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Inventory Control System

Of

Developed By:

Naeem Ahmed

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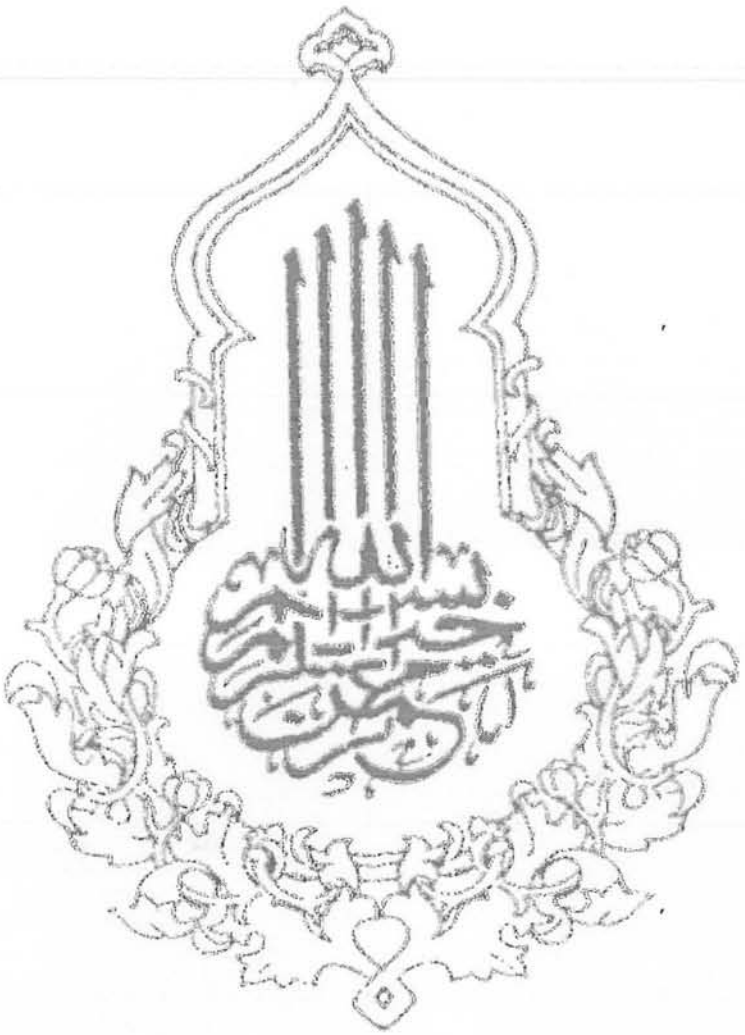


Inventory Control System

Of

Developed By:

Naeem Ahmed

CERTIFICATE

Report Title: ICS

This dissertation Naeem Ahmed is accepted in its present form by the Department of Computer Centre, as fulfilling the requirement for the PGDIT by the QAU after approved by sir Anees-ur-Rehman(project supervisor) of session 2005 – 2006.

Supervised by:

Sir Anees-ur-Rehman

Prepared by:

Naeem Ahmed

Quaid –e-Azam University Islamabad

Supervisor Signature:

Submitted On:

DEDICATED

To

My Parents and all who've given me their support during the development of this project and for Giving Goods Ideas To Prove me as Intellectuals In Front Of my Respected Teachers.

PROJECT BRIEF

PROJECT TITLE:	**Inventory Control System**
ORGANIZATION:	Quaid-E-Azam University
UNDERTAKEN BY:	Naeem Ahmed
SUPERVISED BY:	Sir Anees-ur-Rehman
SESSION:	2005 -2006
SOFTWARE TOOLS & Technologies:	**MS Access/VB**
OPERATING SYSTEM	WINDOWS 98, 2000, XP

ACKNOWLEDGMENT

Praise to Allah, Lord of the worlds, who enabled me to complete the project and fulfill the required functionalities. I am thankful to Head of Computer Centre Department for providing me adequate facilities as regards the hardware equipment and software needed for the project. He provided me every opportunity to work in a healthy atmosphere. And this was all not possible without the guidance and moral support by Mr.Anees. He was always there whenever I needed his help and ideas. I Am really thankful to him and the Head of Department), of course, for arranging separate lab during the course of the project. In the end I would also like to thank the laboratory staff for being cooperative throughout the semester especially to Mr. Tiwana

Chapter 1: Introduction

Chapter 2: Software Management Plan

Chapter 3: Risk Management Plan

Chapter 4 database Description

Chapter 5: Test Management Plan

Chapter 6 ScreenView

Chapter 7 Tools & Technologies

1.1 PROBLEM DEFINITION

This dissertation describes the design of a computerized Inventory Control System for QAU Islamabad. The basic purpose of this work is to modify and enhance the present System of Inventory Control and related information. It will improve the Adition and compilation and will provide quick response with reports and queries. The study has been conducted keeping in view various problems faced by the Inventory Control staff and huge data handling due to the increasing number of employees and stock.

1.2 INVENTORY CONTROL ACTIVITIES

There are fourteen departments in Quaid-e-Azam University and number of employees in each department. Record has to be maintained relating employees designation, department, region, city, phone number if any and email if any.

In addition records related stock for each department should also be maintained properly.So inventory control activities include issuances of items against employee's records about items categorywise and supplier of each item and related activities.

1.3 OBJECTIVE OF PROJECT

The Objective of the Project is to develop an application for QAU Inventory Control System using MS Access/VB Platform, this application automates the data entry and retrieval process. The application utilized MS Access and VB's powerful table, Forms, Queries components and provides a convenient interface for Adding new entries editing exiting entries and searching for the required records.

The existing system for inventory control is based on paper work. Records of the employees are maintained in registers, which is cumbersome process. The data is unstructured and prone to many flaws and errors. Registers are liable to loss the

record, physically damage etc. It is very difficult to find a record in a register. Particularly to keep track items issuance date is quite difficult.

Now we have transformed this workflow in MS Access and VB. The system design is simple and easy to deploy.

1.5 Reasons for Using MS Access and Visual Basic

- No Software cost.
- Easy to develops and deploy applications.
- Possess all benefits of RDBMS.
- Able to keep hundreds of thousands of records.
- Portable to any machine running MS Office and Windows.
- Very useful for small organization like Hostels, Schools, Shops etc.

Other RDBMS like Oracle, FoxPro, SQL Server etc. provide more power but they are not useful in following terms of:- (next page)

- Cost of Software
- Application development time
- Licensing problems
- Just implementation and deployment issues
- Size of the application
- Level of expertise required

Therefore, MS Access 2000 and VB are best for the current application due to their simplicity and benefits

1.6 INTRODUCTION TO THE PROPOSED SYSTEM

Every system whether manual or computerized that replace the previous system, bring about some changes. These changes may be in the procedures or in documents. In this case existing computerized system will be replaced with the newly designed, more efficient, and easy to use, according to current needs of the university, system.

1.7 OBJECTIVE OF THE PROPOSED SYSTEM

The basic approach in finding the objectives of the proposed system is to start with the existing information structure and find the deficiencies and problems. Keeping these things in mind I tried to find measures for their removal.

The proposed system has been designed after conducting a detailed study of the present system. Having meeting and asking questions from the concerned persons of the Inventory Control, collected the necessary information and data. From previous chapter we came to know the deficiencies and problems faced in the existing system by the users. Solutions to these problems are the main objectives of the proposed system. The following are selected as main objectives of the proposed system.

1.7-1 EFFICIENCY

Efficiency is the degree to which we minimize utilities of resources for achieving an object. The proposed system is more efficient than the existing system. Efficient.

1.7-2 *DATA SECURITY*

The data required for decision-making is highly sensitive and valuable. Therefore reliability of the proposed system is secured by giving a regular and guaranteed service to the user.

1.7-3 *TIME FACTOR*

Proposed system will time saving in respect that it will take more queries and reports so that administration may take decisions and information within no time.

1.7-4 ACCURACY

The system will provide accurate and error free information, needed for the decision-making. It will ensure efficient and accurate record keeping.

1.7-5 *FLEXIBILITY*

The algebra of information processing system is liable to change in terms of objectives,information or processes.The proposed system would be sufficiently flexible to cope with such changes.

1.7-6 USER FRIENDLY

User will communicate with the system through simple conversations. No specialized Computer staff will be required.

1.7-7 RELIABILITY

The new system is more reliable than the existing one due to its accuracy and security.

1.7-8 *EFFICIENT DATA COLLECTION AND STORAGE*

Scientific methods are applied for the collection of required information. The format of forms is readable and flow of information is logical. Screens use the format of data collection forms and sheets. So data entry will become very easy and efficient. Floppy disks and hard disks will be used to store data, which are safe, reliable and reusable.

1.7-9 QUICK INFORMATION PROCESSING AND REPORT GENERATION

As information processing is electronic, it takes a little time to get the required information. Also the chances of errors are reduced to a great extent. For example the preparation of Inventory ID card is more fast and error free and preparation of employees' reports is very quick. Multiple queries and form help in this regard.

1.8 SOFTWARE SELECTION

The choice is very important and depends upon the problem which the current system is facing. This is because of various facilities provided by different languages and packages. After a lot of consideration MS ACCESS and VB is proposed to be quite appropriate.

1.9 Visual Basic FORMS

A form is a major product with in the ms visual basic which enable one to quickly develop form based applications for presenting and manipulation data in a variety of ways.

VB forms applications let user to insert, update, delete and query data using a variety of interface items. Control forms across several windows and database transactions.

Access the facilities of oracle graphics directly.

1.10 VB REPORTS

VB reports as a lot for developing, displaying and printing production quality reports. Packages function for creating computation, conditional printing capabilities and fully integrated preview for viewing report output.

1.11 HARDWARE SELECTION

In this system the minimum requirements for the hardware and operating system are IBM PC or any IBM compatible computer with a minimum of 16MB RAM, a 3.5 inch diskette drive and a hard disk with at least 1.2 GB memory. A color SVGA monitors. Printer with 132-column paper width Windows version 98.

