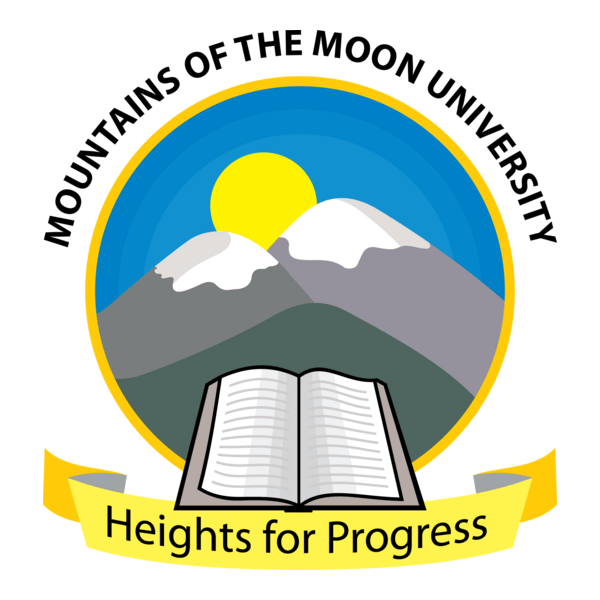
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**MOUNTAINS OF THE MOON UNIVERSITY**

**FACULTY OF SCINCE, TECHNOLOGY AND INNOVATION**

**DEPARTMENT OF COMPUTER SCIENCE**

**FUNDAMENTALS OF WEBSITE DEVELOPMENT**

**COURSE CODE: BIT 1204**

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**REPORT**

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# Introduction

Sam Iga Memorial College (SIMC) is a government-aided, Church of Uganda-founded mixed day and boarding secondary school located in Maganjo B Cell, Nabweru Division, Nansana Municipality in Wakiso District, Uganda. The college offers both Ordinary Level (O-Level) and Advanced Level (A-Level) education, providing students with a balanced curriculum aimed at academic excellence, moral integrity, and spiritual growth.

In an increasingly digital world, institutions of learning are expected to maintain a strong online presence to foster communication with stakeholders, showcase achievements, and streamline administrative processes. The development of a functional and informative website is crucial in fulfilling these expectations. This report evaluates the website for Sam Iga Memorial College hosted at <https://atibu707.github.io/simc2/index.html>, assessing its current features, strengths, and areas for improvement. The report also highlights the significance of a robust digital platform in enhancing the visibility, accessibility, and operational efficiency of the school.

# Background

Sam Iga Memorial College was established to fulfill a vision rooted in Christian values and academic empowerment. Founded by the Church of Uganda, the school was created as a response to the growing demand for accessible, high-quality secondary education in the Wakiso District. Its mission has remained consistent over the years: to nurture learners into responsible, knowledgeable, and God-fearing citizens equipped to serve their communities and the nation.

The school is named in honour of a dedicated and visionary educationist, Mr. Sam Iga, whose legacy continues to inspire the institution’s leadership and philosophy. Under the stewardship of experienced administrators and educators, including the current Head Teacher Mr. Kiberu Stanley, SIMC has gained a reputation for academic performance and character development. Mr. Kiberu’s leadership, supported by over 15 years of experience in school administration, has seen the school maintain excellent academic standards and foster a safe and supportive learning environment.

Sam Iga Memorial College maintains a commitment to holistic education, combining classroom learning with co-curricular activities, spiritual development, and discipline. Over the years, the institution has seen a steady rise in student enrolment and performance in national examinations, reinforcing its role as a key player in Uganda's secondary education sector.

The launch of the school website represents a significant step towards modernization and improved stakeholder engagement. A well-structured website can serve as a gateway for prospective students, a resource for parents, a communication tool for staff, and a showcase of the school’s identity and achievements. As such, this report provides a thorough review of the current site and offers practical recommendations for enhancing its design and functionality to align with the school’s mission and growing needs.

# Objectives

The objectives of the website development project were:

**Communication Efficiency**

Create an accessible platform for communicating with students, parents, and the wider community about SIMC’s offerings, events, and updates.

**Brand Representation**

Strengthen the college’s online identity, making it easily recognizable and reinforcing its values and vision.

**Information Accessibility**

Provide key information, such as admission criteria, academic programs, and school news, in a user-friendly format.

