

**INVENTORY DATABASE SYSTEM OF
COMPUTER HARDWARE AND SOFTWARE**

Project Report Submitted by :

Karavia Kakia

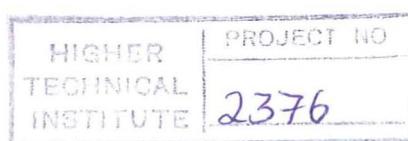
Larkou Christina

In part satisfaction of the Award of Diploma
in Computer Studies
of the
Higher Technical Institute, Cyprus

Project Supervisor : Mr. Christos Makarounas
Lecturer in the Computer Studies
Department, HTI.
Bsc in Computer Science.

External Assessor : Mr. Kyriakos Kyriakou
Bsc in Computer Science.

June 1995



Authors : Karavia Kakia

Larkou Christina

Title : Inventory Database System of Computer Hardware and Software

SUMMARY

The project deals with the development of an inventory system, and more particularly with the “Inventory Database System of Computer Hardware and Software” of “MEMRB International Research & Consultancy Group”.

In order to provide the reader with the necessary understanding, regarding the technique used in analyzing and development of the inventory system, a brief description of this process is given at an initial stage.

An extensive description of each step/activity that compromises this process is given throughout the project report and is documented through the use of different forms, data flow diagrams and narratives.

The objectives of the project are :

- To develop an inventory database system that will meet the requirements of the computer department of “MEMRB International Research & Consultancy group”.
- To provide a system for retrieving information about company’s s/w as well as s/w and h/w information for each computer.
- To provide all necessary queries and reports according to the user request

Table of Contents

| | |
|--|-----|
| Acknowledgments..... | iii |
| Summary..... | 1 |
| Introduction..... | 2 |
| | |
| 1. SYSTEMS DEVELOPMENT LIFE CYCLE..... | 3 |
| | |
| 2. INVESTIGATION PHASE..... | 5 |
| 2.1 Initial Investigation..... | 5 |
| 2.1.1 Description of the existing system..... | 6 |
| 2.1.2 Disadvantages of the existing system..... | 7 |
| 2.1.3 Conclusion..... | 8 |
| 2.1.4 Future Expansion..... | 8 |
| 2.2 Feasibility Study..... | 9 |
| 2.2.1 Financial Feasibility..... | 9 |
| 2.2.2 Schedule Feasibility..... | 14 |
| 2.2.3 Technical Feasibility..... | 15 |
| 2.2.4 Operational Feasibility..... | 15 |
| 2.2.5 Human Factors Feasibility..... | 16 |
| 2.2.6 Conclusion..... | 16 |
| | |
| 3. ANALYSIS AND GENERAL DESIGN PHASE..... | 17 |
| 3.1 Existing System Review..... | 18 |
| 3.1.1 Review of the existing Inventory Database System..... | 18 |
| 3.1.1.1 Organization..... | 18 |
| 3.1.1.2 Processing of Current System..... | 18 |
| 3.1.1.3 Current System Inputs..... | 19 |
| 3.1.1.4 Current System Outputs..... | 20 |
| 3.1.1.5 Conclusion..... | 20 |
| 3.2 New System Requirements..... | 21 |
| 3.2.1 Overview Narrative..... | 21 |
| 3.2.2 System Function (Black Box Description)..... | 22 |
| 3.2.3 Processing..... | 23 |
| 3.2.4 Inputs to the System..... | 26 |
| 3.2.5 Outputs to the User..... | 26 |
| 3.2.6 Process Descriptions..... | 26 |
| 3.2.7 User Interfaces with the new System..... | 26 |
| 3.2.8 Conclusion..... | 27 |
| 3.3 New System Design..... | 27 |
| 3.3.1 Processing..... | 28 |
| 3.3.2 Data Files..... | 28 |
| 3.3.3 Data Access Diagram..... | 33 |
| 3.4 Implementation and Installation Planning..... | 33 |
| 3.4.1 Preliminary Detailed Design and Implementation Plan..... | 34 |
| 3.4.2 Preliminary System Test Plan..... | 35 |

Table of Contents

| | |
|---|-----------|
| 3.4.3 User Training Outline..... | 36 |
| 3.4.4 Preliminary Installation Plan..... | 36 |
| 4. DETAIL DESIGN AND IMPLEMENTATION PHASE..... | 37 |
| 4.1 Technical Design..... | 37 |
| 4.1.1 Human-Machine Interface Design..... | 38 |
| 4.1.2 Database Design..... | 38 |
| 4.1.3 Application Software Design..... | 39 |
| 4.2 Test Specification and Planning..... | 39 |
| 4.2.1 Module (Unit) Testing..... | 39 |
| 4.2.2 Integration Testing..... | 40 |
| 4.2.3 Function Testing..... | 40 |
| 4.2.4 System Testing..... | 40 |
| 4.3 Programming and Testing..... | 41 |
| 4.4 User Training..... | 41 |
| 4.5 System Test..... | 42 |
| 5. INSTALLATION PHASE..... | 43 |
| 6. REVIEW PHASE..... | 44 |
| 7. CONCLUSION..... | 45 |
| APPENDIX A. | |
| 1. Data Dictionary | |
| APPENDIX B. | |
| 1. System Screens | |
| APPENDIX C. | |
| 1. Data Flow Diagrams | |
| 2. Physical Data Flow Diagram | |
| APPENDIX D. | |
| 1. System Flowcharts | |
| GLOSSARY. | |