Inventory Control

OBJECTIVES

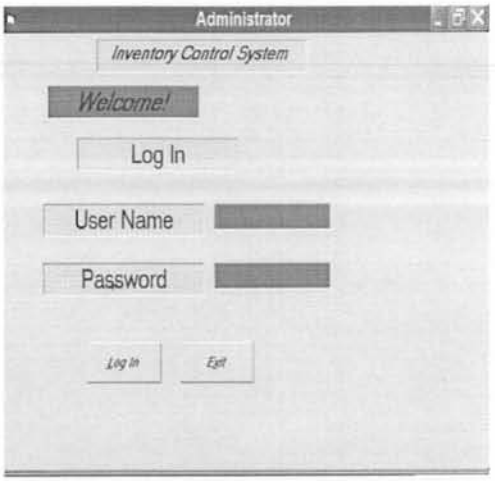
This chapter sums up the activities

Of the project management plan of the

Inventory Control System

This chapter includes:

- Version Statistics
- Introduction of SMP ICS
- Project Organization of ICS
- Gantt Chart of ICS
- Work Products of ICS
- Project Responsibilities
- Work packages, Schedule & Budget



CHAPTER 2

SOFTWARE MANAGEMENT PLAN

Version 1.0

By:

Naeem Ahmed

Version	Primary Author(s)	Description of Version	Date Completed
Draft	Naeem Ahmed	Initial Draft was created for distribution and review comments.	18-04-2006
Preliminary	Same as above	Second draft incorporating initial review comments, distributed for final review.	25-04-2006
Final	Same as above	First complete draft, which is placed under change control.	30-04-2006
Revision 1	Same as above	Revised draft, according to the change control process and maintained under change control.	08-05-2006
Revision 2	Same as above	Revised draft, according to the change control process and maintained under change control.	15-05-2006

1. Introduction

1.1. Project Overview

This project handles **QAU Inventory Control System.**There are methods to add new records in database, edit existing records in database,deleting and searching of

records from database.User can also navigate through records by clicking the appropriate command buttons.

Automatic and quick information can also be retrieved by reports.There are various reports for various kind of information.One can view reports of his own purpose.
Project maintain uptodate information about stock items, their quantity p/u in hand,issued items their category and information about suppliers of items.
The application will perform following functionalities.

- ✓ Adding New Records To DataBase
- ✓ Searching Records from Database
- ✓ Editing Records In Database
- ✓ Deleting Records From Database
- ✓ Navigation Through Records
- ✓ Reports View
- ✓ Information about Employees About Issuances
- ✓ Information about Stock Items
- ✓ Status of Stock Items
- ✓ Infirmation about suppliers

1.2 Project Deliverables

Project deliverables are:

Deliverables	Delivery Location	Delivery Method	Quantity	Expected Date
ICS	Compute Centre QAU	Installing Disk	1	May, 20, 2006
User manual	Computer Centre QAU	Book let	1	May, 20, 2006

1.3 Evaluation of Software project Management Plan

Version	Primary Author(s)	Description of Version	Date Completed
Draft	Naeem Ahmed	Initial Draft created for distribution and review documents	18-04-2006
Preliminary	Same as above	Second draft incorporating initial review comments, distributed for final review.	25-04-2006
Final	Same as above	First complete draft, which is placed under change control	30-04-2006
Revision 1	Same as above	Revised draft, according to the change control process and maintained under change control	08-05-2006
Revision 2	Same as above	Revised draft, according to the change control process and maintained under change control	15-05-2006

1.4 Reference Materials

1. IEEE Standard 1058.1-1987 for Software Management Plans.
2. Software Engineering by Roger.S.PressMan (4^{th} Edition).

1.5 Definition, Acronyms, or abbreviations

SDK	Software Development Kit
SRS	System Requirement Specification
RSD	Requirement Specification Document
I/O	Input Output
SDS	Software Design Specification

2. Project Organization

2.1 Process Model

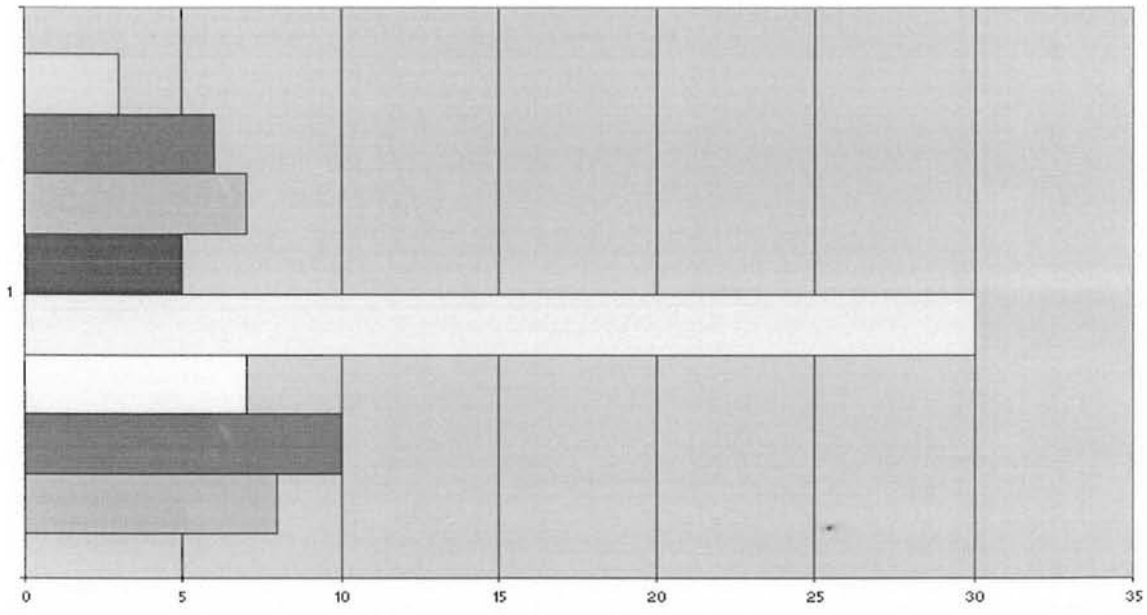
Milestones	Description	Content	Expected Date
Problem Analysis	The problems described by the user for software.	Scope Product Perspective Product functions Constraints Assumptions and Dependencies External Interface Requirements Design constraints Functional	**April 15, 2006**
Detailed Requirement Analysis	Getting Requirements from the customer in detail		**April 18, 2006**

Software Requirement Specification	This document will contain the basic requirements of the customer in detail for providing basis for the software development.	Scope Product Perspective Product functions Constraints Assumptions and Dependencies External Interface Requirements Design constraints Functional Requirements Logical Database Requirements	**April 23, 2006**
Software Design Specification	This document contains the design suitable for development.	Actors Use cases Main Components Functionality of each component Component	**May 01, 2006**

		interaction Component Interaction Model	
Coding Plan	Tool selection for development of modules		**May 06, 2006**
Development	Implementation of the design	Different Modules	**May 22, 2006**
Integration	Integration of different components.	Software components	**May 25,2006**
Interface	Development of user interfaces	Interface components	**May 30,2006**
Testing	Black box testing Focuses on the functional requirements of the software. Is a test case design method that uses the control structure of the procedural design to derive test cases?	White Box testing Back Box Testing	**June 02, 2006**
Final Presentation	Final presentation of the software	Software Document	**June 05,2006**

2.2 Gantt chart:

Activity	Description	Duration	Dependencies
A1	Problem Analysis	3 days	None
A2	Detailed Requirement Analysis	5 days	No of requirements
A3	System Requirement Specification	5 days	Same as above
A4	Software Design Specifications	8 days	No. Of modules
A5	Coding Plan	5 days	Modules interactivity with each other
A6	Development	15 days	
A7	Interface	5 days	
A8	Testing	3 days	No. of users
A9	Integration	3 days	
A10	Final Presentation	3 days	Type of technology, team members

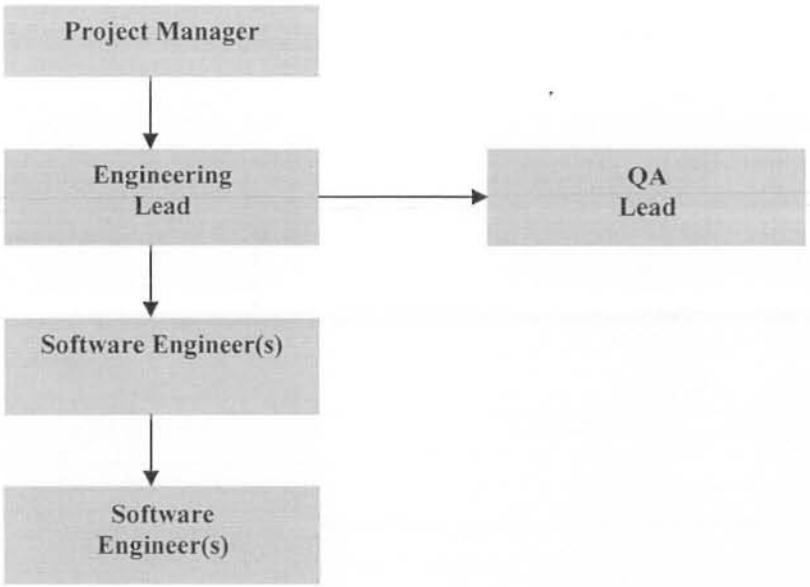


2.3 Work Products:

Work Product Name	Planned Completion Date	Placed under change control?	Deliverable to customer?	People who must sign off on the Work Product
Software Project Management Plan	18-04-2006	YES	NO	Project Manager, Engineering Lead, QA Lead, Documentation Lead
Change control Plan	27-04-2006	YES	YES	Project Manager, Engineering Lead, QA Lead, Documentation Lead
Top 10 Risk List	26-04-2006	YES	NO	Same as above
Change Proposals	29-04-2006	YES	YES	Same as above
Vision Statement	29-04-2006	YES	NO	Same as above
Software Development Plan, including project cost and schedule estimates	02-05-2006	YES	YES	Same as above
User Interface Style Guide	30-05-2006	YES	YES	Same as above
User Manual / requirements specification	05-06-2006	YES	YES	Same as above

Quality Assurance Plan	21-04-2006	YES	NO	Same as above
Software Architecture	23-04-2006	YES	NO	Same as above
Software Integration Procedure	24-04-2006	YES	NO	Same as above
Staged Delivery Plan	24-04-2006	YES	YES	Same as above
Individual stage plans, including miniature milestone schedules	25-04-2006	YES	YES	Same as above
Coding Standard	25-04-2006	YES	YES	Same as above
Detailed design documents	01-05-2006	YES	YES	Same as above
Software construction plans	06-05-2006	YES	YES	Same as above
Deployment document	25-05-2006	YES	NO	Same as previous
Release Checklist	31-05-2006	YES	NO	Same as previous
Release Sign-off Form	03-06-2006			
Document	05-06-2006	YES	NO	Same as previous

2.4 Organizational Structure:



Organizational Boundaries and Interfaces

- ✓ Parent Organization: PYRAMID (Visionaries)
- ✓ Customer Organization: TelecomPlus (WurkDaug)
- ✓ Subcontracting Organization(s): Not Specified (Any Interested customer)
- ✓ QA Organization: Quality Control Department of Visionaries
- ✓ Documentation Organization: Visionaries
- ✓ End User Support Organization: Computer Department Visionaries

2.5 Project Responsibilities:

Responsibility	Persons Responsible
Overall Project Manager	Naeem Ahmed
Engineering Manager	Naeem Ahmed

Quality Assurance	Naeem Ahmed
End-user Documentation	Naeem Ahmed
Requirements Development	Naeem Ahmed
Software Architecture	Naeem Ahmed
Technical Self-Reviews	Naeem Ahmed

3. Managerial Process

Management Objectives and Priorities

- Risk Management procedure used is proactive risk strategy.
- Relative priorities are functionality, schedule and resources (budget, time, and technical people).
- PERT charts will be available for quick management assessment.
- MS Project will be used for management purposes.

