popular nearby news posts and will be deployed of Google Cloud Platform.
- **Bulletin Updation** : Local Authorities will be able to share live updates and details about spots.
- **Recommendation** : Based on his news viewing history, locations will be recommended to the users along with the news category in which user is interested in.

3.3 Behaviour Requirements

3.3.1 Use Case View



4 Other Non-functional Requirements

4.1 Performance Requirements

- The analysis should be crystal clear.
- It should provide the most suitable news available when required.
- It should be able to extract data from users at frequent intervals and suggest them other news according to their liking.
- It should check the news posted by users by having a check at vulgar and inappropriate content.
- It should have support for an ample amount of concurrent users.
- Any bugs/queries should be resolved in 3 days.

4.2 Safety and Security Requirements

1) Authentication and Authorization: Implement a strong authentication system that requires users to create unique login credentials, including usernames and passwords. Also, ensure that users can only access the information that is authorized for their account.
2) Secure APIs: Implement secure APIs to ensure that third-party applications do not have unauthorized access to user data. APIs should require authentication and should only allow authorized applications to access specific data.
3) Regular Updates: Keep the application updated with the latest security patches and upgrades to address any potential security vulnerabilities.
4) Security Testing: Perform regular security testing and assessments to identify and address any security vulnerabilities before they can be exploited by attackers.
5) User Education: Educate users about safe browsing habits and encourage them to use strong passwords and two-factor authentication to protect their accounts.

4.3 Software Quality Attributes

- **RELIABLE** : Should have sufficient accuracy that the users can rely on it. It should meet client satisfaction standards and be able to gain and maintain their trust.
- **AVAILABILITY** : Whenever the need is there for the analysis it should be available. It should not provide misleading information when it is required the most and function seamlessly.
- **SECURE** : It should have security to ensure it is not tampered with and is not used for illegal purposes.
- **MAINTAINABILITY** : The analysis should be easily maintainable, the users should be able to retrieve and add their news stories and should be able to update them with ease at a later time.

Appendix A – Data Dictionary

Field Name	Data Type	Field Size for display	Description	Example
article_id	Integer	5	unique identifier for the article	543
title	String	10	title of the article	New Study Shows Benefits of Exercise
description	String	50	brief description of the article	A new study published in the Journal of Health and Fitness reveals that regular exercise can have significant benefits on both physical and mental health.
content	String	500	full text of the article	According to the study, individuals who engaged in moderate to vigorous exercise for at least 30 minutes a day showed...
author	String	20	name of the article's author	Jane Doe
date_published	Date	10	date the article was published	2022-02-01
category	List	25	category of the article	[Health , Fitness]
user_id	Integer	5	unique identifier for the user who favorited the article	9875

Academic Year: 2023-24

Appendix B - Group Log

Date	Actors	Work Done
12/03/2024	Shashwat, Aagam, Deep	Analysed Requirements
18/03/2024	Shashwat, Aagam, Deep	Prepared SRS