University of Guyana 2021/2022

CSE2101 Software Engineering

Semester Project

Submission 1: Project Plan

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Submission 1

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Introduction

The purpose of this proposal is to outline the operation of an inventory management system for the Guyana Defence Force Stocks Department. This project will aim to simplify the process by moving away from a paper-based filing system. The expected constraints of this project will include inconsistent tracking, incomplete data and changing demands from the customer. This project is expected to start [dd/mm/yy] a and be completed [dd/mm/yy], a total of x days. A budget of $ is deemed sufficient.

Project Organisation

- Project Manager
    - Establishes communication between the client and the team.
    - Plans budget, and schedule.
- Team Lead
    - Conducts and assigns tasks to team members.
    - Make sure that deadlines are met.
    - Resolves conflicts and errors.
    - Ensures that all necessary documentation is made.
    - Ensure project goal is met
- Software Developers
    - Front-end Developers: Create the interface for users.
    - Back-end Developers: Create the admin platform.
- Testers
    - Tests all program features.
    - Identify and document errors.
- UI Designer
    - Designs mockups of the admin platform and user interface.
- QA Engineer
    - Ensures that the program meets all expected criteria flawlessly.

Risk Analysis

Five (5) possible risks that may arise from the project are

- Failed low stock notification
- Over-ordering
- Unknown numbers in the inventory
- Inaccurate numbers in the inventory
- Loss of Data

Project Risk	**Likelihood**	**Risk Reduction Strategies**
Failed low stock notification	***Medium***	• A backup estimated time schedule to check inventory items will alert the admin, regardless of whether the admin received low stock notifications.
Over-ordering	***Low***	• A maximum number will be set for an item or a group of items. An alert will be given when this number is reached.
Unknown numbers in the inventory	***High***	• Admins will be working with a level of transparency, meaning units and users will be able to see available items and their numbers. Units/users will be provided with a history of their supply requests.

Inaccurate numbers in the inventory	***Low***	• The Admin will be able to verify requested items on a daily basis with a record of the date and time to retrace. As admin verifies requests and supplies numbers in inventory, numbers will automatically change to retrace. As admin verifies requests and supplies numbers in inventory, numbers will automatically change with a record of the date and time. And if an admin sees fit, they can alter the numbers themselves. • Admin and user history can be cross-checked. • A monthly inventory balance sheet will be generated by the system with a reflection of the month's supplies and orders.
Loss of Data	***High***	• All data of requests, supplies and orders will all be computerised and backed up.

Hardware & Software Resource Requirements

For Developer

Hardware Requirements	● Processor - 64, two - i5 Core, 3GHz ● RAM - 64GB ● Hard Drive - 256GB ● Enternet (LAN) or WiFi
Software Requirements	● HTML ● CSS ● SQL ● Python ● Windows 10, 11

For User

Hardware Requirements	Minimum Requirements: ● Processor - 64-bit, four-core, 2.5 GHz minimum per core ● RAM - 4 GB ● Hard disk 80 GB Recommended Requirements: ● Processor - 64-bit, four-core, 2.5 GHz minimum per coreRAM - 8-16GB ● Hard disk -80 GB ● Windows 10, 11 ● Enternet (LAN) or WiFi
Software Requirements	● Application and front-end web ● SQL Server ● Web Browser

Work Breakdown

Phase I - Admin Development

Begin admin platform development.

Task 1 - Back-end Development

1.1. Create a pre-made inventory list.
1.2. Add an admin feature that modifies the inventory list.
    1.2.1. The feature will include a way to add items to the inventory list, a way to search the inventory list, and a way to change the numbers on the inventory list.
1.3. Add a feature that notifies the admin when a particular inventory is low.
    1.3.1. The feature will allow the admin to set a minimum number for an individual item or group of items and indicate when that number is met.

Task 2 - Front-end Development

1.1. Design an admin platform mockup.
1.2. Implement platform design.

Task 3 - Test the admin platform and revise if any issues occur.

Phase II - User Development

Begin unit/user interface development.

Task 1 - Back-end Development

1.1. Create an interface that units can check to see if items are in inventory.
    1.1.1. Add features to the interface so units can be able to request items.

Task 2 - Front-end Development

1.1. Design a user page mockup.
1.2. Implement interface design.

Task 3 - Test the unit/user interface and revise if any issues occur.

Phase III - Admin & User Cross Development

Task 1 - Add features that link the admin platform to the user/unit interface.

1.1. Add an admin feature that keeps a record of the date and time of requested items from units and dates of inventory restock.
1.2. Add a feature that automatically changes inventory numbers when items requested by units are verified by the admin.
1.3. Add an admin feature that saves and prints, if desired, the monthly inventory balance sheet.

Task 2 - Compile and test the complete database and revise it if any issues occur.

Project Schedule

Work Bench Schedule	Task	Lead	Duration (Days)	Start	End	Week 1 [dd/mm]					Week 2 [dd/mm]					Week 3 [dd/mm]					Week 4 [dd/mm]					Week 5 [dd/mm]					Week 6 [dd/mm]					Week 7 [dd/mm]				
						M	T	W	T	F	M	T	W	T	F	M	T	W	T	F	M	T	W	T	F	M	T	W	T	F	M	T	W	T	F	M	T	W	T	F
Phase I	Admin Development		17	dd/mm/yy	dd/mm/yy																																		
Task I	Back-end Development		8																																				
Acticity I	Create a pre-made inventory list	Back-end Developer(s)	2																																				
Activity II	Add an admin feature that modifies the inventory list		3																																				
Activity III	Add a feature that notifies the admin when a particular		3																																				
Task II	Front-end Development		6																																				
Acticity I	Design an admin platform mockup	UI Designer	2																																				
Activity II	Implement platform design	Front-end Developer(s)	4																																				
Task III	Test and revise	Team Lead, Testers, QA Engineer	5																																				
Phase II	User Development		11	dd/mm/yy	dd/mm/yy																																		
Task I	Back-end Development		5																																				
Acticity I	Create an interface where units can check and request i	Back-end Developer(s)	5																																				
Task II	Front-end Development		6																																				
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Activity II	Implement interface design	Front-end Developer(s)	4																																				
Task III	Test and revise	Team Lead, Testers, QA Engineer	5																																				
Phase III	Admin & User Cross Development		16	dd/mm/yy	dd/mm/yy																																		
Task I	Add features that link the admin platform to the user/u		11																																				
Acticity I	Add an admin feature that keeps a record of the date an	Back-end Developer(s)	5																																				
Activity II	Add a feature that automatically changes inventory num		3																																				
Activity III	Add an admin feature that saves and prints, if desired, t		3																																				
Task II	Compile, test and revise	Team Lead, Testers, QA Engineer	5																																				