SYNOPSIS

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The "**Web Vulnerability Scanner**" project is a Python-based tool designed to identify common vulnerabilities in web applications. With the increasing complexity of web technologies, vulnerabilities like Cross-Site Scripting (XSS) and SQL Injection pose significant risks to data security. This project aims to provide a solution for developers and security professionals to detect and mitigate these vulnerabilities effectively.

# INTRODUCTION

The Web Vulnerability Scanner project aims to develop a tool using Python that can identify common vulnerabilities in web applications. These vulnerabilities include Cross-Site Scripting (XSS), SQL Injection, and potentially others. The purpose of this project is to provide a basic but functional scanner that can help developers and security professionals identify and mitigate vulnerabilities in their web applications.

## ORGANIZATION PROFILE Sree Narayana Guru College

With a view of imparting quality education for the aspiring youth of Coimbatore, Sree Narayana Guru Educational Trust members came forward with a plan to start a college for Applied Sciences and Management Studies. Sree Narayana Guru College (SNGC) came into existence in 1994, Affiliated to Bharathiar University, Accredited by NAAC and Approved by Govt.of Tamilnadu.

Sree Narayana Guru College strives to emerge as a premiere institute of international standards promoting excellence and equity in higher education. To mould the students of the institution through a socially committed, intellectually inclined, value based and culture driven paradigms of learning using the state-of-the-art educational technologies.

* + - To enhance the learning capacity and knowledge of the students by imparting quality education of national and international standards.
    - To make the students think critically, objectively, creatively and to be life-long learners, engaged leaders and productive citizens.
    - To motivate the students to pursue research, to advance knowledge and to address the state, national and global challenges.
    - To mould their character and develop a value system so as to manifest oneness among students of diverse socio-cultural and economic backgrounds.
    - To identify the inherent talents of the students and provide a platform to exhibit them.

# SYSTEM SPECIFICATION

## HARDWARE CONFIGURATION:

Processor : AMD Ryzen 3 3200G with Radeon Vega Graphics.

RAM : 8GB DDR4.

SSD : 249GB.

Key Board : 104 keys.

* + 1. **SOFTWARE SPECIFICATION:** Operating system : Ubuntu 23.04. Front End Software : Python 3.

Back End Software : MySQL.

## SOFTWARE FEATURES

**About Python 3**

Python is a high-level, interpreted programming language known for its simplicity, readability, and versatility. Guido van Rossum initially created Python in the late 1980s, and its first public release occurred in 1991. Since then, Python has evolved into one of the most popular programming languages globally, with a vast and active community of developers contributing to its growth and ecosystem.

**Key features and characteristics of Python include**:

* 1. **Readable and Simple Syntax**: Python emphasizes readability and simplicity, with a clean and straightforward syntax that reduces the cost of program maintenance and debugging. Its code is often described as being close to natural language, making it accessible to beginners and experienced developers alike.
  2. **Interpreted and Interactive**: Python is an interpreted language, meaning that code is executed line by line by the Python interpreter without the need for compilation. This allows for rapid development and prototyping, as developers can quickly test and execute code interactively in a Python shell or REPL (Read-Eval-Print Loop).
  3. **High-Level Language**: Python abstracts away low-level details, enabling developers to focus on solving problems rather than managing system-level operations. It provides built-in data structures and high-level abstractions for common tasks, such as lists, dictionaries, and file I/O operations.
  4. **Dynamic Typing and Strong Typing**: Python is dynamically typed, meaning that variable types are determined at runtime and can change throughout the program's execution. However, Python is also strongly typed, enforcing type safety and preventing certain types of errors at runtime.
  5. **Extensive Standard Library**: Python comes with a comprehensive standard library that provides modules and packages for performing a wide range of tasks, including file I/O, networking, web development, data processing, and more. This rich library ecosystem simplifies development by providing pre-built solutions for common programming tasks.
  6. **Cross-Platform Compatibility**: Python is available on multiple platforms, including Windows, macOS, Linux, and Unix-like operating systems, making it highly portable and suitable for developing cross-platform applications.
  7. **Large Ecosystem of Third-Party Libraries**: Python boasts a vast ecosystem of third-party libraries and frameworks that extend its capabilities for various domains such as web development (Django, Flask), data science (NumPy, Pandas), machine learning (scikit-learn, TensorFlow), and more. These libraries enhance productivity and enable developers to leverage existing solutions to build complex applications efficiently.
  8. **Community Support**: Python has a vibrant and inclusive community of developers, enthusiasts, and contributors who actively participate in discussions, contribute to open-source projects, organize conferences and events, and provide support through forums, mailing lists, and online communities.

## About MySQL

MySQL is an open-source relational database management system (RDBMS) that is widely used for building and managing databases in various applications and websites. Developed by MySQL AB, it was later acquired by Sun Microsystems and subsequently by Oracle Corporation. MySQL is named after its co-founder, Michael Widenius's daughter, My.

**Key features of MySQL include:**

* 1. **Open Source**: MySQL is available as open-source software under the GNU General Public License (GPL), allowing users to freely download, use, modify, and distribute it. This open-source nature has contributed to its widespread adoption and extensive community support.
  2. **Relational Database**: MySQL is a relational database management system, meaning it organizes data into tables consisting of rows and columns, following the principles of the relational model. It supports SQL (Structured Query Language) for querying and manipulating data stored in these tables.
  3. **Cross-Platform Compatibility**: MySQL is compatible with various operating systems, including Linux, Windows, macOS, and Unix-like systems, making it highly versatile and suitable for deployment in diverse environments.
  4. **Scalability and Performance**: MySQL is known for its scalability and performance, capable of handling large datasets and high-traffic websites efficiently. It offers features like replication, clustering, partitioning, and caching to optimize performance and accommodate growing workloads.
  5. **High Availability and Reliability**: MySQL provides features such as replication, automatic failover, backup and recovery mechanisms, and transaction support to ensure high availability and reliability of data stored in databases.
  6. **Security**: MySQL offers robust security features to protect data from unauthorized access, including user authentication, access control, data encryption, and SSL/TLS support. It also supports auditing and logging functionalities to monitor database activities.
  7. **Community and Enterprise Editions**: MySQL is available in both community and enterprise editions. The community edition is free to use and is supported by the open-source community, while the enterprise edition includes additional features, support, and services tailored for enterprise deployments.
  8. **Extensive Ecosystem**: MySQL has a vast ecosystem of tools, utilities, connectors, and extensions that enhance its functionality and integration with other technologies. This ecosystem includes management tools, graphical user interfaces (GUIs), connectors for various programming languages, and third-party plugins.

## UBUNTU

Ubuntu is a popular open-source Linux distribution based on Debian. It is developed and maintained by Canonical Ltd. and was first released in October 2004. Ubuntu is named after the African philosophy of ubuntu, which emphasizes community, sharing, and interconnectedness.

**Key features and characteristics of Ubuntu include:**

* 1. **Free and Open Source**: Ubuntu is distributed as free and open-source software under the GNU General Public License (GPL). Users are free to download, use, modify, and distribute Ubuntu without any licensing fees.
  2. **User-Friendly Interface**: Ubuntu provides a user-friendly desktop environment with a graphical user interface (GUI), making it accessible to users who may not be familiar with Linux or command-line interfaces. It includes features such as the GNOME desktop environment, the Ubuntu Software Center for installing applications, and a range of pre-installed software packages.
  3. **Stable and Secure**: Ubuntu is known for its stability and security, with regular updates and security patches provided by Canonical. It benefits from the robust security features inherent in Linux, including user permissions, access control, and built-in firewalls.
  4. **Package Management**: Ubuntu uses the Advanced Package Tool (APT) for package management, allowing users to easily install, update, and remove software packages from the Ubuntu repositories. It also supports the Snap package format for distributing and installing software packages with dependencies bundled together.
  5. **Wide Hardware Support**: Ubuntu provides broad hardware compatibility, supporting a wide range of hardware architectures and devices. It includes drivers for common hardware components and peripherals, ensuring that Ubuntu can be installed and used on a variety of systems.
  6. **Community Support**: Ubuntu benefits from a large and active community of users, developers, and contributors who provide support, share knowledge, and collaborate on the development of the operating system. Community forums, mailing lists, and online resources are available for users to seek assistance and contribute to the Ubuntu ecosystem.
  7. **Customization and Flexibility**: Ubuntu offers flexibility and customization options, allowing users to tailor their desktop environments, install additional software packages, and configure system settings according to their preferences. Users can choose from various desktop environments (e.g., GNOME, KDE, Xfce) and customize their Ubuntu experience accordingly.

