

Project Plan: Retail Inventory Management Application
Current Trends and Projects in Computer Science

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1. Project Summary

1.1 Problem, Purpose, and Solution

The goal of the Retail Inventory Management Application (RIMA) is to provide a functional, user-friendly, low-maintenance management solution for a small store or retail business. The application will assist management with product updates, storage, inventory control, and report production. A database will be used for the inventory and for the authorized users. The application's interface opens with a login dialog prompting the user to log in. After logging in, the users will be able to use an interface to select a category of products to display. Once the products are displayed, the user will be able to add new products or remove existing products. A specific product could be selected to change its price and quantity. Once the user is finished making adjustments, the user can go back to the start screen and select a different category, or exit. The user will also be given the option to print a report of available products and a report of products that need to be restocked. The "Project Requirements" document contains more detailed information on requirement specifications.

1.2 Assumptions and Constraints

The users of this application are assumed to be familiar with operating a basic graphical user interface. The application is constrained to be used only from a desktop device.

2. Project Organization Structure

The Project Manager oversees the general organization, and each unit is headed by a leader who is responsible for that unit. All team members are also responsible for performing a variety of tasks across all units.

2.1 Roles and Responsibilities

2.1.1 Project Manager — Svyatoslav Mudryy

A project manager is in charge of the development, organization, and delivery of a project. A project manager also distributes tasks amongst the team and is responsible for contracts, budgets, and timeframes. Ensuring things run to plan,

mitigating risks, and managing unforeseen circumstances or delays are the project manager's responsibilities.

2.1.2 Requirements Manager/Technical Writer — Jamie McCarthy

A requirements manager is responsible for the efficient development of complex systems that meet the requirements of a project or product. Additionally, a requirement manager is also responsible for the optimization of the required processes. The technical writer is in control of producing and maintaining the documentation needed for software development.

2.1.3 Test Director — Ronald Hand

A test manager is responsible for the planning, coordination, and control of various test activities. A test manager first creates a test process and test strategy that analyzes which test methods and tools are suitable and used for test activities.

2.1.4 Software Designer — Jerome Reed

A software designer is responsible for coding the software. Software designer builds the software itself, tackling the logical problems found on the project, and finding solutions for them to finally implement them through efficient code.

3. Scope Management Plan

3.1 Scope Statement

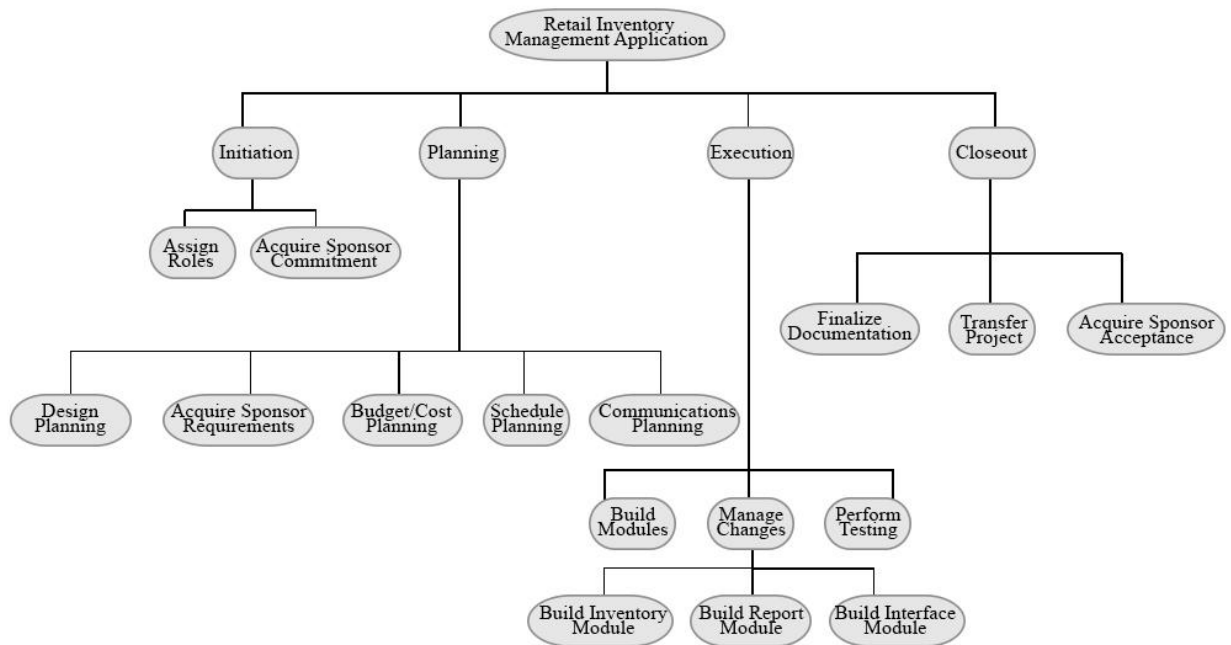
The goal of the Retail Inventory Management Application (RIMA) is to provide a functional, user-friendly, low-maintenance inventory management solution for a small store or retail business. The application will assist management with the following aspects of retail management:

- Product updating
- Storage management
- Inventory control
- Inventory reports

3.2 Requirements Identification and Modifications

All application requirements were provided and documented by the project sponsor. Approval is required if the sponsor wishes to modify these criteria.

3.3 Work Breakdown Structure



3.4 Sponsor Acceptance

Once the application is completed, it will be demonstrated to the sponsor. The sponsor will be given a trial period of 10 days. The sponsor will be able to reject if not all requirements have been met. If the application is working as expected, the sponsor will sign a formal acceptance letter.

3.5 Scope Control

All focus will be on completing the set requirements and meeting the set deadline. Since the project has been allocated a small amount of time, the addition of new features is not being considered.

4. Schedule Management Plan

The Retail Inventory Management Application (RIMA) will take 8 weeks to develop and release. The team will commit to a designed Assignment Schedule (see Appendix D) to assure the development stays on track. The Assignment Schedule is a weekly planner that informs the team of the project elements to be worked on during each week. It specifies the people in charge of leading each phase of development along with the due assignments and their deadlines.

5. Cost Management Plan

Due to the fact that everything can be found open source there is no cost associated with this project. So for the client our gift is free labor!

6. Quality Management Plan

Each team member is responsible for Quality Control, as each individual is accountable for the section of work they have been assigned. The Test Director has the responsibility of being a quality control and final reviewer of the product. In addition to the individual quality control reviews and the Test Directors thorough testing, the code will be written in compliance with the Google JavaScript Style guide.

7. Communication Management Plan

Group 4 communications methods will be the team utilizing whatsApp for day to day discussions. The group will meet by zoom when there is a major issue that needs everyone's attention. The team will work through the project on a shared google drive that was created specifically for Group 4. This is where we can collaborate on any changes throughout the lifecycle of the project.

7.1 Communication Plan

Communication	Medium	Frequency	Goal	Owner
Project Team				
Project Status	WhatsApp	Weekly (Friday)	Review status of project modules and discuss details of deliverables for the week	Project Manager

Deliverable Consolidation	WhatsApp	Weekly (Tuesday)	Discuss consolidation details for deliverables and any issues or delays	All
Task Review	WhatsApp	Weekly	Discuss feedback from deliverables submitted the prior week	Project Manager
Final Product Demonstration	In person	At end of project	Demonstrate and explain all functionality to project sponsor	Project Manager
Issue Resolution	Call/text	As needed	Resolve issues that could delay or prevent on-time deliverable submission	All
Project Sponsor				
Deliverable Submission	UMGC Submission Folder	Weekly	Provide project status update and present tentative deliverable	Project Manager
Final Product Demonstration	In person	At end of project	Demonstrate and explain all functionality to project sponsor	All

Feedback	UMGC Discussion Board	Weekly	Receive feedback on weekly deliverables	All
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8. Risk Management Plan

The first step the team will take towards risk management is identifying all possible risks that could take place during planning the procedure and how to avoid any risks that may occur. This requires tracking potential changes to risk factors along the development process, as well as identifying solutions for any risks that may arise. In the event that a risk occurs, the team will immediately report to the Project Manager, who maintains documentation of all risks and solutions through the development process.

To avoid risk in scope, the client will agree to the terms of development, which will be followed by the development team.

To avoid risk in communication and scheduling, all team members have agreed to dedicate eight weeks of their time to the development of the project and agreed upon a means of communication, as well as a flow of communication in order to direct any conversation towards the right channel.

To avoid quality risk, the development team has established certain requirements, such as frequent and clear communication, observing and following milestones and progress, and constant coordination between all team leads to ensure requirements are met on all ends of the development process. Further information is available in the Risk Register (Appendix G)

9. Technical Process Plan

This project will be developed and deployed following the Software Development Life Cycle (SDLC) process. Using this process ensures that the highest quality product is produced in the least amount of time to lower the cost it takes to develop.

