UNIVERSITY OF GUYANA

COURSE: Software Engineering
COURSE CODE: CSE2101
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Group: 14
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<u>Proposal</u>

Organization overview:
The Guyana Elections Commission (GECOM) is a corporation that has since the year 2000 conducted a series of National Elections which determine the governing body of Guyana for an approximate period of five years. A series of Regional and Local Government Elections; as well as Referendums are also conducted by this organization. GECOM sets policies for voter registrations, support of the voters' list, and the organization of all national, territorial, and local government elections inside the authoritative system.

Problem/opportunity:
Voting is a fairly common procedure, and as an organization grows, it becomes more complex and necessitates vast amounts of data. Presently, voting is performed utilizing poll paper, and the checking has been conducted physically. Thus, it expends a parcel of time and raises the plausibility of invalid votes, caused by human errors. These all make the current election system a tedious task. As a result, an efficient measure can be implemented to achieve this, and that measure is an online election system.

Overview of solution/aim:
An Elections Management Software that supports GECOM system. It will give you the security that operates through end-to-end encryption. It will also allow organizations to empower choices from both a small scale (such as official club decisions) to a more expansive scale (such as local government elections) and permits wards of all sizes to oversee their races through the software's easy-to-understand, user-friendly interface. The software is anticipated to be fraud-proof, targeting the person's distinguishing identity and conducting an exhaustive check on that individual on the off chance that they are eligible to vote. All of the user's identifying documents, including ID cards, TINs, passports, and medical records are linked to their profile through the program. If the computer program

recognizes duplicate votes from the same individual it will subsequently overwrite the primary vote and send the client a caution. The application will analyze a person's medical history to determine whether or not they are deceased, which will notify administrative staff of a voting fraud. Moreover, the application provides organizations with an administrative overview which prompts authorized personnel to identify and declare abstentions. To assure the end users about the protection of their personal information, a privacy policy will be created which the user would have to agree to before gaining access to the system. Additionally, Penetration testing will also be implemented in the testing stage to test the software for any vulnerabilities where adjustments would be made to strengthen the integrity of the system. Lastly, teams of IT specialists will provide 24/7 monitoring of elections, in the case of potential network disruptions.

Relationship to organization: Former employee

GECOM is an organization that is primarily concerned with providing all eligible Guyanese with an effective means of voting. As we are a group of primarily adults, we are of the opinion that the mode used to cast our votes for an election should be much more efficient.