# SYSTEM STUDY

1. **SYSTEM STUDY**

## EXISTING SYSTEM

The existing system for scanning web vulnerabilities exhibits several drawbacks. Firstly, it relies on manual processes, necessitating human intervention for identifying and assessing vulnerabilities in web applications, which can introduce errors and inconsistencies. Moreover, the manual nature of the system contributes to its time-consuming nature, resulting in significant delays in completing scans and addressing security issues promptly. Additionally, the system lacks interactivity, impeding user engagement and feedback during the scanning process, thereby potentially reducing its effectiveness. Furthermore, the high costs associated with the manual system, including expenses related to manpower and specialized tools, make it financially burdensome for organizations to maintain.

## DRAWBACKS

The drawbacks of the existing manual system for scanning web vulnerabilities, as described in the provided text, include:

1. **Human Error**: Manual processes are prone to human error, leading to mistakes in identifying or assessing vulnerabilities. This can result in false positives or negatives, compromising the effectiveness of the scanning process.
2. **Time-Consuming**: Manual scanning is time-consuming as human operators need to inspect each aspect of the web application individually. This leads to delays in identifying and addressing vulnerabilities, leaving the system exposed to potential threats for longer periods.
3. **Limited Scalability**: Manual scanning may not be scalable, especially for large or complex web applications. As the size and complexity of the application increase, the manual effort required for scanning also increases, making it difficult to scale the process effectively.
4. **Inconsistency**: Different individuals may apply different methods or criteria for scanning web vulnerabilities, leading to inconsistencies in the results. This lack of standardization makes it challenging to accurately assess the security posture of the web application.
5. **Resource Intensive**: Manual scanning can be resource-intensive, requiring dedicated personnel and time to perform the scans. This can result in increased operational costs and may not be feasible for organizations with limited resources.
6. **Limited Coverage**: Manual scanning may not cover all aspects of the web application comprehensively. Certain vulnerabilities or areas of the application may be overlooked due to human limitations or oversight, leaving potential security gaps.
7. **Dependency on Expertise**: Effective manual scanning requires expertise in web security and vulnerability assessment. Organizations may struggle to find and retain skilled personnel to perform the scans, leading to gaps in security coverage.

## PROPOSED SYSTEM

This system tends to replace the existing manual system for the scanning process which is a timeconsuming, less interactive and highly expensive. The main features of this system will be creating reportand find various types of vulnerabilities, storing Scanning data, process initiation, and after that it generatesa report of whole scanned websites.

## FEATURES

The proposed Web Vulnerabilities Scanner (WVS) aims to overcome the limitations of the existing manual system for scanning web vulnerabilities. Here are the key aspects and advantages of the proposed system:

1. **Automation**: The WVS automates the scanning process, reducing reliance on manual effort. This automation improves efficiency and accuracy in identifying vulnerabilities across web applications.
2. **Efficiency**: By automating the scanning process, the WVS significantly reduces the time required to scan web applications for vulnerabilities. This efficiency allows for quicker detection and remediation of security issues, enhancing the overall security posture of the applications.
3. **Comprehensive Coverage**: The WVS is designed to provide comprehensive coverage by scanning for a wide range of vulnerabilities. It can identify various types of security flaws, including input injection attacks, cross-site scripting (XSS), SQL injection, and more.
4. **User-Friendly Interface**: The system features a user-friendly interface that simplifies the scanning process and allows users to easily navigate through the application. This intuitive interface makes it accessible to users with varying levels of technical expertise.
5. **Reporting Capabilities**: The WVS generates detailed reports that summarize the findings of the scanning process. These reports provide actionable insights into detected vulnerabilities, enabling users to prioritize and address security issues effectively.
6. **Scalability**: The WVS is scalable and can accommodate the scanning needs of both small and large web applications. It can handle multiple scans simultaneously, allowing organizations to scale their security efforts as their applications grow.
7. **Cost-Effectiveness**: By automating the scanning process and reducing the need for manual intervention, the WVS offers cost savings for organizations. It minimizes the resources required for scanning, including time, manpower, and specialized tools.
8. **Continuous Monitoring**: The WVS supports continuous monitoring of web applications, allowing organizations to regularly assess their security posture and detect vulnerabilities in real-time. This proactive approach helps prevent security breaches and minimize potential risks.

# SYSTEM DESIGN AND DEVELOPMENT

## SYSTEM DESIGN AND DEVELOPMENT

System design involves translation of information, requirements and conceptual design into technical specification and general flow of processing. After the requirements are identified, related information is gathered to verify the problem and after evaluating the existing system, a new system is proposed. The proposed system consists of various tables, their maintenance and report generation.

The proposed system is designed such a way that it will compensate all the deficiency of the existing system and to regenerate the system with optimum efficiency. The software is developed in user friendly mode. The software also generates reports of permanent. It can store large amount of data by occupying very less space.

## FILE DESIGN

A file design system is composed of [objects.](http://www.answers.com/topic/object-references) The behavior of the system is achieved through collaboration between these objects, and the state of the system is the combined state of all the objects in it. Collaboration between objects involves them sending messages to each other. The exact semantics of message sending between objects varies depending on what kind of system is being modeled. In some systems, "sending a message" is the same as "invoking a method". In other systems, "sending a message" might involve sending data via a [socket](http://www.answers.com/topic/unix-socket).Object- Oriented Design (OOD) is an activity where the designers are looking for logical solutions to solve a problem, using objects. Object-oriented design takes the conceptual model that is the result of object-oriented analysis, and adds implementation constraints imposed by the environment, the programming language and the chosen tools, as well as architectural assumptions chosen as basis of design.

## INPUT DESIGN

Input design is a part of overall system design, which requires careful attention. It is the process of converting user-originated inputs to a computer-based format. The major objective of the input design is to make data entry easy, logical and error free.

The design of the input subsystem starts with the organization of the source data. In Visual Basic the acquisition of source data is done through Forms. The forms will be having components like textbox, combo box, List box, radio button, check boxes, push buttons, etc. The data items in the combo box and in list boxes is pre entered and user just has to select the contents from it.Input from includes modules are Login, Customer details, Sales details, Sales return details, Product details, Stock details.

In Visual Basic input to the system is entered through forms. A form is “any surface on which information is to be entered, the nature of which is determined by what is already on the surface”. If the data going into the system is incorrect, then processing and output will magnify these errors. So designer should ensure that form is acceptable and understandable by the user.

This application has been developed in a user-friendly manner. The layout of the form is made in such a way that the user will not find any difficulty in going from one field to other by just pressing the tab. During the processing the cursor is placed in the position where the data must be entered.

The user is also provided with an option of selecting an appropriate input from a list of values. Necessary dropdown list boxes and combo boxes are included for necessary fields so that the user need not remember all the data and can just select from it.

Validation is made for each and every data entered. . Help messages are also provided whenever the users enter a wrong data into a particular field. This makes the user to understand what is to be entered, moreover whenever an erroneous data is entered the error message is displayed and the user can move to the next field only after entering the correct data.

## Data validation:

The two main types of data checks are input validation and feasibility checking.

## Input validation

This is more of an absolute proof than in feasibility checking because the computer based system checks the input data against known values. In the system input validation are duplication of data has been occurred or not is checked when we input the data.

## Feasibility study

Feasibility checks looks for the like hood errors. In the system data types and size are checked against acceptable type and size and any difference results in rejection of data item.

## Error Messages

Whenever an error is detected appropriate error messages are displayed to the user specifying the reason for errors.

## OUTPUT DESIGN

One of the most important features of a system for users in the output it produces. Output design should improve the system’s relationship with the user and help in decision-making. Considering the future use of output required, and depending on the nature, it is displayed on the monitor for immediate need of obtaining the hard copy.

