



Short Paper

Website of Trinity University of Asia - High School: An Interactive Platform for Prospective Students and Parents

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Date received: July 7, 2023

Date received in revised form: September 25, 2023; December 4, 2023

Date accepted: January 6, 2024

Recommended citation:

Jamero, J. E. R., Lee, C. M., Manzon, R. K. D., Mendoza IV, R. I. B., Reyes, V. M., Crisostomo, S. C., Villones, R. B., & Bunag, F. R. (2024). Website of Trinity University of Asia - High School: An interactive platform for prospective students and parents. *International Journal of Computing Sciences Research*, 8, 2695-2710. <https://doi.org/10.25147/ijcsr.2017.001.1.181>

Abstract

Purpose – The project aims to enhance the school's communication and information dissemination processes by providing a user-friendly and interactive platform for students, parents, and teachers.

Method – The use of agile methodology in system development was essential because it allowed for adaptive planning, continuous feedback, and iterative development, enabling teams to respond to changing requirements and deliver high-quality software promptly.

Results – Achieving an excellent rating with a weighted mean of 4.5 for the website's Portability, Usability, and Reliability was extremely significant. It indicated that the website effectively met the needs and expectations of users in these crucial areas.

Conclusion – It had a positive effect on the organization's online presence and user satisfaction. And underscored the website's success in meeting the organization's goals and user expectations, solidifying its reputation as a reliable and user-friendly platform.

Recommendations – The development of the website provided the researchers with the opportunity to hone their skills and become proficient developers. They conducted research as a group and collaborated to improve the website, ultimately refining their concepts to create a user-friendly platform.

Research Implications – The study allows to provision of online information about the school's events, gives sufficient promotional and marketing activities, and increases the number of applicants to enroll in the school. The system has been implemented to aid Trinity University of Asia – High School and is updated and continuously maintained to its latest version.

Practical Implications – Having information about the school on a website, creates an impact that can make a school known easily. And, to encourage students to enroll in the school by posting their offers to those students who are inquiring about the services they offer by looking at the internet.

Keywords – school, website, development, information, user-friendly, platform, students, organizations

INTRODUCTION

Nowadays, most schools use websites to promote their offers and services. As Taddeo and Barnes (2014) in their article, the situation provides academic establishments with a chance to enhance and modernize the learning process by implementing school websites. The degree of significance attributed to academic websites and the resources allocated for their development and upkeep can differ considerably, contingent upon the specific circumstances under consideration. In addition to having a comprehensive understanding of the elements that contribute to a website's efficacy in fostering innovative pedagogy and learning within an educational institution, it is critical to ascertain that the website functions following the day-to-day activities of the institution.

The important information including strands, school officials, news, and very useful events, are placed on a website that can give ideas to parents and students and also encourage them to enroll or to continue their studies. Users can visit a website using their desktop, smartphone, or tablet. It will post accurate information that will help them decide what is best for them. However, there are still some schools that do not have their website and one of those is the Trinity University of Asia - High School.

Trinity University of Asia - High School consists of Junior High and Senior High School and is attended by a total of 600 students per year. Junior High School encompasses Grades 7 to 10, whereas Senior High School comprises Grades 11 and 12, and allows students to choose between three strands: Accountancy, Business, and Management (ABM), Humanities and Social Sciences (HUMSS), and Science, Technology, and Mathematics (STEM). In Junior High School, there are a total of eight (8) sections, with two sections for each grade level. In Senior High School, the number of sections varies by grade level. In Grade 11, the ABM and HUMSS strands each have one section, while STEM has three sections, and in Grade 12, the ABM and HUMSS strands each have one section, while STEM has two sections. Junior High and Senior High share the same school administration, department heads, and professors.

The school website can provide the information to encourage all parents and prospective students to enroll. The proposed project will help the school in advertising

their offers and services simply by using the website, to keep the current students and to encourage the prospective students as well as their parents. The website is real-time, and always updated in terms of the news and events of the school.

