

19CSE463-Mobile Application Development

Software Requirements Specification for Android Top 10 News App

Syam Sai Krishna Bandi – AM.EN.U4CSE21016

1. Introduction

1.1 Purpose

The purpose of this document is to outline the Software Requirements Specification for the Top 10 Tech News App. It will provide a comprehensive description of the application, its functionalities, and the required features to ensure a user-friendly experience for browsing and reading technology news articles.

1.2 Scope

The Top 10 Tech News App is a mobile application designed to aggregate the latest technology news articles from various reputable sources using a news API. It aims to provide users with a clean, engaging interface to browse, search, and save articles.

1.3 Audience

This document is intended for project stakeholders, developers, quality assurance testers, and future maintenance teams involved in the development and upkeep of the app.

1.4 Definitions, Acronyms, and Abbreviations

- **API:** Application Programming Interface
- **UI:** User Interface
- **SRS:** Software Requirements Specification

2. Overall Description

2.1 Product Perspective

The Top 10 Tech News App will be a standalone mobile application available for Android devices. It will utilize a news API to fetch the latest technology articles and employ libraries such as Picasso for image loading and caching.

2.2 Product Functions

Key functionalities of the Top 10 Tech News App include:

- Browsing and reading the latest tech news articles
- Viewing article details, including images and descriptions
- Searching for articles based on keywords
- Saving favourite articles for offline reading

2.3 User Classes and Characteristics

- **General Users:** Individuals interested in staying updated with the latest technology news. They will require easy navigation and access to news articles.
- **Tech Enthusiasts:** Users who are particularly passionate about technology and seek in-depth articles and insights.

2.4 Operating Environment

- The app will be developed for Android OS (version 8.0 and above).
- It will be optimized for both smartphones and tablets.

3. Specific Requirements

3.1 Functional Requirements

3.1.1 Article Browsing

- **Description:** Users shall be able to browse the latest tech news articles.
- **Input:** User opens the app to view a list of articles.
- **Output:** Display of the latest articles with titles, sources, and snippets.

3.1.2 Article Details

- **Description:** Users shall tap on an article to view its full details.
- **Input:** User selects an article from the list.
- **Output:** Display of the full article, including the title, description, source, publication date, and an image.

3.2 Non-Functional Requirements

3.2.1 Performance Requirements

- The app should launch within 3 seconds.
- Smooth scrolling through the list of articles should be supported.
- The app must function offline for saved articles.

3.2.2 Usability Requirements

- The user interface should be intuitive and easy to navigate.
- The app should provide a consistent and responsive design across different devices.

3.2.3 Security Requirements

- User data (e.g., saved articles) must be securely stored.
- The app should implement proper error handling and provide user feedback.

3.3 External Interface Requirements

3.3.1 User Interfaces

- **Splash Screen:** Display the app logo during the loading process.
- **Home Screen:** Show a list of the latest tech news articles.
- **Article Details Screen:** Display full article details with images and descriptions.

3.3.2 Hardware Interfaces

- The app will utilize the device's touch interface for input.
- It will require access to the device's internet connection for fetching news articles.

3.3.3 Software Interfaces

- **News API:** For fetching the latest tech news articles.
- **Picasso Library:** For efficient image loading and caching.

4. System Features

4.1 News Article Browsing

- The system shall allow users to browse and view the latest technology news articles in a list format.

5. Acknowledgments

- **News API:** For providing the news data.
- **Picasso:** For simplifying image loading and caching.