The objective of output design is to define the controls and format of all printed documents and reports and of screens that will be produced by the system. Computer output is the most important and direct source of information to the user.

## Objectives of Output Design

* + - Design output to serve the intended purpose.
    - Deliver the appropriate quality of output.
    - Choose the right output method.
    - Provide output on time.

Output, generally refers to the results that are generated by the system. The output of the system is designed so as to include number of reports. Reports reflect the output design.

## DATABASE DESIGN

The activity deals with the design of the database. A key is to determine how the access paths are to be implemented. A physical path is derived from a logical path. The general theme behind database is to handle information as a whole. A database is a collection of interrelated data stored with minimum redundancy to serve many users quickly and efficiently.

Database design is the most critical part of the design phase. An elegantly designed, well- defined database is a strong foundation for the whole system. The general objective is to make information access easy, quick, inexpensive and flexible for the user Files in a relational database are called as tables. Columns of tables represent data and rows represent the records in conventional technology. During database design, the following objectives are concerned:-

* + - Controlled redundancy.
    - Easy to learn and use.
    - More information and low cost.
    - Accuracy.
    - Integrity.

.

# SYSTEM DEVELOPMENT

## 3.5 .1 DESCRIPTION OF MODULES

Proposed system includes updating of master file and generation of Reports. Using Visual Basic as Front-end and MS Access as Back-end. Detail of purposed system is as below.

## Item Details:

This stores the information about the Item in the Medical store. Store the information such as Item code, Item name, stock, etc.

## Purchase Details:

This keeps information about the purchase Item from dealer . This stores information such as dealer name, Item name, price , quantity etc**.**

## Billing Details:

This keeps details of all billing information. This keeps records customer who purchase our item including customer name, bill no, and total amount.

## Customer Details

It consists of customer code, customer name, address etc. It has the option to add and delete the customer and view the existing customers.

## Supplier Details

It consists of supplier code, supplier name, address etc. It has the option to add and delete the supplier and view the existing suppliers.

## Product Details

It consists of product code, product name, unit price, maximum level and reorder level of the item. It has the option to add and delete the outdated item and view the existing item.

# TESTING AND IMPLEMENTATION

* + - * 1. **TESTING AND IMPLEMENTATION**

## SYSTEM IMPLEMENTATION

The implementation phase is less creative than system design. It is primarily concerned with user training site preparation and file conversation. Implementation is the stage where the theoretical design is turned into a working system. The most crucial stage in achieving a new system is that it will work efficiently and effectively after implementation. The system can be implemented only after thorough several testing and should work according to the user’s specification.

The user training is a very important aspect in developing a project. The software developer gives the details and the methods to use the software. The user should be provided with enough details for the successful operation and maintenance of the system.

The user manual should contain the details and description of the system, which is essential for the proper operation. In addition, the system should accommodate future enhancements and also the error handling techniques should be perfect.

During the final testing the user acceptance is tested and followed by user training depending on the nature of system extensive user training may be required. This is the final stage of the system development.

## SYSTEM TESTING

System testing focuses verification effort on the smallest unit of software design of the module. Using the detail design description as a guide, important control paths are tested to uncover errors within the boundary of the module. The relative complexity of tests and the errors detected as a result is limited by the constrained scope established for unit testing. The unit is always white box- oriented, and the step can be conducted in parallel for multiple modules.System testing is normally considered an adjunct to the coding step. After source level code has been developed, reviewed, and verified for correct syntax, unit test casedesign begins.

A review of design information provides guidance for establishing test cases that are likely to uncover errors in each of the categories discussed above. Each test case should be coupled with a set of expected results.

Because a module is not a stand-alone program, driver and / or stub software must be developed for each system test. In most applications a driver is nothing more than a “main program” that accepts test case data, passes such data to the module, and prints the relevant results. Stubs serve to replace modules that are subordinates (called by) the module to be tested.

## WHITE BOX TESTING

In this approach of testing, tests are made with the complete knowledge about the internal working of the product. Tests can be conducted to ensure that all the internal operations of the product perform according to the specifications and all the internal components have been adequately tested. Check points at various places could be placed, so that checks are made to see if the status corresponding to the actual status.

Test cases designed through this approach ensure that

All independent paths within a module have been exercised at least once, executing all logical decisions depending on their true or false values.

* Execute all loops well within their bounds
* Exercise internal data structure to ensure their validity etc.

## BLACK BOX TESTING

In this approach to testing, test cases are prepared with the knowledge about the function that the product is designed to perform. Tests can be conducted which demonstrates the complete functionality of the product. Tests are done to check if the product is fully operational rather than checking each loops are conditions of the function. At the software level of testing, this approach resolves around testing the software interface. This approach has very little regard for the internal logical structure of the software. This approach saves time and energy.

Although this approach of testing is designed to uncover errors, they demonstrate that the functions are fully operational. They ensure that the inputs are properly accepted and desired output is obtained. They also provide for maintaining the complete integrity of the external input.

The attributes of both black and white box testing can be combined to provide an approach that validates the software interfaces and selectively ensures that the internal workings of the software are correct.

## UNIT TESTING

Unit testing focuses verification effort on the smallest unit of software design, module. This testing was carried out during the coding itself. In this testing step, each module is found to be working satisfactorily as per the expected output from the module.

## SYSTEM TESTING

The next level of testing is system testing where the system analyst tests all of the components to see that they interact correctly when combined as a system. A series of testing are performed for the newly developed system before the system is ready for user acceptance testing.

## VALIDATION TESTING

Validation succeeds when the software functions in a manner that is reasonably expected by the customer. Software validation is achieved through a series of black box test that demonstrate conformity with the requirements. Deviations or errors at this step are corrected.

## OUTPUT TESTING

The output generated by the system under consideration is in the format required by the user and the information in the reports is accurate. It is possible to generate timely reports without any errors.

## USER ACCEPTANCE TESTING

User acceptance of a system is a key factor for the success of any system. The system under consideration was tested for user acceptance by constantly keeping in touch with prospective system users at the time of developing and making changes wherever required.

## QUALITYASSURANCE

Software quality assurance involves the entire software development process monitoring and improving the process, making sure that any agreed-upon standards and ensuring that problems are found and dealt with. It is oriented to prevention.

Testing involves operation of a system or application under controlled conditions and evaluating the results. The controlled conditions should include both normal and abnormal conditions. Testing should intentionally attempt to make things go wrong to determine if things happen when they should not or things don’t happen when they should. It is oriented to ‘detection’.

Organizations vary considerably in how they assign responsibilities, quality assurance and testing. Sometimes they are the combined responsibility of one group or individual. Also common are project teams that include a mix of testers and developers who work closely together, with overall quality assurance process monitored by project managers. It will depend on what best fits and organization’s size and business structures.

## SYSTEM MAINTENANCE

Maintenance involves the software industry captive, typing of system resources. It means restoring something to its original condition. Maintenance involves a wide range of activities including correcting, coding and design errors, updating documentation and test data, and upgrading user support. Maintenance was done after the success implementation. Maintenance is continued till the product is reengineered or deployed to another platform. Maintenance is also done based on fixing the problem reported, changing the interface with other software or hardware, enhancing the software.

# CONCLUSION

## CONCLUSION

While developing the system a conscious effort has been made to create and develop a software package, making use of available tools, techniques and resources – that would generate a proper System.

While making the system, an eye has been kept on making it as user-friendly, as cost- effective and as flexible as possible. As such one may hope that the system will be acceptable to any user and will adequately meet his/her needs.

In the system you can get the reports which includes bills, customers information. In the bills we can know the item information and also stock information.

Since modular and structure approach has been taken towards development of system, it can also expand other functions of the part of organization. It also very useful for the management. With the used of these system user can easily update the record, view the record and quickly generate the report.