4. Assumptions, Dependencies and Constrains

Assumptions

- This product will be used only by this enterprise internationally for their Testing Department and by the management staff to track the activities of the product.

Dependencies

- The database depends upon MS-Access, with maximum size (10 MB approx)
- The number of concurrent users can be limited by MS-Access.

Hardware Constraints

- **Monitors**: 800*600 minimum resolutions at 256 colors minimum.
- **Memory**: Approximately 64 megabytes.
- **I/O**: One or two button mouse and standard 101-key keyboard.
- **CPU:** At least 600 MHz should be on the computer.

5: Risk Management

- Technology being used is new to the organization.
- Specialized user interface is required for the project.

6: Monitoring and Controlling Mechanics

- Must work on network because it is a web base application.
- Must be Browser independent
- Must have clear help/error messages.
- Text should be kept minimum to facilitate the user.
- Color choices should be appropriate to accommodate users of all kinds.

7: Staff Plan

Staffing Factor	Required
Number of Personnel	1
Software Engineer	1
Senior Software Engineer	1
Engineering Lead	1
Quality Assurance Lead	1
Duration of the Project	49 days for the first release
Training Days	1 week

8: Technical process

Methods, Tool and Techniques

Hardware Environment

- Monitors: 800x600 minimum resolutions at 256 colors minimum.
- Memory: Approximately 64 mega bytes.
- I/O: One or two button mouse standard 101-key keyboard.

Operating System

Microsoft Windows (95, 98, 2000, XP, NT Workstation, NT Server) platform preferred.

Software Tools Methods and Techniques

- Microsoft Word
- Visual Basic
- Unit Testing
- Integration testing

Software Documentation

Software Development plans, including project cost and schedule estimates.

Project Support Functions

- System Requirement Specification
- Software Design Document

9: Work Packages, Schedule and Budget

9.1 Work Packages

Work Products:

Work Package Identification	Work Packages
W1	Software Project Plan
W2	Change Control Pan
W3	Change Proposals
W4	Vision Statement
W5	Top 10 Risks List
W6	Software Development Plan, including project cost and schedule estimates
W7	User Interface Style Guide
W8	User Manual / Requirement Specification
W9	Quality Assurance Plan
W10	Software Architecture
W11	Software Integration Procedure
W13	Individual stage plans, including milestones.
W14	Coding Standard
W15	Detailed design documents
W16	Software construction plans
W17	Deployment Document
W18	Release Checklist
W19	Release Sign-off log
W20	Software Project Log
W21	Software Project History Document

Resource Requirements

Resources Required	Duration
Personnel	7 Weeks
Software Engineers	7 Weeks
Senior Software Engineer	7Weeks
Engineering Leader	7 Weeks
Quality Assurance Lead	4 Weeks
Training Leader	1 Week
Computers	2
Software used	8

Schedule

Already described in Gantt char

Inentory Control System

OBJECTIVES

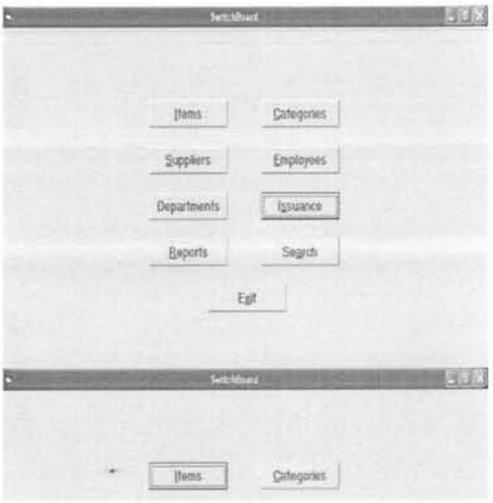
This chapter sums up the activities

Of the Risk Management plan, Roles and

Responsibilities, tools and Risk Budget,

This chapter includes:

- Introduction (Risk Management System)
- Purpose of Risk Management System
- Roles and Responsibilities
- Risk Documentation
- Activities
- Risk Management Budget
- Risk Management Tools



CHAPTER 3

RISK MANAGEMENT PLAN

Version 1.0
By:
Naeem Ahmed

1. Introduction (Risk Management System)

Despite much research and progress in the area of **Software Project Management**, software development projects still are not achieving the target of delivering desired systems on time, within the available financial resources and desired quality. Much of the failure in achieving those targets could be avoided by managers proactive planning for dealing with risk factors rather than waiting for problems to occur and then trying to react on the time of occurrence. Usually this reaction is too little and too late, because by the time the problem is fully recognized, the schedule has already been disturbed, a considerable amount of resources has been utilized, and the product quality has suffered due to introduction of errors. Risk management has been proposed as a solution to for overcoming errors appeared insight into potential problem areas and to identify these problems, address and eliminate them before they can create any problems in the project.

In order to implement a successful risk management program, project managers need tools to help them reduce risks. Risk Management helps project managers in identifying risks in earlier phases of the project cycle, defining risks in earlier phases of the project cycle and defining risk containment actions. The system should support Risk Assessment during the initial phase of the development as well as during project delivery phase.

A good measurement program helps managers:

- Communicate unambiguously throughout the organization.
- Identify and correct technical and management problems by focusing on early discovery of errors.
- Make key tradeoffs by assessing the impact of decision.
- Defend and justify decisions by providing data to explain how issues are prioritized and managed.

Using these as the evaluation criteria a detailed search and evaluation of the Risk Management System available in the industry was made.

2. Purpose

The purpose of this document is to describe how we can perform the job of managing risks for online testing. It identifies risks which may occur in the project, defines roles and responsibilities for participants in the risk management process, the risk management activities that will be carried out, the schedule and budget for risk management activities and tools and techniques that will be used during this process.

3. Roles and Responsibilities

3.1 Project manager

The project manager will assign a Risk Officer to the project, and identify this individual on the project's organization chart. The Project Manager and other members of the Project Management team will meet every week to review the status of all risk resolving efforts, review the exposure assessments for any new risk items, and redefine the project's Top Ten Risk List.

3.2 Software Quality Assurance involvement

The Project Manager and other members of the project will check about the quality of the project and will assign role for each member of the team for making quality assured software

3.3 Risk Officer

The Risk officer has the following responsibilities and authorities:

- ✓ Coordinating between risk identification and analysis activities
- ✓ Maintaining the project's risk list
- ✓ Notifying project management of the new risk items discovered
- ✓ Reporting risk resolution status to management
- ✓ The Risk Officer should normally not be the project Manager.

3.4 Project Member Assigned a Risk

The Risk Officer will assign each newly identified risk to any member of the project, who will assess the exposure and probability for the risk factor and report the results of that analysis back to the Risk Officer. Project members who have assigned the responsibilities for performing the steps of the mitigation will report progress about the risk mitigation to the Risk Officer biweekly.

4. Risk Documentation

4.1 Risk List

The risk factors identified and managed for this project will be accumulated in a risk list. The Risk list contains the following items:

1. Personal Risk
2. Unrealistic schedules and budgets.
3. Developing wrong software solution.
4. Developing wrong user interface.
5. Continuing streams of requirement changes.
6. Shortfall in extremely furnished components.
7. Shortfall in externally performed tasks.
8. Real time performance shortfall.
9. Wrong assessment of requirements.

The ten risk items that currently have the highest estimated risk exposure are referred to as the project's Top Ten Risk List.

4.2 Risk Data Items

The following information will be stored for each project risk:

- **Risk ID**
- **Classification**
- **Description**
- **Probability**

- **Impact**
- **Risk Exposure**
- **First Indicator**
- **That risk is becoming a problem**
- **Mitigation approaches**
- **Owner**
- **Date due**
- **Contingency plan**
- **Contingency plan trigger**

4.3 Closing Risk

A risk item can be considered closed when it meets the following criteria:

The planned lessening actions have been completed and the estimated risk exposure of probability time's impact is less than 2.

5. Activities

	Task	Participants
Risk Identification	State the techniques that will be used to identify risk factors at the beginning of the project and on an on-going basis. This may involve a formal risk assessment workshop, a brainstorming session, and interviews at the beginning of each life cycle phase. Describe any consolidated lists of risk items that will be used to identify candidate risks for this project.	**Risk Officer**

	The Risk **Officer** will assign each risk factor to an individual project member, who will estimate the probability the risk could become a problem and the impact this risk on either scale of units of dollars or schedule days, as indicated by the Risk Officer)	**Assigned Project Member**
	The individual analyzed risk factors are **collected, reviewed,** and **adjusted** if necessary. The list of risk Factors are sorted by descending risk exposure.	**Risk Officer**
	The top ten risks, or those risk factors having an estimated exposure greater than *<state exposure. Threshold>* are assigned to individual project members for development and execution of a risk mitigation plan.	**Risk Officer**
	For each assigned risk factor, recommend actions that will reduce either the probability of the risk materializing into a problem, or the severity of the exposure if it does. Return the mitigation plan to the Risk Officer.	**Project Members**
	The mitigation plans for assigned risk items are collected into a single list. The completed **Top Ten Risk List** is created and made available for the management.	**Risk Officer**
	Each individual who is responsible for executing a risk mitigation plan carries out the mitigation activities	**Assigned Individual**
	Constructive Cost Model (COCOMO)	**Risk Officer**
	The status and effectiveness of each mitigation action is reported to the Risk Officer every two weeks.	**Assigned Individual**
	The probability and impact for each risk item is reevaluated and modified if appropriate for risk management.	**Risk Officer**
	If any new risk items have been identified, they are	**Risk Officer**

	analyzed as were the items on the original risk list and added to the risk list.	
	The Top Ten Risk List is regenerated based on the updated probability and impact for each remaining risk.	**Risk Officer**
	Any risk factors for which mitigation actions are not being effectively carried out, or whose risk exposure is rising, may be escalated to an appropriate level of management for visibility and action.	**Risk Officer**
	If the project will be storing lessons learned about mitigation of specific risks in a database, describe that database and process here and indicate the timing of entering risk-related lessons into the database.	**Risk Officer**

5.1 Schedules for Risk Management Activities

Risk Identification	A risk workshop will be held on approximately 12 December 2001.
Risk List	The prioritized risk list will be completed and made available to **the project team** by approximately 15 December 2001.
Risk Managemer Plan	The risk management plan, with mitigation, avoidance, or prevention strategies for the top ten risk items, will be completed by Approximately 20 December 2001.
Risk Review	The Risk Management Plan and initial Top Ten Risk List will be reviewed and approved by the Project Manager on approximately 22 November 2001.
Risk Tracking	The status of risk management activities and mitigation success will be revisited as part of the gate exit criteria for each life cycle phase. The risk management plan will be updated at that time

6. Risk Management Budget

6. Risk Management Budget

Rs. 80,000

7. Risk Management Tools

RiskTrack Version 5.0

7.1.1 Introduction

Risk Track is a Risk management tool from Risk Services and Technology. It allows the identification of different kinds of risks that may occur during the different phases of software project development. It also allows the specification of the probability of these risks. The interface is more attractive and easy to use. It does not use the rather outdated spreadsheet like interface which the other risk management and management software use. To start a new project, first it provides a screen for project definition where we can specify the project title, creation date, project description, project manager, project leader, risk, mitigation parent and mitigation. Project ID is generated automatically.

