

BASAVARAJESWARI GROUP OF INSTITUTIONS

Ballari Institute of Technology & Management

AUTONOMOUS INSTITUTE UNDER VISVESVARAYA TECHNOLOGICAL UNIVERSITY JNANA SANGAMA,
BELAGAVI 590018

INTERNSHIP

Report On

INVENTORY MANAGEMENT SYSTEM

Submitted in partial fulfilment of the requirements for the award of degree of

Bachelor of Engineering

In

COMPUTER SCIENCE AND ENGINEERING

Submitted by

VANITHA.D

3BR23CS180

Internship Carried Out By

EZ TRAININGS & TECHNOLOGIES PVT.LTD

Internal Guide

External Guide

Ajay

Technical Trainer

BALLARI INSTITUTE OF TECHNOLOGY & MANAGEMENT

NACC Accredited Institution*

(Recognized by Govt. of Karnataka, approved by AICTE, New Delhi & Affiliated to Visvesvaraya Technological University, Belagavi)

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2024-2025

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

CERTIFICATE

This is to certify that the Internship entitled **"INVENTORY MANAGEMENT SYSTEM"** has been successfully completed by **VANITHA.D** bearing USN **3BR23CS180** a bonafide student of Ballari Institute of Technology and Management,

Ballari. For the partial fulfilment of the requirements for the **Bachelor's Degree in Computer Science and Engineering** of the VISVESVARAYA TECHNOLOGICAL UNIVERSITY, Belagavi during the academic year 2024-2025.

**Signature of Internship
Co-ordinator**

Signature of HOD

**R N KULKARNI
Prof. and HOD(CSE)**

DECLARATION

I, **VANITHA.D**, second year student of Computer Science and Engineering, Ballari Institute of Technology, Ballari, declare that Internship entitled “**INVENTORY MANAGEMENT SYSTEM**” is a part of Internship Training successfully carried out by **EZ TECHNOLOGIES & TRAININGS PVT.LTD** at “**BITM,BALLARI**”. This report is submitted in partial fulfilment of the requirements for the award of the degree, Bachelor of Engineering in Computer Science and Engineering of the Visvesvaraya Technological University, Belagavi.

Date : 28-09-2024
Place: BALLARI

Signature of the Student

ACKNOWLEDGEMENT

The satisfactions that a company the successful completion of my internship on “INVENTORY MANAGEMENT SYSTEM” would be incomplete without the mention of people who made it possible, whose noble gesture, affection, guidance, encouragement and support crowned my efforts with success. It is my privilege to express my gratitude and respect to all those who inspired me in the completion of my internship.

I am grateful to our respective coordinator for his noble gesture, support co-ordination and valuable suggestions given to me in the completion of Internship.

I also thank **R N Kulkarni**, H.O.D. Department of **Computer science and engineering** for extending all his valuable support and encouragement.

COMPANY PROFILE

Company Name: EZ Trainings and Technologies Pvt. Ltd.

Introduction:

EZ Trainings and Technologies Pvt. Ltd. is a dynamic and innovative organization dedicated to providing comprehensive training solutions and expert development services. Established with a vision to bridge the gap between academic learning and industry requirements, we specialize in college trainings for students, focusing on preparing them for successful placements. Additionally, we excel in undertaking development projects, leveraging cutting-edge technologies to bring ideas to life.

Mission:

Our mission is to empower the next generation of professionals by imparting relevant skills and knowledge through specialized training programs. We strive to be a catalyst in the career growth of students and contribute to the technological advancement of businesses through our development projects.

Services:

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- Tailored training programs designed to enhance the employability of students.
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- Custom solutions to meet specific business needs.

Locations: Hyderabad | Delhi NCR

At EZ Trainings and Technologies Pvt. Ltd., we believe in transforming potential into excellence

Day to Day Activity:-

<u>Days</u>	<u>Topic</u>	<u>Topic</u>
<u>Day 01</u>	<u>Introduction to python(data types, variable)</u>	<u>Keywords, comments , indentations, operators</u>
<u>Day 02</u>	<u>Conditional statements, looping</u>	<u>Problem solving using loops and pattern programs</u>
<u>Day 03</u>	<u>Functions, string operations, Problem solving</u>	<u>Recursion, class and object, constructor</u>
<u>Day 04</u>	<u>List, Tuple</u>	<u>Set, Dictionary (Problem solving using list, tuple)</u>
<u>Day 05</u>	<u>OOPS(Inheritance, Polymorphism)</u>	<u>Encapsulation, Abstraction</u>
<u>Day 06</u>	<u>Exceptional handling, File handling</u>	<u>Problem solving</u>
<u>Day 07</u>	<u>Problem solving (15 ques)</u>	<u>Problem solving (10 ques)</u>
<u>Day 08</u>	<u>Revision and scenarios Problem solving</u>	<u>Revision and scenarios Problem solving</u>
<u>Day 09</u>	<u>Modules and packages</u>	<u>OOPS revision</u>
<u>Day 10</u>	<u>Introduction to D.S, Big O (time complexity, class pointers)</u>	<u>Introduction to linked list (get, self, insert, remove)</u>
<u>Day 11</u>	<u>Linked list, stack (Push, pop, is full, is empty, peak, display)</u>	<u>Queue (constructor, enqueue, dequeue), priority queue</u>
<u>Day 12</u>	<u>Bubble sort, selection sort, insertion sort</u>	<u>Merge sort and task in sorting</u>
<u>Day 13</u>	<u>Recursion, Quick sort (5 problems)</u>	<u>Linear search and problem solving(Assessment)</u>
<u>Day 14</u>	<u>Binary search, Introduction to Trees, Tree traversal</u>	<u>Traversal, insertion searching(BFS, DFS)</u>