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**BIBLIOGRAPHY**

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## WEBSITE:

* + [www.devx.com](http://www.deux.com/asp.net)
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  + [www.example-code.com](http://www.example-code.com/)
  + [www.functionx.com](http://www.functionx.com/)

**APPENDICES**

# A. DATA FLOW DIAGRAM

Level 0

# B.TABLE STRUCTURE

## LOG IN MASTER TABLE

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **N O** | **NAME** | **TY PE** | **S I**  **Z E** | **CONSTR AIN** | **DESCRIPTIO N** |
| **1** | **Username** | **Text** | **10** | **Not Null** | **Username** |
| **2** | **Password** | **Text** | **10** | **Not Null** | **Password** |

1. **BILL TABLE**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **NO** | **NAME** | **TYPE** | **SIZE** | **CONSTRAIN** | **DESCRIPTION** |
| **1** | **No** | **Int** | **10** | **Primary Key** | **No** |
| **2** | **Billno** | **Int** | **10** | **Not Null** | **Billno** |
| **3** | **C\_code** | **Int** | **10** | **Not Null** | **Customer Code** |
| **4** | **C\_name** | **Text** | **15** | **Not Null** | **Customer Name** |
| **5** | **Itemcode** | **Int** | **10** | **Not Null** | **Item Code** |
| **6** | **Itemname** | **Text** | **15** | **Not Null** | **Item Name** |
| **7** | **Quantity** | **Float** | **10** | **Not Null** | **Quantity** |
| **8** | **Price\_Per\_Unit** | **Float** | **10** | **Not Null** | **Price per unit** |
| **9** | **Total\_Price** | **Float** | **10** | **Not Null** | **Total Price** |
| **10** | **Salesdate** | **Datetime** | **8** | **Not Null** | **Salesdate** |

## CUSTOMER MASTER TABLE

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **NO** | **NAME** | **TYPE** | **SIZE** | **CONSTRAIN** | **DESCRIPTION** |
| **1** | **Cid** | **Int** | **10** | **Primary Key** | **Customer Id** |
| **2** | **C\_name** | **Text** | **15** | **Not Null** | **Customer Name** |
| **3** | **C\_no** | **Numeric** | **10** | **Not Null** | **Contact Number** |
| **4** | **C\_add** | **Text** | **15** | **Not Null** | **Customer Address** |
| **5** | **City** | **Text** | **15** | **Not Null** | **City** |
| **6** | **Pin** | **Int** | **6** | **Not Null** | **Pin code** |
| **7** | **Email** | **Text** | **15** | **Not Null** | **Email Address** |

1. **DEALER MASTER TABLE**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **NO** | **NAME** | **TYPE** | **SIZE** | **CONSTRAIN** | **DESCRIPTION** |
| **1** | **D\_code** | **Int** | **10** | **Primary Key** | **Dealer Code** |
| **2** | **D\_name** | **Text** | **15** | **Not Null** | **Dealer Name** |
| **3** | **C\_no** | **Numeric** | **10** | **Not Null** | **Contact Number** |
| **4** | **Add** | **Text** | **15** | **Not Null** | **Address** |
| **5** | **City** | **Text** | **10** | **Not Null** | **City** |
| **6** | **Date** | **Datetime** | **8** | **Not Null** | **Datetime** |
| **7** | **Pin** | **Numeric** | **6** | **Not Null** | **Pin Time** |
| **8** | **Email** | **Text** | **15** | **Not Null** | **Email Address** |

## Item Master Table

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **NO** | **NAME** | **TYPE** | **SIZE** | **CONSTRAIN** | **DESCRIPTION** |
| **1** | **I\_code** | **Int** | **10** | **Primary Key** | **Item Code** |
| **2** | **I\_name** | **Text** | **15** | **Not Null** | **Item Name** |
| **3** | **I\_details** | **Text** | **15** | **Not Null** | **Item details** |
| **4** | **Price** | **Float** | **10** | **Not Null** | **Price** |

1. **PURCHASE MASTER TABLE**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **NO** | **NAME** | **TYPE** | **SIZE** | **CONSTRAIN** | **DESCRIPTION** |
| **1** | **NO** | **Int** | **10** | **Primary Key** | **Dealer Number** |
| **2** | **D\_code** | **Int** | **15** | **Not Null** | **Dealer Code** |
| **3** | **D\_name** | **Text** | **20** | **Not Null** | **Dealer Name** |
| **4** | **I\_code** | **Int** | **10** | **Not Null** | **Item code** |
| **5** | **I\_name** | **Text** | **20** | **Not Null** | **Item Name** |
| **6** | **Total\_pur** | **Numeric** | **10** | **Not Null** | **Total Purchase** |
| **7** | **Pri\_per\_uni** | **Numeric** | **10** | **Not Null** | **Price Per Unit** |
| **8** | **To\_price** | **Numeric** | **10** | **Not Null** | **Total Price** |
| **9** | **Pu\_date** | **Datetime** | **10** | **Not Null** | **Perchase Date** |
| **10** | **Billno** | **Int** | **10** | **Not Null** | **Bill No** |

## PURCHASE RETURN TABLE

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **NO** | **NAME** | **TYPE** | **SIZE** | **CONSTRAIN** | **DESCRIPTION** |
| **1** | **No** | **Int** | **10** | **Primary Key** | **Dealer Number** |
| **2** | **Billno** | **Int** | **10** | **Not Null** | **Bill Number** |
| **3** | **D\_code** | **Int** | **10** | **Not Null** | **Dealer Code** |
| **4** | **D\_name** | **Text** | **20** | **Not Null** | **Dealer Name** |
| **5** | **I\_code** | **Int** | **10** | **Not Null** | **Item Code** |
| **6** | **I\_name** | **Text** | **20** | **Not Null** | **Item Name** |
| **7** | **Quantity** | **Float** | **10** | **Not Null** | **Quantity** |
| **8** | **T\_price** | **Float** | **10** | **Not Null** | **Total Price** |
| **9** | **P\_date** | **Datetime** | **10** | **Not Null** | **Purchase Date** |

1. **SALES MASTER TABLE**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **NO** | **NAME** | **TYPE** | **SIZE** | **CONSTRAIN** | **DESCRIPTION** |
| **1** | **No** | **Int** | **10** | **Primary Key** | **Customer Number** |
| **2** | **C\_code** | **Int** | **10** | **Not null** | **Customer Code** |
| **3** | **C\_name** | **Texte** | **20** | **Not null** | **Customer Name** |
| **4** | **I\_code** | **Int** | **10** | **Not null** | **Item code** |
| **5** | **I\_name** | **Texte** | **20** | **Not null** | **Item Name** |
| **6** | **Quntity** | **Int** | **10** | **Not null** | **Quantity** |
| **7** | **Pri\_per\_u** | **Numeric** | **10** | **Not null** | **Price Per Unit** |
| **8** | **T\_price** | **Numeric** | **10** | **Not null** | **Total Price** |
| **9** | **Billno** | **Int** | **10** | **Not null** | **Bill Number** |
| **10** | **S\_date** | **Datetime** | **10** | **Not null** | **Sales Date** |

## SALES RETURN TABLE

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **NO** | **NAME** | **TYPE** | **SIZE** | **CONSTRAIN** | **DESCRIPTION** |
| **1** | **No** | **Int** | **10** | **Primary Key** | **Customer Number** |
| **2** | **Billno** | **Int** | **10** | **Not Null** | **Bill Number** |
| **3** | **C\_code** | **Int** | **10** | **Not Null** | **Customer Code** |
| **4** | **C\_name** | **Text** | **20** | **Not Null** | **Customer Name** |
| **5** | **I\_code** | **Int** | **10** | **Not Null** | **Item code** |
| **6** | **I\_name** | **Text** | **20** | **Not Null** | **Item Name** |
| **7** | **Quantity** | **Float** | **10** | **Not Null** | **Quantity** |
| **8** | **T\_price** | **Float** | **10** | **Not Null** | **Total Price** |
| **9** | **S\_date** | **Datetime n** | **10** | **Not Null** | **Sales Date** |
| **10** | **C\_no** | **Numeric** | **10** | **Not Null** | **Contact Number** |
| **11** | **Pri\_per\_uni** | **Numeric** | **10** | **Not Null** | **Price Per Unit** |