We can also add, modify and delete all possible users, phases, risk class, risk cause, attributes, objectives, risk status, and risk types that can occur during the development of the project. After specifying all these, we can add a new risk through the **Add Risk function**.

In the add new risk screen you can give the Risk name, risk ID, and select the risk status, class, cause, type and phase. You can also provide a risk statement and its consequences, the risk probability, At Risk Cost, Risk exposure, mitigation exposure, mitigation exposure, cost allocation, assigned to, date assigned on, assigned by, and action date. You can also add a mitigation using the add mitigation title screen. Here you can give the mitigation title, the effectiveness, risk exposure, cost of mitigation, mitigated exposure, cost allocation, assignee, assigned by and action date while the mitigation ID, creation date, created by, modification date and date assigned on are

automatically generated. There is also a mitigation screen where we can see the cost, slip and effect on performance.

7.1.2 Usability

RiskTrack is very easy to use software. It does not use the spreadsheet like interface rather it uses a simple interface where you provide input through input boxes and dropdown lists. It generates easily comprehendible reports, which are also a plus point of the software.

7.1. 2 Strength

Its strength lies in its ease of use and straight forwardness. It also covers all the phases of Risk Management Process.

Inventory Control

OBJECTIVES

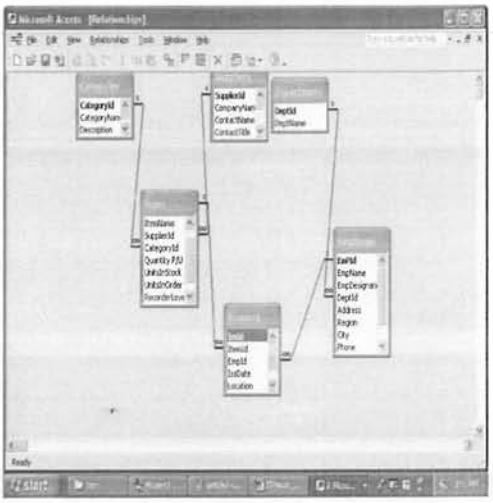
This chapter sums up the description

Of the database, its tables along with

its Data fields and description.

This chapter includes:

- Database Description
- Platform (OS)
- Database Connectivity Type
- Short Description of Tables
- Data Dictionary



CHAPTER 7

DATABASE DESCRIPTION

Version 1.0

By:

Naeem

Data Base	
Name	naeem
Introduction	It contains all the information regardingInventry Control. It maintains the records of Administrator, Employees,items,Suppliers,Categories,Departments,Issuances
Platform	Windows XP,Windows98,Windows2000
Connectivity	OLEDB
References	

No	Table Name	Description
1.	Administrator	This table stores the information of Administrator.
2.	Categories	This table is used to store all the information related to Categories
3.	Departments	This table is used to store all the information related to Departments
4.	Employees	This table is used to store all the information related Employees
5.	Issuance	This table is used to store all the information about issuances against employees
6.	Items	This table is used to store all the information related to Items
7.	Suppliers	This table is used to store all the Information about Suppliers

Data dictionary

administrator			
FIELD NAME	**DATA TYPE**	**SIZE**	**DESCRIPTION**
UserName	Text	15	Id of the Administrator
UserPassword	Text	15	Password of the Administrator

Categories			
FIELD NAME	**DATA TYPE**	**SIZE**	**DESCRIPTION**
CategoryId	AutoNumber	Long	Id of the Category
CategoryName	Text	20	Name of Category
Description	Memo	50	What is included

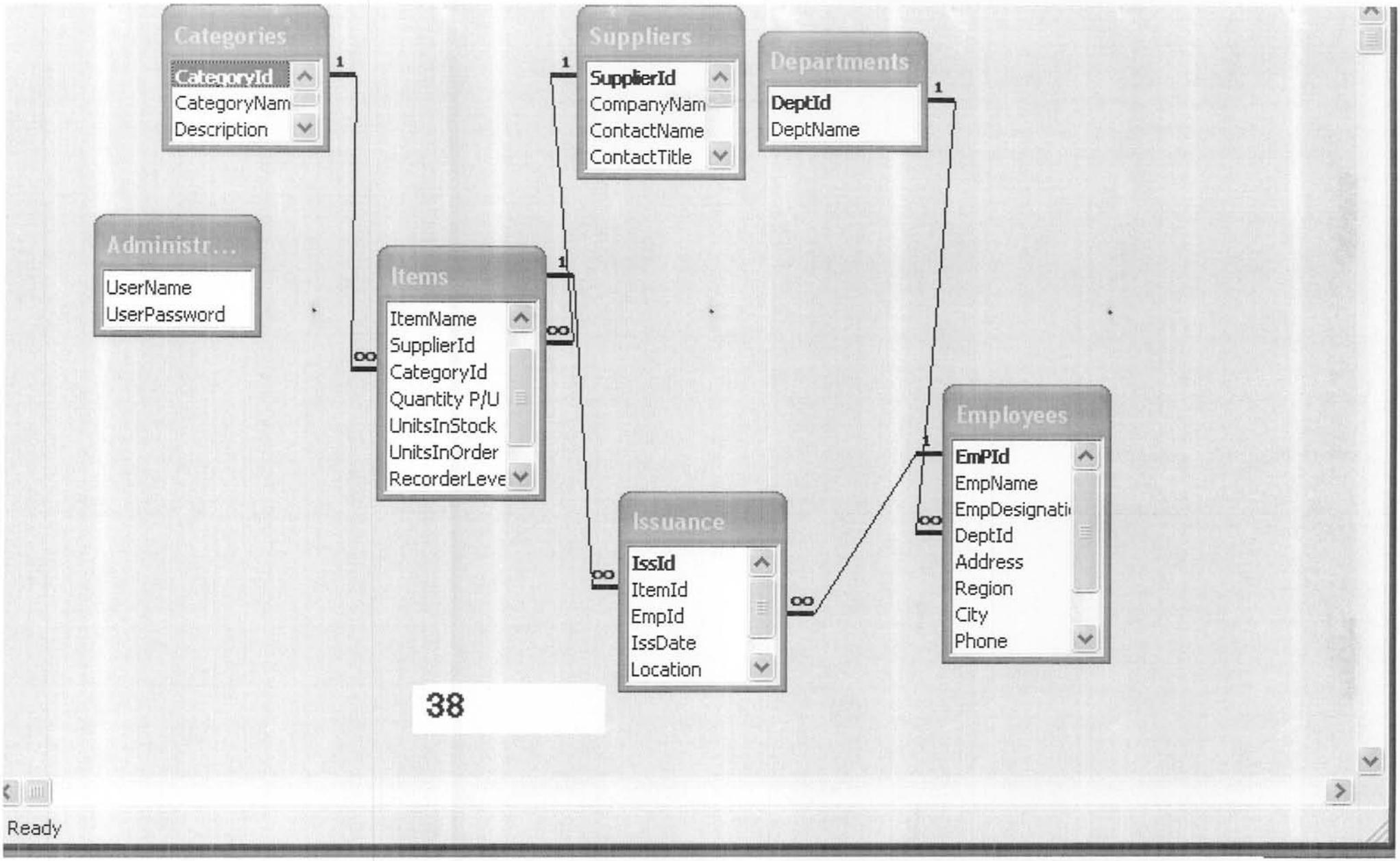
Departments			
FIELD NAME	**DATA TYPE**	**SIZE**	**DESCRIPTION**
DeptID	AutoNumber	30	Id of Department
DeptName	Text	30	Name of Department

Employees			
FIELD NAME	**DATA TYPE**	**SIZE**	**DESCRIPTION**
EmpId	AutoNumber	15	Id Number of Employee
EmpName	Text	30	Name of Employee
EmpDesignation	Text	30	Designation of employee
DeptId	Number	15	Same Entry as in Department table
Address	Text	30	Address of Employee
Region	Text	30	State or Province
City	Text	30	City Of Employee
Phone	Text	15	With country/area code
Location	Text	30	Room# etc;

Issuance			
FIELD NAME	**DATA TYPE**	**SIZE**	**DESCRIPTION**
IssId	AutoNumber	15	Id Number of Issuance
ItemId	Number	15	Same Entry As in Items
EmpId	Number	15	Same entry as in employees
IssDate	Date	25	Date of Issuance
Location	Text	25	Location of Issued item
Comments	text	40	Comments about employee to which item is issued

Items			
FIELD NAME	**DATA TYPE**	**SIZE**	**DESCRIPTION**
ItemID	AutoNumber	15	ID of Item
ItemName	Text	50	Name of theItem
CategoryId	Number	15	Same entryt as in categories
SupplierId	Number	15	Same entry as in Suppliers
Quantity P/U	Text	250	Quantity per Unit
UnitsInStock	Number	5	Units in stock
UnitsInOrder	Number	5	Units In Order
RecorderLevel	Number	5	Recorder Level

Suppliers			
FIELD NAME	**DATA TYPE**	**SIZE**	**DESCRIPTION**
SupplierId	AutoNumber	5	Id of Supplier
CompanyName	text	40	Name of supplier company
ContactName	text	50	Name of person dealing
ContactTitle	Text	50	Designation of person dealing
Address	Text	50	Address of supplier
City	Text	40	City of supplier
Region	Text	22	State or province
PostalCode	Text	40	Postal code of supplier
Country	Text	30	Country of supplier
Phone	Text	30	Number include Country/area code
Fax	Text	25	Fax number includes country area code
HomePage	HyperLink	50	Supplier's address on world wide web