<u>Day 15</u>	<u>Introduction to graph (BFS, DFS), introduction to graph algorithm</u>	<u>Project team separation and discussing the problem statement with each team</u>
<u>Day 16</u>	<u>Project implementation</u>	<u>Project implementation and problem solving in reinprep portal</u>
<u>Day 17</u>	<u>Project implementation Phase-01</u>	

INVENTORY MANAGEMENT SYSTEM

Problem:-

- The CRUD(create , read , update, delete)product inventory.
- Automatic alerts for low stocks.
- Reporting capabilities for sales.
- Generation of sales reports based on time period

The CRUD (Create, Read, Update, Delete) inventory system is a foundational approach to managing inventory, ensuring that businesses can keep track of their products, maintain sufficient stock levels, and respond quickly to customer demand. To ensure smooth operations, the system also needs to

***Alert for low stock levels**

***Generate sales reports**

***To provide insights into business performance.**

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Pseudocode for Inventory System:

START

1. CLASS InventoryItem:

- **Method: __init__(name, quantity, price)**
 - Initialize item with name, quantity, and price.

2. CLASS InventorySystem:

- **Method: __init__()**
 - Initialize an empty list called inventory.
- **Method: add_item(item)**
 - Append the given item to the inventory list.
- **Method: update_item(name, quantity, price)**
 - FOR each item in inventory:
 - IF item.name == name:
 - Update item.quantity and item.price with given values.
- **Method: delete_item(name)**
 - Remove items from inventory where item.name == name.
- **Method: check_low_stock(limit)**
 - FOR each item in inventory:
 - IF item.quantity < limit:
 - Add item to the low_stock_items list.
 - RETURN low_stock_items.
- **Method: generate_sales_report(start_date, end_date)**
 - Calculate total sales by summing item.price * item.quantity for all items in inventory.
 - RETURN total_sales.

3. MAIN FUNCTION:

- Initialize an InventorySystem object.
- Prompt user to enter the number of items to add (n).

- FOR i = 1 to n:
 - Prompt user to enter item name, quantity, and price.
 - Create a new InventoryItem object with the provided details.
 - Add the item to the inventory system using add_item().

- Prompt user to enter the name of the item to delete.
- Call delete_item() to delete the item from the inventory.
- IF the item does not exist:
 - Print "No item to delete."
- ELSE:
 - Print "The item deleted is <name>."

