UNIVERSITY of GUYANA

Course: CSE2101: Software Engineering

Topic:

Faculty: Faculty Of Natural Sciences

Department: Department Of Computer Science

Lecturer: Ms. Juanelle Marks

Due Date: October 26, 2022

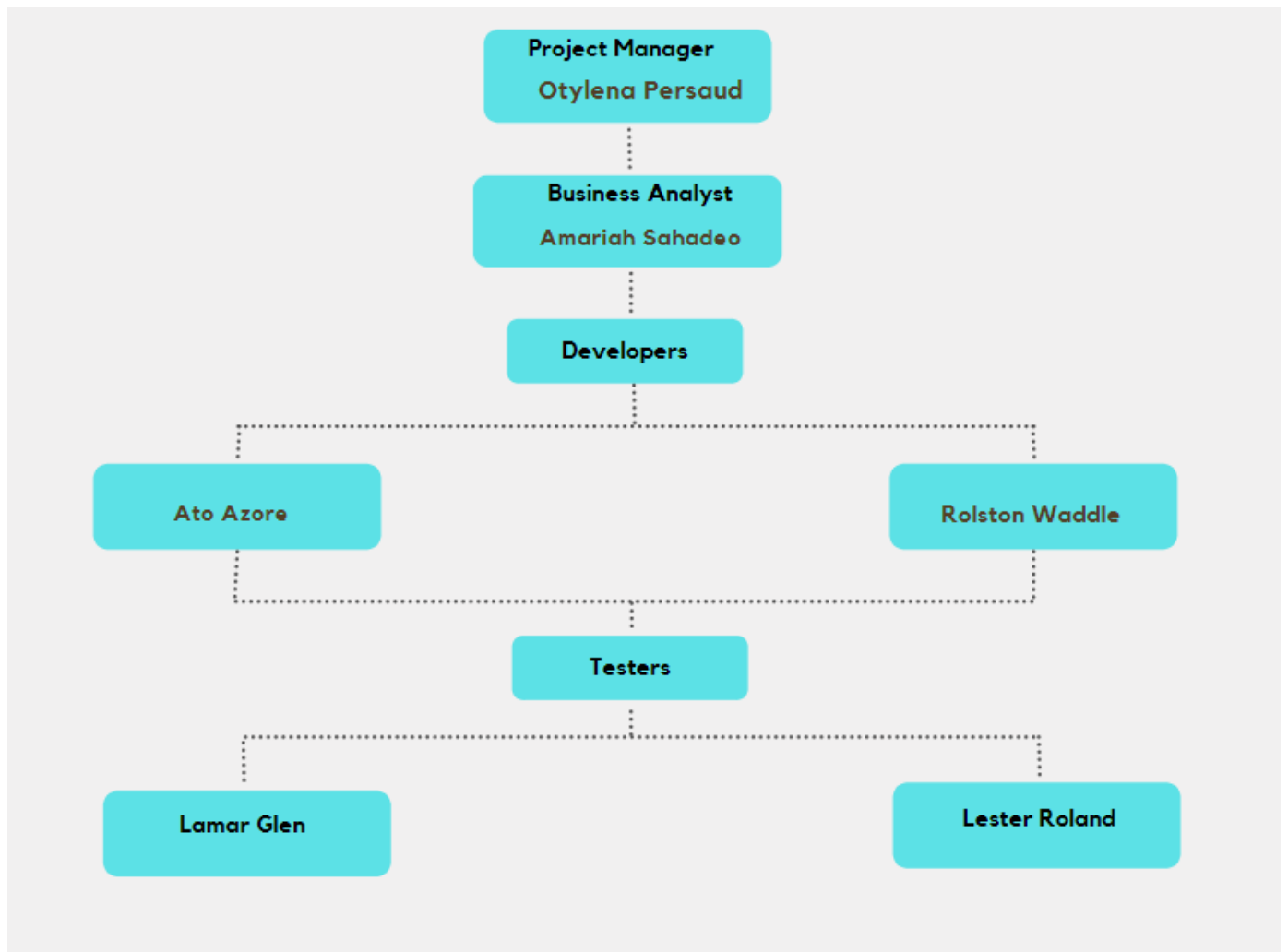| NAME	USI
Otylena Persaud	1040207
Amariah Sahadeo	1040819
Lester Roland	1045554
Lamar Glen	1040710
Ato Azore	1041185

INTRODUCTION

Roopa's Bar is a small business located within the heart of Kitty. It solely on a paper-based records keeping system, in which orders and other relevant business information are manually documented and recorded using ledgers and log books. At this, information is often misplaced. Thus, as a solution, the owner wishes to install a POS system.

