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**PROPOSED TITLE**

Student Online Voting System

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# 1.1 Introduction

This project proposes to develop a student online voting system to meet the electoral needs of the International University of Management (IUM). This proposal discusses the study background, motivation, problem statement, aim and objectives, delimitation, limitation, methodology and ethical considerations.

# 1.2 Background

Over the years, technology has revolutionized our world and daily lives. Additionally, technology has created amazing tools and resources, putting useful information at our fingertips. Technology has changed major sectors over the years, including media, climate action and healthcare. One of the tools include the automation of voting. Student elections in higher education institutions have over the years become very expensive and involving exercises (Thiga et al., 2018). This study examines the challenges facing the conduct of these student elections manually and presents an electronic alternative which is a Student Online Voting System for the International University of Management that demonstrates great advantages especially in introducing efficiency at the vote tallying stage of the election. Introducing new ICT systems in elections is always challenging, and requires careful deliberation planning. Electoral voting involves core of the entire electoral process (the casting and counting of votes). Online voting system greatly reduces direct human control and influence in this process, and provides an opportunity to solve some old electoral problems. The study added that there are a number of online voting systems that are marketed as a means of improving voting methods and reducing costs. Some of the systems claim to offer a high degree of reliability and resistance to electoral malpractice.

# 2. Motivation

The difficulty of manually managing the voting system process seems to exist. The proposed system could be a way to eliminate paper ballot voting and manual management of voting process as well as to eliminate or minimize the dangers it might cause to the environment. The proposed system could also speed up the counting of ballots, reduce the cost of paying stuff to count votes manually and to provide improved accessibility for disabled voters. By the development of the proposed system, this could decrease expenses in the long term, and report and publish results faster.

# 3. Problem Statement

The manual paper ballet voting method may cause the whole voting process to become slow. According to Khan (2017), it takes a huge amount of time to count the votes before declaring the results. IPL (n.d) agrees with Khan (2017) by saying that casting votes using paper ballot is very much time consuming and slow. Diamond (2018) noted that traditional voting requires ballots to be printed and mailed and waiting for mail-in paper ballots can be time consuming and inefficient. Additionally, students might be faced with issues such as trying to vote only during their free periods, causing them to join long queues to cast their vote, which inevitably wastes time (Antwiwah, 2018). Therefore, the built of a voting system that would automate the voting system with the purpose of eliminating long queue and reducing the time it takes to complete voting process.

With the manual ballot voting system, most disabled or physically challenge people left out of the voting process (Vasilogambros, 2019). The people who are physically or mentally challenged may find it difficult to cast their votes through the paper ballot as they might not be able to show up on the voting poll in person, and even if they show up to the voting poll they may require someone to cast their vote on behalf of themselves. Montana (2020) said that people with disabilities have difficulties to cast their votes independently. In such cases, their privacy while casting a vote may be breached, said Munemo (2019). Montana (2020) suggested that technology could be used to increase the accessibility of disabled people to voting. Therefore, development of an electronic voting system may assist disabled people to have more access to the voting polls during elections.

This is indicated by Khan (2017) that paper is a substance that is inflammable thus under certain circumstances, the paper in which the votes were recorded in ballot might get damaged then becomes impossible to retrieve the records of the votes.

In universities with a corrupt voting system, voting officials could easily insert several bogus paper votes in the ballot and then it becomes impossible to distinguish between the legit votes form the erroneous one. There is no way to audit this system unless you manually re-count the votes. Proxy voting may lead to vote tempering. Tallying paper votes requires a secure system, one that is usually left to the discretion of the administrator (Diamond, 2018).

The cost of expenditure on the paper ballot is way higher than on electoral voting. In-person voting requires a dedicated polling place and staff to oversee the election. YesElections (2019) confirmed that this can lead to additional costs if an organization has to hire staff to run the elections.

Manual voting might not be designed to reject mistakes such as multiple selections made by a single voter. Another problem is whether the votes that are being cast are being counted correctly or even counted at all (Helpme, n.d).

# 4. Aims and Objectives

# 4.1 Aim

This project intends to design and develop a student online voting system for the International University of Management.

# 4.2 Objectives

Upon completion of this system, it would allow:

* Online registration of students.
* Candidates to register for their various positions.
* The system to display all registered voters to the administrator.
* Candidates running for elections to upload manifestos.

# 5. Delimitation

The information of the user will not be encrypted to the system but it will be protected from any unauthorized access. The system will only operate in English since it is the official language in Namibian schools.

