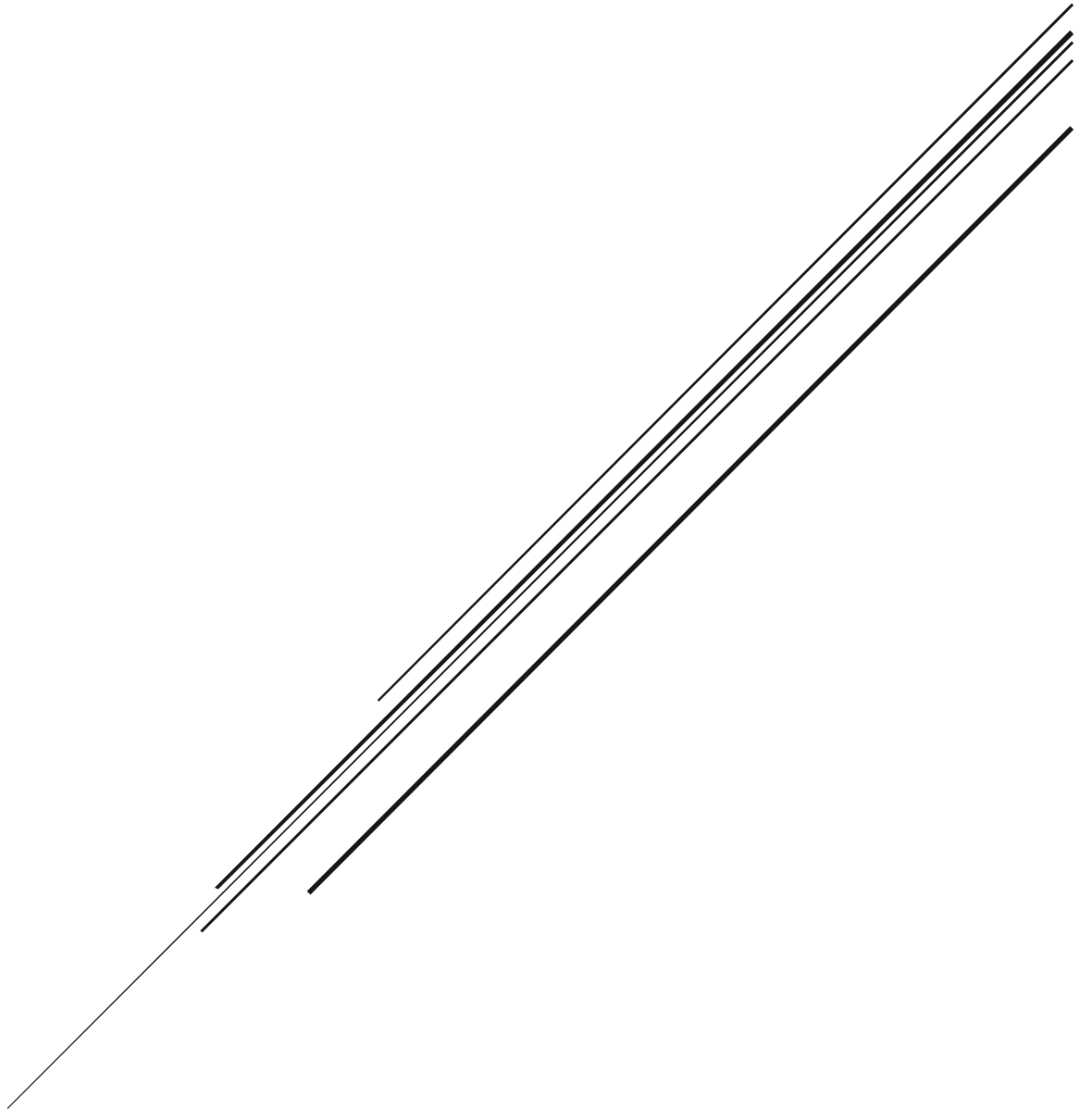


CSE2101 ASSIGNMENT

GECOM's New System



GROUP MEMBERS:

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Introduction

GECOM deals with the operation responsible for the direction and performance of elections in Guyana. A citizen of Guyana who voted and was later on deceased would still be on the voting list. The idea is to create a database that must update a month response time in the voter's list. There are different standard functions of voting management software we have today, for example, electronic voter registration, ballot casting and voter casting. Our database will be an updated version of those standard functions of voting management. The overall project is organic and the effort required for the project is 10PM or 10.29PM, while the development time for the project will take 3 months to complete. The people required for this project will estimate up to 1.7 persons. With all of these in mind the budget of the project will approximate up to one million dollars. That is 180,000 per month per developer for eight hours of work per day.

Project Organization

In this section of the project, we'll examine a framework that merely makes the coordination and execution of project tasks easier and more motivating.