1. **STOCK MASTER TABLE**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **NO** | **NAME** | **TYPE** | **SIZE** | **CONSTRAIN** | **DESCRIPTION** |
| **1** | **I\_code** | **Int** | **10** | **Primary Key** | **Item Code** |
| **2** | **I\_name** | **Text** | **20** | **Not Null** | **Item Name** |
| **3** | **Quantity** | **Numeric** | **10** | **Not Null** | **Quantity** |
| **4** | **P\_date** | **Datetime** | **10** | **Not Null** | **Purchase Date** |
| **5** | **Price** | **Numeric** | **10** | **Not Null** | **Price Per Unit** |

## SAMPLE CODING

**Expiry Form**

Private Sub cmdClose\_Click() Unload Me

End Sub

Private Sub cmdPrint\_Click() With Adodc1

.ConnectionString = \_ "Provider=Microsoft.Jet.OLEDB.3.51;" & \_ "Persist Security Info=False;" & \_

"Data Source=" & App.Path & "\database.mdb"

.RecordSource = \_

"SELECT \* FROM Product WHERE Product.Month < " & \_ Month(Now) & " AND Product.Year < " & Year(Now) & \_ " ORDER BY Product.Month, Product.Year"

.Refresh End With

Set drExpire.DataSource = Adodc1 ActiveReport = "Expire"

'Call HideAll End Sub

Private Sub Form\_Load() 'show toolbar..

mdiMain.Toolbar1.Visible = True

Me.Left = 0

Me.Top = 0 With Data1

.DatabaseName = App.Path & "\database.mdb"

.RecordSource = \_

"SELECT \* FROM Product WHERE Month < " & \_ Month(Now) & " AND Year < " & Year(Now) & \_ " ORDER BY Month, Year"

.Refresh End With

Report Form

Private Sub cmdClose\_Click() Unload Me

End Sub

Private Sub cmdCRep1\_Click() With Data1

.RecordSource = \_

"SELECT \* FROM Transaction WHERE Date=#" & \_ DTPicker1.Value & \_

"# ORDER BY [Product Code],[Product Name],Date"

.Refresh

With .Recordset

If .EOF = True And .RecordCount = 0 Then

MsgBox "No Record(s).", vbExclamation, Me.Caption cmdPrint.Enabled = False

'hide grid.. picDisplay.Visible = True DBGrid1.Visible = False Exit Sub

Else

picDisplay.Visible = False DBGrid1.Visible = True

End If End With

End With

Frame1.Caption = "Result (By Date)" cmdPrint.Enabled = True

End Sub

Private Sub cmdCRep2\_Click()

'user did not select a month on the cboMonth.. If cboMonth.ListIndex = -1 Then

MsgBox "Select a month.", vbExclamation, "Required" cboMonth.SetFocus

Exit Sub End If 'check year..

If txtYear.Text = Empty Then

MsgBox "Enter year.", vbExclamation, "Required" txtYear.SetFocus

Exit Sub End If With Data1

.RecordSource = \_

"SELECT \* FROM Transaction WHERE Month=" & \_

cboMonth.ListIndex + 1 & \_

" AND Year=" & Val(txtYear.Text) & \_

" ORDER BY Date,[Product Code],[Product Name]"

.Refresh

With .Recordset

If .EOF = True And .RecordCount = 0 Then 'display message..

MsgBox "No Record(s).", vbExclamation, Me.Caption 'disable print button..

cmdPrint.Enabled = False 'hide grid.. picDisplay.Visible = True DBGrid1.Visible = False Exit Sub

Else

'show grid.. picDisplay.Visible = False DBGrid1.Visible = True

End If End With

End With

Frame1.Caption = "Result (By Month)" cmdPrint.Enabled = True

End Sub

Private Sub cmdCRep3\_Click()

'if FROM value is equal than TO value If dtFrom.Value = dtTo.Value Then

MsgBox "The date in FROM and TO is invalid.", vbExclamation, Me.Caption dtFrom.SetFocus

Exit Sub

End If With Data1

.RecordSource = \_

"SELECT \* FROM Transaction WHERE Date BETWEEN #" & dtFrom.Value & \_ "# AND #" & dtTo.Value & \_

"# ORDER BY Date,[Product Code],[Product Name]"

.Refresh

With .Recordset

If .EOF = True And .RecordCount = 0 Then 'display message..

MsgBox "No Record(s).", vbExclamation, Me.Caption 'disable print button..

cmdPrint.Enabled = False 'hide grid.. picDisplay.Visible = True DBGrid1.Visible = False Exit Sub

Else

'show grid.. picDisplay.Visible = False DBGrid1.Visible = True

End If End With

End With

Frame1.Caption = "Result (By Range)" cmdPrint.Enabled = True

End Sub

Private Sub cmdPrint\_Click() With Adodc1

.RecordSource = Data1.RecordSource

.Refresh End With

Set drDaily.DataSource = Adodc1 ActiveReport = "Report"

'Call HideAll End Sub

Private Sub Form\_Load() DTPicker1.Value = Date dtFrom.Value = Date dtTo.Value = Date

'show toolbar.. mdiMain.Toolbar1.Visible = True Me.Left = 0

Me.Top = 0

With Adodc1

.ConnectionString = \_ "Provider=Microsoft.Jet.OLEDB.3.51;" & \_ "Persist Security Info=False;" & \_

"Data Source=" & App.Path & "\database.mdb" End With

With Data1

.DatabaseName = App.Path & "\database.mdb"

.RecordSource = "Transaction"