9.1 Methods, Tools, and Techniques

In order to provide for a uniform standard across group 4 the following tools will be utilized during the project development.

1. Language - Java
2. Platform - JDK 8.x on NetBeans 15.x
3. Platform - SQL Database structure
4. Code repository - github
5. Documentation - Utilize Microsoft Office

Coding will be in Java due to cross platform interoperability and the languages common usage in the development community. JDK 8.x or newer will be used in order to utilize the up to date features of the language. Github will serve as the main repository for both version control and accessibility. All documentation will be done in Microsoft Office, which is the industry standard office tools. The Platforms that will be utilized are NetBeans to construct the code, and Oracle SQL for the Database structure.

9.2 System Specifications

- a. Development platform: Intel Core 2 Quad 1.8 GHz (minimum), 4 Gigabytes Memory (minimum), Hard disk with at least 5.5 GB remaining space, Windows 10, Eclipse IDE with Java JDK 11, and MySQL Server 8.0.
- b. Operating platform: Intel Core 2 Quad 1.8 GHz (minimum), 2 Gigabytes Memory (minimum), Hard disk with at least 3.5 GB remaining space, Windows 10, Java JDK 11, MySQL Server 8.0.

Appendix A

Project Charter

Project Name: Retail Inventory Management Application (RIMA)
Date: 11/01/2022
Project Manager: Svyatoslav Mudryy
Project Sponsor:
Requested Completion Date: 12/13/2022
Project Justification: This technological solution will provide a Graphical User Interface (GUI) that will allow small retail businesses to access it from any desktop computer. Users can view, add and remove the products through an interface. The software will be able to produce a report of available products as well as a report of products that need to be restocked.

Project Overview
<ol style="list-style-type: none"> 1. Project Plan 2. Test Plan 3. Project Design 4. Phase 1 Source: classes 5. Phase 2 Source: methods 6. Phase 3 Source: user experience and modules 7. Final deliverable

Approvals			
Title	Name	Signature	Date
Project Sponsor		(Email confirmation is acceptable in place of signature.)	
Project Manager	Svyatoslav Mudryy	SM	11/01/2022

Appendix B

Project Team

Project Name: Retail Inventory Management Application (RIMA)
Date: 11/01/2022
Project Manager: Svyatoslav Mudryy

Role	Name	Contact
Project Manager (PM)	Svyatoslav Mudryy	
Requirements Manager/Technical Writer (RM/TE)	Jamie McCarthy	
Software Designer (SW)	Jerome Reed	
Test Director (TD)	Ronald Hand	

Appendix C

Statement of Work

Scope

As agreed upon with the client, the contractor will provide the client with a single solution to manage the inventory of a retail business, titled Retail Inventory Management Application (RIMA). This solution will come in the form of a computer application. The RIMA will allow users to view, add and remove the products through an interface. The users will also be able to produce a report of available products as well as a report of products that need to be restocked. Features will be included at the contractor's discretion, as agreed upon with the client.

Location of Work

Will be done from home based on ability to complete all tasks remotely. With this project being a software-based program the need for face to face has been eliminated. All day to day communication will be conducted Via WhatsApp and Zoom for any face to face meetings that may arise.

Timeline

The timeline of work is between the dates of October 19, 2022, and December 13, 2022, with the final product to be delivered on December 13, 2022. The schedule of work is included in the delivered Project Plan, Appendix C.

Acceptance Criteria

The acceptance criteria as agreed upon with the client are as follows:

1. Given that a customer selects a product category, the RIMA user will be able to look through the products in the chosen category
2. Given that the product has been chosen, the RIMA user will be able to adjust the needed product information.
3. Given that there are products that need to be restocked, the RIMA user will be able to generate a report of missing products, otherwise, the user can generate a report of available products.

Software and Hardware Requirements

For this application, the client will require the following to run the program:

- A personal computer
- A web browser
- Internet connection
- A printer

The preceding information represents the requirements agreed upon between the contractor and the customer. The contractor must complete all mandatory requirements by the deadline, and the client must examine and approve the completed application based on its ability to successfully meet the stipulated tasks.