A software project manager will be appointed to lead the team, this is the most important person inside the team who will take the responsibility of managing the project and ensure the successful completion of the project. The team will consist of the:

1. Senior Hardware Engineer – the task of developing the hardware required for the project will fall to this individual.
2. Senior Software Engineer – this person will be responsible for the integration of the software components into a fully functional software system
3. Database Engineer – this person will be responsible for developing a new database and applications, they will also administer and maintain database security, integrity and optimization.
4. System Administrator- this person will be responsible for monitoring the performance and maintenance of systems according to the project requirements
5. Requirement Analyst – this person will ensure that proper functionality is developed for the project, they will also be acting as a liaison between the development team , project manager and the customer.
6. Technical Support – this person will be responsible for maintaining both hardware and software systems

Risk Analysis

Five identified risks identified in the projects along with solutions are:

1. Code Issues

Code of low quality is one danger that typically comes with software development. Projects may have subpar code as a result of hurried effort and other issues. Unmaintainable code, crashes, security flaws, software failures, and a host of other problems with code may occur. These hazards associated with subpar code quality can be minimized by developers via:

1. Frequent testing of the code
2. Fixing bugs logical flaws when they are discovered
3. Establishing code guidelines for developers
4. Making use of the top coding standards

2. Low Productivity

Risks in software development might also include concerns with productivity. Software development teams can experience productivity issues, which can be brought on by delays, employee fatigue, and a variety of other variables. The project manager can use a variety of techniques to address low productivity, including:

1. Establishing a well-paced project schedule to reduce stress and prevent burnout
2. Effectively communicating project data and issues
3. Hire a strong manager who can inspire and guide the staff.

3. Not choosing the right technology

It's crucial to pick the correct technology since it may make or ruin your project. Programming in the wrong language or with the wrong tools may raise expenses and lower output. One of the most prevalent technical hazards in software development is the absence of thorough study on the programming language and tools. At the conclusion of the development process, it changes the targeted outcome. Here are a few solutions to this:

1. Before looking at the possibilities for designing an application, determine your top needs.
2. Don't rely on the development team's familiarity with obsolete technology.
3. Ascertain that you can collaborate with a skilled software team to develop new languages.

4. Time Frame is not Specified for Project Deliverables.

If time frames are not clarified up front, deadlines may be missed and your product may not launch when it is expected to or when the business requires it. There are several ways to lower this risk.

1. Talk with your software provider about the project schedule to decide when each job and delivery is due.
2. Include all phases of software development in this timeline, including the design and testing phases.
3. Rather of waiting for end-of-project updates, you should be informed of the software team's weekly or monthly updates.

5. Not testing the application

There is a potential that consumers will experience software issues if the final product is not tested. Here are several ways to prevent this:

1. To raise the general level of software quality, use a variety of testing methods and tools, such as focus groups or beta testing.
2. Before giving your application to developers, test it.

Hardware and support software

In every project, both the supporting software and the hardware are crucial. After research, we have identified the following hardware requirements to complete the project: a solid internet connection, a Samsung CRG5 monitor, a Radeon RX 6950 XT, 32 GB of RAM, Microsoft Windows 11, a Logitech mouse, keyboard and an AMD Ryzen CPU. Support software improves the project's core component, by enhancing it. The following support software would be helpful for this project: Bitdefender Anti-virus software for additional security while working on the system, backup software like Back Blaze in case of computers crashes, Google Cloud Computing service, data synchronization software like Free Files Sync, SQL workbench for quick access to crucial data from databases and lastly Clean My PC disk cleaner to free up the computer's disk space.

Work breakdown

This outlines the project's division into activities and lists the deadlines and deliverables connected to each activity. Deliveries are the work items that are given to the client; milestones are significant points in the project when progress may be evaluated.

Guyana's Elections Commission also known as "GECOM" does multiple tasks for Guyana besides Elections and intaking in political activities. Quite a few things which may regard their milestones or job are; issuing Identification cards, taking a census every 10 years, etc. Milestones and deliveries associated with each activity may take multiple weeks to months depending on the project such as elections may take a few months if not interfered by any government control via one major issue was APNU trying to hijack the elections to win. Meanwhile, other activities may take one to two months but also GECOM has been very useful when it comes to their delivery, as they usually send their employees to your address and drop identification cards or other useful forms of documentation to your home. Overall, GECOM is very useful and does a good job into helping Guyana grow into becoming a better country for everyone since the past few decades.

Gantt chart

	Task	Assigned To	Start	End	Dur	%	2022			2023		
							Oct	Nov	Dec	Jan	Feb	Mar
			26/10/22	12/3/23	96							
1	Establish Roles	Management Team	26/10/22	28/10/22	3		●					
2	Project Start	All members	28/10/22	5/11/22	6		●					
3	Connecting the database	Joel Edwards	5/11/22	30/11/22	16							
4	Developing Backend	Ehimen Eitokpah	30/11/22	18/12/22	13							
5	Developing Frontend	Jadon Alleyne	18/12/22	16/1/23	21							
6	Testing	Ganesh Mansram	16/1/23	30/1/23	11							
7	Implementation	Ronaldo Rodrigues	30/1/23	20/2/23	16							
8	Project Review	All members	20/2/23	28/2/23	7							
9	Customer Acceptance	All members	28/2/23	5/3/23	4							
10	Maintenance	All members	5/3/23	10/3/23	5							
11	Project Release	All members	10/3/23	12/3/23	1							

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