# 6. Project Constraints

Network and internet connectivity will be a major factor for the proposed system. In order for the system to be effective, it has to be connected to the network.

Another factor to consider is the risk related to security that could compromise an election and public confidence. If voting is conducted on a personal computer, the risk of viruses or a hacker can impact the maintenance of ballot secrecy. The risk of a power outage or malfunctions can also threaten the voting process.

# 7. Literature Review

Several voting systems can be found on different web pages on the internet. The voting system has the potential to make the voting process easier and more accessible for electors. Other voting systems that we can look at are:

7.1 Simply Voting



Simply Voting Inc. is a full-service provider of secure, hosted online elections. The company was built in 2003 and has built a reputation for delivering excellent service and solid technology (Bradley, n.d). Over 2000 organizations from municipalities to universities to unions rely on Simply Voting for safely executing their elections. The issue with Simply Voting is that the system allows users to see some real time results before the end of voting.

7.2 SurveyLegend



SurveyLegend is an Online Survey Management Software that creates custom, interactive surveys, forms, questionnaires, and polls on any device. It enables users to create mobile-friendly surveys, manage survey questionnaires, customize questions and track responses. SurveyLegend equips users with a useful drag and drop editor, allowing users to add, edit and remove survey content easily (Abhishek, 2020). Also provides users with over 70 pre-designed themes which users can utilize to create attractive surveys, facilitates customizable branding by enabling users to upload custom backgrounds, logos and images. The main drawback of SurveyLegend is that the user cannot access their survey results without paying.

7.3 VoxVote



VoxVote is a free mobile voting platform with unlimited audience. It adds interaction to user’s event. It also lets its audience use their smartphone and add answers to live polls, quiz or create a word cloud based on their responses (Capterra, 2018). The problem with VoxVote is that the user interaction is not always optimal, which makes it harder to see the results (Jasper B, 2020).

7.4 Vevox



Vevox is a real-time polling and anonymous Q&A platform for audience engagement. Vevox makes virtual and hybrid meetings & classes unmissable by providing participants the opportunity to have an equal say wherever they are located (Capterra, 2018). The problem is that there is not much flexibility and therefore getting data out is complicated.

7.5 eBallot



eBallot is an online voting software and services provider that specializes in secure, closed voting events. It offers a simple, self-administration platform, all the way up to full service vote management backed by a team of experts. The system made it easier to have voting and surveys and also be able to asses them by yourself (Lungile, 2021). The problem is that it does not have any features that allow people to vote using emails.

# 9. Methodology

The researcher will make use of qualitative research to gather information from the targeted group. The researcher chose qualitative research because it gives a unique depth of understanding which is difficult to gain from a closed question survey. This methods offers a dynamic approach to research, where the researcher has an opportunity to follow up on answers given by respondents in real time, generating a valuable conversation around a subject, something which is not possible with a structured survey.

The researcher has chosen to use the interview method to gather user requirements. The researcher chooses this method because it will enable the researchers to collect information from the users relatively quickly and easily.

# 10. Hardware and Software Requirements

# 10.1 Hardware Requirements

The hardware requirements for the proposed system include a minimum of processor speed - 3GHz, memory - 512MB, processor - core i3, RAM - 4GB, hard disk - 500 GB, input devices such as keyboard, mouse, etc. And output devices such as monitor, etc. The researcher chose this types of hardware specifically for the process to be powerful in order to handle the entire operations. As well as the hard disk to have sufficient storage to store the file and application.

# 10.2 Software Requirements

The software requirements for the proposed system include a minimum of Window 8 operating system. The system will make use of programming languages such as JavaScript and PHP, HTML and CSS will be used to construct the basic structure of the website. The researcher chose this software specification to allow the developer to understand the system and function to be carried out.

# 11. Work Plan

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Months  Work Plan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct |
| Background study |  |  |  |  |  |  |  |  |  |
| Introduction |  |  |  |  |  |  |  |  |  |
| Literature review-documentation |  |  |  |  |  |  |  |  |  |
| Analysis |  |  |  |  |  |  |  |  |  |
| Design |  |  |  |  |  |  |  |  |  |
| Development |  |  |  |  |  |  |  |  |  |
| Implementation |  |  |  |  |  |  |  |  |  |
| Testing |  |  |  |  |  |  |  |  |  |

Fig 1.0 Grantt chart

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