

VISVESVARAYA TECHNOLOGICAL UNIVERSITY
JNANA SANGAMA,BELAGAVI – 590018

KARNATAKA



Assignment Report
On

“YARD SALE PROFIT TRACKER”

SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS

FOR THE DATA STRUCTURES AND APPLICATIONS (BCS304) COURSE OF

III SEMESTER

Submitted by

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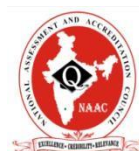
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

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Rubric – B.E. Mini-Project [BCS304]

Course outcome	Rubric/Level	Excellent (91-100%)	Good (81-90%)	Average (61-80%)	Moderate (40-60%)	Score
CO1	Identification of project proposal (05 Marks)					
CO2	Design and Implementation (10 Marks)					
CO3	Presentation skill (05 Marks)					
CO4	Report (05 Marks)					
Total						

Course outcome:

CO 1: Identification of project proposal which is relevant to subject of engineering.

CO 2: Design and implement proposed project methodology.

CO 3: Effective communication skill to assimilate their project work.

CO 4: Understanding overall project progress and performance.

Student Signature

Faculty signature

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ABSTRACT

The "Yard Sale Profit Tracker" is an application designed to help individuals organize and monitor the financial performance of their yard sales. The system employs various data structures to efficiently manage and analyze sales transactions, allowing users to track profits, items sold, and other key metrics. The primary data structures used include arrays, linked lists, and hash tables. Arrays store details of individual items, such as names, categories, and prices. Linked lists are utilized for tracking each transaction, ensuring that users can easily access past sales data. Hash tables are employed for quick lookups, enabling users to search for specific items or sales events efficiently.

This system provides a user-friendly interface for adding, updating, and removing items from a sale, while also calculating the total revenue and providing insights into item performance. Furthermore, the program implements sorting algorithms to help users categorize items by profit, price, or quantity sold. By leveraging data structures, the Yard Sale Profit Tracker enables better decision-making, improves sales efficiency, and helps individuals maximize their yard sale profits.

In conclusion, the Yard Sale Profit Tracker utilizes key data structures and algorithms to organize sales data and streamline the management of yard sales, making it an essential tool for optimizing profits and tracking inventory efficiently.

CHAPTER 1:

INTRODUCTION

- ❖ Data may be organized in many different ways. The logical or mathematical model of a particular organization of data is called Data Structures.
- ❖ A data structure is a specialized format for organizing, processing, retrieving and storing data. There are several basic and advanced types of data structures, all designed to arrange data to suit a specific purpose. Data structures make it easy for users to access and work with the data they need in appropriate ways. Most importantly, data structures frame the organization of information so that machines and humans can better understand it.
- ❖ In computer science and computer programming, a data structure may be selected or designed to store data for the purpose of using it with various algorithms. In some cases, the algorithm's basic operations are tightly coupled to the data structure's design. Each data structure contains information about the data values, relationships between the data and in some cases functions that can be applied to the data.
- ❖ In computer science, a data structure is a data organization, management, and storage format that are usually chosen for efficient access to data. More precisely, a data structure is a collection of data values, the relationships among them, and the functions or operations that can be applied to the data, it is an algebraic structure about data.
- ❖ Data structures can be implemented using a variety of programming languages and techniques, but they all share the common goal of efficiently organizing and storing data. Data structures are generally based on the ability of a computer to fetch and store data at any place in its memory, specified by a pointer—a bit string, representing a memory address, that can be itself stored in memory and manipulated by the program. Thus, the array and record data structures are based on computing the addresses of data items with arithmetic operations, while the linked data structures are based on storing addresses of data items within the structure itself. This approach to data structuring has profound implications for the efficiency and scalability of algorithms. For instance, the contiguous memory allocation in arrays facilitates rapid access and modification operations, leading to optimized performance in sequential data processing scenarios.

CHAPTER 2:

PROBLEM STATEMENT

Looking to flip items to make some extra cash?

Here's how to find the best deals at yard sales so you can make big money Develop a c program to buy item, sell item & display profit.

In the realm of yard sale flipping, individuals seek to capitalize on undervalued items found at local sales and resell them for a profit. However, navigating the intricacies of buying, selling, and maximizing profits presents numerous challenges.

The problem at hand is the lack of comprehensive guidance and strategies for yard sale flippers to effectively manage their buying and selling processes while maximizing profits. Many flippers struggle to identify valuable items, negotiate favorable prices, and accurately assess potential profits, leading to missed opportunities and suboptimal outcomes.

To address these challenges, the Yard Sale Flipper Report aims to provide actionable insights and strategies for optimizing buying, selling, and profit maximization in the yard sale flipping business.

Key components of the report include:

Item Selection and Acquisition: Analyzing market trends and demand to identify high-value items likely to yield profitable returns. Strategies for efficient item selection, negotiation tactics, and risk assessment will be explored to help flippers acquire items at favorable prices.

