Software Requirement Specifications

A software application's functional and non-functional requirements are detailed in an SRS (Software Requirements Specification). It serves as a guide for the development team, it guarantees that all project participants are aware of the goals, characteristics, and behaviour of the software. It precisely defines the functional and non-functional requirements of a software before the development stage.

**Why is an SRS document required?**

* **Clarity and Focus:** Clearly states the objectives and parameters of the project.
* **Communication:** Provides a conduit for information between stakeholders, project managers, developers, and testers.
* **Test Basis:** Offers a precise guide for developing test cases. Timeline management, cost estimation, and project planning are all aided by project management.
* **Legal Reference:** Can serve as a legal agreement in case of disputes.

**How does the SRS Benefit the Development of the website?**

* Streamlined Design and Development
* Consistency Across Pages
* Improved Maintainability
* Future Scalability

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# **1. PROBLEM STATEMENT**

Nowadays, a university’s website is necessary for connecting the institution with its students, staff, faculty and important outsiders in the education field. It is necessary for sharing academic details, advertising what the university offers, supporting communication and lifting its image.

This issue can be handled by making the website focused on users, responsive and search engine friendly. To ensure users have no trouble, this website must use modern website technologies, make navigation easy, include a range of media and allow for interaction.

# **1.1Principal Difficulties:**

**Overwhelming Information Architecture:** Most college websites have too many sections that make it difficult for visitors to find the desired information.

**Poor Mobile Usability:** Since college websites are not generally designed to work well on mobile devices, their users mostly have negative experiences with them.

**Lack of Real-Time Content Updates:** If updates for announcements, calendars, admission or events are not provided in real time, people may feel confused.

**Security and Privacy Contents:** In such cases, it can be difficult to keep users’ data safe, resulting in risks for their privacy.

**Missing Interactive Features:** The absence of such items as forms, media files and maps on a university website makes the website uninteresting and does not offer much information. **Scalability and Performance Limitations:** During Admission or results, the site might not operate smoothly.

# **2.PROPOSED SOLUTION FOR THE UNIVERSITY WEBSITE**

It is suggested to develop a website that is flexible, updated and easy to use for the university. Browsing the website on a mobile device will be a simple process because it is both current and reliable. Its purpose is to make sure students, faculty and guests have a comfortable digital place to use and get the information from the institution they require.

**Modern and Responsive User Interface**

Using HTML, Bootstrap, and CSS, this modern, expert design ensures a consistent user experience on all devices. All features are easily accessible with clear, simple navigation.

**Up-to-Date Feed**

The calendar of events, news and info for admissions will be reviewed in real time on the website. Sections on the site that can be updated regularly for announcements and events. An easy way to update the backend regularly and ensure the information stays current.

**Interactive Features and Tools**

Adding interactive features will help capture and keep the attention of the players. Contact forms, Google Maps placed on the site and images and videos. Clicking the search button takes me straight to what I need. The ability to create forms with different fields.

**Mobile-Friendly Design**

To be easy to use on any device, the website will be designed primarily for mobile phones. A responsive design that uses media queries and scalable grids. Made images smaller in size.

# **3.THEME: UNIVERSITY WEBSITE**

# **3.1. Introduction**

# **3.1.1 Objective**

This SRS was created to outline the necessary requirements for making a university website. We are using HTML, CSS, JavaScript to create the platform for everyone at the school. It shows the resources provided by the institution, describes what courses are offered and makes the site attractive for exploring.

# **3.1.2 Extent**

Using the university website, people can easily find their way through About, Courses/Services, Contact and Announcements. Among its most important features are a navigation bar that stays visible, updates on events as well as admission, capability to work on all devices, embedding audio and video and forms meant for engaging with users. Updates and changes to the application will be easy to implement using this framework.

# **3.1.3 The Viewers**

This document is made for web developers, UI/UX designers, project managers, testers and those responsible at the university for creating and managing the website.

Definitions, Acronyms, and Abbreviations

* **SRS** - Software Requirements Specification
* **UI, UX** - User Interface, User Experience
* **HTML** - Hypertext Markup Language
* **CSS** - Cascading Style Sheets
* **SEO** - Search Engine Optimization

# **3.2. Synopsis**

# **3.2.1 A Look at the Product**

The University Website is intended to serve students, faculty and site visitors by providing them with a simple and responsive experience. It will make available information about academic courses, the admission process, events, office contact details and services at the university. To achieve consistency and modernity on all devices, HTML, CSS, JavaScript will be used for developing the website.

# **3.2.2 Features of the Product**

* Call-to-action buttons on an easy-to-use landing page.
* Adaptive design for smooth device usage.
* Optimizing for search engines to increase visibility.
* Safe data management and user verification.

# **3.2.3 User Classes and Qualities**

Students check for academic offerings, admission data, news of upcoming events and contact options.