**Engagement and Interaction:**

Facilitate better engagement with prospective students and parents, improving their experience with the school’s digital presence.

# Target Audience

The target audience for the Sam Iga Memorial College website includes:

**Prospective Students**

Individuals considering enrolling in the school who are seeking details about the academic offerings, admission process, fees, and school culture.

**Parents**

Parents of both current and prospective students who require information about school events, fees, academic schedules, and other important updates.

**Current Students and Staff**

Students and staff who rely on the website for updates on school activities, academic calendars, and institutional announcements.

**General Public and Educational Stakeholders**

Educational bodies, partners, potential donors, and the general public interested in learning more about SIMC’s initiatives, achievements, and involvement in the community.

# Tools and Technologies Used

The website was developed using a range of modern web technologies, ensuring it is both functional and aesthetically appealing:

**HTML5**

HTML5 provides the core structure of the website. It is used to define the layout, content, and semantics of the site, ensuring accessibility and compatibility with modern web browsers.

**CSS3**

CSS3 is used to style the website, including layout adjustments, color schemes, typography, and overall presentation. It ensures the site is responsive, adapting to various screen sizes, from desktops to mobile devices.

**GitHub Pages**

The website is hosted on GitHub Pages, a free and reliable service for static websites. It offers a secure and fast platform for public access to the site.

**JavaScript**

JavaScript was used to implement interactive elements on the website, such as form validation and click-triggered actions, enhancing the user experience.

**Responsive Web Design**

The website follows a responsive design, ensuring it is mobile-friendly and provides an optimal user experience across all devices and screen sizes.

|  |  |
| --- | --- |
| Tool/Technology | Purpose |
| HTML5 | Website structure and content markup |
| CSS3 | Styling, layout, and responsiveness |
| JavaScript | Basic interactivity (image slider) |
| GitHub Pages | Free hosting and version control |
| Google Fonts | Typography enhancement |
| Multimedia (Images, Icons) | Visual appeal and engagement |

# Design and Development Methodology

The website development process followed a systematic approach to ensure that it met the institution’s needs while maintaining high-quality standards. Below are the phases involved in the design and development:

**Planning Phase**

Objectives and goals for the website were defined, focusing on key features such as the admission process, school values, and academic programs. The target audience was also identified to tailor the design and content accordingly.

**Design Phase**

Wireframes and mock-ups were created to visualize the site structure and layout before development. This phase focused on crafting a clean and professional design that aligns with SIMC’s brand identity and mission.

Design considerations included colour schemes, typography, and user experience to ensure the site was visually appealing and easy to navigate.

**Development Phase**

The website was coded using HTML5 for structure, CSS3 for styling, and JavaScript for interactive features. The focus was on creating clean, well-structured code that was optimized for both performance and accessibility.

The development process also involved ensuring that the site was responsive, meaning it would look and function well on devices of all sizes.

**Testing Phase**

Extensive testing was carried out to ensure the website’s functionality, including testing on multiple browsers (Chrome, Firefox, Safari) and devices (desktops, tablets, and smartphones).

Performance testing ensured that the website loaded quickly, while content accuracy was verified to ensure all information was correct and up to date.

**Deployment Phase**

The website was deployed on GitHub Pages for public access. The final version was optimized for fast loading times and accessibility.

# Features and Functional Overview

The Sam Iga Memorial College website includes several key features designed to enhance user experience:

**Homepage**

The homepage serves as the first point of contact with the website. It introduces the school’s mission, values, and key information. It also provides quick links to other important sections of the site.

**About Us Section**

This section provides background information about the school, including its founding, leadership, values, and vision. It offers insight into the school’s goals and how it strives to provide quality education.

**Admission Information**

This section outlines the requirements for admission to both O-Level and A-Level programs. It includes details on the application process, required documents, deadlines, and the school’s fees.

**Academic Programs**

The Academic Programs section details the subjects and courses offered at the school, including subjects for both Ordinary and Advanced Levels. This section helps prospective students make informed decisions about their education.

**Gallery**

A gallery of images showcasing school events, sports activities, student achievements, and other important moments in the school’s life.

**News Section**

This section contains updates on the school’s latest activities, achievements, and upcoming events. It ensures the community stays informed and engaged with the school’s progress.