Pricing and Valuation Techniques: Developing methodologies for accurately valuing items based on factors such as condition, rarity, and market demand. Pricing strategies that balance profitability with competitiveness will be outlined to help flippers set optimal selling prices.

Inventory Management: Providing guidelines for efficient inventory management, including tracking acquisition costs, sale prices, and profit margins. Strategies for optimizing inventory turnover and minimizing holding costs will be discussed to maximize profitability.

Marketing and Sales Channels: Exploring various marketing and sales channels, both online and offline, to reach target buyers and maximize sales opportunities. Strategies for effective promotion, customer engagement, and brand building will be outlined to enhance selling success.

Profit Analysis and Optimization: Implementing techniques for analyzing profit margins, identifying profitable flipping opportunities, and optimizing resource allocation. Strategies for diversifying product offerings, scaling operations, and mitigating risks will be explored to maximize overall profitability.

CHAPTER 3:

IMPLEMENTATION

```
#include <stdio.h>
#include <stdbool.h>
#define MAX_ITEMS 100
typedef struct {
    char itemName[50];
    float buyPrice;
    float sellPrice
} Item;
Item inventory[MAX_ITEMS];
int itemCount = 0;
float totalProfit = 0;
void buyItem() {
    if (itemCount < MAX_ITEMS) {
        printf("Enter item name: ");
        scanf("%s", inventory[itemCount].itemName);
        printf("Enter buy price: ");
        scanf("%f", &inventory[itemCount].buyPrice);
        printf("Enter sell price: ");
        scanf("%f", &inventory[itemCount].sellPrice);
        itemCount++;
        printf("Item bought successfully!\n");
    } else {
        printf("Inventory full!\n");
    }
}
void sellItem() {
    if (itemCount > 0) {
        int choice;
        printf("Select item to sell:\n");
        for (int i = 0; i < itemCount; i++) {
            printf("%d. %s\n", i + 1, inventory[i].itemName);
        }
    }
}
```

```

printf("Enter choice: ");
scanf("%d", &choice);
if (choice > 0 && choice <= itemCount) {
    float profit = inventory[choice - 1].sellPrice - inventory[choice - 1].buyPrice;
    totalProfit += profit;
    printf("Sold item %s for a profit of %.2f\n", inventory[choice - 1].itemName, profit);
    // Remove item from inventory (simplified for this example)
    for (int i = choice - 1; i < itemCount - 1; i++) {
        inventory[i] = inventory[i + 1];
    }
    itemCount--;
} else {
    printf("Invalid choice!\n");
}
} else {
    printf("Inventory empty!\n");
}
}

void displayProfit() {
    printf("Total profit: %.2f\n", totalProfit);
}

int main() {
    int choice;
    do {
        printf("\nYard Sale Flipper Menu:\n");
        printf("1. Buy Item\n");
        printf("2. Sell Item\n");
        printf("3. Display Profit\n");
        printf("4. Exit\n");
        printf("Enter your choice: ");
        scanf("%d", &choice);

        switch (choice) {
            case 1:
                buyItem();

```



```
        break;
    case 2:
        sellItem();
        break;
    case 3:
        displayProfit();
        break;

    case 4:
        printf("Exiting... Goodbye!\n");
        break;
    default:
        printf("Invalid choice! Please try again.\n");
    }
} while (choice != 4);
return 0;
```

CHAPTER 4:

RESULT/SCREENSHOTS

```
PS C:\Users\sambr\OneDrive\Desktop\CODING> cd "c:\Users\sambr\OneDrive\Desktop\CODING\C\" ; if ($?) { gcc ysl.c -o ysl } ; if ($?) { .\ysl }

Yard Sale Flipper Menu:
1. Buy Item
2. Sell Item
3. Display Profit
4. Exit
Enter your choice: 1
Enter item name: RICE
Enter buy price: 50
Enter sell price: 60
Item bought successfully!

Yard Sale Flipper Menu:
1. Buy Item
2. Sell Item
3. Display Profit
4. Exit
Enter your choice: 2
Select item to sell:
1. RICE
Enter choice: 1
Sold item RICE for a profit of 10.00

Yard Sale Flipper Menu:
1. Buy Item
2. Sell Item
3. Display Profit
4. Exit
Enter your choice: 3
Total profit: 10.00

Yard Sale Flipper Menu:
1. Buy Item
2. Sell Item
3. Display Profit
4. Exit
Enter your choice: 4
Exiting... Goodbye!
PS C:\Users\sambr\OneDrive\Desktop\CODING\C> █
```

CHAPTER 5:

CONCLUSION

- The difference between what you can resell the items for and what you bought them for will be your profit.
- Remember though, you must be a morning person. The best items are normally the first to go so you have to get to the yard sales early. If you aren't one of the first few people there you could miss out on that perfect flipping opportunity.
- Yard sale flipping can get addictive. Watch out for addictive behaviors and make sure you're still flipping for the right reasons.

REFERENCES:

- [GeeksforGeeks | A computer science](#)
- [portal for geeks](#)
- [GitHub: Let's build from here · GitHub](#)
- ChatGPT