



**MAPÚA UNIVERSITY**  
School of Information Technology  
Makati, Philippines



**Technology News Web Application**

**In Partial Fulfillment of the Requirements for the Course**  
**Application Development and Emerging Technologies (IT120P)**

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## **I. INTRODUCTION**

### **1.1 Background of the Study**

The emergence of technology in this day and age has provided numerous ways and opportunities for people to share and consume information. For instance, the invention of telecommunication technologies paved the way for both the internet and SMS, which then allowed us people to pass information through the use of computers or cellphones. Now in the twentieth century, the widespread adoption of smartphones combines both internet and SMS technology. People can now easily browse the latest technological news and information through different sources. Though despite this advantageous development, people may still have difficulties being updated all the time with recent changes and new information about topics pertaining to technology.

As observed, older clients or readers were mostly uninformed about the latest technological trends which may cause struggles on their part to keep up and deal with newer technological advancements. This problem on hand shows that there is a demand for a reliable news source that caters to the specific requirements of senior citizens and provides them with accurate and reliable technological information.

With this rising demand, the group developed a news web application that focuses on disseminating news in a format that is both accessible and suitable for older individuals. Furthermore, the group also implemented SMS notification services to deliver the latest news updates directly to the users' mobile devices. This feature ensures that clients are always up-to-date on the latest news without needing to frequently visit the website. Through this, our application aims to promote awareness on newer technologies to help individuals be updated on new technological shifts.

## **1.2 Statement of Objectives**

### **1.2.1 General Problem**

The problem associated with digital illiteracy causes daily struggles especially to older people. With this, there is a demand for a technology news web application that provides credible information in an easily accessible format which could potentially be brought by an SMS notification service feature.

### **1.2.2 Specific Problem**

1. Older clients are struggling to keep up with latest technological information, leaving them uninformed and sometimes, misinformed.
2. Most tech news websites or applications are complex and not user-user-friendly for older readers.

### **1.2.3 General Objective**

The general objective of this project is to develop an accessible and user-friendly technology news web application with SMS notification services to deliver accurate and updated news information for senior citizens who are struggling to keep up to date with latest technological news. The overall goal is to promote awareness on newer technologies by providing older consumer clients a new alternative news platform that would also cater to their convenience brought by SMS notification services.

#### **1.2.4 Specific Objectives**

1. Create a new alternative technology news web application with an “Account Management System”.
2. Create a web application with a “Content Management System”.
3. Develop a technology news web application that is user-friendly with the implementation of SMS notification services for the convenience of potential clients.

#### **1.3 Scope and Limitations**

The following project focuses on the development of a technology news web application with the integration of SMS notification feature. With the daily struggles of keeping up with newer technologies, the developed project is specifically designed to cater to the needs of older clients and readers.

The project is solely limited to the development of a news website with SMS integration. Primary content included are news information pertaining with technology as this is the news genre our target consumers are having difficulties with.

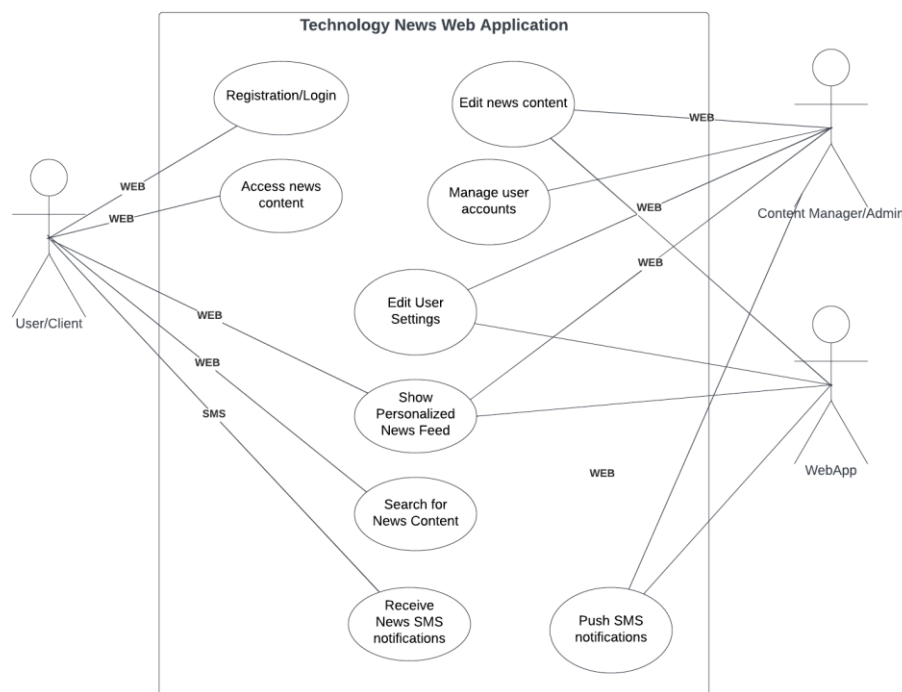
## **II. THE PROPOSED SYSTEM**

### **2.1 System Overview**

The Technology News Website is a web application built using PHP, HTML, and CSS languages, with MySQL (PHPMysqlAdmin) as the database management system. The

website is designed to provide up-to-date news on technology news especially on Mobile Phones and Tablets, Computer Hardware and Software, and Cybersecurity as the provide categories. The system utilizes NewsAPI to fetch the latest news from credible sources. It also features a user and admin login and registration system, where users can access the latest technology news with categories to choose from (Mobile Phones & Tablets, Computer Hardware, Software, and Cybersecurity), while the admin has functions for user and content management. Additionally, the website has an SMS news update feature that allows registered users to receive news updates through their registered mobile number which is automatically received by users once the NewsAPI updates the website for new articles. An option to manually update the users can be initiated by the Administrator which can be seen on the Website Settings on the Admin panel.

