#### **CHAPTER 3**

#### SYSTEM ANALYSIS AND DESIGN

#### 3.1 Introduction:

*Introduction to the chapter detailing what the chapter covers.* 

#### 3.2 Methodology

Describe the Systems Development Methodology that is used in the research. This is just to introduce it before the actual implementation begins.

## 3.2.1 Data Collection Tools and Techniques:

Describe the data collection tool, its preparation and how it was administered and attach it as an appendix. Use tools like Interviews, Observation, questionnaires, etc. This tool should be approved by the Supervisor before it is administered. Be sure to include the data collection tool in the appendix after the References.

## 3.2.2 Data Analysis Tools and Techniques

Describe how the data collected will/was analysed using Statistical tools (Excel, SPSS) and represent the findings using any analytical tool (pie charts, bar graphs, line graphs, etc)

## 3.3 System Analysis

Provide a narrative of the system specification (Describe the system you desired to develop).

### 3.3.1 User and System Requirements

List the main user requirements with their associated system requirements. Refer to Lecture 5

#### 3.3.2 Functional Requirements

List the functional requirements. Refer to Lecture 5

### 3.3.3 Nonfunctional Requirements

List the nonfunctional requirements. Refer to Lecture 5

### 3.4 System Design

# 3.4.1 System Architecture

Draw the architectural design for the proposed system. Refer to Lecture 8

#### 3.4.2 User Case Diagram

Draw the use case diagram for the proposed system. Refer to Lecture 6 & 7

# 3.4.3 Context Diagram

Draw the context diagram for the proposed system. Refer to Lecture 6 & 7

# 3.4.4 Data Flow Diagrams

Draw the DFDs (upto level 3) for the proposed system. Refer to Lecture  $6\ \&\ 7$ 

# 3.4.5 Class Diagram

Draw the class diagram for the proposed system. Refer to Lecture 6 & 7

# 3.4.6 Entity Relationship Diagram

Draw the ERD for the proposed system. Refer to Lecture 6 & 7