.Refresh End With

DBGrid1.Refresh DBGrid1.ReBind

End Sub

Private Sub txtYear\_KeyPress(KeyAscii As Integer) Select Case KeyAscii

Case 48 To 57 '0-9

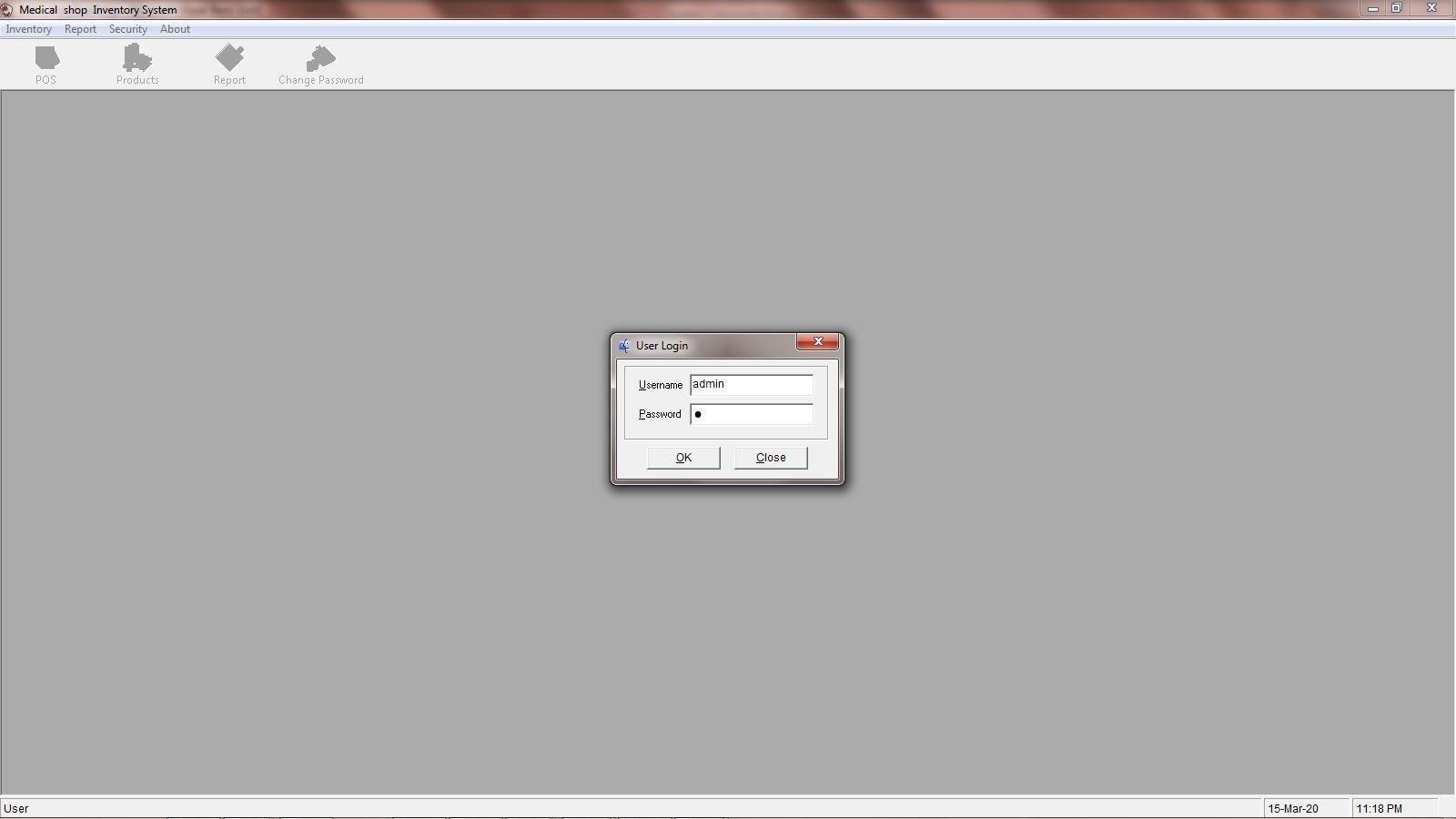
Case vbKeyBack Case Else

KeyAscii = 0 End Select