LITERATURE REVIEW

Barikzai's (2009) analysis reveals that technological improvements have greatly impacted the enhancement and broadening of educational options globally. Websites are a technological tool that allows organizations and enterprises to efficiently and affordably market and distribute their profiles to a global audience. The Kabul Education University, or KEU, is an educational institution located in Kabul, Afghanistan. It was established in 2003. It is a vocational training institution that specializes in delivering instruction to educators in high schools. In June 2009, the university was the only state college in Kabul without a website, whereas all the other colleges had websites. In response to the request made by the university administration, faculty, and students, he developed a website. Before commencing the website development process, I conducted interviews with senior executives at KEU. The persons comprised the university chancellor, the deans of six faculties, and selected department heads. These interviews were done to collect ideas from individuals regarding the importance of a website in attaining the organization's aims. Furthermore, the website will offer students and teachers an enhanced means of ensuring the currency of their pertinent resources. It is possible to achieve this without a website, but having a website will function as a reliable gateway to access the internet. In addition, university instructors will have the capability to submit their course materials to the website, enabling KEU students to conveniently access these resources at their convenience.

In the study conducted by Tupas (2015), the aim was to create and assess the LPU-B High School website based on its content, functionality, and usability as perceived by instructors, designated staff, and students. Furthermore, the main goals of the study were to determine if there was a significant discrepancy in the ratings given by the two separate groups of participants and to propose enhancements for the website. Developers were responsible for creating and maintaining the software applications that operate on the internet. The system comprises a database component, the application of a programming or scripting language, and the creation and execution of the graphical user interface (GUI). The user interface can be accessed using any web browser, as it was primarily designed using Hypertext Markup Language (HTML) and Cascading Style Sheet (CSS). The PHP content management system technology is employed to handle the requests and tasks performed by users on the server side. Subsequently, the server provides the pertinent database information in response to the request. MySQL is utilized to store application-specific data in tables within relational databases using a database management system. This encompasses the graphical user interface, computational algorithms, and data storage system. The server is accountable for hosting all the components of the program.

Website on the World Wide Web The URL for the universal resource locator is hs.ipub.edu.ph.

Sadiku et al. (2021) did a study to create a progressive website for a private school situated in the North Central area of Nigeria. The website provided comprehensive information on a wide range of topics, encompassing news, sports, career advice, departmental updates, student enrollment, results, frequently asked questions (FAQs), and feedback reports, among others. Throughout the duration of this study, the college did not provide any online courses. Despite being equipped with all the necessary internet-related hardware, such as phone lines, the computers at the school were standalone systems that lacked an actual internet connection. Consequently, the researchers informed the school about the importance of having a website and the value of being connected to the Internet. Another aspect of the project involved the creation of interactive websites specifically designed for secondary schools, to share information with the broader public.

Muhammad et al. (2014) Due to a lack of current technology, the management of such systems was not simple and dynamic in the past; therefore, the implementation of this website has included some enhancements to mitigate the disadvantages of the past. This website aims to make it simpler for users (Students, Staff, and Users) to access useful resources such as the digital library, admission form, admission requirements, and admission results. All of this is a result of the extremely potent and innovative evolution of advanced Information Technologies, as exemplified by the Internet's rapid and dynamic growth. In addition to the standard website features such as a home page, contact us module, etc., our website also features a fully functional, interactive digital library. In addition, one of the most prevalent features of our website is a J-Query-implemented photo gallery that is aesthetically pleasing to users (Students, Staff, and Students). The system is web-based, which provides applicants with numerous benefits.

METHODOLOGY

Software Development

Agile software development is a streamlined strategy that was suggested to address the constraints of traditional development methodologies. The objective is to minimize expenses and overhead while allowing for adaptability to accommodate modifications in requirements at any point. Task management and coordination are achieved by adhering to a defined set of values and principles (Al-Saqqa et al., 2020). Agile software development is a method that emphasizes flexibility and efficiency. Figure 1 illustrates the profound importance of the Agile Methodology in the domains of software engineering and information technology. This article will explore the four cores of agile software development, which are essential for streamlining the software development process (Gheorghe et al., 2020).

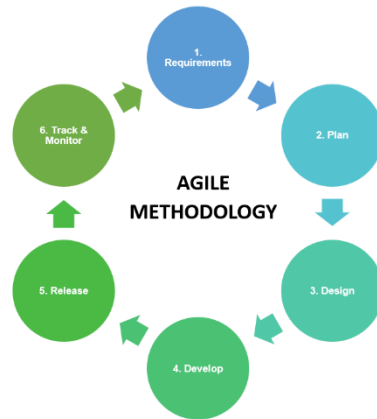


Figure 1. Agile Development Methodology

Planning

During this phase, the author planned, gathered data, conducted interviews, conducted research, and spoke with experts to ascertain the objectives and specifications that were taken into consideration when creating the system to improve the manual process. The stage in which the author gathers every program, hardware, and tool that might be used for building the system.

