**Chapter 3**

**COMPUTERIZED SALES AND INVENTORY WITH MONITORING DELIVERY SYSTEM FOR RRGM**

**3.1 Introduction**

**3.2 System Design Specification**

**3.2.1 Methodology (System Development Life Cycle)**

SDLC is a process used by a system analyst to develop a system information and it includes validation, requirements, trainings and stakeholder ownership etc. A process that establish a life cycle for software, and provide a mode for the development, acquisition and configuration of software systems.

The [systems development](http://www.referenceforbusiness.com/knowledge/Software_development_methodology.html) life cycle (SDLC) describes a set of steps that produces a new computer information system. The SDLC is a problem-solving process. Each step in the process delineates a number of activities. Performing these activities in the order prescribed by the SDLC will bring about a solution to the business situation.

**3.2.1.1 Planning Phase**

SDLC starts with the analysis and definition of phases, where the purpose of the system should be determined, the goals of what it needs to accomplish need to be established and a set of definite requirements can be developed. During the software construction or development stage, the actual engineering and writing of the application is completed.

**3.2.1.2 Requirement Determination**

Requirement gathering from RRGM is essential in system analysis. Understanding of transaction of RRGM information will help the developers to provide a suitable system for the user in limited time and budget. This phase is used to ensure that both parties have complete understanding of what the company’s problem is.

**3.2.1.3 Analysis Phase**

Analysis phase is based on the requirements gathered from requirements determination by the developers; it defines the problem that developers are trying to elucidate. The developers need a regular series of interview with the company. This is to create consistent and traceable information from the company and the developers. The developers used SDLC methodology because it a continuous process unlike other methodologies. It will end when the last phase was executed. And when it reached the last phase, it will go back to its first phase, to improve the system development.

**3.2.1.4 Design Phase**

This defines the components of the system. The developers will create a system that is suitable for RRGM. The application is designed to be a simple, clean, and user-friendly system application with additional features for the sales and inventory of RRGM.

**3.2.1.5 Implementation Phase**

This phase is to put the system operational of the new information system in the production environment. During this phase, the developers trained the user of the system application for them to recognize the usage of it and increase the employee’s familiarity with the system. On this phase the developers monitor the progress of the user through the status details and task given and finished by the user.

**3.2.1.6 Maintenance Phase**

This phase includes all the activity after the installation of the software that is performing to keep the system application operational. The developers will check the system on schedule day for the system application reliability. A regular checking of the system application is required to maintain the system process.

**3.3 Hardware Specification**

The developers recognize the importance and usefulness of the CPU, monitor, mouse and other components that make up the whole computer system guarantee operations.

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| --- | --- |
| **Minimum Hardware Requirements:** | **Recommended Hardware Requirements:** |
| 1.9Ghz to 2.0Ghz of Processor Speed | 2.3Ghz to 2.6Ghz of Processor Speed |
| 1.0Gb of RAM | 2.0Gb of RAM or better |
| 64Mb of Graphics Memory | 512Mb of Graphics Memory or better |
| 14” CRT/LCD Monitor with at least 1366x768 screen resolution | 17” LCD Monitor with at least 1440x900 screen resolution |
| Inkjet Printer | LaserJet Printer |
| At least 10Gb Hard Disk Space | 20Gb of Hard Disk Space |
| PS2/USB Optical Mouse | PS2/USB Optical Mouse |
| PS2/USB Keyboard | PS2/USB Keyboard |

**3.4 Software Specification**

The developers recognize what to use in order to ensure the functionality of the system. Exceeding below of the minimum requirements could cause errors, or system instability. Exceeding recommended requirements is optional and is susceptible to compatibility issues.

Recommended software installed:

* Microsoft Windows 7 (32/64 bit)
* MySQL Server 5.6
* MySQL ODBC Connector 5.0

**3.5 Diagrams**

**3.5.1 Gantt Chart**

A Gantt chart is a graphical depiction of a project schedule. A Gantt chart is a type of bar chart that shows the start and finish dates of several elements of a project that include resources, milestones, tasks and dependencies. Henry Gantt, an American mechanical engineer, designed the Gantt chart.

A Gantt chart aids in scheduling, managing, and monitoring specific tasks and resources in a project. The chart shows the project timeline that includes scheduled and completed work over a period. The Gantt chart aids project managers in communicating project status or plans and helps ensure the project remains on track.

**3.5.2 Data Flow Diagram**

A data flow diagram (DFD) is a graphical representation of the "flow" of data through an [information system](https://en.wikipedia.org/wiki/Information_system), modelling its process aspects. A DFD is often used as a preliminary step to create an overview of the system, which can later be elaborated. DFDs can also be used for the [visualization](https://en.wikipedia.org/wiki/Data_visualization) of [data processing](https://en.wikipedia.org/wiki/Data_processing) (structured design).

**3.5.3 Context Diagram**

A system context diagram (SCD) in software engineering and systems engineering is a diagram that defines the boundary between the system, or part of a system, and its environment, showing the entities that interact with it. This diagram is a high level view of a system.

**3.5.4 Entity Relationship Diagram**

An entity-relationship diagram (ERD) is a data modeling technique that graphically illustrates an information system's entities and the relationships between those entities. An ERD is a conceptual and representational model of data used to represent the entity framework infrastructure.

**3.6 Summary**

With this Computerized Sales and Inventory and Monitoring Delivery System, it will assist the company in minimizing the total amount of time that is necessary in each transaction.

This chapter discussed the requirements of the system, and the purpose of this will be used in the developed system.