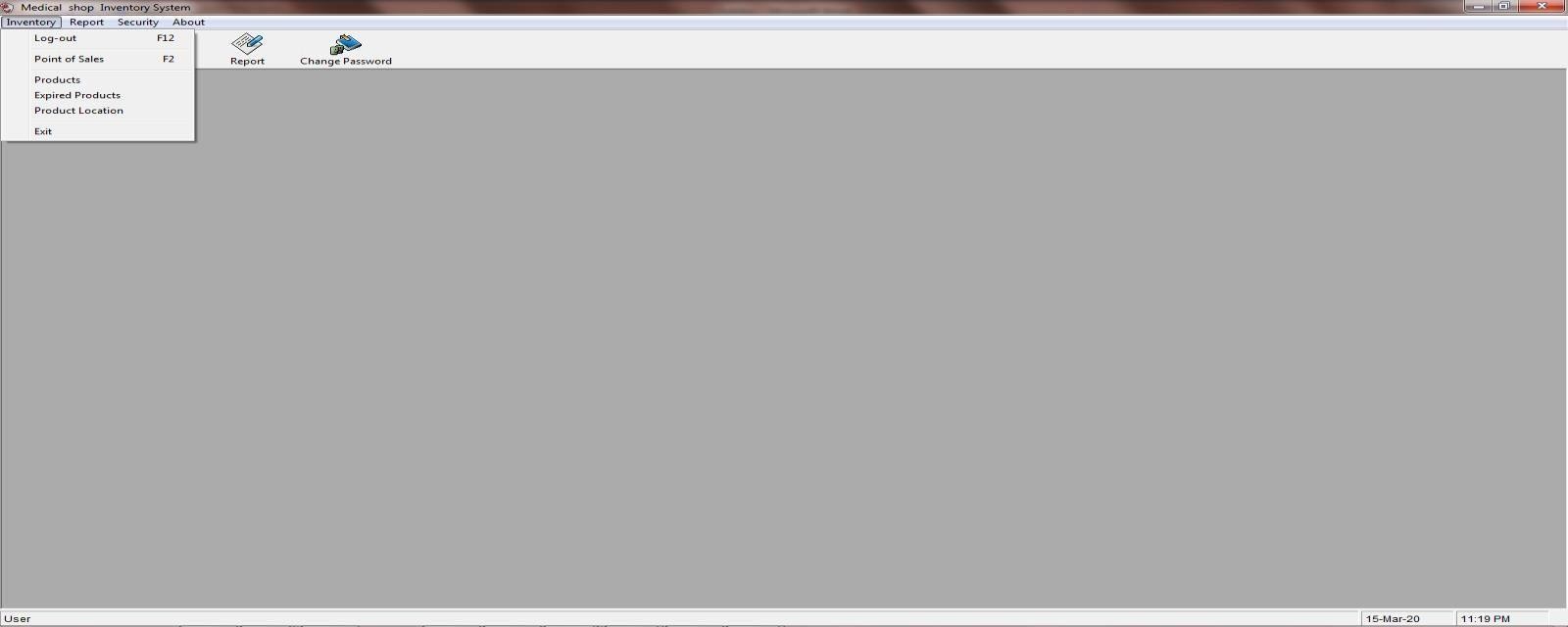
End Sub

# SAMPLE INPUT

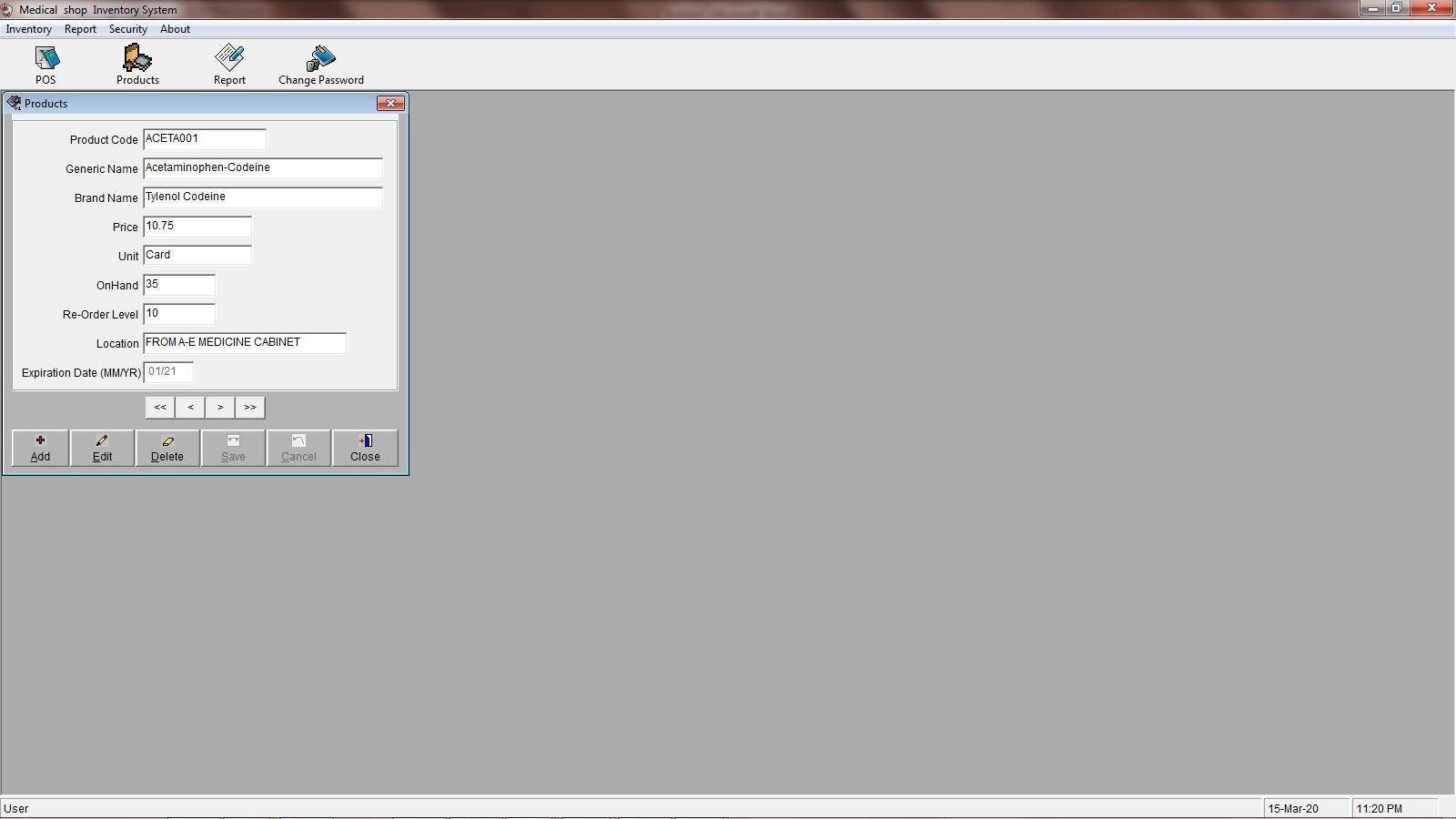
## LOGIN FORM

****

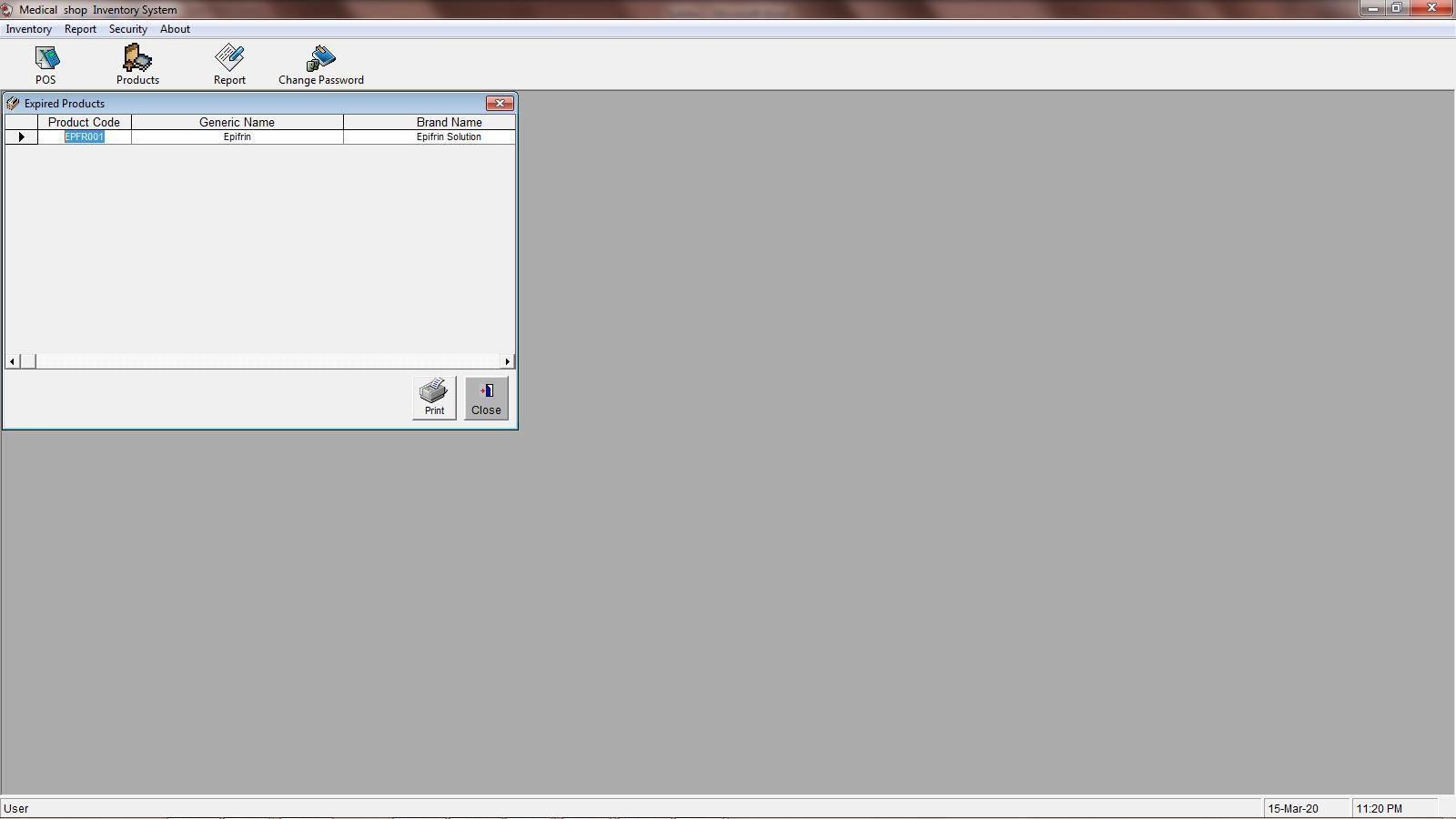
**MDI FORM**

****

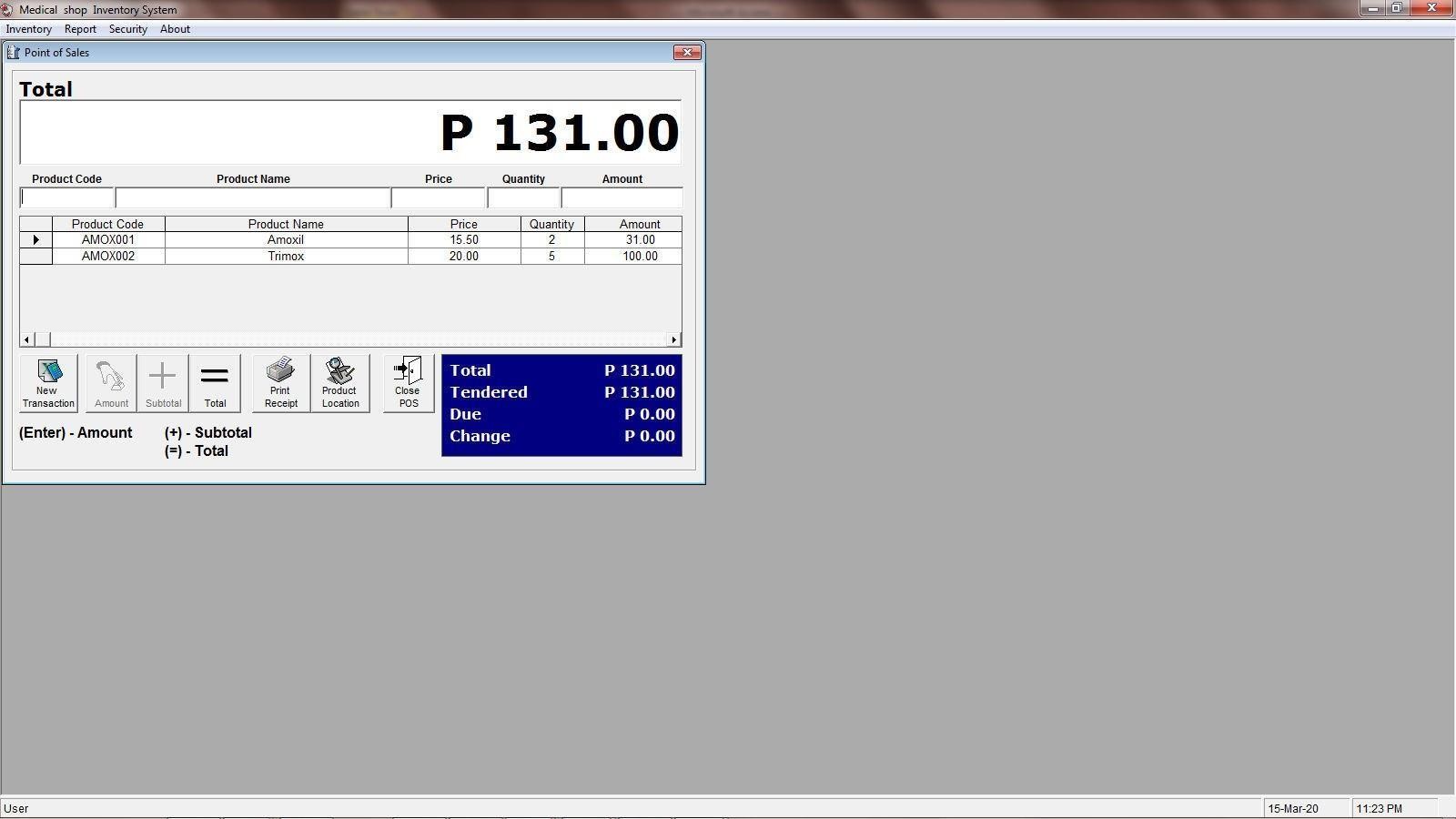