# **3.2.4 Environment of Operation**

**Frontend:** JavaScript, HTML, CSS.

**Backend (Optional):** Python, PHP, or Node.js for dynamic content.

**Database (optional):** Firebase (for future growth), MongoDB, or MySQL.

# **3.2.5 Limitations in Design and Implementation**

* The application needs to load fast and be lightweight.
* It ought to work with every major browser.
* The layout needs to be responsive to mobile devices.
* The code ought to be neat, well-structured, and thoroughly documented.

# **4. FEATURES OF THE SYSTEM**

# **4.1 The landing page**

* Pages load without any hiccups, thanks to a sleek and updated UI built.
* Bright buttons at the bottom to view courses or apply online Post
* A high-quality background image or banner related to the campus.
* Improved search engine ranking through integrated SEO

# **4.2 Navigation and Page Modules**

* Usually, the main pages are called About, Courses/Services, Contact, Announcements and Interaction Page.
* A form that allows users to contact the site with some basic valuation.
* A search tool to get to particular parts of the website or pages quickly

# **4.3Interactive Elements and forms**

* Engaging users with Google Maps, videos and collections of images.
* Input fields for name, email, subject and message in the form are able to change based on user needs.
* Users can subscribe to the site’s newsletters or request updates.

# **4.4. Footer**

* Information on how to connect with the university Right here are sections that you might find useful.
* Social media buttons and links for email Copyright notice

# **4. 5 User Interface Design (UI)**

* I created the wireframes and mock up’s using Figma.
* Sample page for a website’s landing page
* How to Design an About Page Setting Up the Page for Services The form is added to the Contact Page.
* Making the Page for Announcements

# **5.FUNCTIONAL REQUIREMENTS OF THE SYSTEM**

Functional Requirements describe the specific features and capabilities that the University Website must offer to meet user and stakeholder needs.

# **5.1Navigation and Page Accessibility**

* Viewers should find it simple to access various pages such as the Home, About, Courses/Services, Contact and Announcement pages.
* A fixed navigation bar that allows you to link to specific IDs for easy scrolling.
* Every page should be properly loaded and consistent in every browser.

# **5.2 Interactive Contact Form**

* A contact form should let users fill out the form with their name, email, the subject and enter a message.
* To make sure the input is correct, basic HTML validation should be used. After the form has been submitted correctly, users should read a confirmation notice.

# **5.3 Real-Time Content Updates**

* New stories and updates are added in live time.
* Regardless of whether admins join later, they should be able to control and edit the announcements and event area.
* Any calendars, admission information or breaking news should be easy to update on the site.

# **5.4 Responsive Design**

* It is important to design websites that respond appropriately to a computer or a mobile screen.
* A well-designed website should display properly on all devices.
* Apps are made using a mobile-first design to ensure users can use them easily on phones and tablets.
* Images have been adjusted so that they open fast on mobile phones.

# **5.5 Multimedia and Embeds**

* You should be able to embed videos and Google Maps into the homepage of your website.
* Be sure to use pictures from reliable sources like Un Splash on each page.

# **5.6 SEO Optimization**

* You should organize your HTML codes properly and use meta tags for title, description and keywords.
* Each URL, heading (H1, H2, etc.) and image should be built with SEO in mind.
* Optimize your website’s speed to help your website rank higher on search engines.

# **5.7 Accessibility and Personalization**

* Use Google Fonts and be sure to keep headings easier to read than the text in the rest of the body.
* Maintain WCAG standards by providing good contrast in colours, selecting readable text and including alternative text for all images.
* Users have the option to subscribe to newsletters or arrange their dashboard (if the service provides this option).

# **5.8 Security and Privacy**

* Ensure your site accesses HTTPS (via your web host).
* To avoid contact form spam, use CAPTCHA or another similar verification method.
* All data from users must be managed according to privacy policies.

# **5.9 Error Handling and Validation**

* In forms, the validation process for fields like email, phone number and message ought to happen on the client’s end.
* Display a helpful message if input from a user is invalid or a field is left unfinished.
* Set it up to prevent errors when a user clicks on a page that doesn’t exist.

# **6.NON-FUNCTIONAL REQUIREMENTS OF THE SYSTEM**

Non-functional requirements define the quality attributes, standards, and constraints that the University Website must meet to ensure usability, performance, and reliability.

# **6.1 Performance Requirements**

* This section explains the requirements for how the project should be tested.
* It is important that no matter the internet connection, the website takes no more than 3 seconds to load.
* Optimizing content and media supports a fast connection speed for all kinds of devices.
* The site must be able to work well during busy times such as the admission season.

# **6.2 Scalability**

* It is important for the code to be organized in modules, so the site can be updated or expanded later on (e.g., with student portals, online applications).
* Created to allow for chatbots, dashboards and similar future features.

# **6.3 Usability and User Experience**

* An uncluttered and intuitive design will help every user enjoy using the UI comfortably.
* Keeping styles, typefaces and spacing the same helps give the design a cohesive look.
* Helpful buttons labelled “Apply Now”, “Contact” and “Explore Courses” make it easier for users to follow along.

# **6.4 Reliability and Availability**

* Both reliability and availability are part of Service Level Agreement.
* The website must work all the time and should experience little downtime. There should not be any corruption or mistake in any data (e.g., forms and content) shown on the website.