## 2.2 Use Case Diagram



*Figure 1. Use Case Diagram for the Technology News Web Application*

## 2.3 Screen Layout

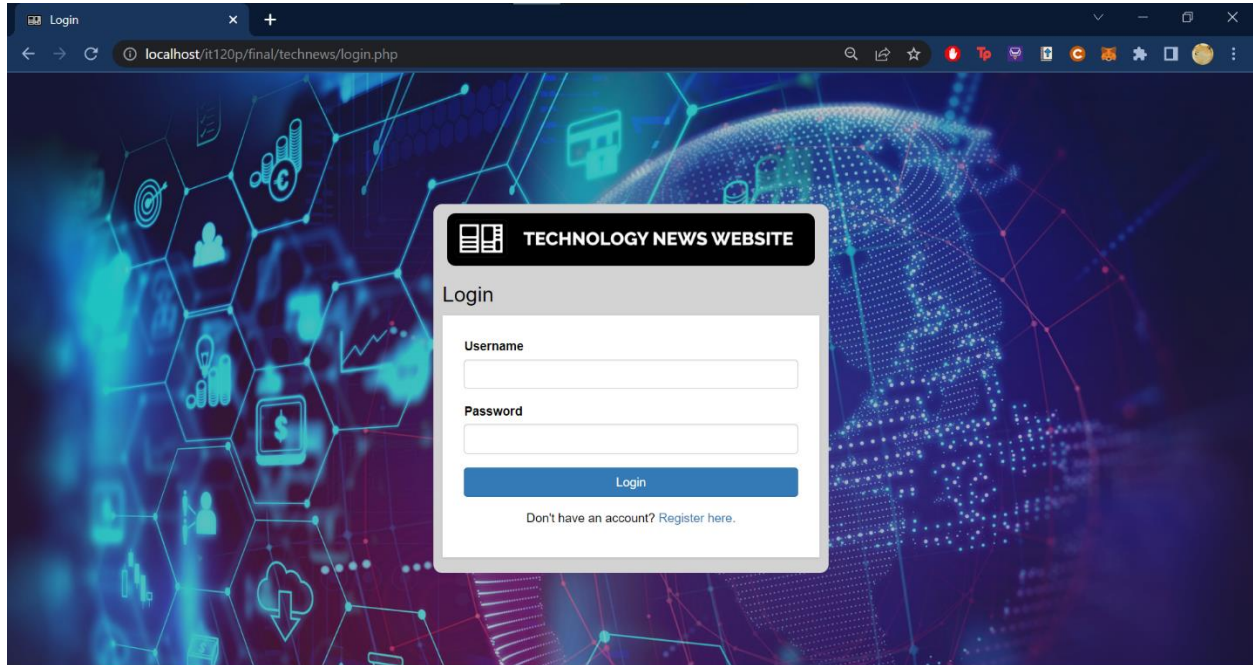


Figure 2.1 Log-In Page

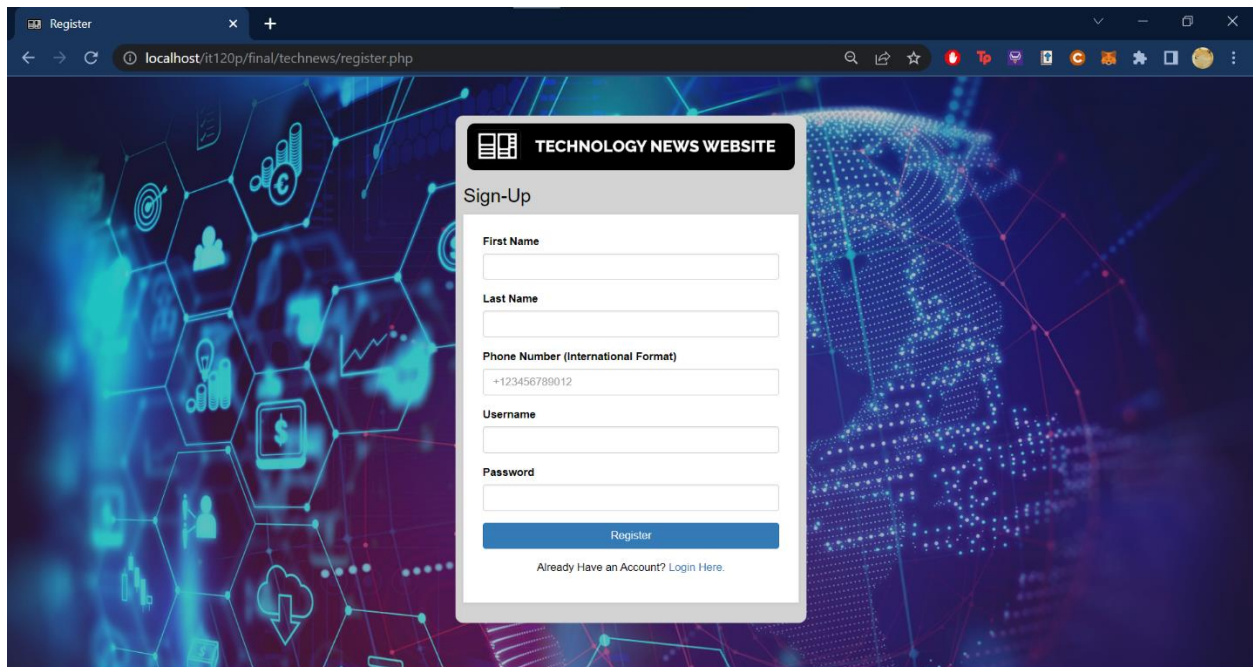


Figure 2.2 Sign-Up Page



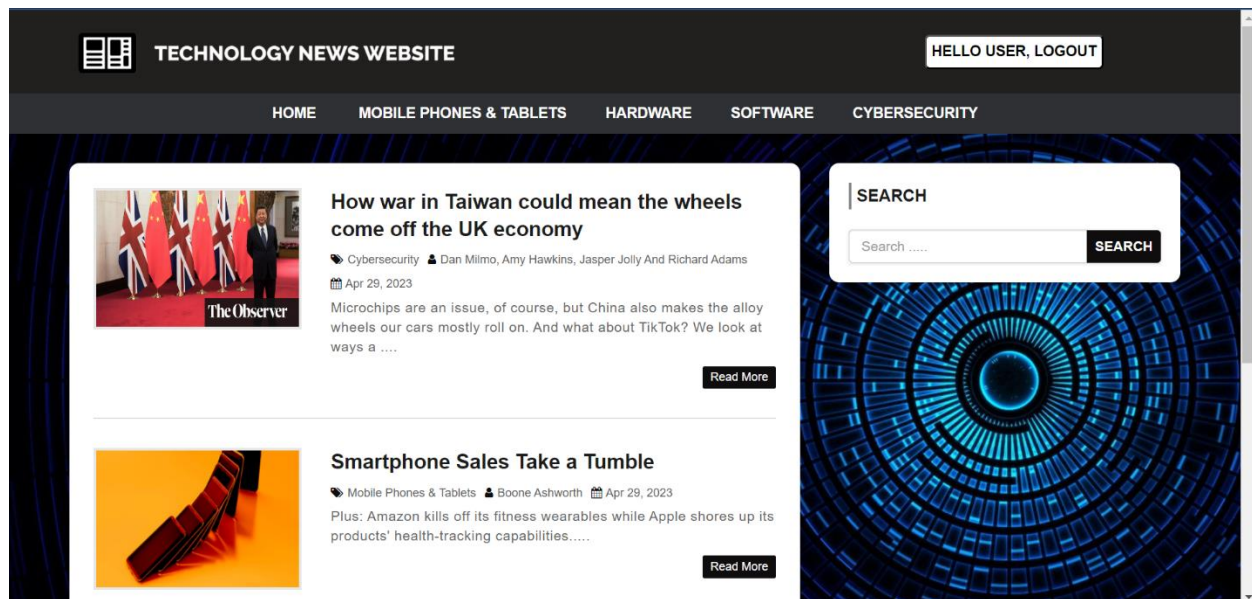


Figure 2.3 User Home Page

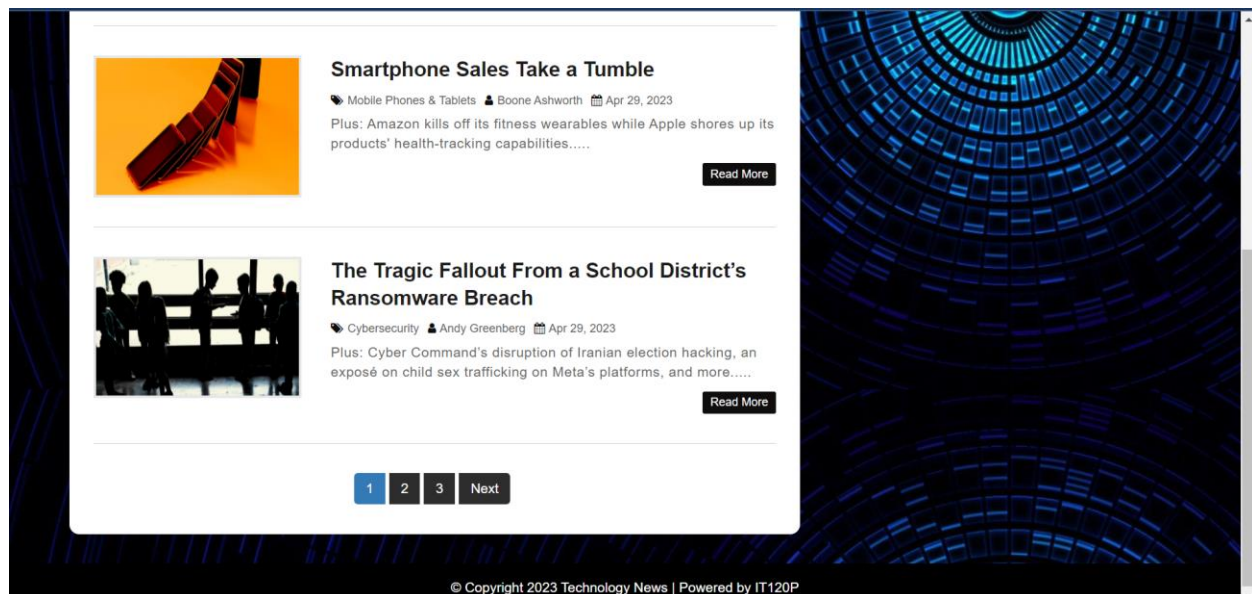