POS systems are software applications that enable businesses to accept payments through credit cards or debit cards. These systems are also known as point of sale (POS) systems. In order to run a successful business, it is important to have a reliable POS system installed. A Point-of-sale system would effectively combat this problem, allowing for the proper management and monitoring of the sales and inventory of the business and prevent any further loss of information or any other vital piece of business data.

The Isle Help customizable point of sale system and back office software costs $75 USD per month, with an additional 3.4% fee on all credit card purchases. The software comes with a payment terminal and thermal printer which is included in this fee and does not require further costs. As for hardware components, an iMac, which would act as a hub for the bar, is included at a price of $1,499 USD. An iPad from which the software will run on at $899USD. A monitor or kitchen orders at $290USD, a cash drawer cash register at $28USD and an additional $36.93USDon thermal paper rolls to refill the thermal printer. The estimated time for the completion of this project is two to four weeks.

This project seeks to automate as much of a retailer's financial processes as possible, i.e, increasing information reporting accuracy so that the retailer can gain smoother operations and better information on which to make crucial business decisions.

PROJECT ORGANIZATION

Project Manager
Otylena Persaud

Business Analyst
Amariah Sahadeo

Developers

Ato Azore

Rolston Waddle

Testers

Lamar Glen

Lester Roland

Role Definition

Project Manager: Amariah Shadeo

Roles and responsibilities:

- Leader of the development team
- Monitors progress and performance
- Manages time and budget constraints and budget allocation

Business Analyst: Otylena Persaud

Roles and responsibilities:

- Responsible for translating business needs into requirements and ensuring they are documented correctly before a solution is developed and implemented into the system.
- Ensures that the development outcome is in line with the client's specifications and requirements.

Software Developers: Ato Azore and Rolston Waddle

Roles and responsibilities:

- Responsible for all coding/ programming
- Responsible for all user interface design and system functions

Software Testers: Lamar Glen and Lester Roland

 Roles and responsibilities:

- Responsible for designing testing scenarios for usability, performance and security testing.
- Note any bugs in the system functionality and communicate findings to the software developers.

RISK ANALYSIS

Risk	Impact Description	Probability Level 1 (LOW) to 5 (HIGH)	Mitigation Mechanism
End User Involvement	The new POS application can be difficult to sell to those who have used an old system previously, even though the new one would actually simplify their daily tasks.	5	To prevent rejection during and after the installation, many end-users should be included in the implementation process. User-tests must be part of the early stages of implementation.
Reliance on Internet Connection	In order for a POS system to function, a stable internet connection is required. The store, at present, does not have the best internet connection, and without it, a POS system may be tricky to run.	4	With some extra funds, the business can look into alternate providers or using tools such as WiFi extenders.

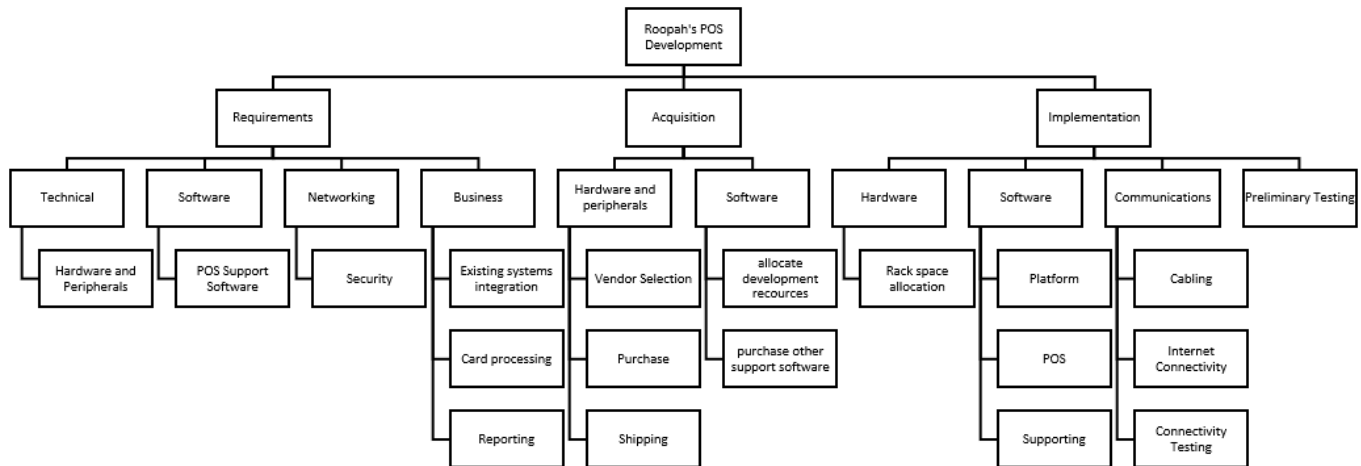|			
Improper Communication	It is easy for misunderstandings to happen, and in numerous cases, they're caused by unclear communication between the parties (can occur during the installation process or when teaching employees how to use the system.) If the problem is unaddressed and left to grow, it becomes out of hand, and beget substantial problems later in the design.	3	Having an expansive knowledge of inner proces ses and exercising close c ollaboration with team members can aid in discovering and helping those misconstructions before they transfigure into practical problems.
Customer Data	If the system is not secure and the device gets stolen, you may have just exposed over thousands of your customers' credit card information and other details stored to potential threats. If a staff member leaves and you don't remove their login rights, they can access the data for	2	Systemise user security and ensure that there are procedures in place to protect the POS systems when a staff member departs.