Analysis

After evaluating the information gathered, the author conducted an analysis and determined the client's overall user needs in this phase by contrasting the client's potential solutions with the author's suggestions. To verify the accuracy of the suggested fixes for the problems, the author created a Data Flow Diagram, Gantt Chart, UML Use Case Diagram, and Entity Relationship Diagram. Diagrams substantially aid in the study of all the data by helping to visualize how the data is generally related.

Designing

Software functions are thoroughly explained in this stage. This covers things like process flow diagrams, business rules, and interface screen layouts. As the starting input for this phase, requirements from the requirements document created in the previous step are used. Each requirement leads to the development of design elements, which thoroughly describe the software's functionality. When this phase is finished, a description of the system as a collection of modules and subsystems should be produced.

Coding

Throughout this phase, the author focused on the crucial specifications, attributes, and capabilities of the suggested system. The author was able to create a plan, decide the development's sequence, prepare the system flow, and allocate each feature that would be introduced by creating a system design and beginning to tackle the problems that cropped up during the manual process.

The author creates code in this phase using the modules and subsystems created in the phase before. Programs are written, tested, documented, installed, and implemented during this phase.

User Testing

The system must be installed and tested at this stage to see if it meets the user's requirements and expectations. At this point, alpha and beta testing were utilized. The functionality of the system must be rated by the participants in the author's system assessment survey. After the review, the users agreed and stated that they were certain the system was meeting their needs.

Here, all the components or modules are assembled and tested for flaws. Code modules are merged during this stage to make sure they work together as expected. Unit, systems, and user acceptance testing are among the several types of testing that are carried out.

Deployment

Since the author has planned for its deployment, the system must operate, function, and enable activities in line with user needs, which also pertains to the actual and final project output. This stage involves gathering user input after system testing and evaluation.

The system is installed and rendered operational in a production setting following the requirements after having undergone testing and being approved by the user.

System Testing and Evaluation

Suwawi et al. (2015) say ISO 9126 is one of the evaluation standards that has been acknowledged internationally in evaluating software from the software engineering perspective. The international standards provide six characteristics: functionality, reliability, usability, efficiency, maintainability, and portability.

Table 1 is a Likert scale consisting of a statement or a question, followed by a series of five or seven answer statements. Respondents choose the option that best corresponds

with how they feel about the statement or question. The responses were calculated using the *Mean = Summation / Total number of Population*.

Table 1. The Likert Scale

Scale	Range	Interpretation
5	4.21 - 5.00	Excellent
4	3.41 - 4.20	Very Good
3	2.61 - 3.40	Good
2	1.81 - 2.60	Fair
1	1.00 - 1.80	Poor

Table 2. ISO Software Product Quality

ISO Software Product Quality	Sub-Characteristic
Functional Suitability - This characteristic represents the degree to which a product or system provides functions that meet stated and implied needs when used under specified	Functional completeness
	Functional correctness
	Functional appropriateness
Reliability - Degree to which a system, product or component performs specified functions under specified conditions for a specified period of time.	Maturity
	Availability
	Fault tolerance
	Recoverability
Usability - Degree to which a product or system can be used by specified users to achieve specified goals with effectiveness, efficiency and satisfaction in a specified context of use.	Appropriateness recognizability
	Learnability
	Operability
	User error protection
	User interface aesthetics
	Accessibility
Performance efficiency - This characteristic represents the performance relative to the amount of resources used under stated conditions.	Time behaviour
	Resource utilization
	Capacity
Maintainability - This characteristic represents the degree of effectiveness and efficiency with which a product or system can be modified to improve it, correct it or adapt it to changes in environment, and in requirements.	Modularity
	Reusability
	Analysability
	Modifiability
	Testability
Portability - Degree of effectiveness and efficiency with which a system, product or component can be transferred from one hardware, software or other operational or usage	Adaptability
	Installability
	Replaceability

Haoues. et al. (2017) utilized ISO 25010 criteria to assess and quantify the quality characteristics of software systems. The standard provided a framework for evaluating

characteristics including functionality, reliability, usability, efficiency, maintainability, and portability. Table 2 shows the ISO Software Product Quality which is the cornerstone of a product quality evaluation system. The quality model determines which quality characteristics will be considered when evaluating the properties of a software product.

