**Chapter 1**

**Introduction**

**1. Introduction**

**1.1 Purpose**

The purpose of this document is to present a detailed description of a Garment Showroom Processing System. It will explain the features, interfaces of the system, what the system will do, and the constraints under which it must operate and how the system will react to external stimuli. This document is intended for both the stakeholders and the developers of the system and will be proposed to the Regional Historical Society for its approval.

**1.2 Scope of the Project**

This software system will be a Garment Showroom Processing System for a small garment business. This system will be designed to maintain all kinds of activities within a garments showroom; including product entry, discounting, selling, product availability, order processing, memo creation, and daily, monthly, and yearly journal creation of the business which would otherwise have to be performed manually. By maximizing the manager’s work efficiency and production the system will meet the manager’s needs while remaining easy to understand and use.

More specifically, this system is designed to allow a showroom manager and owner to manage all of the commercial activities that can be done manually. The system also contains a relational database containing a list of products, their prices, availability status and other necessary information. It also contains a list of business’s regular and VIP customers.

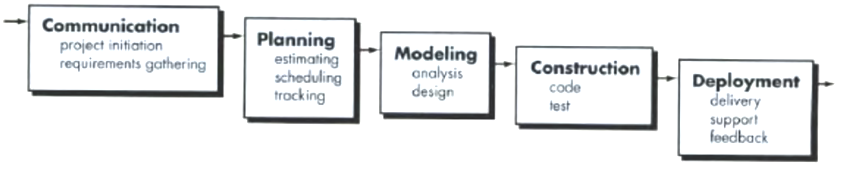
**1.3 Intended Audience**

Intended audiences for this software project are small showroom businesses. Main user of the software is showroom manager. The owner of the showroom can interact with the system through the manager interfere.

**1.4 Software Development Model**

As development model we have chosen the waterfall model because of its straightforwardness. The phases in waterfall model are communication, planning, modeling, construction, and deployment.

Communication includes project initiation, requirement gathering; planning involves estimating, scheduling, and tracking; modeling contains analysis and design; construction means coding and testing the system or components of the system; deployment means delivery, installation, support, feedback; This can be pictorially shown as –



**Figure 1.4(a) Waterfall Model**

**1.5 Communication and Initial Investigation and initial requirement**

As a team we have visited some small size men’s showroom where there is no software system for maintaining their activities. We have talked to the showroom manager and tried to identify their problems and requirements. As the showroom was small size so their software requirements were not high enough. According to their demands the software should have the following features-

1. Manager needs to be logged in to the system
2. Manager should be able to enter purchase history
3. Manger should be able to entry product description i.e. product id, price, model, discount, etc.
4. There should be mechanism for handling the daily expenses of the showroom.
5. There should be a feature for handling order and for customer memo.
6. A module for cash withdraw handling
7. An option for producing daily or monthly showroom report about purchase, sales, expenses, balance etc.
8. And so on…

**1.6 Glossary**

|  |  |
| --- | --- |
| **Term** | **Definition** |
| manager | The showroom manager |
| owner | The owner of the showroom |
| Stakeholder | Any person with an interest in the project who is not a developer. |
| Software Requirements Specification (SRS) | A document that completely describes all of the functions of a proposed system and the constraints under which it must operate. For example, this document. |
| customer | People who will get in the showroom for shopping |
| Sales man | Trainer trains a trainee of a particular course |
| business | Other company that business with the showroom |
| “memo” | Customers purchase memo |
| report | The showroom activity report |

**1.7 Reference**

**Book Reference:**

1. System Analysis And Design by Elias M.Awad
2. Database System Concepts by Abraham Silverschatz
3. Software Engineering by Roger’s S.Pressman

**Online Reference:**

1. http://en.wikipedia.com

**1.8 Overview of the Document**

The next chapter, the Overall Description section, of this document gives an overview of the functionality of the product. It describes the informal requirements and is used to establish a context for the technical requirements specification in the next chapter.

The third chapter, Requirements Specification section, of this document is written primarily for the developers and describes in technical terms the details of the functionality of the product.

Both sections of the document describe the same software product in its entirety, but are intended for different audiences and thus use different language.