# Product Details

****

**Expired Products**

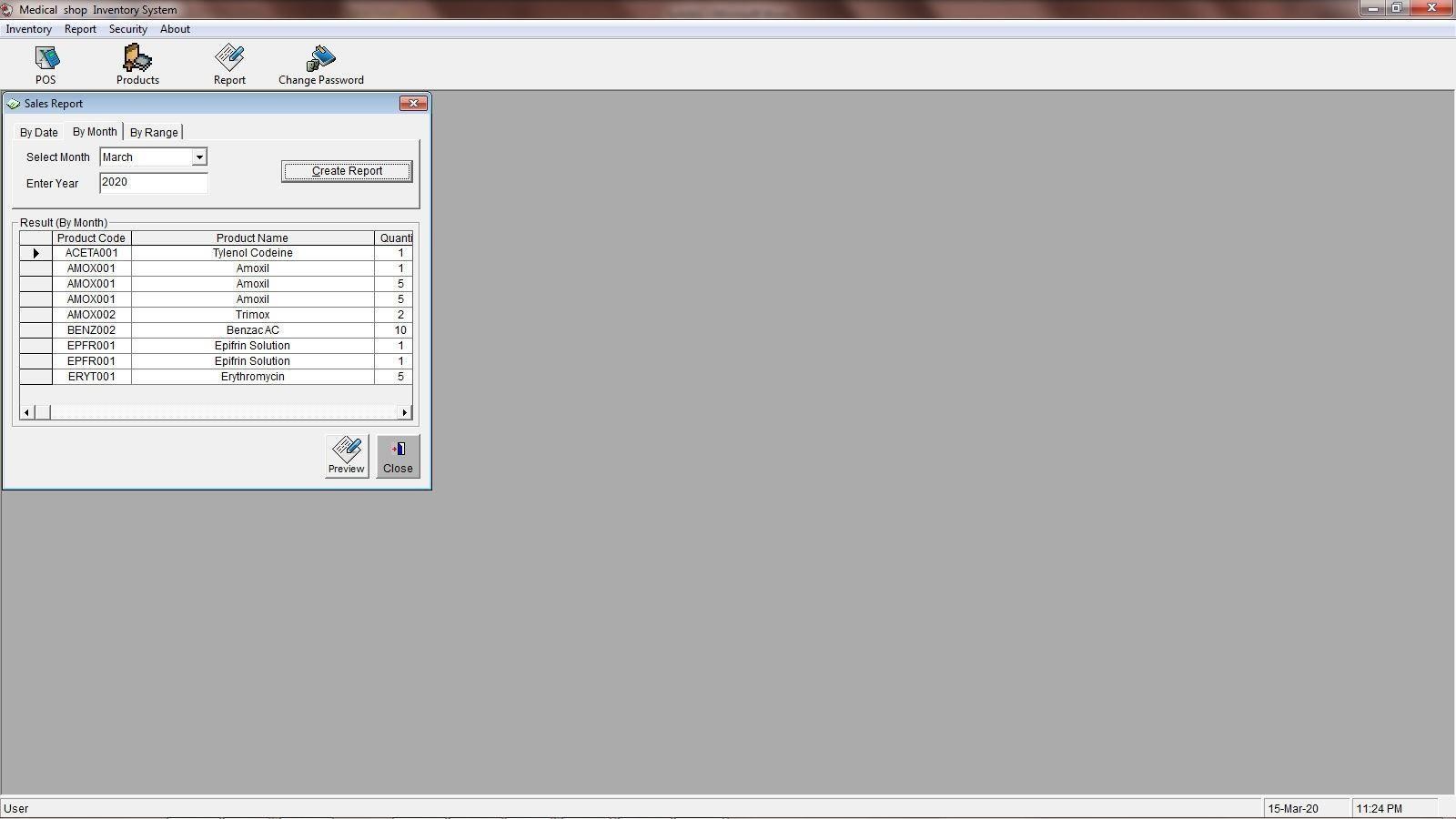
****

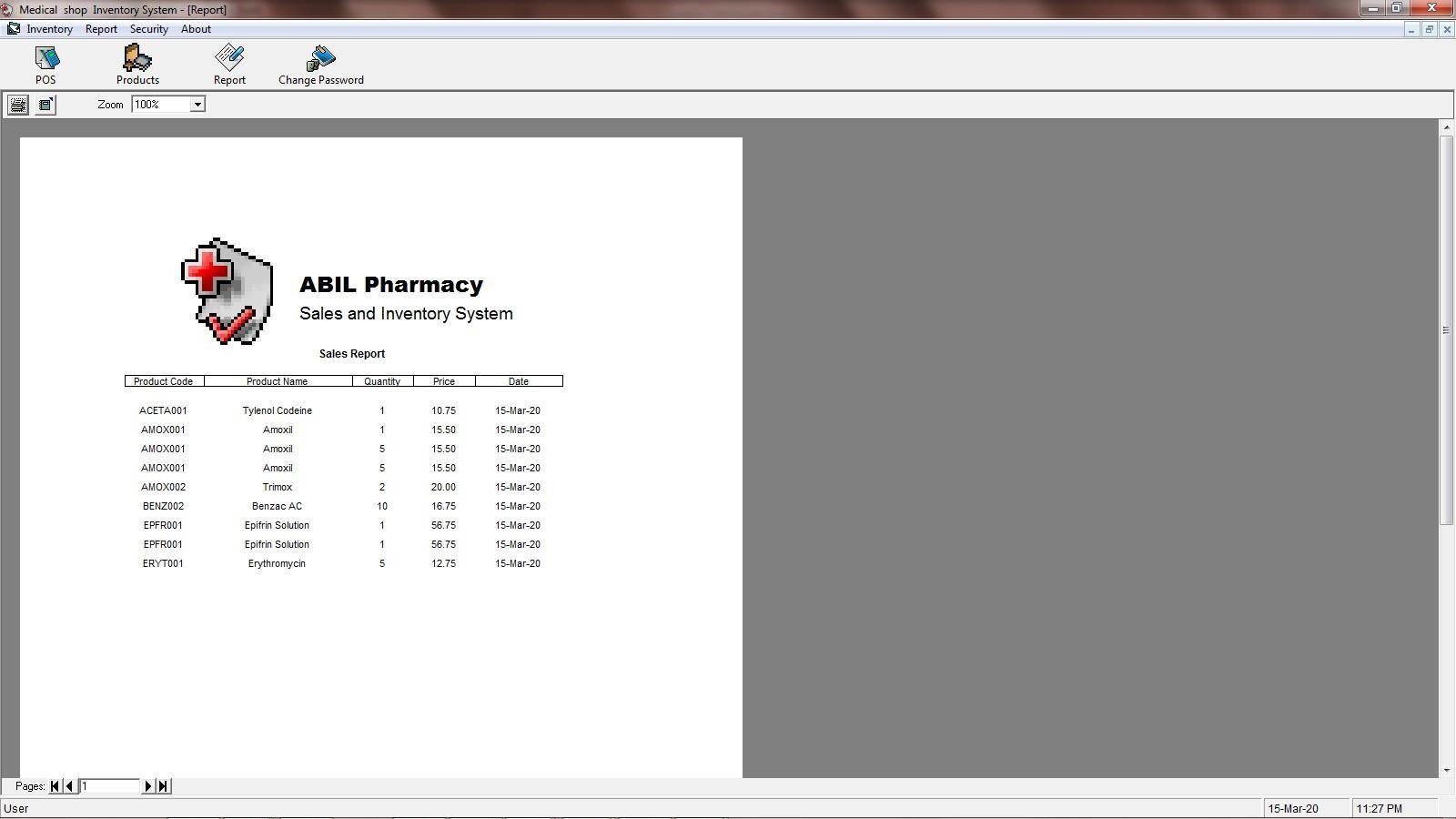
# Point of Sale

****

1. **SAMPLE OUTPUT**

## SALES REPORT.

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