RESULTS

System Architecture

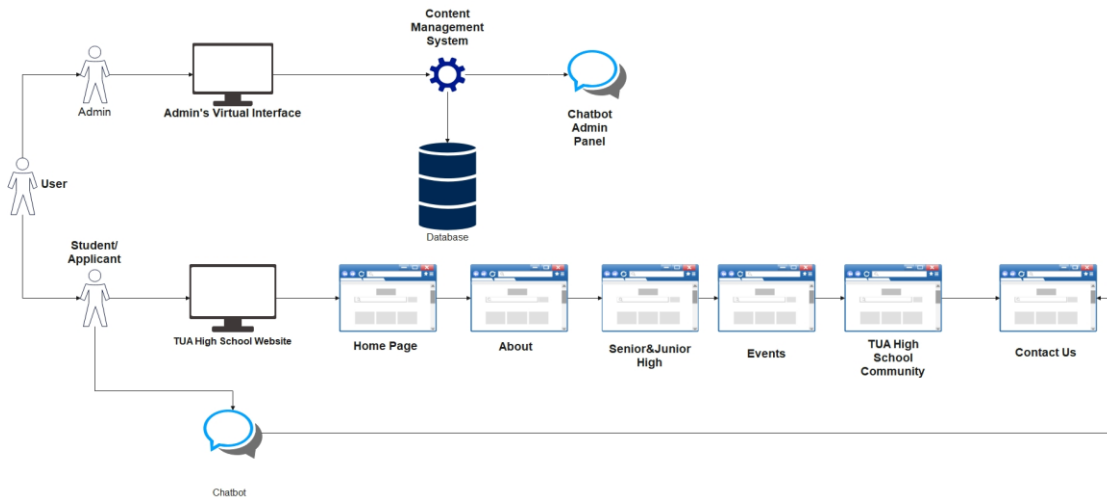


Figure 2. System architecture

Figure 2 is a System Architecture diagram, it can view how the system is built and how it is automated and provides basic services. The system architecture in the following instances is illustrative

Modules



Figure 3. Home Page With Navigation Bar Menu

Figure 3 is the Home Page With Navigation Bar Menu - The first page of the website is the Home page. The home page contains important details about the Trinity University

of Asia - High School that the users will have an interest in once they visit the website. It will help them to become updated on the happenings inside the campus, especially for potential students who want to enroll in the said school. It also displays videos and photos that will get the attention of parents and students who visit the website.

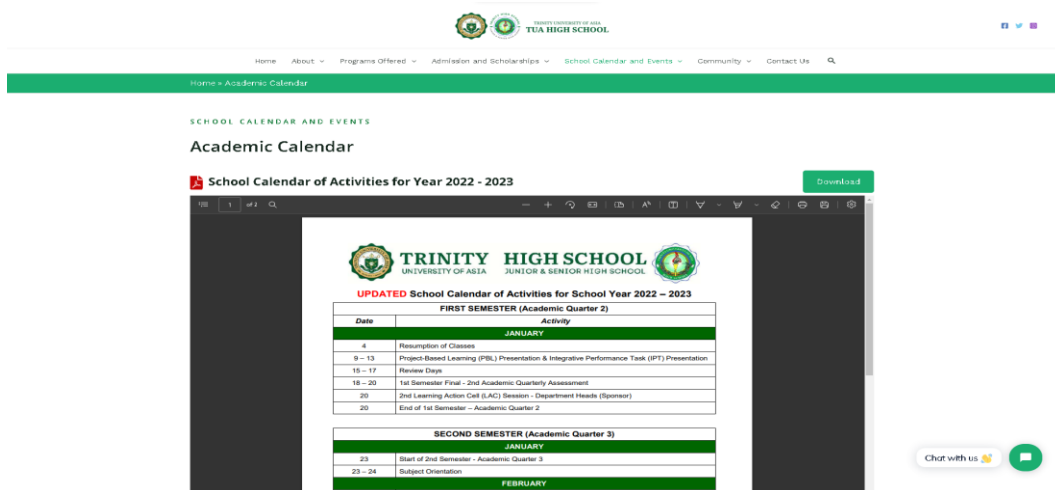


Figure 4. School Calendar and Events

Figure 4 School Calendar and Events - This page contains the Academic Calendar of the school year, to acknowledge the parents and students on when the events will happen this school year. Also, the TUA HS Memorandum will give information about the events that the students are required to attend.