**Chapter 2**

**Overall Description**

**2. Overall Description**

**2.1 System Environment**

The garment showroom system has one active user, showroom manager, and a cooperating system. The cooperating system is physical in nature where owner, customers, sales men, and other business play to demonstrate the system work. All events happened in the system are mainly done by the owner and the manager. There are two visual outcomes in the system: “memo” and “journal”; “memo” will be given to the customers and “journal” will only be seen by the owner and the manager. There is another thing which is product availability list or status. The figure below will give an overall structure of the system.



**Figure 2.1(a) System Environment**

**2.2 Functional Requirement Specification**

This section outlines the use cases for the showroom manager. These use cases will show how and what the manager will do in the system.

**2.2.1 Purchase Use Case**

When the owner/business purchases the products from the outside business and handover the products to the manager, manager will act in the system according to the following steps. Before this use case, manager must lunch the software system.

1. Manager chooses the purchase entry option.
2. A purchase entry form has the fields: purchase date, product category, product quantity, purchase amount. Manager fills up the fields and submits the purchase story to the system.
3. A confirmation window will be confirmed by the showroom manager.

Purchase submit query

**Figure 2.2.1(a) Purchase Entry Process**

**2.2.2 Product Entry Use Case**

Assume that there are some products in the showroom untagged. The manager itself or by other means will do tagging and perform the activities-

1. Choose the product entry option from the software system to insert into system database in product table.
2. Fills up all form field namely- product id, product type, product model, product quantity, unit price, net price.
3. Finally- manager will confirm product submission.

Product submit query

**Figure 2.2.2 (a) Product Entry Process**

**2.2.3 Order Processing Use Case**

A customer chooses some products to be purchased and inform a sales man for further processing. Sales man will brought the products to the manager and the order processing will be initiated in the system by the manager. The steps are-

1. Sales man transfers the products to the manager desk.
2. Manager will enter the products’ ids and quantities to be sold in the sales or order form.
3. An optional field “less” will be field by the manager depending on the customer familiarity.
4. Confirm the order and a “memo” will be produced by the system automatically.
5. Balance will be automatically updated.

memo

Id

confirm

**Figure 2.2.3(a) Order Processing in the system**

**2.2.4 Cost Processing Use Case**

1. There is an option for cost processing and manager will select it.
2. Manager will fill up pre-defined fields such as cost purpose, person/organization, and cost amount.
3. After verifying the fields manager will submit the form to the system to update the balance

submit cost

**Figure 2.2.4(a) Cost Processing**

**2.2.5 Cash Withdraw**

Only owner can withdraw cash and manager can only act as media. The detail action can be stated by the following steps.

1. Owner will request for withdraw to manager
2. Manager will fill up the cash withdraw form and submit to the system
3. Database will be automatically updated.
4. Current Balance status will be show immediately to the manager.

Balance status

Submit

**Figure 2.2.5(a) Cash Withdraw Processing**

**2.2.6 Report Creation**

This includes sales report, withdraw report, purchase report, product status report etc. The manager will initiate the process in the software system.

1. There will be options for individual sales report, withdraw repot, purchase report product list/status report.
2. According to the manager request the system will generate the report.

**Figure 2.2.6(a) Report Creation**

## 2.3 User characteristics

The manager is expected to be computer literate that means he needs to know how to operate computer, how to use a software, how to select different options in the software.

**2.4 Non-functional Requirement**

The software will be on local pc. The software developed here assumes the use of windows as operating system and Microsoft ADO database.

**Chapter 3**

**Requirement Specification**

**3. Requirement Specification**

**3.1 External Interface Requirement**

**User Interface**

There is a login interface in the system. After Login to the system, manager will see the options for purchase, product entry, sales/order, cost entry, cash withdraw, product status, report. The manager can navigate to different options for different purpose.

**Software interface**

To implement this system we are considering to use C# as programming language and ADO database. This is based on windows platform. It will be run on windows pc.