Appendix D

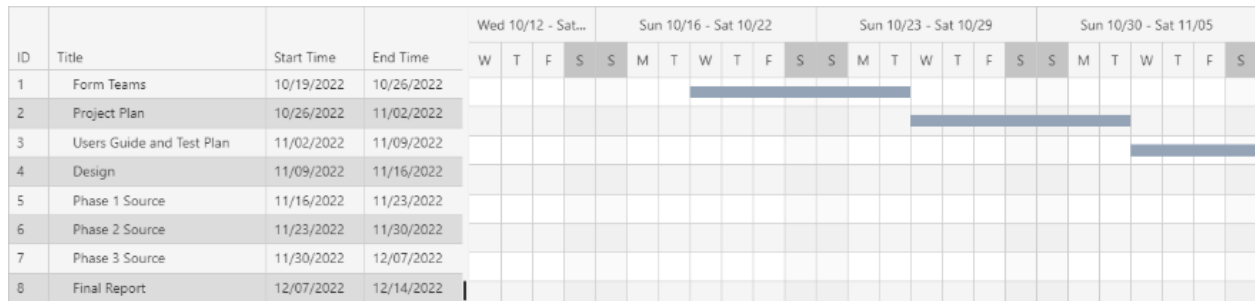
Schedule

Week	Dates	Lead	Topic	Description	Due Date	Assignments Due
1	10/19-10/25	Svyatoslav Mudryy (PM)	Form Teams	Get to know team members, pick a topic	-	-
2	10/26-11/01	Svyatoslav Mudryy (PM), Jamie McCarthy (RM/TE)	Project Plan	Outline Milestones, delegate responsibility, describe project's purpose, identify the system specifications	11/01	Project Plan
3	11/02-11/08	Ronald Hand (TD)	Users Guide and Test Plan	Create test plan with clear user's guide, if appropriate create test data files	11/08	Test Plan Peer Review 1
4	11/09-11/15	Jamie McCarthy (RM/TE)	Design	Design a user interface and related structures and finalize test case	11/15	Project Design
5	11/16-11/22	Jerome Reed (SD)	Phase 1 Source	Software Development	11/22	Phase 1 Source Peer Review 2
6	11/23-11/29	Jerome Reed (SD)	Phase 2 Source	Software Development	11/29	Phase 2 Source
7	11/30-12/06	Jerome Reed (SD)	Phase 3 Source	Software Development	12/06	Phase 3 Source
8	12/07-12/13	Svyatoslav Mudryy (PM)	Final Report	Compile all topics into a single document	12/13	Final Peer Review 3

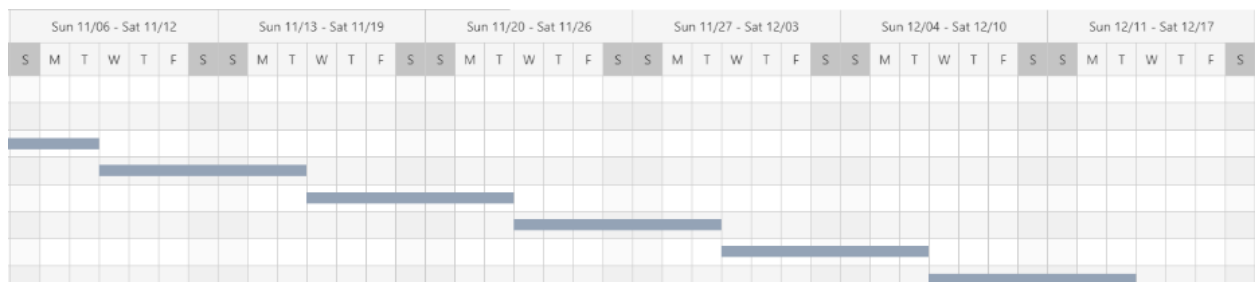
Appendix E

Gantt Chart

Retail Inventory Management Application (RIMA) - Gantt Chart



continuation:



Appendix F

Scope Baseline

Scope Baseline: Interface			
System Requirements Checklist	Item	Status	Notes
Are all categories available for selection?	1a		
Are the displayed products from the chosen category?	1b		
Does the displayed information match the database?	1c		

Scope Baseline: Inventory			
System Requirements Checklist	Item	Status	Notes
Can the user change the quantity of a product?	2a		
Can the user change the price of a product?	2b		
Can the user change the category of a product?	2c		
Can the user add a new product?	2d		
Can the user remove an existing product?	2e		

Scope Baseline: Report			
System Requirements Checklist	Item	Status	Notes
Can the user produce a report of the available products?	3a		
Can the user produce a report of the missing products?	3b		
Does the displayed information match the database?	3c		
Can the user print the selected report?	3d		