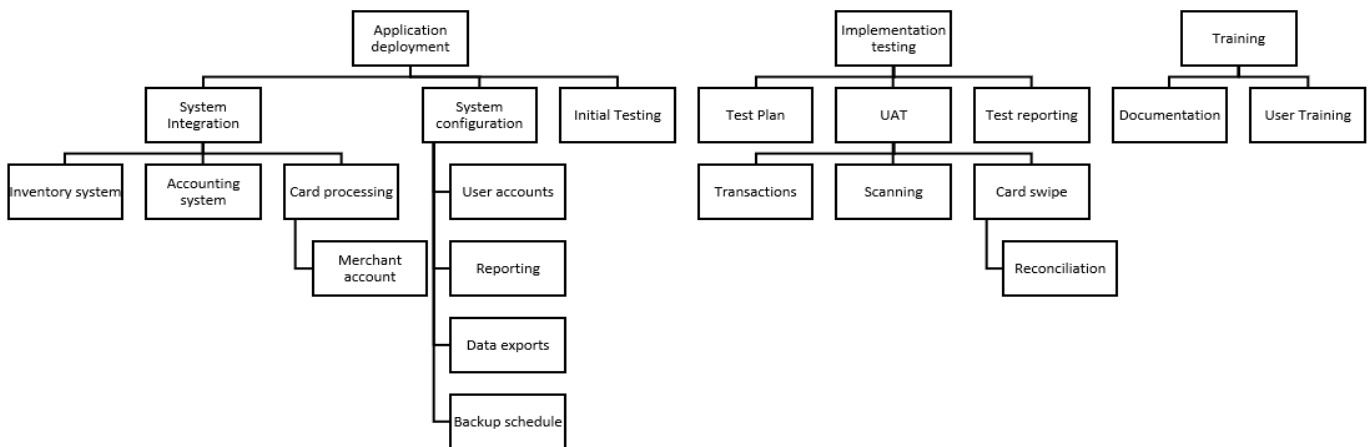|			
	malicious or competitive intent.		
Malware Infections/ Network Vulnerability	Given that the POS system is an internet-based system, it can be infected with bugs or malware, which can affect its efficiency and stop it from working. POS problems are also commonly caused by unsecure networks. Hackers can infiltrate any weak installations and steal valuable information (credit card numbers and business account data).	1	With the use of some extra funds, the proper security software can be installed in order to apply a best practice security configuration to the system. POS systems should be kept on a separate, password-protected network. Change passwords at least once every 90 days to avoid data leaks.