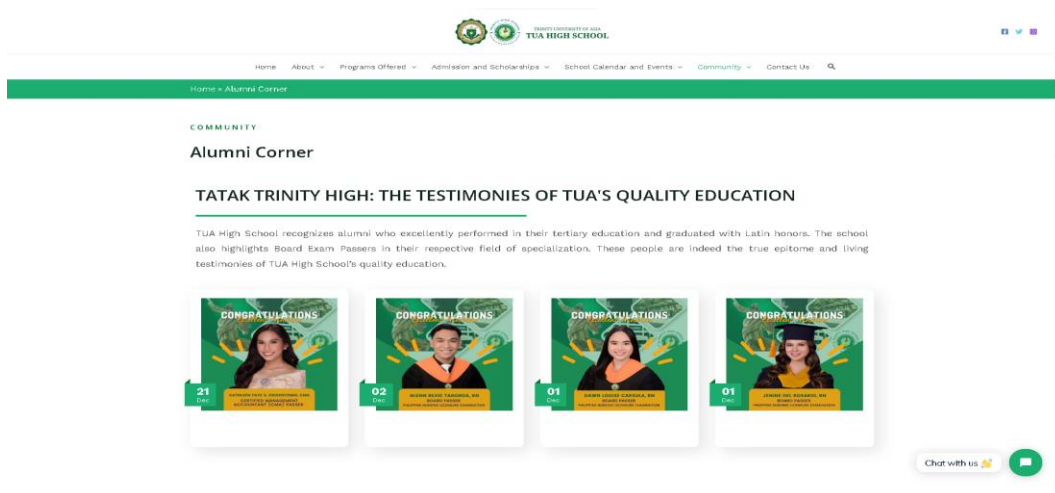


Figure 5. Community

Figure 5 Community - The THS community contains pages like Alumni Corner. Where the alumni from TUA HS will be featured because of their achievements to inspire the

students to study better to become like them. The page also contains Campus Life where students will celebrate an event organized by the Trinity University of Asia - High School, and the Vanity Map of the Campus is posted on the Community Page.

Evaluation Results

By employing the ISO 25010 criteria, evaluators could analyze and compare systems objectively, identify areas for improvement, and make informed selection, optimization, and improvement decisions. The system was evaluated by its user and system administrator. Two kinds of evaluators performed the system's evaluations. A system administrator and (10) users comprised of students, parents, and guardians assess the website and respond to the questionnaires regarding Portability, Usability, and Reliability. This is under ISO/IEC 25010:2011. Table 1 displays these criteria and their respective evaluation results.

Table 3. ISO/IEC 25010 Evaluation Result

Characteristic	Sub-Characteristic	Mean	Interpretation
Functional Suitability	Functional completeness	4.7	Excellent
	Functional correctness	4.1	Very Good
	Functional appropriateness	4.4	Excellent
Reliability	Maturity	4.6	Excellent
	Availability	4.0	Very Good
	Fault tolerance	4.3	Excellent
	Recoverability	4.0	Very Good
Usability	Appropriateness recognizability	4.7	Excellent
	Learnability	4.4	Excellent
	Operability	4.7	Excellent
	User error protection	4.7	Excellent
	User interface aesthetics	4.5	Excellent
	Accessibility	4.5	Excellent
Performance efficiency	Time behaviour	4.6	Excellent
	Resource utilization	4.3	Excellent
	Capacity	4.6	Excellent
Maintainability	Modularity	4.5	Excellent
	Reusability	4.6	Excellent
	Analysability	4.7	Excellent
	Modifiability	4.9	Excellent
	Testability	4.2	Very Good
Portability	Adaptability	4.5	Excellent
	Installability	4.7	Excellent
	Replaceability	4.5	Excellent
Overall Weighted Average		4.5	Excellent

Table 3 shows the summary of the results of the evaluation made by ten (10) users. Achieving an Excellent rating with a weighted mean of 4.5 for the website's Portability,

Usability, and Reliability was extremely significant. It indicated that the website effectively met the needs and expectations of users in these crucial areas.