**3.2 Functional Requirement**

The system functional requirements can be described by the following points as below-

1. In the section 2.2.1, the manager may select for insert purchase story in the database. For this requirement, we need to provide a mechanism where the manager can find a form to enter the purchase information and a button for submitting that information. Now he wants a message carrying the operation success or failure information.
2. In the section 2.2.2, the manager wants to entry products in the system database. So there needs some fields where manager can put product information such as product id, product type, product model, quantity, unit price, discount, net price, etc. and a button for submitting the info into the database. Necessary operation message will be shown.
3. According to section 2.2.3, the client requires a mechanism for order processing and customer “memo” creation.
4. According to section 2.2.4, the system must be capable of handling daily expanses of the showroom. The expenses will be inserted into database so that manager or owner can trace the expenses.
5. In use case described in the section 2.2.5, the showroom owner may withdraw the cash from the showroom balance or cash. They require functionality for this purpose so that manager or owner can see previous withdraw information and insert current cash withdraw.
6. There needs to provide another functionality in the system where the manager can choose one of the options for report viewing. According to the selection report can be sales report, expense report, purchase report, withdraw report, etc.

**3.3 Detailed Non-functional requirement**

**3.3.1 The Logical Structure of the Data**

The logical structure of the system is given by the following figure.



**Figure 3.3.1(a) Logical structure of the Garment Showroom Management System**

The data descriptions of each of the entities used in this system are-

**Purchase Entry**

|  |  |  |  |
| --- | --- | --- | --- |
| **Data Item** | **Type** | **Description** | **Comment** |
| Purchase ID | Integer | ID of a purchase | primary |
| Purchase Date | Date | Purchase Time |  |
| Category | Text | Product Category(shirt, pant, T-shirt, etc.) |  |
| Quantity | Integer | Number of products has be purchased |  |
| Purchase Amount | Double | Amount needed to purchase |  |
| Company | Text | The company from which the owner purchases the products. |  |

**Product Entry**

|  |  |  |  |
| --- | --- | --- | --- |
| **Data Item** | **Type** | **Description** | **Comment** |
| Product ID | Integer | ID of a purchase | primary |
| Product type | text | In which categories the selected product is |  |
| Product model | Text | Model name of the product |  |
| Quantity | Integer | How much product has in the store. |  |
| Unit price | Double | Price per piece |  |
| Discount | Text | Discount on the product |  |
| Net price | Double | Actual price of the product |  |

**Sales/order/memo**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Products Ids** | **Category** | **quantity** | **Unit price** | **Discount** | **Less** | **Total** |
| Product Id1 | Category name | a | primary |  |  |  |
| Product Id2 | Category name | b |  |  |  |  |
| Product Id3 | Category name | c |  |  |  |  |
| .  .  . | .  .  . |  |  |  |  |  |
| Product Id(n-1) | Category name | d |  |  |  |  |
| Product Id(n) | Category name | 6 |  |  |  |  |
| Total= | | | | | | |

**Expense Entry**

|  |  |  |  |
| --- | --- | --- | --- |
| **Data Item** | **Type** | **Description** | **Comment** |
| Expense ID | Integer | ID of an expense | primary |
| Expense Date | Date | Expense Time |  |
| Expense Purpose | Text | Why this expense |  |
| Expense Amount | double | How much expenses |  |
| Person/organization | text | To which the expenses has been made |  |

**Cash Withdraw**

|  |  |  |  |
| --- | --- | --- | --- |
| **Data Item** | **Type** | **Description** | **Comment** |
| Withdraw ID | Integer | ID of withdraw made by owner. Which can help in tracking the withdraw history. | primary |
| Withdraw DateTime | DateTime | Time of the withdraw |  |
| Withdrawn amount | double | How much has been withdrawn |  |

**Sales Report**

|  |  |  |  |
| --- | --- | --- | --- |
| **Attributes** | **type** | **Description** | **Comment** |
| Date | Date | A specific date | Unique |
| amount | Double | Amount sold in this date |  |
| Product quantity | Integer | Product quantity sold in this date |  |

Similarly there will be reports for purchase, expenses, withdraw etc.

**3.4 Security**

The system is login protected and the software will be in the manager pc. So it seems that it is secure enough. There is no network for the processing and therefore the system is secure from unauthorized access attempt.

**Chapter 4**

**Conclusion**

**4.1 Conclusion**

This is a simple document and can be developed with very reasonable cost and within very short time. Small showroom businesses can use it and by using it they can use their manpower very efficiently and effectively. This software project ( if implemented ) can minimize and optimize the manager as well as owner labor. Manager can feel very comfort since the accounting task is not a problem now at all.