Newsportal

Software Requirements Specification

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Team Members Name

Abhijeet Singh Thakur

Abhishek Yadav

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# 1. Introduction

News Portal is the ultimate magazine theme with creative design and powerful features that allow you to quickly and easily create a style to suit your needs. It is completely built on Customizer which allows you to customize most of the theme settings easily with live previews. It is the fully widgetized theme so as to let users manage the website using the easy to use widgets. .

## 1.1 Purpose

The purpose of using a news portal website is to offer information to the public and provide instant and latest news updates from all over the world. It allows for easier accessibility and live coverage of events.

## 1.2 Scope

The scope of news portal website is vast and many benefits. Here are three points that highlight the scope of news portal website:

(1) **Global Reach:** A new portal website can research a global audience as it is not restricted to a particular geography. Anyone with an Internet connection can access the information on the website from anywhere in the world.

(2) **Diversification:** A News portal website can cover a wide range topic and categories such a society, politics, economy, culture, environment, health, business, etc. This allows for diversification and the ability to engage with people with varying interests.

(3) Describe the application of the software being specified. As a portion of this, it should:

(a) Describe all relevant benefits, objectives, and goals as precisely as possible. For example, to say that one goal is to provide effective reporting capabilities is not as good as saying parameter-driven, user-definable reports with a 2 h turnaround and on-line entry of user parameters.

(b) Be consistent with similar statements in higher-level specifications (for example, the System Requirement Specification) , if they exist. What is the scope of this software product.

## 1.3 Definitions, Acronyms, and Abbreviations

Newsportal is a website that provides news and information from various sources. Some examples of acronyms and abbreviations related to newsportal are CNN, BBC, NYT, and RSS.

## 1.5 Overview

This subsection should:

(1) Newsportal website is a website that provides news and information from various sources,such as newspapers, magazines, blogs, podcasts, videos, and social media.

(2)  A Newsportal website can cover different topics, such as politics, economy, business, science, culture, sports, entertainment, and more.

# 2. General Description

Newsportal is a misspelling of newsportal, which is a website that provides news and information from various sources. A newsportal website can cover different topics, such as politics, economy, business, science, culture, sports, entertainment, and more. A newsportal website can also offer opinions, analysis, commentary, and interactive features for its users.

## 2.1 Product Perspective

The product perspective of newsportal in website is the way that the newsportal website provides value to its users and stakeholders.

## 2.2 Product Functions

The product function of newspotral website is the way that the newsportal website performs its tasks and delivers its services to its users and stakeholders.

## 2.3 User Characteristics

The user characteristics of newsportal website are the attributes and behaviors of the users who visit and interact with the newsportal website.  (Demographic, Psychographic, Behavioral, Technical).

## 2.4 General Constraints

User interface, loading speed, content management, scalability, search functionality, advertising, mobile optimisation, security, accessibility, and social media integration are all requirements for news portal websites.

## 2.5 Assumptions and Dependencies

* There are various assumptions and dependencies to consider when designing a news portal website. These assumptions and dependencies can have an impact on the website's design, functioning, and overall success. Here are a few examples:
* News portals rely on content from a variety of sources, including journalists, freelance writers, and news organisations. The presumption is that these suppliers will give consistent high-quality and timely news information.
* Internet access: The website expects that users will have a reliable internet connection in order to view the news portal. The accessibility and speed of internet connectivity can have an impact on the user experience, particularly while loading multimedia content or during peak traffic hours.
* Advertising collaborations: Advertising is a major source of revenue for many news websites. They are dependent.

# 3. Specific Requirements

A news portal website requires a user-friendly interface, with a homepage featuring top stories and trending topics. Categories should be present for easy content organization, and individual article pages should include multimedia elements. A search function aids in finding specific articles, while user registration and profiles allow for personalization. Social media integration enables easy sharing, and a commenting system encourages user engagement. Monetization through advertisements is crucial, and a content management system simplifies publishing. SEO optimization improves visibility, while analytics provide valuable insights. Responsive design ensures compatibility across devices, and accessibility features enhance user experience. These requirements combine to create a successful news portal website.

## 3.1 External Interface Requirements

The external interface requirements for a news portal website can vary depending on the specific features and functionality required. However, here are some common external interface requirements that are typically considered:

### 3.1.1 User Interfaces

* The website should have an intuitive and user-friendly interface.
* It should support responsive design to ensure compatibility with various devices (desktop, mobile, tablets).
* The interface should be visually appealing and easy to navigate.
* It should provide clear and consistent navigation menus, search functionality, and content categorization.

