**[PROJECT TITLE]**

**[YOUR NAME (ADM NUM IN FULL)]**

**A PROJECT REPORT PRESENTED TO CATHOLIC UNIVERSITY OF EASTERN AFRICA, FACULTY OF SCIENCE, DEPARTMENT OF COMPUTER SCIENCE, IN FULFILLMENT OF THE AWARD FOR THE [DEGREE/DIPLOMA] [OF/IN][BACHELOR OF SCIENCE IN COMPUTER SCIENCE/INFROMATION TECHNOLOGY]**

**DATE: [MONTH, YEAR]**

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**CATHOLIC UNIVERSITY OF EASTERN AFRICA**

**PROJECT REPORT FOR FINAL YEAR STUDY IN [TITLE OF COURSE]**

**BY**

**[YOUR NAME (ADM NUM IN FULL)]**

**PROJECT TITLE**

**[Project Title]**

**DATE: [MONTH, YEAR]**

Submitted in partial fulfillment of the requirement for the [Degree/Diploma] in [Computer Science/ Information Technology]

## **Declaration and Approval**

**Student**

I, [insert your name] declare this research report is my original work and that it has not been presented in any other university or institution for academic credit.

Signature.......................... Date.......................................

**Supervisor’s Approval**

This research report has been submitted for examination with my approval as university

supervisor.

Signature.......................... Date.......................................

Name [ Your supervisor’s name]

**Head of Department’s Approval**

This research report has been submitted for examination with my approval as the head of department.

Signature.......................... Date.......................................

Name Mr. Kinyua

## **Acknowledgment**

## **Dedication**

## **Abstract**

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## **List of Terms and Abbreviations**

[should be in alphabetic order, NB: You may initially type them in any order then use word paragraph sort tool to sort them.]

DFD Data Flow Diagram. A tool used in System Analysis

ERD Entity Relationship Diagram. A toll used in database design

# **CHAPTER ONE: INTRODUCTION**

## **1.1 Background of the Study**

## **1.2 Problem Statement**

## **1.3 Main Objective**

## **1.4 Specific Objectives**

## **1.5 Justification**

## **1.6 Scope**

## **1.7 Research Organization**

# **CHAPTER TWO: LITERATURE REVIEW**

[NB: literature review forms the research part of your research project. It should be one of the chapters that should have several pages in your report/documentation. Ideally, you should study and document as much as possibly recent similar system with the aim of discovering the research Gap. Don’t force the Gap, it should be discovered from the review. A Gap may also point at the need to localize a similar product done elsewhere (in a different country) so as, for instance, to provide for locally available payment solutions and/or taxation.]

## **2.1 Introduction**

## **2.2 Methodology of Literature Review**

## **2.3 History of the Research Topic**

## **2.4 Review of Related Prototypes, Systems [at least 5 cases, can be more]**

[NB: these cases are the one that mainly give you the references that appear in the reference section. You should have intext citation for every reference in the reference section. You are encouraged to have between 5 and 10 cases]

### **2.4.1 Case 1: [case 1 title]**

[each case study should start with the case description, strength, weakness/gap. Figures/images, tables for comparison purposes may be used in this section. Take the time to discuss each case exhaustively.]

[Any figure/diagram/image or table inserted should be captioned to enable autogenerating of the list of figures and list of tables]

Figure 1: Case 1 system in operation-the steps

Table 1: case 1 comparison with proposed system

|  |  |  |
| --- | --- | --- |
| S/N | Proposed system | Case 1 |
| 1 | Has A | Has A |
| 2 | Has B | Has B |
| 3 | Has C | Lacks C |

### **2.4.2 Case 2: [case 2 title]**

### **2.4.3 Case 3: [case 3 title]**

### **2.4.4 Case 4: [case 4 title]**

### **2.4.5 Case 5: [case 5 title]**

## **2.5 Emerging Trends and Patterns**

## **2.6 Research Gap**

## **2.7 Chapter Summary**

# **CHAPTER THREE: METHODOLOGY**

[methodology is about the approach and tools used in your study/research/system development. You don’t have to use diagrams and figures. The only time you can do this is to show the standard of a particular tool. E.g. to show the standard notation/shapes used for context diagram or DFD or flow chart BUT do not do the analysis or design itself in this section. This chapter should be shorter than Chapter 2 in terms of expected num. of pages]

## **3.1 Introduction**

## **3.2 Methodology of Requirement Elicitation**

[Mention the approach you will use in data collection and the tools/ techniques e.g data collection e.g. Interviews, questionnaires and note that for tolls order is significant.]

**3.3 Methodology for system Analysis**

[mention the approach you will use in analyzing the system. It is either SSAD or OOSAD based]

[mention the tools used in line with your methodology e.g For SSAD, System workflow for workflow, Context diagram, Level 1 DFD, Level 2 DFD all for system analysis, (Normalization (Up to 3rd NF). ]

[The approach used in analysis doesn’t change independent of what is being analyzed, that is, current or proposed system. For this reason, you only need ONE methodology in each of these sections in chapter 3]

## **3.4 Methodology for System Design**

[ Mention the approach and tools used in system design. E.g Approach SSAD, Tools: Flow charts, User Interface design (UI/UX tools, Prototype screenshots), Database design (ERD)]

## **3.5 Methodology for System Implementation**

[Mention the approach and tools you used in implementation e.g Approach: state the coding standard, tools: IDEs and Programing language (Backend/front end, DBMS, etc.]

