

EDGE: BU-CSE DIGITAL SKILLS TRAINING



Project on

Inventory Management & Billing System for Gadget Shop

Method : Python

Submitted to

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Executive Summary

The Inventory & Billing System is a Python-based console application aimed at managing product inventories and generating bills efficiently. This project streamlines inventory management by allowing users to add, edit, search, and delete products while ensuring persistent data storage. The billing functionality calculates totals and produces a detailed receipt, offering a practical solution for small businesses.

Objectives

- Develop a simple and efficient inventory management system.
- Allow users to perform CRUD operations on product records.
- Automate the billing process with accurate calculations and stock validation.
- Provide persistent data storage using text files.

Methods

Tools & Technologies Used:

- Programming Language: Python 3
- File Handling: Text files (products.txt, bill_receipt.txt)
- Libraries: OS module for file operations

System Requirements

- Python 3.x installed
- Basic command-line interface
- Text file support

Project Modules

- Add Product: Inputs product details and saves them to a file.
- Display Products: Reads and shows available product records.
- Search Product: Finds and displays a product's details.
- Edit Product: Updates existing product information.
- Delete Product: Removes a product record.
- Generate Bill: Creates a bill based on selected products and quantities.

Results

Sample Data:

Laptop, 1000, 10

Mouse, 20, 50

Keyboard, 50, 30

Monitor, 200, 15

Phone, 800, 8

Sample Bill:

--- Bill Receipt ---

Mouse: \$200.0

Total Amount: \$200.0

- The system successfully manages product inventories and generates bills.
- Persistent storage ensures data is retained between program executions.

Conclusions

The Inventory & Billing System is a practical, beginner-friendly Python project. Its modular structure and clear functionality provide a reliable solution for small business inventory management. Despite its limitations, such as reliance on text files and a lack of a graphical user interface, the system offers great potential for future enhancements, including database integration and PDF export capabilities.

References

- Python Official Documentation
 - Stack Overflow for debugging and best practices
 - EDGE Project Outline
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THE END