# **6.5 Security**

* Each query should include HTML validation, CAPTCHA and use HTTPS while processing data.
* Proper steps should be put in place to protect against XSS, form injection and any additional typical web dangers.
* Any user data that could compromise someone’s privacy should only be retained if it is kept safe and secure.

# **6.6 Maintainability and Flexibility**

* The HTML, CSS and media files should be organized in separate folders on the website.
* Use modular code and include comments so that modifying and upgrading the software is effortless.
* The site needs to be able to use CMS or database systems to add or update content.

# **6.7 Portability and Compatibility**

* All the elements on the website should be accessible in Chrome, Firefox, Edge and Safari.
* No matter the device or system used, the webpage must be seen correctly.

# **6.8 SEO and Accessibility**

* It is crucial that the site applies meta tags, uses semantic HTML and incorporates keywords.
* You should use simple fonts, good contrast and labelling elements and images with ARIA and alt text.
* If pages cannot be searched by machines, they may never be discovered by users.

# **7. MODULE DESCRIPTIONS FOR UNIVERSITY WEBSITE**

The university website can be broken down into core functional modules. Each module plays a specific role in enhancing the experience for students, staff, and visitors.

# **7.1 Home Module**

**Purpose**: To present a friendly entry to the university and help users find the most important pages.

**Key Features**:

* The logo and how the university is branded There is a main menu (Home, About, Course, Blog, Contact) at the top of the site.
* When you see ‘Welcome text and university full form’ in the description, it means you have found the tutorial.
* The CTA button located in the middle of the page which reads “Visit Us to Know More” The school is announcing admission by scrolling the message.

# **7.2 Courses Module**

**Purpose:** To present all the academic courses available at the university. **Key Features:**

* The programs highlighted in this section include Intermediate, Undergraduate and Postgraduate.
* Descriptions that cover the main features of each program level

# **7.3 Campus Module**

**Purpose:** To outline the university’s campuses around the world.

**Key Features:**

* Displayed are images and labels for the campuses in London, New York and Washington.
* Briefly highlighting what campus living is like.

# **7.4 Facilities Module**

**Purpose:** To present what the university provides in terms of facilities and services.

**Key Features:**

* The library, playground and cafeteria are displayed, along with their descriptions.
* Support for learning and for enjoying recreational activities

# **7.5 Why NUST Module**

**Purpose:** To show the advantages of learning at NUST.

**Key Features:**

* The three main supports are Academic Excellence, Global Partnerships and Adaptive Learning.
* Clarify the benefits for prospective students.

# **7.6 Testimonials Module**

**Purpose:** Offering feedback to students so they can trust the site.

**Key Features:**

* Student’s details such as their names, photos and star ratings, are displayed in two testimonials.
* Points addressed are academics, the nature of the campus and the experience there.

# **7.7 Call to Action Module**

**Purpose:** To get prospective students inspired to take steps forward.

**Key Features:**

* Information about the benefits of taking online courses “Contact Us” button to ask another question

# **7.8. Footer Module**

**Purpose:** To give an overview of the university and share its social media profiles.

**Key Features:**

* About Us page Copyright The icons of Facebook, Twitter, Instagram and LinkedIn

# **7.9 Navigation and Responsiveness Module**

**Purpose:** To let people visit the website on whichever device they use.

**Key Features:**

* The global navigation is made responsively using JavaScript.
* Font Awesome helps design a modern and easy-to-use website.
* Google Fonts help the website look attractive.

# **7.10 Admission Notice Module**

**Purpose:** To provide students with information on current application procedures and special dates.

**Key Features:**

* Banner located at the bottom with the dates for when admissions open and close.
* Show the orientation date with a different-looking and coloured background.
* Important notices should be readily seen by anyone visiting the website.

# **7.11 Branding and Visual Identity Module**

**Purpose:** To ensure NUST has a well-known and attractive image through its visuals.

**Key Features:**

* Always using the Poppins font from Google Fonts.
* Things done in green against a white background.

# **8. Conclusion**

To sum up, this Software Requirement Specification (SRS) document gives a thorough overview of the University Website, defining its goals, functional and non-functional requirements, architecture, and design considerations. It also serves as an essential tool for developers, testers, and stakeholders throughout the project lifecycle, ensuring a shared understanding of the system's functionality and expectations. This document outlines the project scope, user and admin module descriptions, user interface design, testing strategies, and risk management, ensuring a solid basis for development. Using this SRS as a guide allows the development team to produce a high-quality product that satisfies user needs, aligns with business objectives, and supports future scalability and maintenance. The successful implementation and long-term viability of the University Website will be greatly enhanced by proper adherence to the requirements specified in this document.

All in all, these pages explain what makes up the university website and how it is structured at Nuthana University of Science and Technology (NUST). Currently, the site shows static information but offers prospective students, parents and others all the important details courses, campus, testimonials and contact they may need. The website has been built to be both easy to use and responsive on desktops and mobile devices.