## **3.6 Methodology for System Testing**

[The approach used in generating test data, the testing plan and testing techniques]

## **3.7 Methodology for System Deployment**

[The approach used in introducing the system to users: Phased, Pilot, Parallel, Direct; Data migration plan and Users training.]

## **3.8 Chapter Summary**

# **CHAPTER FOUR: SYSTEM ANALYSIS**

## **4.1 Introduction**

## **4.2 Description of the Current Systems**

[This is the only section where the current system is discussed, past here it is not necessary to do so]

### **4.2.1 System workflow**

[its something like a flow chart of the entire system]

### **4.2.2 Current System Context Diagram**

### **4.2.3 Current System Data Flow Diagram(DFD-Level 1)**

### **4.2.4 Current System Strengths**

### **4.2.5 Current System Weakness**

[From 4.3 onwards, it’s about the proposed system]

## **4.3 Feasibility Study**

### **4.3.1 Operational Feasibility**

### **4.3.2 Technical Feasibility**

### **4.3.3 Social Feasibility**

### **4.3.4 Economic Feasibility**

[no need to get into legal feasibility because even your title and proposal wouldn’t have been allowed by your supervisor if the system you intended to develop raised some moral, ethical or legal questions]

## **4.4 Requirements Analysis**

[explain how you did requirements elicitation, the issuance, collection, aggregation and analysis of collected data. The sub headings below actually list your findings from requirement elicitation, organized into functional and non-functional requirements]

### **4.4.1 Functional Requirements**

### **4.4.2 Non-Functional Requirements**

## **4.5 System Analysis**

[breakdown of system into its components using relevant tools [SSAD (Context diagram, DFD)/ OOSAD (Use Case diagram)]

### **4.5.1 System Workflow**

### **4.5.2 Context Diagram**

### **4.5.3 DFD (Level 1)**

### **4.5.4 DFD (Level 2)**

**4.6 System Users /Actors**

[inputs and outputs are clearly identified]

## **4.6 Normalization**

[Extract data stores from the DFD and identify stored data in each store, then normalize to establish entities and resolve transitive entities [Normalization to 3NF)]

## **4.7 Chapter summary**

# **CHAPTER FIVE: SYSTEM DESIGN**

[All design is about the proposed system; it is therefore implied in the subtitles below. We have no reason at all to design the current system, its already in existence]

[Design is a natural progression from analysis. There should be proper flow and connection between Chapter 4 and Chapter 5 and both should use the approach and tools mentioned in Chapter 3, if in case you change the tools and approach in either chapter 4 or 5, you will need to update Chapter 3]

## **5.1 Introduction**

## **5.2 User Interface Design**

### **5.2.1 Input Form Design**

[mockup screens or screenshots of the developed prototype]

### **5.2.2 Reports Design**

[mockup screens or screenshots of the developed prototype]

## **5.3 Process Design**

[Use tools proposed in chapter 3. Since Chapter 5 is the progression of Chapter 4 it is expected that there will be a smooth flow between the two chapters. E,g. If you used DFD in Analysis, then process design involves picking a process in the DFD and developing its flow chart. As such, you should even quote the DFD from which you are picking the process since you expected to have captioned the figure. It is for this reason that your analysis of the proposed system MUST go up to level 2 DFD so that you capture the process in details]

### **5.3.1 [process A e.g Authentication]**

### **5.3.2 [process B e.g User Registration]**

### **5.3.3 [process C e.g Order Process]**

### **5.3.4 [process D e.g Payment Process]**

## **5.4 Database Design**

[the entities resulting from normalization are picked and an ERD drawn. A data dictionary is then developed to show the details of entities attributes, their type and size]

## **5.5 Test Data**

[should be adequate to represent actual input scenario in terms of variance]

## **5.8 Chapter summary**

# **CHAPTER SIX: IMPLEMENTATION**

## **6.1 Introduction**

## **6.2 UI Implementation**

### **6.2.1 Input forms Implementation**

[screen shots of the developed system]

### **6.2.2 Reports Implementation**

[screen shots of the developed system]

## **6.3 ERD Implementation**

[screen shots from the implemented DB showing the DB structure and table structure] system, the equivalent if suing a NO-SQL DB]

## **6.4 Business Logic Implementation**

[Code extract from the client side (e.g form validation) and from the server side (insert, delete, update and select code]

## **6.5 Module testing**

[Test table showing expected versus actual output ro the report generated from given input]

[demonstrable for at least one module]

## **6.6 Chapter summary**

# **CHAPTER SIX: FINDINGS, CONCLUSIONS AND RECOMMEDATIONS**

[order is important. Findings come first, then you conclude based on findings and recommend areas of further study]

[this should be the shortest chapter of all for this level of study]

## **7.1 Introduction**

## **7.2 Findings**

### **7.2.1 Achievement of objectives**

[objectives and requirements if your project was a system]

### **7.2.1 Challenges**

[challenges encountered, that may have hindered achievement of some objectives or requirements]

## **7.3 Conclusions**

[based largely on the state of the developed solution and its applicability]

## **7.4 Recommendations**

[you may have achieved all objectives and requirements, but there are still things you could have done given more time or with an extended scope. This is why you need this section. To recommend that those interested to pursue this research further may consider the items you did not for whatever reasons]

# **REFERENCES**

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## **Appendix A: Fact Finding Techniques**

## **Appendix B: Source Code Snippets**

[used to show the coding standard used and internal documentation which is largely technical documentation (comments)]

**Appendix C:** [add other appendices as necessary]