### 3.1.2 Hardware Interfaces

A news portal website typically relies on a combination of hardware interfaces to function properly. Here are some common hardware interfaces that may be involved:

* Server Interfaces: These interfaces connect the web server hardware to the network infrastructure. They can include Ethernet ports, network interface cards (NICs), and fiber optic connections for high-speed data transfer.
* Storage Interfaces: News websites often require substantial storage capacity to store articles, images, videos, and other media files. Common storage interfaces include Serial ATA (SATA), Serial Attached SCSI (SAS), and solid-state drive (SSD) interfaces.
* Input/Output Interfaces: These interfaces enable interaction between the website and external devices. Examples include USB ports for connecting peripherals like keyboards, mice, and cameras.
* Display Interfaces: News websites are accessed by users through various devices with different display interfaces. Some common display interfaces are High-Definition Multimedia Interface (HDMI), DisplayPort, and VGA (Video Graphics Array).
* Network Interfaces: Websites rely on network interfaces to connect to the internet and communicate with users. Common interfaces include Ethernet ports, wireless adapters (such as Wi-Fi or Bluetooth), and cellular interfaces (such as 4G or 5G modems).
* Power Interfaces: Hardware components require power, and news portal websites are no exception. Power interfaces include power cords, power supply units (PSUs), and related connectors.
* Peripheral Interfaces: Various peripherals may be used to facilitate website management and content creation, such as printers, scanners, and external storage devices. These peripherals connect to the website's hardware through interfaces like USB, Thunderbolt, or FireWire.

# 3.1.3 Database Interface

The database interface allows the website to interact with a database management system (DBMS) where the news articles, user information, and other data are stored. It facilitates data retrieval, storage, and modification operations, ensuring efficient access to information.

# 3.1.4 Application Programming Interface (API):

An API is a set of rules and protocols that allows different software applications to communicate with each other. A news portal website may have APIs to integrate with external services or to provide access to its own data and functionality, such as allowing developers to build mobile apps or integrating with social media platforms.

# 3.1.5 Search Interface

The search interface enables users to search for specific news articles or topics on the website. It may utilize a search engine or provide filters and sorting options to refine search results.

# 3.1.6 Advertising Interface

Many news portal websites generate revenue through advertising. They may integrate with advertising networks or use ad management platforms, which provide interfaces for managing and displaying ads on the website.

# 3.1.7 Analytics Interface

Analytics interfaces allow website administrators to track and analyze various metrics related to user behavior, traffic, engagement, and other important statistics. This data helps in understanding the website's performance and optimizing its content and user experience.

## 3.2 Functional Requirements

A news portal website should have a user-friendly interface that allows visitors to easily navigate and access various news articles. It should provide a search functionality for users to find specific topics or articles of interest. The website should support different categories or sections, such as politics, sports, entertainment, and more, allowing users to browse and explore news in their preferred areas. It should have a robust content management system to facilitate the publication, editing, and removal of articles by authorized editors. Additionally, the website should be responsive, optimized for different devices, and provide social media integration for easy sharing of articles.

## 3.5 Non-Functional Requirements

Non-functional requirements for a news portal website typically include:

# 3.5.1 Performance

The website should be responsive and provide fast loading times to ensure a smooth user experience, even during peak traffic periods.

# 3.5.2 Scalability

The website should be able to handle increasing traffic and user demand without significant degradation in performance. It should be scalable to accommodate future growth and additional features.

# 3.5.3 Availability

The website should have a high level of availability, ensuring that it is accessible to users at all times, with minimal downtime for maintenance or upgrades.

# 3.5.4 Security

The website should implement robust security measures to protect user data, prevent unauthorized access, and defend against potential cyber threats, such as hacking or data breaches.

# 3.5.5 Maintainability

The website's code and infrastructure should be well-structured and maintainable, making it easier for developers to update, fix bugs, and add new features in the future.

# 3.5.6 Performance monitoring:

The website should have mechanisms in place to monitor and analyze performance metrics, such as page load times, server response times, and user behavior, to identify areas for improvement and optimize the website's performance.

## 3.6 Disaster recovery:

The website should have backup and disaster recovery mechanisms in place to ensure that data is protected and can be restored in the event of a system failure, data loss, or other emergencies.

## 3.7 Compliance:

The website should comply with relevant legal and regulatory requirements, such as data protection laws (e.g., GDPR), accessibility standards, and copyright regulations.

# 3.8 Compatibility:

The website should be compatible with multiple web browsers, operating systems, and devices to ensure a consistent experience for all users.

# 3.9 usability

The website should be user-friendly and intuitive, with clear navigation, well-organized content, and an appealing design. It should be accessible across different devices and screen sizes.

# 4.0 Compatibility

The website should be compatible with multiple web browsers, operating systems, and devices to ensure a consistent experience for all users.