HARDWARE AND SOFTWARE RESOURCE MANAGEMENT

Purpose

The purpose of this point-of-sale system is to prevent the misplacement of important information for a small business. This system will allow for proper monitoring of inventory and sales across multiple outlets. By implementing a POS system, a complete and precise sales report can be generated. This includes the number of products sold, profit margins, best selling products, and better security over all. The point of sale system would comprise of both software applications and hardware components to support this software system. The software application deemed fit to carry out this development is 'Isle Help'. Isle help is a cloud based application and point of sale software that allows for real time management of orders, products and inventory, customer orders, transactions and history. It provides detailed reporting for the sake of simplifying accounting and is overall a fairly easy software to implement and use (IsleHelp - Point of Sale System, n.d.). When software is created, developed and implemented it requires the right hardware to function to its fullest potential. The hardware components to support this software system include a desktop system which would act as a hub for the bar and is connected to other terminals, a point of sale terminal in which the device that the point of sale software will run on is an iPad, payment terminals for digital payment transactions, thermal printer for printing receipts, kitchen display system for tracking food orders from the kitchen and a cash drawer to store cash. When choosing these hardware devices, it is important to look for ones that are easy to use and incredibly durable as it will be responsible for tracking all sales and monitoring all inventory for this business and should last for as long as possible.
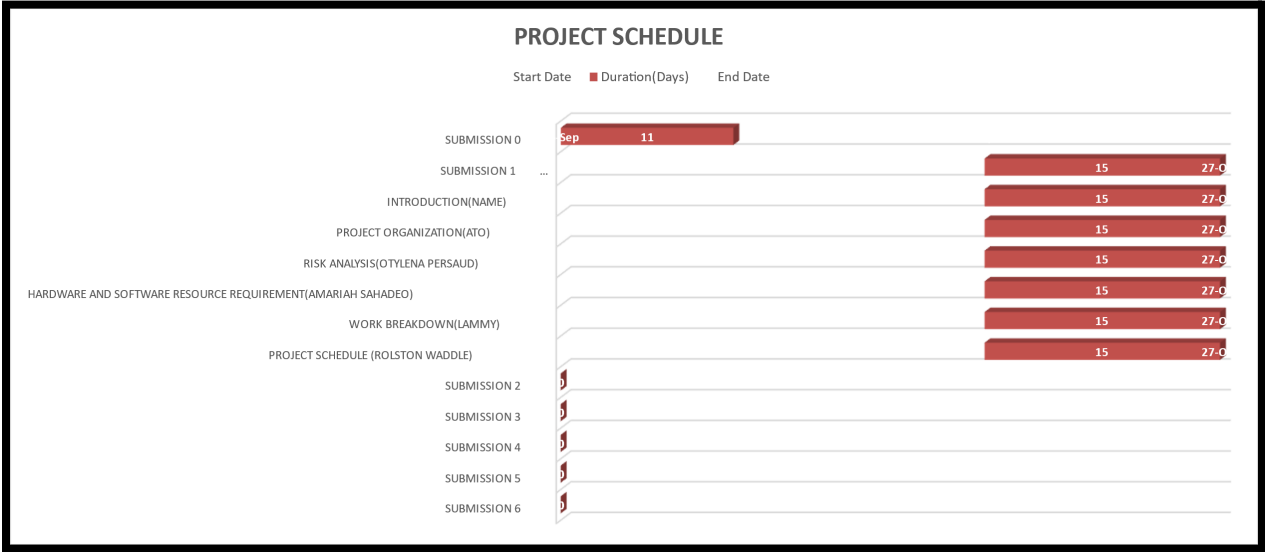
WORK BREAKDOWN

Roopa's POS Development cont'd

PROJECT SCHEDULE

PROJECT SCHEDULE

Start Date ■ Duration(Days) End Date

SUBMISSION 0	Sep	11	
SUBMISSION 1	...	15	27-O
INTRODUCTION(NAME)		15	27-O
PROJECT ORGANIZATION(ATO)		15	27-O
RISK ANALYSIS(OTYLENA PERSAUD)		15	27-O
HARDWARE AND SOFTWARE RESOURCE REQUIREMENT(AMARIAH SAHADEO)		15	27-O
WORK BREAKDOWN(LAMMY)		15	27-O
PROJECT SCHEDULE (ROLSTON WADDLE)		15	27-O
SUBMISSION 2			
SUBMISSION 3			
SUBMISSION 4			
SUBMISSION 5			
SUBMISSION 6			

Gantt Chart showing the project schedule

Reference

Banerd, W. (2017, April 17). Risks Affecting Point of Sale Terminals | D3 Security Blog. D3 Security. https://d3security.com/blog/risks-affecting-point-of-sale-terminals/

Baykara, S. (2021, September 17). Point of Sale (POS) Security Issues. PCI DSS GUIDE. https://www.pcidssguide.com/point-of-sale-pos-security-issues/

Chechi, Z. (2022, February 17). POS System Guide: Advantages and Disadvantages. Expert Market US. https://www.expertmarket.com/ca/pos/pos-system-advantages-disadvantage

Heiney, S. (2020, September 8). POS Problems: How Retailers Can Avoid Common Pitfalls | Impero. Www.imperosoftware.com. https://www.imperosoftware.com/blog/common-pos-problems/

IsleHelp - Point of Sale System. (n.d.). Islehelp.net. Retrieved October 20, 2022, from https://www.islehelp.net/

Kennedy, C. (2017, December 1). 3 Threats to your POS Software (and How to Deal with Them) -. Point of Sale. https://pointofsale.com/3-threats-to-your-pos-software-and-how-to-deal-with-them/

Retail, L. S. (2017, August 9). Lessons learned from doing a large Point Of Sale implementation. Www.lsretail.com. https://www.lsretail.com/resources/lessons-learned-large-pos-implementation