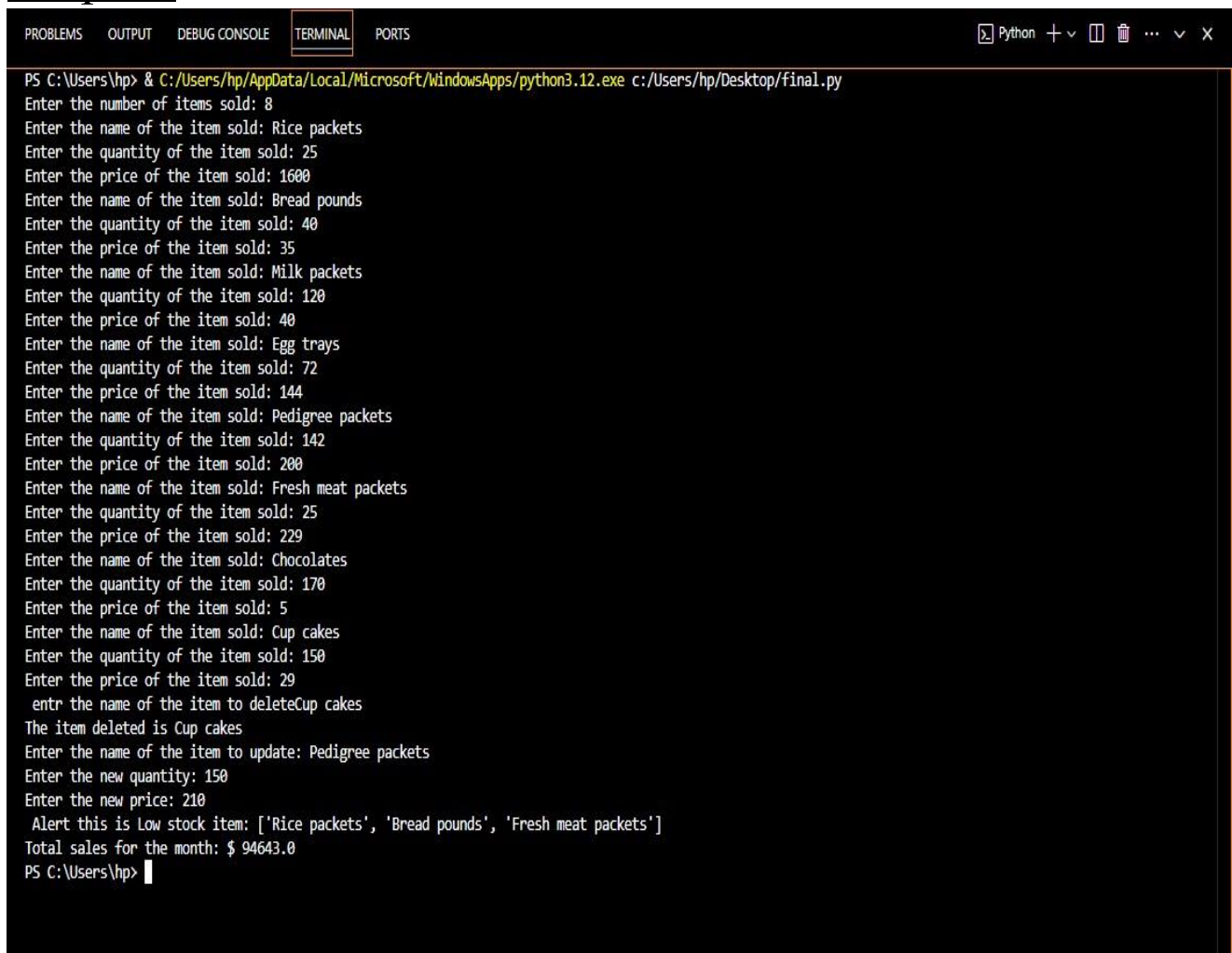
- Prompt user to enter the name of the item to update.
- Prompt user to enter the new quantity and price.
- Call update_item() to update the specified item.

- Call check_low_stock(10) to get a list of items with low stock.
- Print the names of items with low stock.

- Call generate_sales_report(start_date, end_date) to calculate total sales for the specified period.
- Print the total sales for the period.

END

Output:-



```
PS C:\Users\hp> & C:/Users/hp/AppData/Local/Microsoft/WindowsApps/python3.12.exe c:/Users/hp/Desktop/final.py
Enter the number of items sold: 8
Enter the name of the item sold: Rice packets
Enter the quantity of the item sold: 25
Enter the price of the item sold: 1600
Enter the name of the item sold: Bread pounds
Enter the quantity of the item sold: 40
Enter the price of the item sold: 35
Enter the name of the item sold: Milk packets
Enter the quantity of the item sold: 120
Enter the price of the item sold: 40
Enter the name of the item sold: Egg trays
Enter the quantity of the item sold: 72
Enter the price of the item sold: 144
Enter the name of the item sold: Pedigree packets
Enter the quantity of the item sold: 142
Enter the price of the item sold: 200
Enter the name of the item sold: Fresh meat packets
Enter the quantity of the item sold: 25
Enter the price of the item sold: 229
Enter the name of the item sold: Chocolates
Enter the quantity of the item sold: 170
Enter the price of the item sold: 5
Enter the name of the item sold: Cup cakes
Enter the quantity of the item sold: 150
Enter the price of the item sold: 29
entr the name of the item to deleteCup cakes
The item deleted is Cup cakes
Enter the name of the item to update: Pedigree packets
Enter the new quantity: 150
Enter the new price: 210
Alert this is low stock item: ['Rice packets', 'Bread pounds', 'Fresh meat packets']
Total sales for the month: $ 94643.0
PS C:\Users\hp> |
```

Conclusion:-

The project successfully implements an inventory management system using Python. The program allows for the addition, update, and deletion of inventory items, checks for low stock alerts, and generates sales reports for a specific time period. This project showcases the practical application of programming concepts in a real-world scenario, aiding in efficient inventory control and sales analysis.

Table of Contents

Chapter No.	Chapter Name	Page No.
1	Company Profile	01
2	Day to day activity (student dairy extend)	02-03
3	Introduction of the project	04
4	Algorithm	05
5	Output	06
6	Conclusion	06