



Billing application for computer shop using visual basic

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Abstract

The billing application for a computer shop developed using Visual Basic is a software program designed to streamline the billing process of a computer shop. This application allows the computer shop to generate invoices for customers, keep track of customer information, and manage inventory levels. The software interface is user-friendly and easy to navigate. It includes various features such as the ability to add and edit customer information, search for customer details, and view sales reports. The application also provides a comprehensive inventory management system, allowing the computer shop to track the quantity and value of products sold.

Keywords: Application, sales, billing, product, service

Introduction

The Visual Basic Integrated Development Environment is a program from Microsoft used to create, test, and deploy Visual Basic programs. VB programs can be written using other text editors, which must then be converted to executable code (compiled and linked) by the programmer. As the name implies, creation, editing, compiling, and linking are all integrated in this development environment. Visual Basic was designed to be easy to learn and use, which is why it is often used to prototype an application. It will likely then be written in a more difficult language that is better suited to the app.

The company still adds new tools for VB developers to Visual basic. The structure of VB is designed to allow programmers to use the environment to write executable files. Also, using VB, developers can create program that can be utilized as a front end to databases. VB tools can help programmers develop applications or complete software while still allowing them to modify and revise their work accordingly.

A macro is essentially a sequence of characters whose input results in another sequence of characters that accomplishes specific computing tasks. You do not need to purchase the VBA software because VBA is the version of Visual Basic that ships with Microsoft Office.

Overview of the project

The purpose of the system is to serve to make billing easy and efficient Application to manage inventory and make billing simple. This study aims to help the staff/employee of the company make their work faster using the system where they can monitor the products in the records where they can see in the database. The system will provide a good service to the company like better transaction process that brings bigger profits. The new system can fix the problem of managing records and making bill easier for monitoring help the workers to have a faster way of recording details of each bill entry.

The application saves all the data related to the subscribers like the customer's name, Date, address, phone number.

These details will be saved in the database.

First part of the application includes splash screen, login page, home page.

It has secured with login username and password that helps to protect unauthorized login by external people. Second is home page. This is equipped with multiple menus that needed to maintain the products and preparation of purchase and sales bill with regard to each customer separate entry with specified date ordered.

Hardware requirements

Processor : AMD Pro A4 4th Gen
Hard Disk Capacity : 256 GB
Ram : 8 GB
Keyboard : Dell
Mouse : Dell

Software requirements

Operating System: Windows 11 pro
Front – End: Microsoft Visual Basic
Back – End: Microsoft Access

Existing system

Earlier the data pertaining to billing was managed manually. This was not efficient. It was more prone to make error. The user had to keep track of all the customers information in files. Keep Searching for the information was laborious task. It utilized the maximum efforts from the telecom vendors. Eventually it causes significant data mismatch of various category of products.

The cost of maintaining the data of customers was huge. As the industry grew the problem became more complex. There was a huge requirement for resources to track the bill of each of customers. Even it is sufficient for small businesses with a limited number of customers.

This may also cause lack of real-time updates on inventory levels, sales data, purchase data, customer data, etc. It became difficult to scale up and are not always efficient manual billing.

Proposed system

This is a simple Billing system application developed using Visual Basic. The interface takes as input certain fields which shall be stored in the database. The user has to login to the system with unique username and password for protection. This form takes details such as name, Address, Number of the supplier and the customer. The details are stored in respective tables in the database. Each record pertaining to the customer is recorded in the backend.

With the robust connectivity to the database user can search for any of the purchase and sales details with ease. Time saving of manual entry of record to the updated version of billing on computerized system

With the proposed system billing and maintenance of record of customer, Supplier and Products items are stored on the Microsoft Access Database. The Microsoft Access database is used as the back-end of the application to store and manage the database.

Software description

A. Operating System: Windows 11

Windows 11 is the next client operating system, and includes features that organizations should know. Windows 11 is built on the same foundation as Windows 10. If you use Windows 10, then Windows 11 is a natural transition. It's an update to what you know, and what you're familiar with. It offers innovations focused on enhancing end-user productivity, and is designed to support today's hybrid work environment. Your investments in update and device management are carried forward. For example, many of the same apps and tools can be used in Windows 11. Many of the same security settings and policies can be applied to Windows 11 devices, including PCs. You can use Windows Autopilot with a zero-touch deployment to enroll your Windows devices in Microsoft Intune. You can also use newer features, such as Azure Virtual Desktop and Windows 365 on your Windows 11 devices.

B. Platform

Microsoft Visual Basic 6

Visual Basic is a programming language and development environment created by Microsoft. It is an extension of the basic programming language that combines Basic functions and commands with visual controls. Visual Basic provides a graphical user interface GUI that allows the developer to drag and drop objects into the program as well as manually write program code.

Programs created with Visual Basic can be designed to run on Windows, on the Web, within Office applications, or on mobile devices. Visual Studio, the most comprehensive VB development environment, or IDE, can be used to create programs for all these mediums.