Figure 2.4 User Home Page with Page Selection on the bottom page section

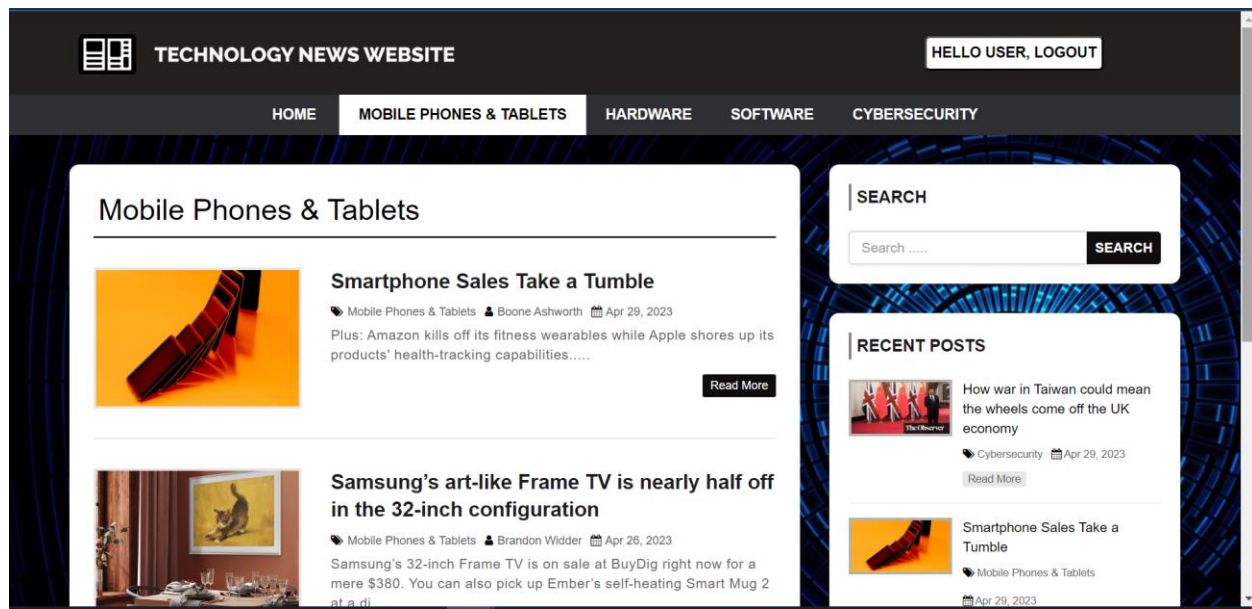


Figure 2.5 User Category Selection Page

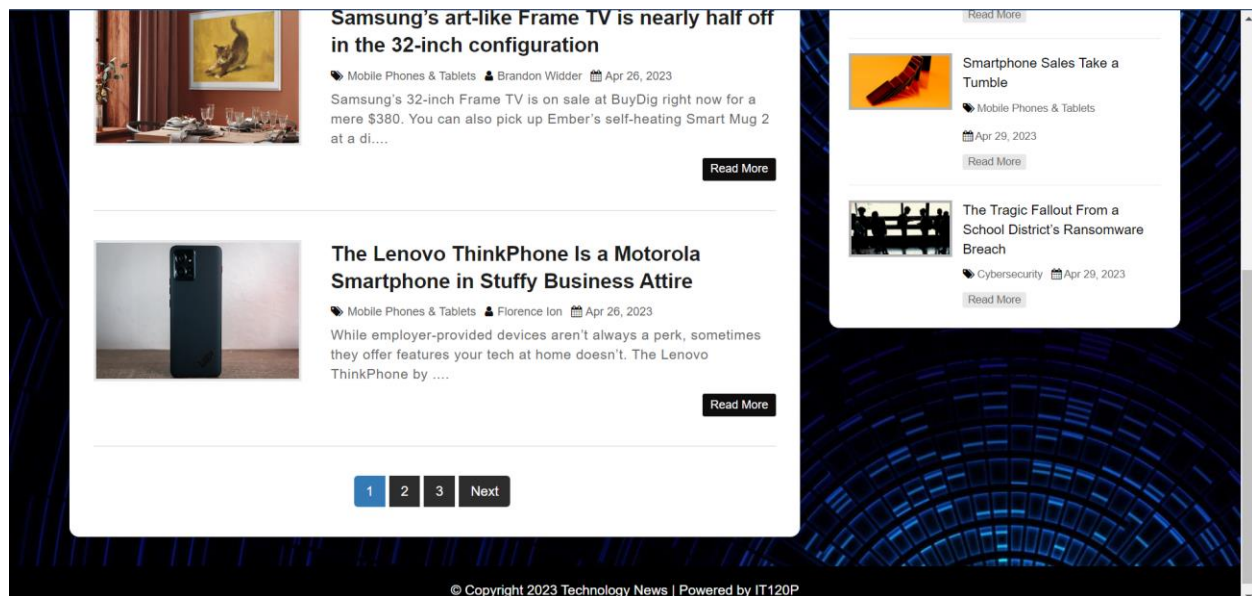


Figure 2.6 User Category Selection Page with Page Selection on bottom page section

## SEARCH

SEARCH

## RECENT POSTS



How war in Taiwan could mean the wheels come off the UK economy

🔍 Cybersecurity 📅 Apr 29, 2023

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Smartphone Sales Take a Tumble

🔍 Mobile Phones & Tablets

📅 Apr 29, 2023

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The Tragic Fallout From a School District's Ransomware Breach

🔍 Cybersecurity 📅 Apr 29, 2023

[Read More](#)