Categories
CategoryId
CategoryNam
Description
Suppliers
SupplierId
CompanyNam
ContactName
ContactTitle
Departments
DeptId
DeptName
Administr...
UserName
UserPassword
Items
ItemName
SupplierId
CategoryId
Quantity P/U
UnitsInStock
UnitsInOrder
RecorderLeve
Issuance
IssId
ItemId
EmpId
IssDate
Location
Employees
EmPId
EmpName
EmpDesignati
DeptId
Address
Region
City
Phone
1
∞
38
Ready

ICS

OBJECTIVES

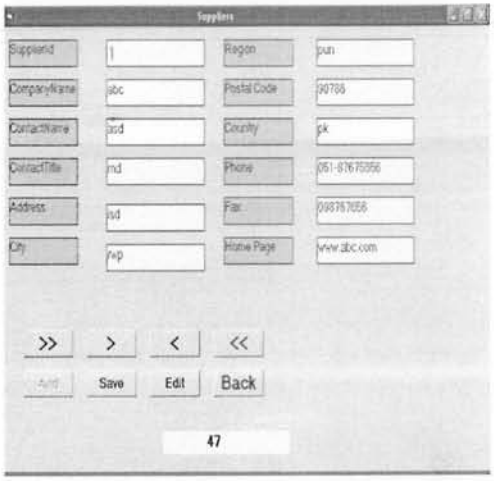
This chapter sums up the activities

Of the testing, plan of the Inventory

*Control System(**ICS**)*

This chapter includes:

Testing Plan
Team for Testing
Decomposition of Modules



CHAPTER 5

TESTI MANAGEMENT PLAN

Version 1.0
By:
Naeem Ahmed

Software Test Plan

Product Visualization

ICS is developed especially for the personal who are engaged in controlling the inventory for QAU Departments who do not have much and convenient Information gathered altogether (because of The problems of duplication). So keeping in view the problems of these people we are going to develop a system, which can be used by these Personals.

The Purpose of this project is to maintain an Informative record, by which people would have an unlimited access to know the current status of inventory. We term the project as "ICS".

Time Limit

We have a time of eight, so we will take Six days for testing, as we don't require an exhaustive testing.

Team for Testing

testing team is composed one member

No	Name	Contribution
1.	Naeem Ahmed	User Registration, Login, Validation and modification All Module Testing

Decomposition of Modules

We have divided project into different modules for the testing purposes being considering our manpower, resources and expertise. The modules for ICS are

1. **, Login**
2. **Suppliers**
3. **Categories**
4. **Items**
5. **Departments**
6. **Employees**
7. **Issuance**

Level of Testing

We require a medium level of testing for ICs, so we will perform our testing on this level and try to make it a quality product. We will also try to find as many bugs as we can and try to achieve the goal.

Description of Plan

As far as the overall description of our testing plan is concern we have planned it by considering different factors including

- Nature of product
- Tool used for development

- Platform of the product deployment
- Development and design constraints
- User consideration
- Architecture of software
- Resources constraints

TESTING

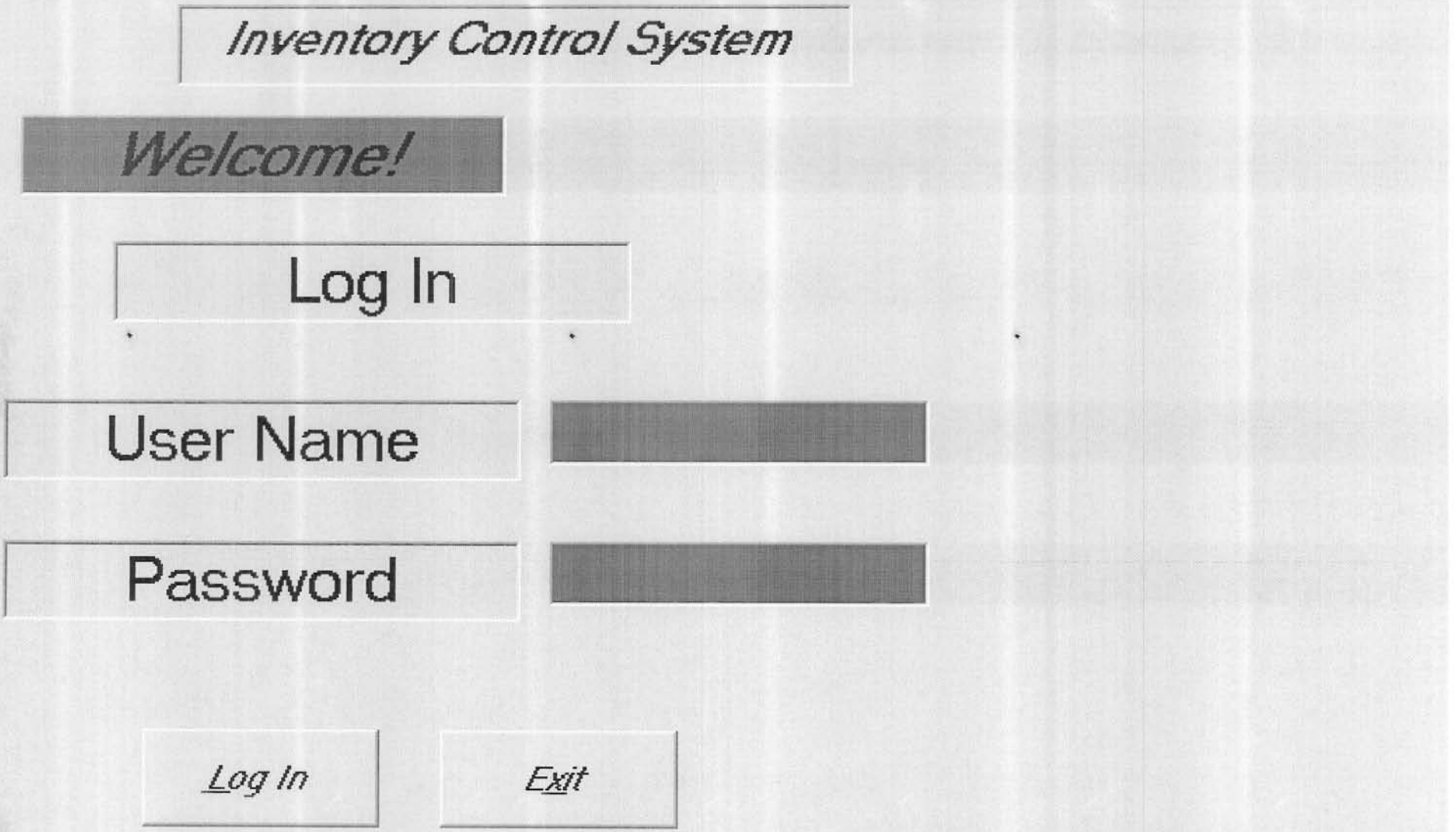
1. Introduction

1.1 Product Name	Version
Inventory Control System	1.0

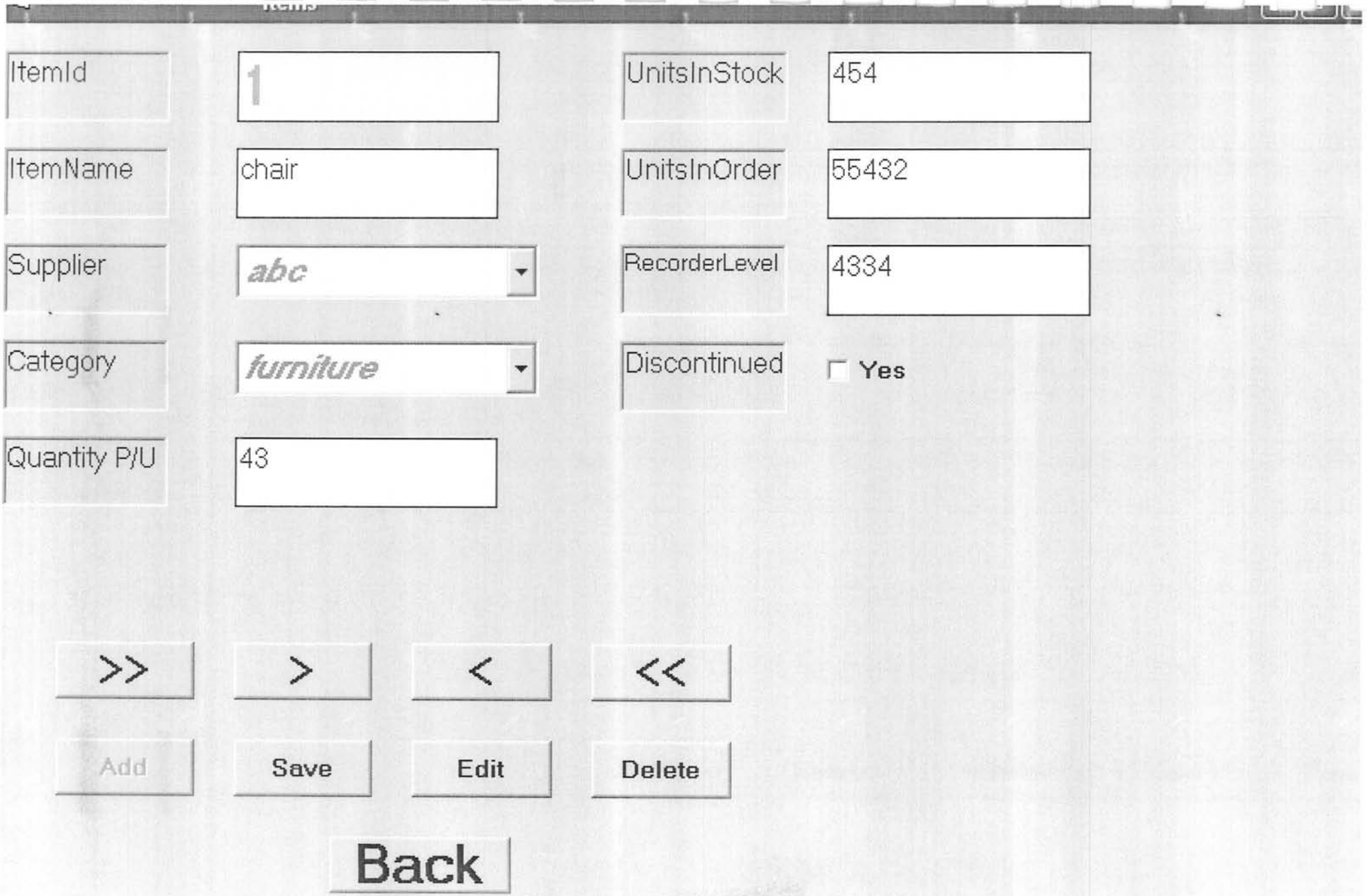
1.2 Test Cases Developed by		
No	Name	Contribution
1.	Naeem Ahmed	Testing of User Registration, Login, Validation and All Module Testing