Input design

Input design is the process of connecting the user-originated inputs into a computer to used formats. The goal of the input design is to make data entry Logical and free from errors. Errors in the input database controlled by input design this application is being developed in a user-friendly manner. The forms are being designed in such a way that during the processing the cursor is placed in the position where the data must be entered. An option of selecting an appropriate input from the values of validation is made for each of the data entered. Concerning clients comfort the project is

designed with perfect validation on each field and to display error messages with appropriate suggestions. Help managers are also provided whenever user entry to a new field he/she can understand what is to be entered. Whenever user enter an error data error manager displayed user can move to next field only after entering a correct data.

Database Design

The database design involves creation of tables that are represented in physical database as stored files. They have their own existence. Each table constitute of rows and columns where each row can be viewed as record that consists of related information and column can be viewed as field of data of same type. The table is also designed with some position can have a null value. The database design of project is designed in such way values are kept without redundancy and with normalized format. Refer the appendix for screen shots of Database Design

Output Design

Computer output is the most important and direct source of information to the user. Efficient intelligible output design should improve the system's relationship with the user and admin in decision-making. Output design generally refers to the results generated by the system. For many end users on the basis of the output the evaluate the usefulness of the application.

Customer Details

This module is used for customer Information registration for Billing Software. Once the customer is registered, we can use the same Account for all consequent items, can purchased we add the sub module of the form like customer id, customer name and address.

Supplier Details

This module is used for Supplier registration for delivery in the variety of Products. If the stock is not available, the orders and buys from a prescribed vendor. The amount will be paid by deducting the total amount acquired in the sales activity Once the Supplier is registered, we can use the same logon for all consequent items can purchased we add the sub module of the form like Supplier id, Supplier name and address.

Billing Details

As the customer buys the products and comes to the billing counter, the user is supposed to enter the item name it purchased and the quantity of the item wanted to purchase. This is not a huge a task. The system will display all the items whose name starts with the letter selected by the user. It can select out of those displayed.

Purchase Details

The purchase is the information spending cost for buying keyboard, mouse, computer and its accessories that need to be recorded is separate database with information about the supplier, date, invoice number, list of items, price, quantity, total amount spend.

Sales Details

The information in which the products after product condition and customer satisfaction of the product are analyzed with the seller and confirm to the billing process

that include recording of Customer Name, Invoice Number, Date, item Purchased, Category of Product, Price and Total Amount of Sales to the Customer.

System Testing

In the system testing the whole system is tested for interface between each module and program units are tested and recorded. This testing is done with sample data. The securities, communication between interfaces is tested System testing is actually a series of different tests whose primary purpose is to fully exercise the computer-based system although each test has a different purpose all work to verify that all system elements properly integrated and perform allocate function.

Unit Testing

Here each program is tested individually so any error apply unit is debugged. The sample data are given for the unit testing. The unit test results are recorded for further references. During unit testing the functions of the program unit validation and the limitations are tested. Unit testing is testing changes made in an existing or new program this test is carried out during the programming and each module is found to be working satisfactorily. For example, in the registration form after entering all the fields we click the submit button. When submit button is clicked all the data in form are validated.

Only after validation entries will be added to the database. Unit testing comprises the set of tests performed by an individual prior to integration of the unit into large system. The situation is illustrated in as follows Coding Debugging >Unit Testing Integration testing->Output Testing.

Output Testing

Asking the user about the format required by them tests the output generated by the system under consideration. It can be done in two ways, one on screen and other on printer format. The output format on the screen is found to be correct as the format designed n system test.

Integrated Testing

Integrated testing is a systematic technique for constructing tests to uncover errors associated with interface. Objective is to take unit tested modules and build a program structure that has been dictated by design.

Acceptance Testing

Acceptance testing involves planning an execution of a functional test, performance test and stress test to verify that the implemented system satisfies the requirement. The acceptance testing is the final stage of the user the various possibilities of the data are entered and the results are tested.

Validation Testing

software validation is achieved through a series of test that demonstrates the conformity and requirements. Thus, the proposed system under consideration has to be tested by validation and found to be working satisfactorily.

For example, in customer enters phone number field should contain number otherwise it produces an error message Similarly in all the forms the fields are validated.

System Implementation

Implementation is the stage in the project where the theoretical design is turned into a working system. The most crucial stage is achieving a successful new system and giving a user confidence in that the new system will work efficiently and effectively in the implementation stage.

The stage consists of

- Testing a developed program with sample data.
- Detection and correction of error.
- Creating whether the system meets a user requirement.
- Making necessary changes as desired by users.
- Training user personal.

Conclusion

The main objective of the project is to bring a full-fledged computerized organization, and to enable the transaction details to maintain records, which makes of the employees easier. Thus, the proposed system has been developed with good amount of flexibility without compromising on the response time. Computerization of the entire system will enhance more accuracy and reduces major part of clerical works. Fast, clear and legible reports can be generated without any ambiguity. Integrated database design and ease of maintenance is a major advantage of the system. User friendliness is a unique feather of the system. Hence by developing a system that is user-friendly in nature, many users are able to work on the system with little of computer knowledge and training.

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