Figure 2.7 Search Bar and Recent Post Section



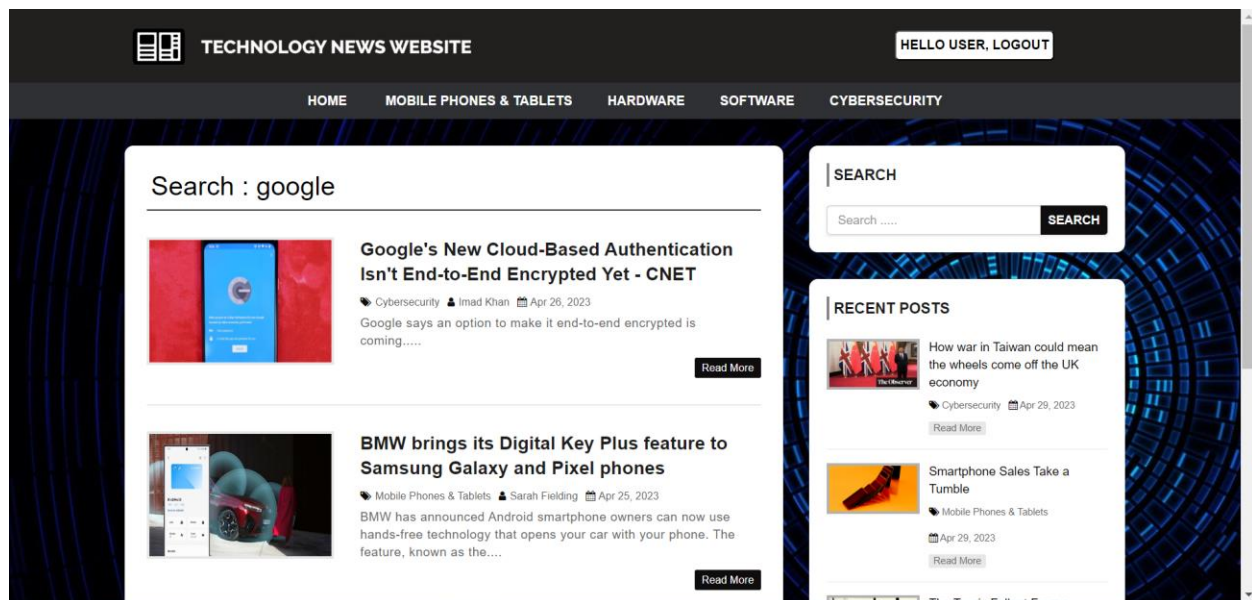


Figure 2.8 Search Result Section

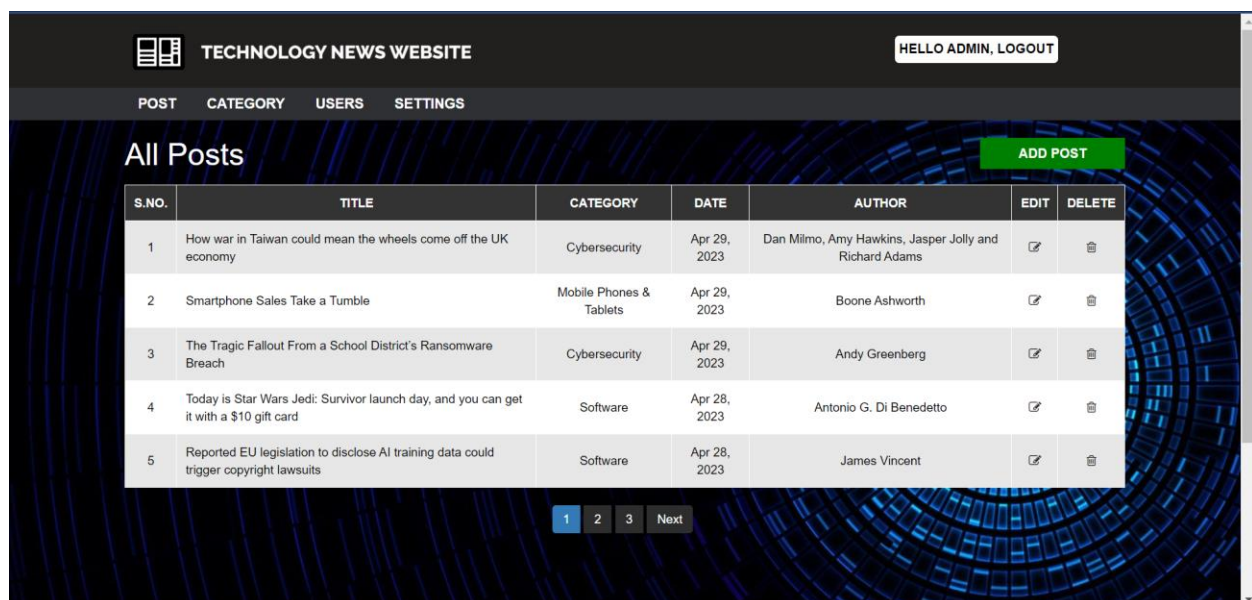


Figure 2.9 Admin Landing Page (View All Post – Content Management)