1.3 Document Generated by	Signature
Naeem Ahmed	Naeem

1.4 Date		
Saturday	June	2003
Day	Month	Year

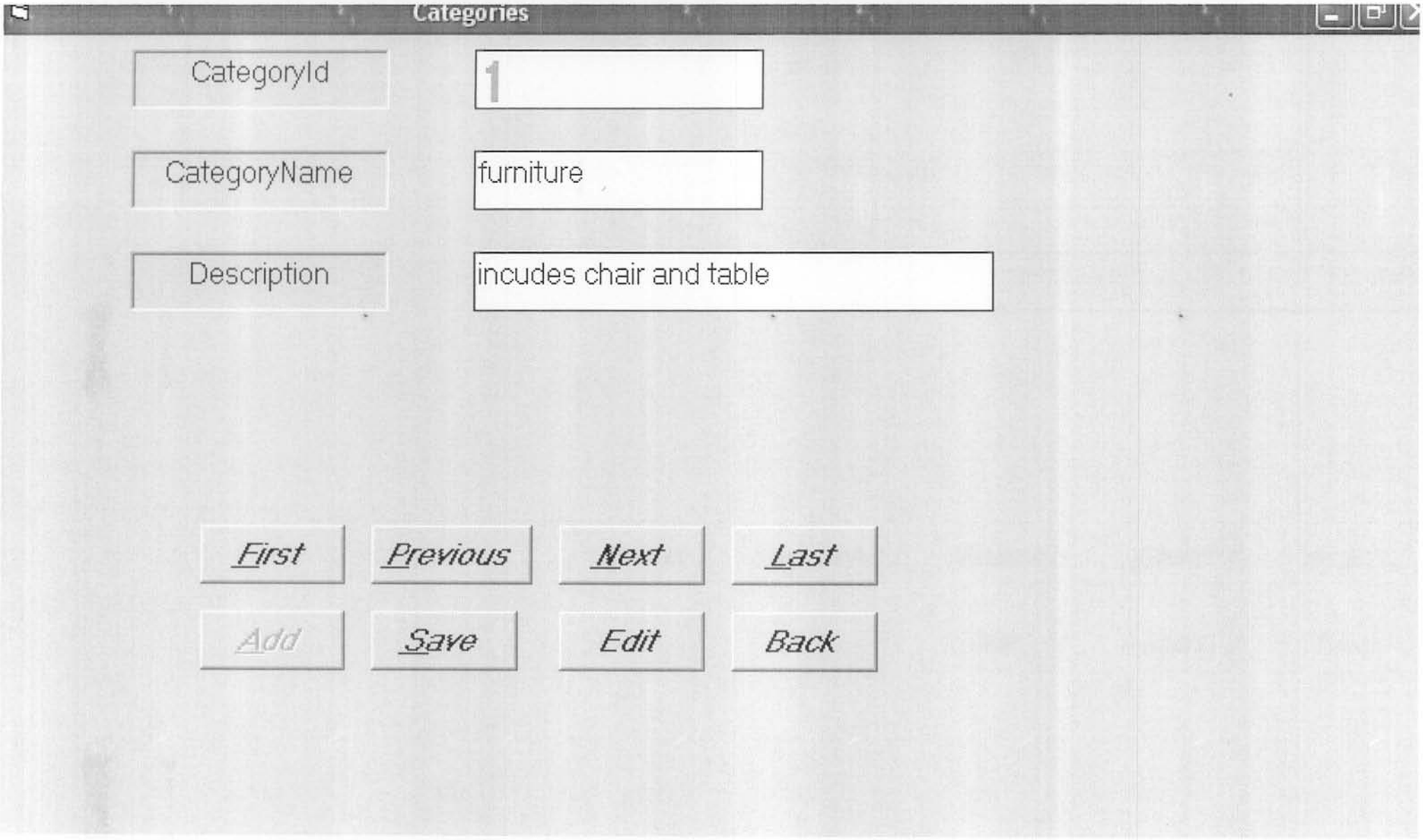

Inventory Control System
Welcome!
Log In
User Name
Password
Log In
Exit

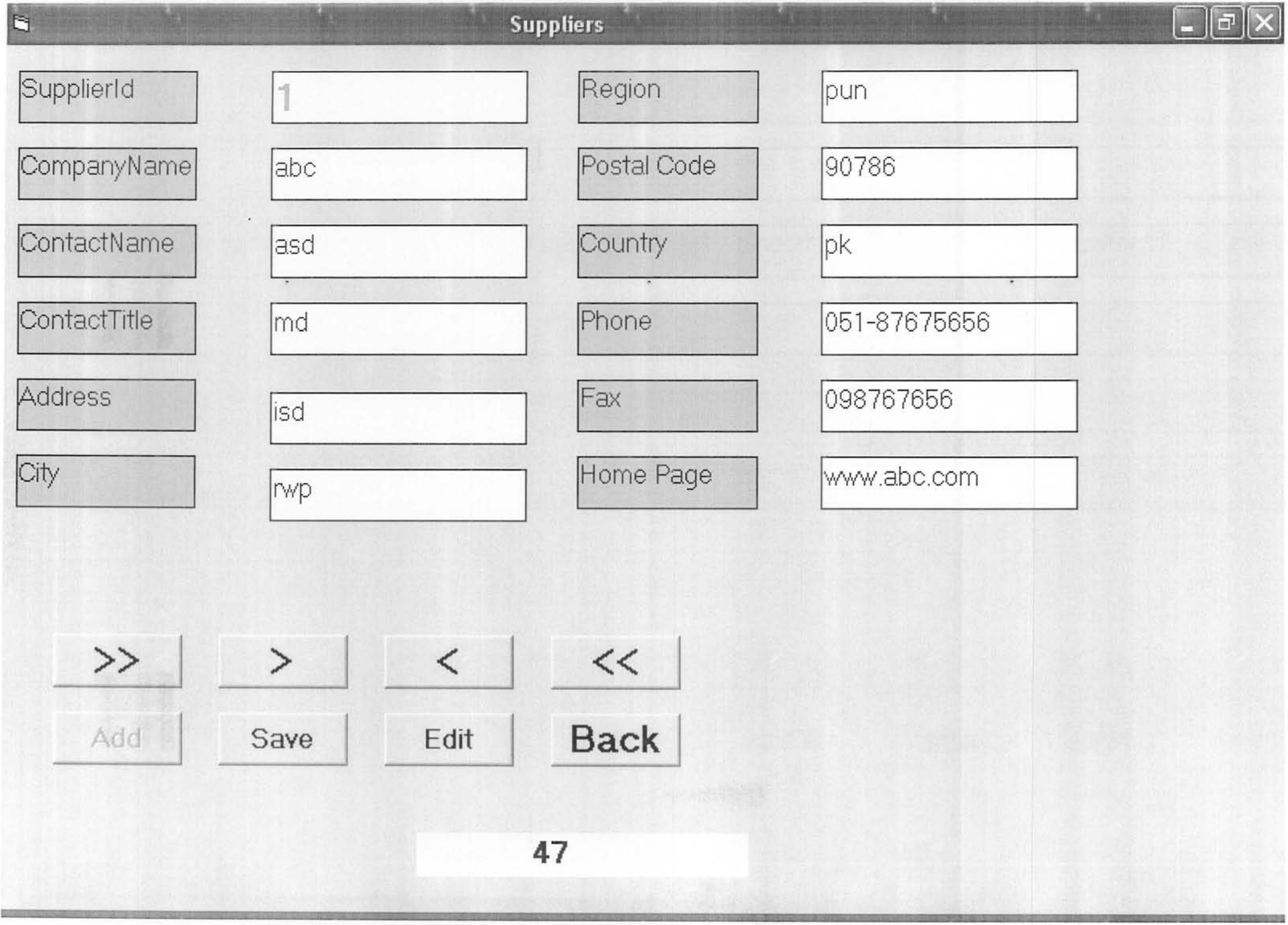
4:50 PM

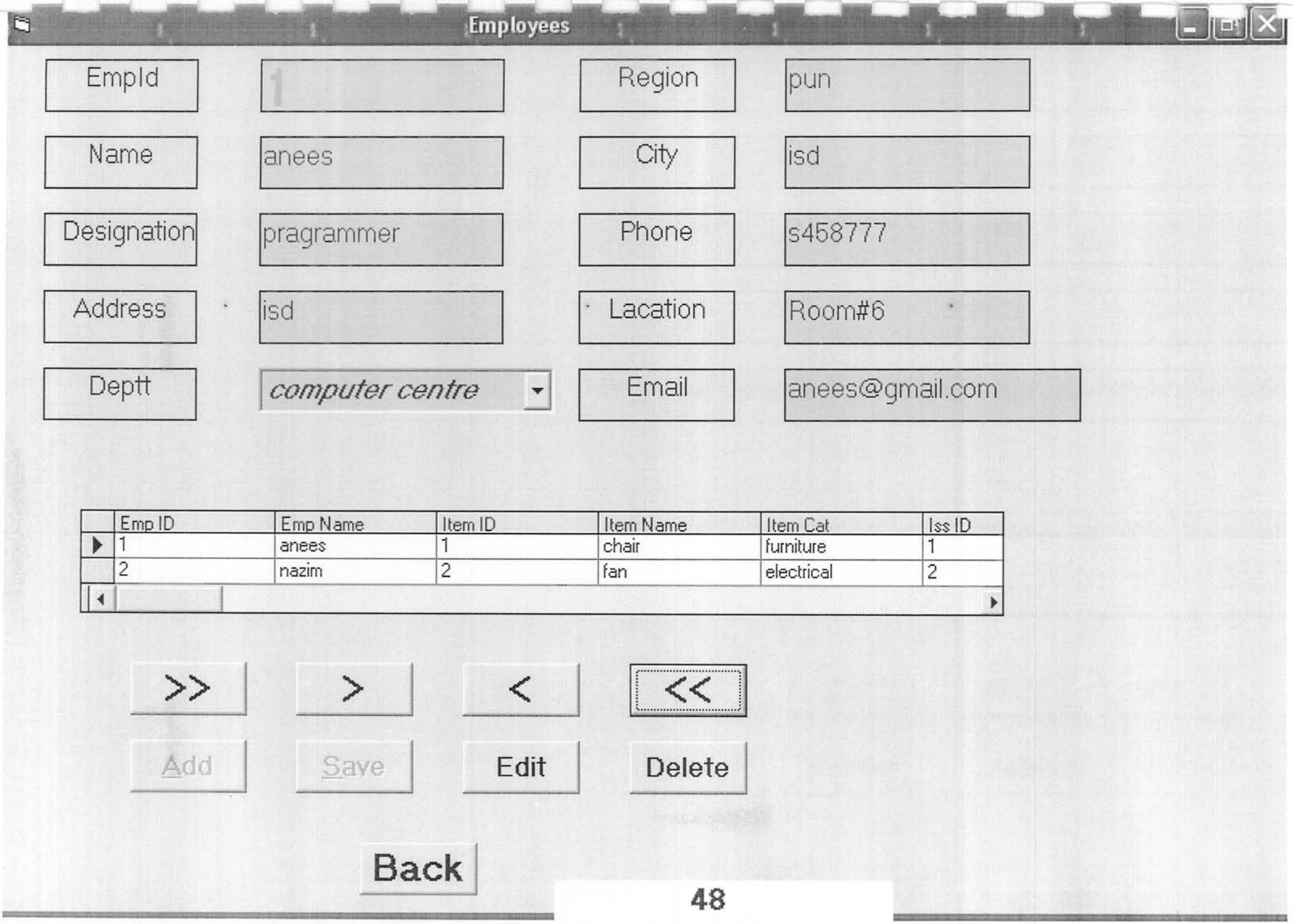

ItemId
1
UnitsInStock
454
ItemName
chair
UnitsInOrder
55432
Supplier
abc
RecorderLevel
4334
Category
furniture
Discontinued
Yes
Quantity P/U
43
>>
>
<
<<
Add
Save
Edit
Delete
Back

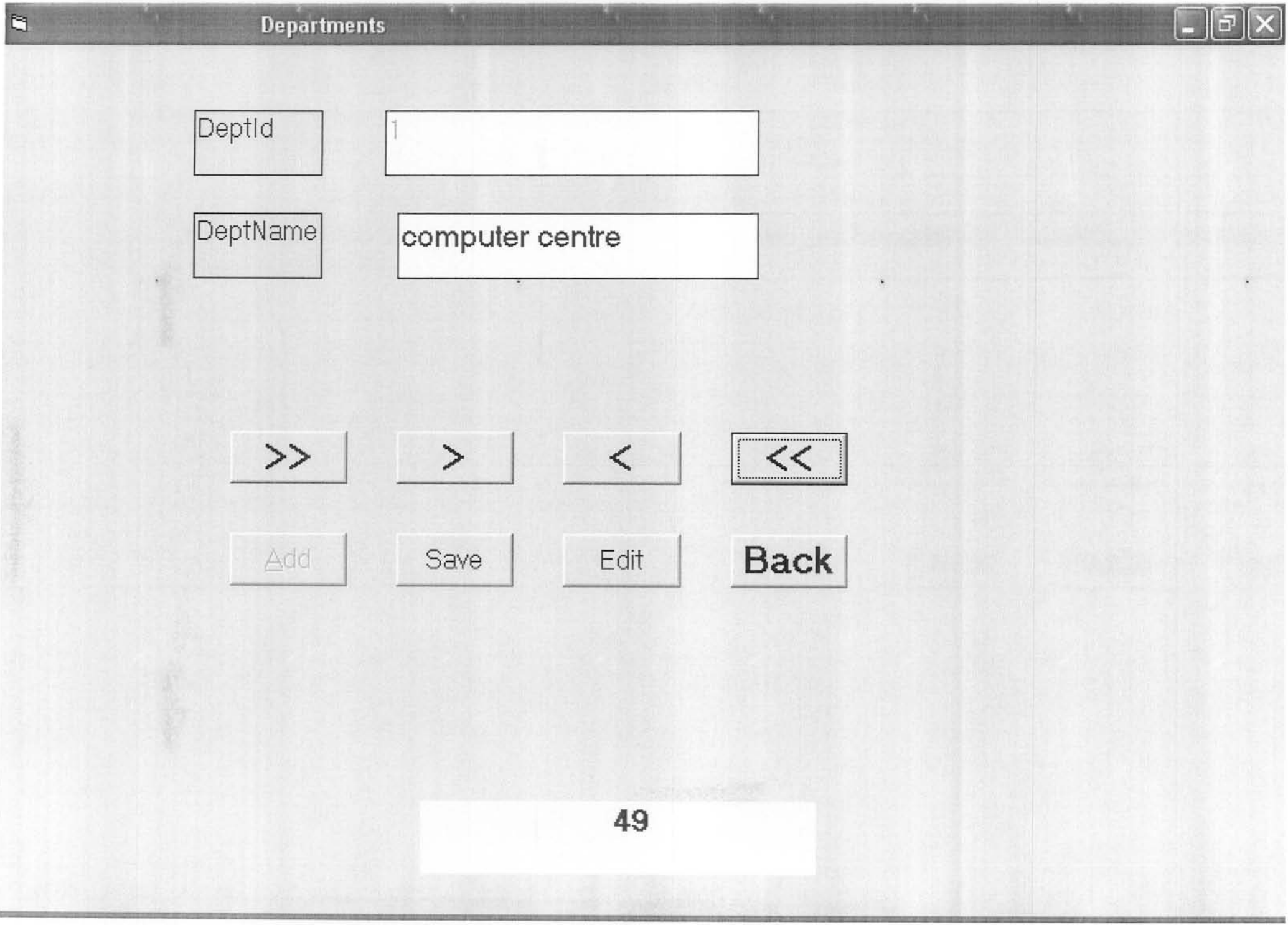
4:53 PM

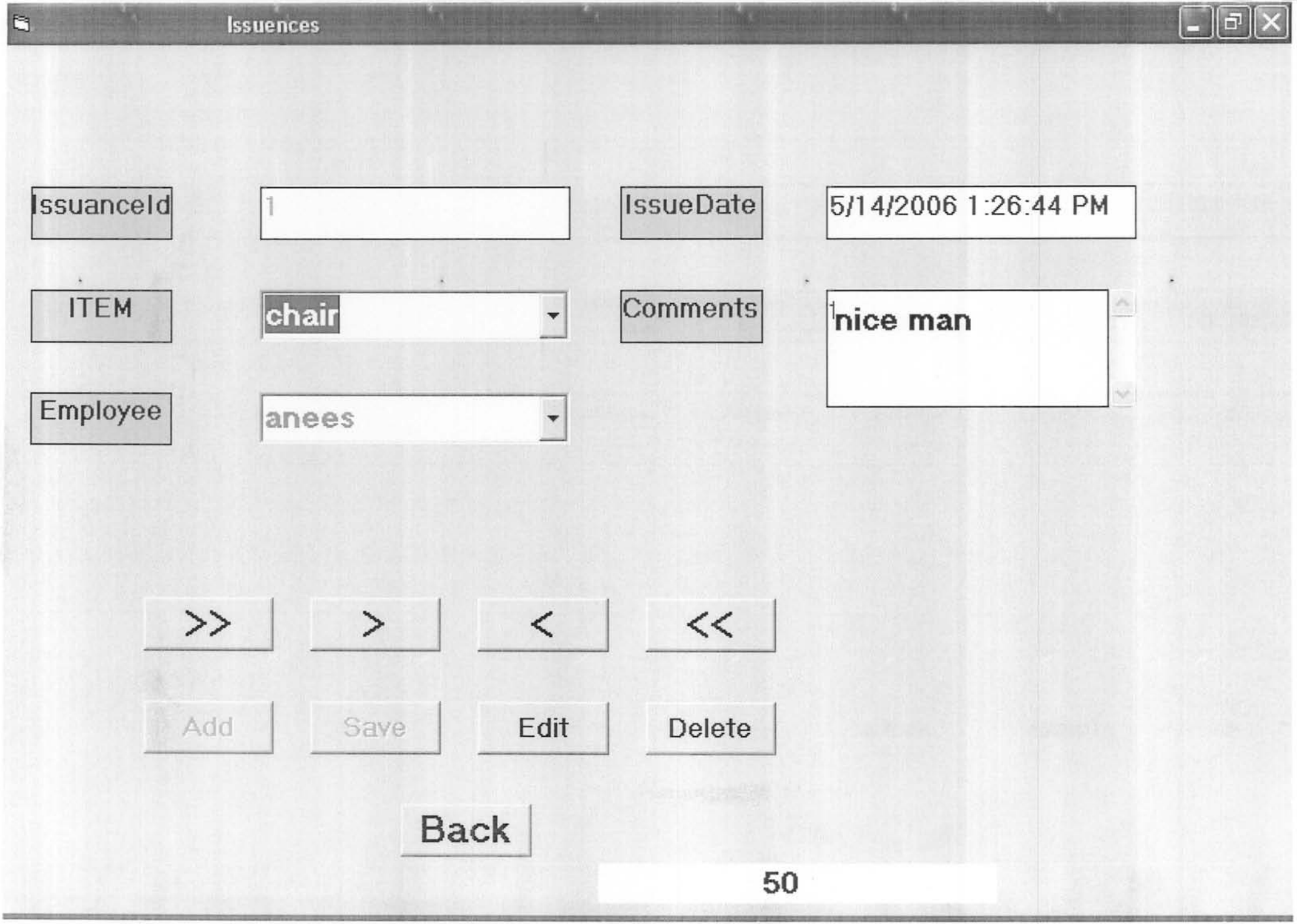

Items
Categories
Suppliers
Employees
Departments
Issuance
Reports
Search
Exit


Categories
CategoryId
1
CategoryName
furniture
Description
incudes chair and table
First
Previous
Next
Last
Add
Save
Edit
Back


Suppliers
SupplierId
1
Region
pun
CompanyName
abc
Postal Code
90786
ContactName
asd
Country
pk
ContactTitle
md
Phone
051-87675656
Address
isd
Fax
098767656
City
rwp
Home Page
www.abc.com
>>
>
<
<<
Add
Save
Edit
Back
47


Employees
EmpId
1
Region
pun
Name
anees
City
isd
Designation
pragrammer
Phone
s458777
Address
isd
Lacation
Room#6
Deptt
computer centre
Email
anees@gmail.com
Emp ID
Emp Name
Item ID
Item Name
Item Cat
Iss ID
1
anees
1
chair
furniture
1
2
nazim
2
fan
electrical
2
>>
>
<
<<
Add
Save
Edit
Delete
Back


