# CHAPTER 2: REQUIREMENTS SPECIFICATION

## **2.1 Introduction**

The major objective of this chapter is to provide a clear insight of how the current system operates, and how it is to be integrated into the proposed solution. This chapter will cover requirement analysis, data requirements, processing requirements, software requirements as well as hardware requirements.

## **2.2 Fact finding and analysis tools**

Educational research uses a variety of research instruments like interviews, observations and questionnaires for the purpose of this research questionnaires shall be used. Interviews will also be used to compliment the questionnaires.

### **2.2.1 Questionnaires**

Oppenheim (2009) refers to the questionnaires as any data collection instrument; attitude scales projective techniques or rotting saddles. The questionnaires will be chosen because of its advantages: The results of the questionnaires can usually be quickly and easily quantified by either a researcher or through the use of a software package. Large amounts of information can be collected from a large number of people in a short period of time and in a relatively cost effective way. Questionnaires can also be carried out by the researcher or by any number of people with limited effect to its validity and reliability. It is an instrument that can be given to respondents within a short space of time. Questionnaires help reduce costs in terms of money and effort. They also serve to ensure confidentiality because the respondents are not asked to indicate their class or names.

Although the questionnaire might prove straight forward information there can be hitches which can be uncounted within the techniques which are employed if questionnaires are postponed so respondents may not cooperate and not return them if they are reminded. The language may be misunderstood. This may lead to unwanted responses being given in open ended questions and inadequate answers when questionnaires are posted. In this case the researcher will overcome some of these problems by physically administering the questionnaires. Omission will be noticed as she will be collecting the questionnaires and the respondents will kindly be asked to finish answering the questionnaires to ensure clarity of the questionnaires and that respondents would not object to answering any question.

### **2.2.2** **Interviews**

The research instrument will be used in this study because of its main advantage of being adaptable. The researcher will use this instrument to cross check the validity of the questionnaires. This is a personal interaction between the interviewer and the interviewee. The advantages of an interview over using questionnaires is that the interviewer gets to observe facial expression and verbal cues which may either be supporting or belying the spoken word hence having more validity. Interviews are however more time consuming than questionnaires which are mainly targeting the views of the users of the current system.

## **2.3 Data requirements**

Product Entry

Product Code

Product Name

Description

Price

Supplier

Orders

Total Amount

orderID

ProductID

Pice

Quntity

**2.3.1 Data structers and file organisation**

**Table Product**

|  |
| --- |
| Field name field type field size format examples |
| Pid Numeric 5 1 |
| Pname Text 15 ZapNax |
| Pdiscription Text 15 500g red |
| Price Currency $0.50 |
| Quantity 1 30 1 |

Orders

|  |
| --- |
| Field name field type field size format examples |
| OrderID Numeric 6 1 |
| PID Numeric 5 2 |
| SID Numeric 5 2 |
| Price Currency $90.00 |
| Quantity Numeric 8 23 |
| TotalAmount Currency $2 070.0 |

## **2.4 Processing requirements**

|  |  |
| --- | --- |
| **USER** | **EXPECTATION(S)** |
| Sales Person | * A system that shows the total amount of sales and total number of products in the stock * A user-friendly interface * A system that can reduce the number of entries to be made each time a transaction occurs. * An automatically updating system. |
| Administration & Management | A more secure system so that easy data loss is avoided.  A portable system that takes up less disk space and requires minimum resources so that some costs such as stationary costs are eliminated. |

### **2.4.1 Functional and non-functional requirements**

#### **2.4.1.1 Functional requirements;**

Functional means providing particular service to the user. These are requirements that define those features of the system that will specifically satisfy a user need, or with which the user will directly interact. Functional Requirements Specification documents the operations and activities that a system must be able to perform. Functional Requirements should include:

* Support real time updating of all functions
* Allow staff to initiate a database search from any point in the system
* Provide for the use of function /hot keys for frequently used functions

#### **2.4.1.2 Non-functional requirements;**

On the other hand, non-functional requirements are a requirement that specifies criteria that can be used to judge the operation of a system, rather than specific behaviors. The non-functional requirements are as follows:

* Usability
* Availability & Reliability
* Backup & Disaster recovery
* Privacy & Security
* Accessibility

## **2.5 Software Requirements**

Software requirements mainly consists of the platform on which the system will run and the software that will be used to develop the proposed system.

**Microsoft visual studio 2017**

Microsoft Visual Studio 2017 is an integrated development environment (IDE) from Microsoft. The software can be used to develop console and graphical user interface applications along. Windows Forms applications, web sites, web applications, and web services in both native codes together with managed code for all platforms. This is a programme that makes it possible for developers to create software applications of their own. This can be used by individual professional software developers as well as small teams of software developers and students who are just getting into software development and the programme comes packed with useful features. The basic version of the programme is completely free to download and use. As a result, no licensing fee will be required. Although there are certain limitations in the free version, there are likely to be enough features for the developing this system. This software has been chosen to develop the user interface and all the system modules with the help of C#.Net.

**MySQL**

MYSQL DBMS- It allows combination, extraction, manipulation and organization of data in the KMPS database. It is platform independent and therefore can be implemented and used across several such as Windows, Linux server and is compatible with various hardware mainframes. It is fast in performance, stable and provides business value at a low cost.

## **2.6 Hardware requirements**

**Input**

* **Keyboard**- For capturing library members’ information and books information.
* **Mouse** -selection of options
* **Bar code reader** – to capture drug serial Number

**Output**

* **High Definition (HD) Monitor** – Quality and crystal clear display of records
* **Laser Printer** – For printing of reports when needed by the administration.

## **2.7. Conclusion**

The planning phase will assist in the analysis and design stage of the proposed system to come up with the required resources and how best the resources that are available will be utilized .it will also assist in coming up with how to manage the time and the plan used to cross check if the deadlines are met.