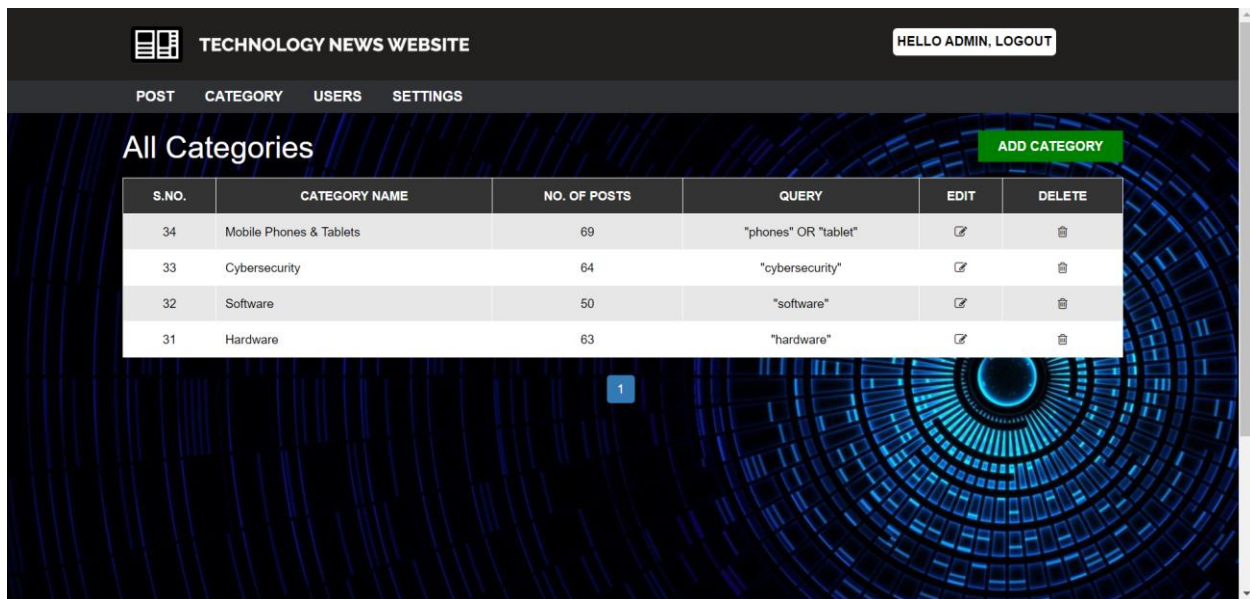


Figure 2.10 Admin Category Management Page

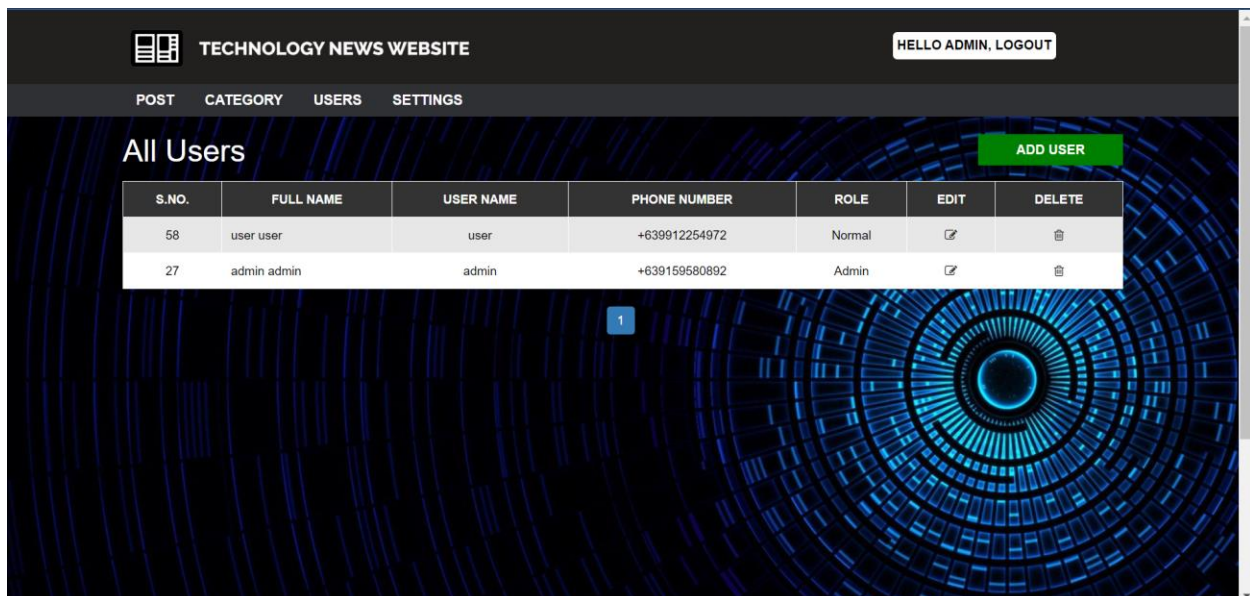



Figure 2.11 Admin User Management Page

 TECHNOLOGY NEWS WEBSITE

HELLO ADMIN, LOGOUT

POSTCATEGORYUSERSSETTINGS

Website Settings

Website Name

Technology News

Website Logo

Choose FileNo file chosen

Footer Description


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Save Settings

Send Latest News Alert to Users

Send SMS

Figure 2.12 Admin Website Settings Page

 TECHNOLOGY NEWS WEBSITE

HELLO ADMIN, LOGOUT

POSTCATEGORYUSERSSETTINGS

Add New Post

Title

Author

Description

Date

dd/mm/yyyy --:-- --

Category

Figure 2.13 Admin Add New Post Page



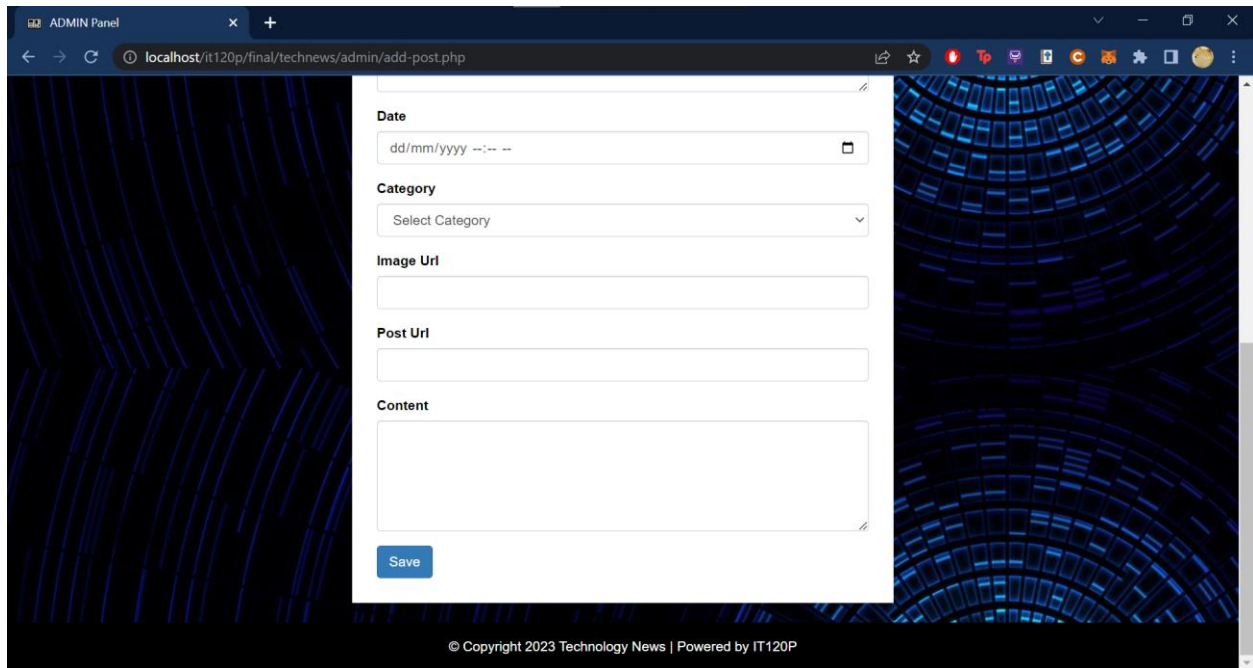


Figure 2.14 Admin Add New Post Page (Bottom Section)