A high rating for Portability indicated that the website was accessible and functional across multiple devices and platforms, allowing users to interact with it without interruption regardless of their preferred technology. In addition, the website's high Usability rating indicated that it was user-friendly, intuitive, and simple to navigate. Users were able to complete their duties quickly and effectively, resulting in a positive user experience.

DISCUSSION

The summary of the Client's evaluation is displayed in Table 3. With an overall weighted mean of 4.5, the website's Portability, Usability, and Reliability are rated as Very Good. The findings of the evaluation allowed us to conclude that the Website was in a Very Good and operational state. Having an overall weighted mean of 4.5 for the website's Portability, Usability, and Reliability, rated as an extremely satisfactory evaluation from its system administrator, was of paramount importance. This high rating indicated that the website excelled in terms of being accessible across different platforms, providing a user-friendly experience, and maintaining a high level of dependability.

The exceptional evaluation from the system administrator demonstrated that the website met or exceeded their expectations in these critical aspects, reflecting a well-designed and well-executed system. This positive assessment affirmed that the website was successful in delivering its intended functionalities effectively and efficiently.

Furthermore, the outstanding evaluation highlighted the organization's commitment to providing a seamless and reliable digital experience for users. It validated the efforts put into optimizing the website's performance, ensuring a smooth user experience, and reinforcing user trust and satisfaction.

CONCLUSIONS

In conclusion, obtaining an Excellent rating with an overall weighted mean of 4.5 in Portability, Usability, and Reliability of the website was an accomplishment that demonstrated the website's efficiency, user-friendliness, and dependability, which had a positive effect on the organization's online presence and user satisfaction. Overall, the extremely satisfactory evaluation of 4.5 for Portability, Usability, and Reliability from the system administrator underscored the website's success in meeting the organization's goals and user expectations, solidifying its reputation as a reliable and user-friendly platform.

RECOMMENDATIONS

The developer's primary goal in developing the website was to aid Trinity University of Asia - High School in promoting their programs to both current and prospective students, thereby encouraging the latter to enroll. From a marketing perspective, it was regarded as crucial to identify and capitalize on the opportunities presented by this shift. Prospective parents and students spent a significant amount of time at home engaging with and investigating school-related content. This presented an excellent occasion to evaluate, update, and consider ways to better cater the school website to the intended audience. The development of the website provided the researchers with the opportunity to hone their skills and become proficient developers. Although the researchers had limited notions about website development at first, they conducted research as a group and collaborated to improve the website, ultimately refining their concepts to create a user-friendly platform.

RESEARCH IMPLICATIONS

The study allows to provision of online information about the school's events, gives sufficient promotional and marketing activities, and increases the number of applicants to enroll in the school. The system has been implemented to aid Trinity University of Asia – High School and it is updated and continuously improved to its latest version.

PRACTICAL IMPLICATIONS

The main benefit that the Website for Trinity University of Asia – High School can do is it can give out information about the High School. Details written on the website will help out interested people and those who are currently involved in the school. It is also one of the modern ways of promoting products and services and can easily reach out to everyone via the Internet. Having information about the school on a website creates an impact that can make a school known easily. And, to encourage students to enroll in the school by posting their offers to those students who are inquiring about the services they offer by looking at the internet.

ACKNOWLEDGEMENT

We would like to sincerely thank everyone who helped us with this research project. To our family for their financial support and motivation, the respondents for taking part in the study and voluntarily answering the survey questions, to the College of Engineering and Information Sciences and the University Research and Development Center of the Trinity University of Asia for their assistance in the publication of this research.

FUNDING

The study was not funded by any institution.

DECLARATIONS

Conflict of Interest

All authors declared that they have no conflict of interest.

Informed Consent

The study requested the Trinity University of Asia - High School, Faculty, Parents, and Students for consent as a participant. It can help them in this research on how we manage it and have a good design and a user-friendly system.

Ethics Approval

The conducted research was reviewed by the Institutional Ethics Review Committee of the Trinity University of Asia with the protocol code 2023-2nd-CEIS-Jamero-V1.

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Roman B. Villones holds a Master's degree in Information Technology and is presently employed as an IT instructor at the College of Engineering and Information Sciences at Trinity University of Asia. His principal areas of expertise include software engineering, system analysis, and design.

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