Departments
DeptId
1
DeptName
computer centre
>>
>
<
<<
Add
Save
Edit
Back


Issuences
IssuanceId
1
IssueDate
5/14/2006 1:26:44 PM
ITEM
chair
Comments
nice man
Employee
anees
>>
>
<
<<
Add
Save
Edit
Delete
Back
50

Inventory Control System

OBJECTIVES

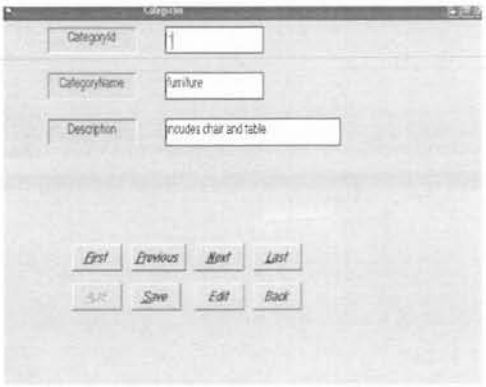
This chapter sums up the information

Of the tools and technologies used to develop

this Inventory Control System

This chapter includes:

- Introduction To VB
- Visual Basic IDE
- Steps in Developing VB Application
- Database Handling in VB
- The Data Control
- Recordset Object
- DAO &ADO



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CHAPTER 9

TOOLS & TECHNOLOGY

Version 1.0

By:

Naeem Ahmed

Introduction To Visual Basic

Visual Basic evolved from Basic (Beginner's All purpose Symbolic Instruction Code).Basic was developed in 1960s by Professor John Kemmeny and Thomoas Kurtz of Dartmooth College.It was developed as a language for writing simple programs to help people learn how to program.

BASIC became a popular language and its widespread use led to many enhancements in the language.With the development of GUI for personal Computer (MS Windows) in the late 1980s and early 1990s,the version of BASIC suitable for GUI environment was developed.It was named Visual Basic and it was developed by Microsoft Corporation in 1991.

9.2 Visual Basic IDE

Visual Basic is both a tool and a language. He tool is he Visual Basic Inegrated Devolopment Environment (IDE).It provides facilities for writing, debugging and running programs in one environment.It is used to develop GUI of The program. Language is used to write the code that executes behind the GUI of the program.

Steps in Developing VB Application

An application in Visual Basic Devolopment Enviornment is developed in three steps. These steps are followed in every application whether it is a simple or a complicated and extensive application. These steps are:

- Drawing the user interface by placing controls on the forms
- Assigning properties to the controls
- Writing and Attaching the code to the control events and writing independent procedures

The Visual Basic application is developed in stages. In each stage, the code for one procedure is written and tested. This makes writing of the application programs simpler. It also minimizes programs errors.

Standard EXE Project

When Visual Basic is loaded the new project dialog window is displayed. This dialog window contains various types of applications that can be created in Visual Basic IDE.It contain the following three tabs.

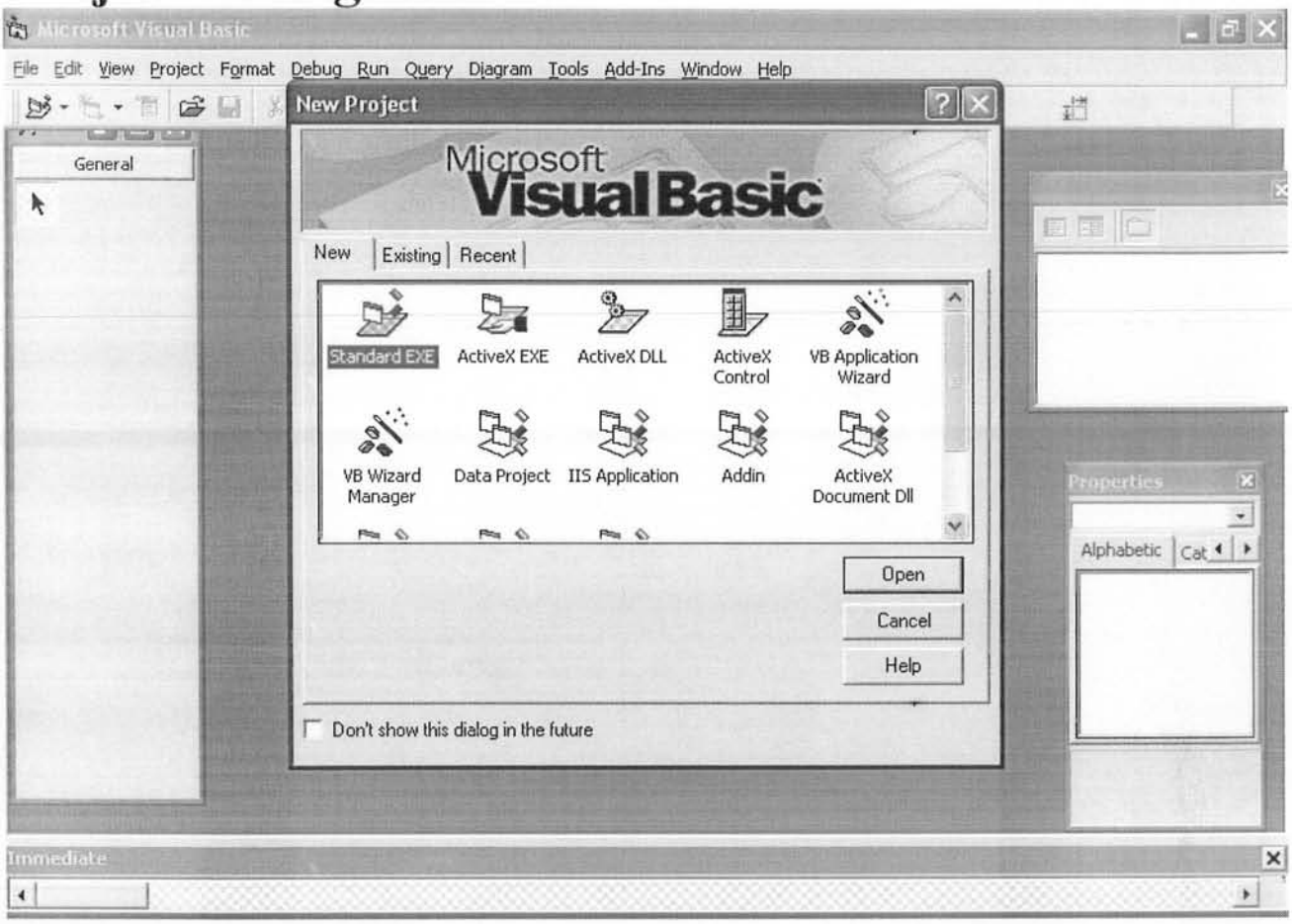
- ✓ The **new** tab contains options for creating new visual basic applications
- ✓ The **existing** tab is used for opening an existing application saved on the disk
- ✓ The **recent** tab is used for opening a project that has been recently used into the Visual Basic IDE.

The **new project dialog** is displayed each time the Visual Basic is loaded. There is a check Box in the lower left corner of this dialog. If this check box is checked, this dialog is not displayed when the visual basic is started. It is, however, displayed when the new project command in the file menu is executed.

The new project dialog window contains a number of different types of applications that can be created in visual basic. Their number and type in this dialog window depends upon the edition of the visual basic. For example the learning edition of VB contains fewer items than the Professional Edition.

The figure below shows the new project dialog of Visual Basic Enterprise Edition. **Standard Exe** is highlighted by default. It uses the most common visual Basic Features.

Project Dialog Box



Database Handling In Visual Basic

DATABASE

A database is a collection of related information organized in a specific format that can be easily retrieved for processing. The data in a database is arranged in tabular form, i.e. in columns and rows. The **rows** in a database table are used to describe similar items. The rows are referred to as **database records.** In general, no two rows in a database table will be alike. The **columns** in a database table provide characteristics of the records. These characteristics are called **database fields** .Each

Field contains one specific piece of information. Assigning it the data type, length and other attributes specifies a database field.

Database Handling

Database is handled in Visual Basic through Visual Basic Forms. Database is connected to visual Basic Form either through connection property of ADO/DAO Control are by creating connection and recordset objects depending upon the size and nature of the database application. But it is strongly recommended that objects should be created when working on large projects. By creating objects every type of database can be connected with Visual Basic Enviornment. Here we are creating objects in our project to handle the database developed in MS Access, because there is no need to convert the database in version suitable for visual basic as it is done when working with Data Access Object Control.

Connection Object

The connection object is used to establish a connection to the data source. The data source may be a local database or a remote SQL Server.The connection object is created as:

Dim connection name _as new ADODB.Connection

ADODB stands for ActiveX Data Object Database

Connection Object Methods

Its methods are used to open and close connections. These are also used to manage transactions and execute commands.

The commonly used methods are:

Open Method

It is used to establish a physical connection to a data source. Its Syntax is:

Conobject.open connection string, username, password

The used of arguments Username and password is optional.

Connection String:

"Provider=Microsoft.jet.OLEDB.4.0; Data source= Biblio.mdb"

Close Method

This method is used to break the connection with the data source. Its syntax is:

Conobject.close

RecordSet Object

It is used to hold the records retrieved from the database. The recordset object is main object of ADO. It can be used to open a data source directly without using connection object. It also allows the direct access to a data source to add new records, update records, and delete existing records and to navigate the records.

Records Methods

Its commonly used methods are:

Open method

It is used to open table of database into a recordset object.

Close Methods

It is used to close the recordset object.

Navigation Methods are:

MoveFirst

To move to the first record in the table .The recordset object must support Backward cursor movement otherwise this method generate an error.

MovePrevious

To move to the previous record with respect to the current record in the table. The recordset object must support Backward cursor movement otherwise this method generates an error.

MoveNext

To move to the next record with respect to the current record in the table

MoveLast

To move to the last record in the table

To allow all types of movements through the recordset, the CursorType of adOpenDynamic is defined. The syntax is:

Recordset.CursorType=adOpenDynamic

MS Access

Microsoft is a powerful windows based relational database management system (RDBMS). That can be used to create and modify database tables, data entry forms and queries etc. It is a database that is more suitable for working with VB forms.

TABLE CREATION

In Access database files are called as tables. First step towards the development of system is to create tables according to the specification and structure . Before creating tables a new project is created, which is keeping track o files .a project make it easy easier to organize, view and manipulate database objects through the interface, as well as to simplify the process of building an application.

Second step is to create the relations between tables according to extended Bachman diagram. Access provides an easy visual approach to define relationships between tables in the database relationships.