# 4. Analysis Models

For a news portal website, there are several analysis models that can be implemented to provide valuable insights and enhance the user experience. Here are a few commonly used analysis models:

* Sentiment analysis: This model determines the sentiment expressed in news articles or user comments, categorizing them as positive, negative, or neutral. It can help identify trends, understand public opinion, and monitor brand reputation.
* Topic modeling: Topic modeling algorithms, such as Latent Dirichlet Allocation (LDA) or Non-Negative Matrix Factorization (NMF), are used to identify the main topics and themes present in a collection of news articles. This can assist in organizing and categorizing news content, as well as recommending related articles to users.
* Named Entity Recognition (NER): NER models identify and extract named entities, such as names of people, organizations, locations, and other specific entities mentioned in news articles. It can be helpful for creating interactive features like linking related articles, generating tags, or providing additional information.
* Trend analysis: This model tracks the popularity and engagement of different news topics over time. By analyzing user behavior, social media trends, and search patterns, it can identify emerging topics or predict future trends. This information can be used for content planning, editorial decision-making, and personalized recommendations.
* User behavior analysis: By analyzing user interactions, click patterns, and reading habits, models can provide insights into user preferences and behavior. This can help optimize the website layout, improve content recommendation algorithms, and personalize the user experience.
* Fake news detection: With the rise of misinformation, fake news detection models are crucial for maintaining the credibility of a news portal. These models use various techniques, including natural language processing and machine learning, to analyze article content, sources, and historical data to identify potentially misleading or false information.
* Content recommendation systems: Recommendation models analyze user preferences, browsing history, and behavior to provide personalized news recommendations. These models can employ collaborative filtering, content-based filtering, or hybrid approaches to suggest relevant articles and engage users.

# 5. Change Management Process

The change management process for a news portal website typically involves several steps to ensure a smooth transition and minimize any negative impact on the website's functionality, user experience, and content delivery. Here's a general outline of the change management process for a news portal website:

* Define the Change: Clearly identify the proposed change, whether it involves design updates, functionality improvements, content management system migration, or any other modifications to the website.
* Impact Assessment: Assess the potential impact of the change on various aspects of the website, including technical infrastructure, user experience, SEO, content delivery, and revenue generation. Identify potential risks and dependencies associated with the change.
* Planning and Documentation: Create a comprehensive plan that outlines the specific steps, timeline, and resources required to implement the change. Document the plan, including details such as the objectives, key milestones, responsible team members, and communication strategy.
* Stakeholder Engagement: Engage key stakeholders, such as website owners, editors, designers, developers, and content creators, to gather their input, address concerns, and ensure their buy-in for the proposed change. Regularly communicate updates and progress throughout the process.
* Development and Testing: Implement the change in a development or staging environment, allowing for thorough testing and quality assurance. This step involves coding, design implementation, data migration, and any other technical tasks required to bring the change to life.
* User Acceptance Testing (UAT): Conduct user acceptance testing by involving a group of representative users who can test the modified website and provide feedback. Address any identified issues and iterate on the changes based on user feedback.
* Deployment and Rollout: Once the change has been thoroughly tested and approved, deploy it to the live production environment. Follow best practices for deploying changes, such as using version control systems, maintaining backups, and ensuring a smooth transition without any downtime or disruptions.
* Monitoring and Support: Continuously monitor the website's performance, user feedback, and analytics after the change has been deployed. Address any post-deployment issues promptly and provide support to users and internal teams as needed.
* Evaluation and Continuous Improvement: Evaluate the success of the change by analyzing key performance indicators, user feedback, and other relevant metrics. Use this information to identify areas for further improvement and optimization, and incorporate these learnings into future change management processes.
* Documentation and Knowledge Transfer: Document the entire change management process, including lessons learned, best practices, and any specific configuration or setup details. This documentation will serve as a valuable resource for future website updates and change management initiatives.

# 6 . Appendices

If you are referring to the additional sections or features that can be included on a news portal website, here are some common appendices or components that many news websites include:

* Categories or Sections: News websites often organize their content into different categories or sections such as politics, business, sports, entertainment, technology, health, etc. This allows users to easily navigate and find news stories in their area of interest.
* Breaking News: This section highlights the most recent and important news stories that are happening at the moment. It provides real-time updates and ensures that users are informed about the latest events.
* Top Stories: This section showcases the most popular or significant news stories of the day or week. It helps users quickly catch up on important news they might have missed.
* Featured Articles: This section highlights in-depth or special reports, interviews, or feature stories that provide unique insights or perspectives on a particular topic.
* Opinion/Editorial: Many news websites include opinion pieces or editorials where writers or experts share their thoughts and analysis on current issues. This section allows for a diversity of viewpoints and encourages discussions.
* Multimedia Content: News websites often include various multimedia elements such as photos, videos, and infographics to enhance the storytelling experience and provide additional context or visual information.
* Search Functionality: A search bar or search feature allows users to easily search for specific news articles or topics within the website.
* Social Media Integration: News websites often integrate social media buttons or widgets that allow users to share articles on their social media platforms, helping to increase the reach and visibility of the news content.
* Subscription or Membership Options: Some news websites offer subscription or membership plans that provide additional benefits to users, such as access to exclusive content, ad-free browsing, or personalized newsletters.
* Comments and Discussion: Many news websites allow readers to leave comments or participate in discussions related to the news articles. This can encourage engagement and create a sense of community among readers.
* About Us/Contact Information: Including an "About Us" page or section helps users learn more about the news organization, its mission, and its team members. Contact information, such as an email address or contact form, allows users to get in touch with the website administrators or journalists.
* Archives: A news portal often includes an archives section where users can access previously published articles by date, category, or keyword search.