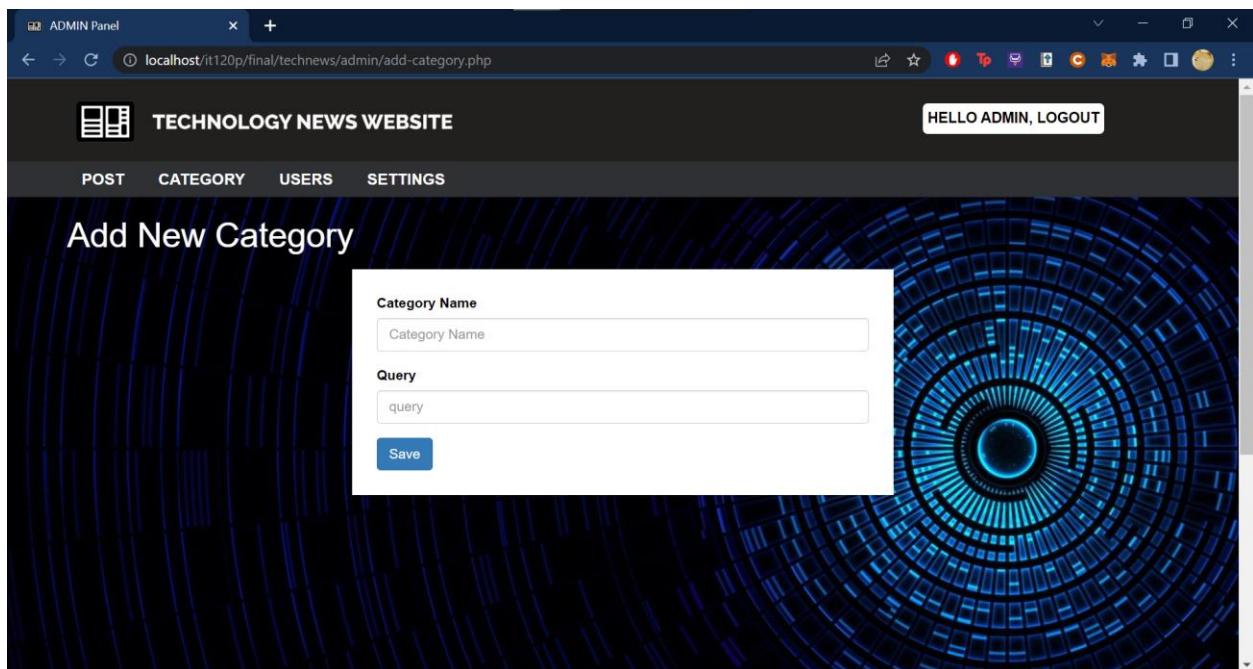


Figure 2.15 Admin Add New Category Page

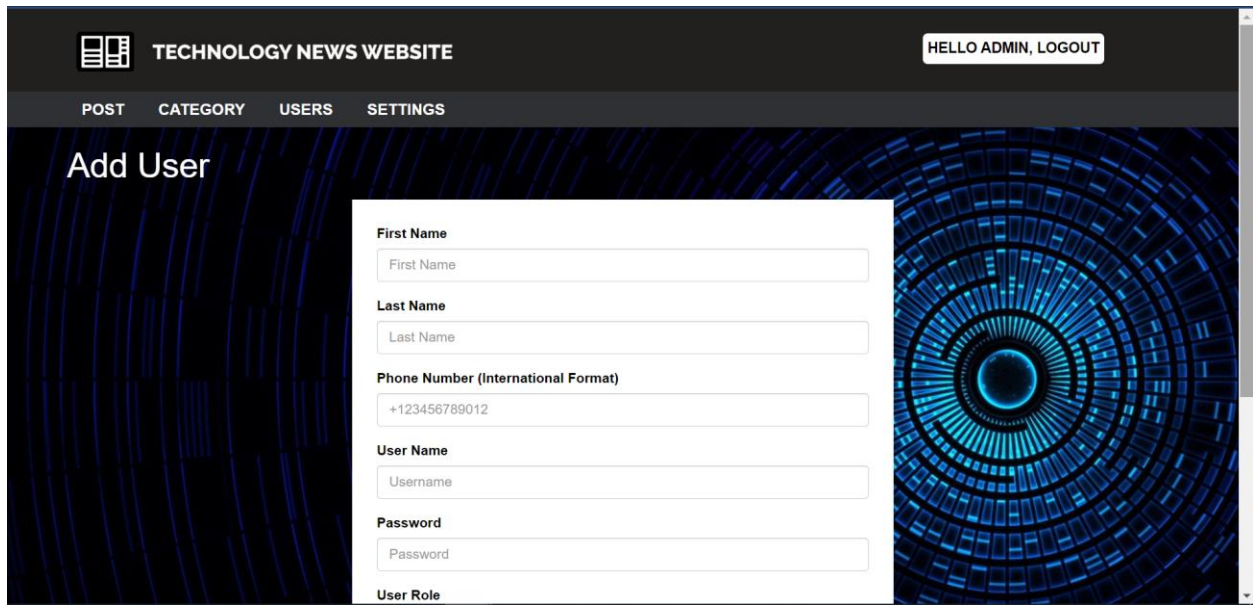


Figure 2.16 Admin Add User Page

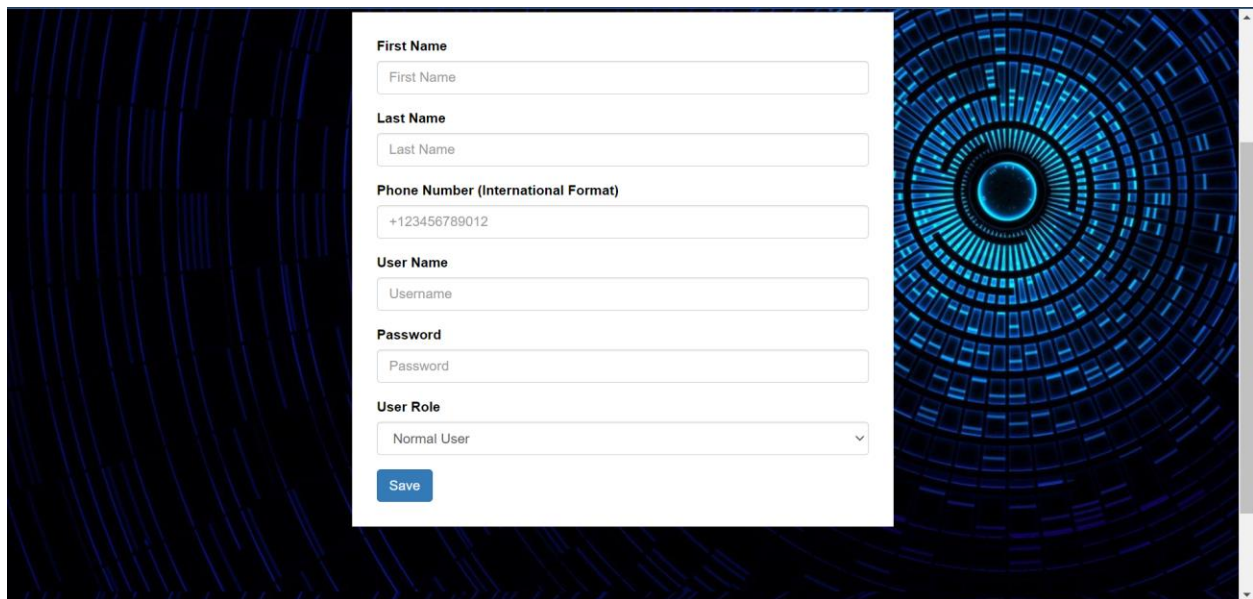


Figure 2.17 Admin Add User Page (Bottom Section)



## **2.4 Reports/Forms**

1. Sign-Up Form (User Registration) – This form allows new users to register for the website by providing basic information such as first name, last name, phone number in international format, desired username, and password.
2. Login Form – This form would allow users to log in to the website by entering their registered username and password.
3. Add Post Form (News Article) – This form allows the admin to create and publish news articles on the website, in this proposed system's case, it utilized NewsAPI to fetch news articles from credible sources and update the posts if new articles are available. The news articles include the details: title, author, description, date published, category, image URL, original post URL, and content.
4. News article report – This report lists all the news articles published on the website, including the title, date, author, and category which would be displayed in the User's home page.
5. User Management form – This form allows the admin to create and edit a user's information based on their registered details.
6. User Management report – This report lists all the registered users on the website, including the details from their registration such as first name, last name, phone number, username, etc.
7. SMS Notification Update Alert Report – This report lists new updates on news articles based on NewsAPI and sends an SMS update to the users using their registered phone number.

## **2.5 Modules**

1. Log-In and Registration module – This module allows a new user to register to the web application and an existing user to login to their respective accounts to access to website.
2. User management module – This module allows the admin to manage user accounts that includes their registration/login details such as first name, last name, phone number, username, etc.
3. News management module – This module allows the admin to manage the news articles published on the website, including creating, editing, and deleting articles.