**Contact Us**

The Contact Us page provides essential information such as the school’s address, phone number, and email for inquiries. It also includes a contact form for direct communication with the administration.

# Testing and Quality Assurance

A rigorous testing process was followed to ensure that the website functions as intended and meets user expectations. The following tests were conducted:

**Cross-Browser Compatibility**

The website was tested on different browsers to ensure consistent appearance and functionality.

**Mobile Responsiveness**

The website was tested on various mobile devices to ensure that it is fully responsive and adapts seamlessly to smaller screen sizes.

**Performance Testing**

Load testing was conducted to ensure that the website loads quickly, even under heavy traffic.

**Content Verification**

All content, including text, images, and videos, was reviewed for accuracy and up-to-date information.

# Challenges Encountered and Resolutions

**Limited Interactivity**

The website initially lacked interactive features for students and parents.

**Resolution**

Future updates will introduce interactive forms, such as online registration and feedback forms.

**Visual Design Constraints**

The website design was initially basic and lacked dynamic visual elements.

**Resolution**

New design elements, including more engaging images and a vibrant colour scheme, were added to enhance the visual appeal.

# Project Evaluation

The Sam Iga Memorial College website is a solid platform for communication and information sharing. However, it could benefit from increased interactivity, more frequent content updates, and advanced features such as an online application system. It effectively meets the needs of its users but requires ongoing enhancements to remain relevant and fully functional.

# Future Recommendations

**SEO Optimization:**

Implement SEO techniques to improve search engine rankings and make the website more discoverable.

**Additional Interactive Features:**

Integrate tools such as an online application form, event registration, and a student portal for better engagement.

**Regular Updates:**

Ensure that the News and Events sections are regularly updated to keep the community informed.

**Enhanced Mobile Experience:**

Further optimize the website for mobile devices, ensuring fast loading times and user-friendly navigation.

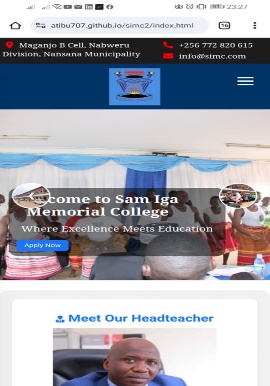
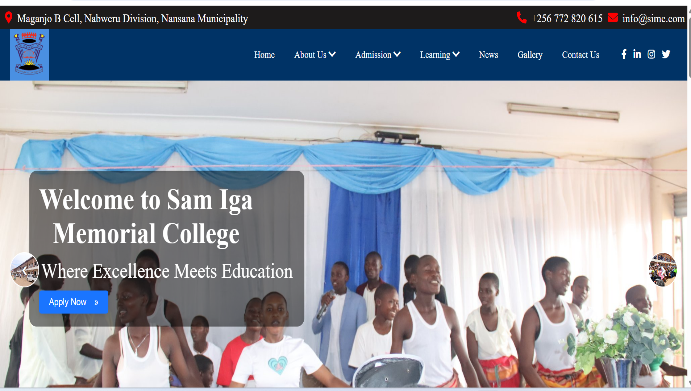
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2. GitHub Pages Documentation. (n.d.). Retrieved from <https://pages.github.com>
3. [Sam Iga Memorial College Website](https://atibu707.github.io/simc2/index.html)
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5. W3Schools and CSS-Tricks for layout and media queries guidance

# Appendices

**Appendix A: Testing Results**

A summary of the tests was conducted during the testing phase, including cross-browser and mobile responsiveness tests Images below illustrate it more

**Appendix B: Code Snippets**

This appendix presents key code snippets extracted from the Sam Iga Memorial College website project. These examples highlight essential interactive and responsive features implemented to enhance the user experience and accessibility across different devices.

**Image Slider (Homepage)**

The homepage features an automatic image slider used to visually showcase various aspects of the school environment. This slider cycles through images at intervals, creating a dynamic and engaging first impression for visitors.

**Responsive Navigation Menu**

The site includes a responsive navigation bar that adapts to screen sizes, particularly for mobile devices. When viewed on smaller screens, the menu collapses into a toggle (hamburger) icon to save space and improve usability.

**Appendix C: Feedback from Users** Multiple users such as students and staff provide feedback regarding their experience with the website.