4. Category management module - This module allows the admin to manage the categories of the news articles. In the case of the website, the current categories given are: Mobile Phones & Tablets, Computer Hardware, Software, and Cybersecurity. The admin has the privilege to add more categories if they choose to.
5. Search module – This module allows users to search for news articles based on keywords.
6. SMS News Alert module – This module allows users to receive news updates via SMS through their registered phone number.

### **III. SYSTEM CODING**

#### **3.1 Programming Language**

For this project, the group utilized a combination of various languages that is typically used for web development. HTML, CSS, and PHP. The project also made use of JavaScript Object Notation files or JSON for API data types.

#### **3.2 Database(s)**

For the database, the group used MySQL database language. XAMPP and phpMyAdmin are then used to provide the local web server environment and to manage MySQL databases on the web, respectively.

### **IV. RESOURCE REQUIREMENTS**

#### **4.1 Hardware Requirements**

A high-performance computer or laptop is necessary for developing the website. The computer or laptop has sufficient memory, storage, and processing power with a modern operating system installed. These are necessary to develop the website. A web server is also required for hosting the website and making it accessible to users.

#### **4.2 Software Requirements**

One of the software requirements for developing the technology news web application is creating a Content Management System (CMS), which is essential for managing and publishing content on the website. Web development tools are also required for designing and coding the website.

### 4.3 Human Resources Requirements

The development of the technology news web application requires skilled web developers for designing and developing the website. The group includes front-end developers, back-end developers, and full stack developers. The group also includes web designers who are necessary for designing the visual elements of the technology news web application.

### Appendices

*Link to the Web Application Codes:*

[https://drive.google.com/drive/folders/1igRUlaCXRI\\_C8NAWrDuRvTU7C9n-KBrh?usp=share link](https://drive.google.com/drive/folders/1igRUlaCXRI_C8NAWrDuRvTU7C9n-KBrh?usp=share_link)