A Micro Project Report

on

Problem Solving using C Language

Submitted by

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

NARASARAOPETA ENGINEERING COLLEGE: NARASARAOPET

(AUTONOMOUS)

Accredited by NAAC with A+ Grade and NBA under Tier-1

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2024-2025

NARASARAOPETA ENGINEERING COLLEGE: NARASARAOPET

(AUTONOMOUS)

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

CERTIFICATE

This is to certify that **Mylavarapu Lakshmi Gayathri, Roll No: 23471A0CK,** a Second Year Student of the Department of Computer Science and Engineering, has completed the Micro Project Satisfactorily in "Problem Solving using C Language" for the Academic Year 2024-2025..

Project Co-Ordinator

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Asst. Professor

HEAD OF THE DEPARTMENT

Dr. S. N. Tirumala Rao, M.Tech., Ph.D.

Professor

INDEX

S.No	Description
1.	Departmental store management system (stock management and biling system)

Stock management and Billing

AIM :

Write a C program on stock management and billing

```c
#include <stdio.h>

#include <stdlib.h>

#define MAX_ITEMS 200

typedef struct

 {

    char name[50];

    int quantity;

    float price;

}

 Item;

Item stock[MAX_ITEMS];

int itemCount = 0;

void addItem()

 {

    if (itemCount < MAX_ITEMS)

    {
```

```c
        printf("Enter item name: ");

        scanf("%s", stock[itemCount].name);

        printf("Enter quantity: ");

        scanf("%d", &stock[itemCount].quantity);

        printf("Enter price: ");

        scanf("%f", &stock[itemCount].price);

        itemCount++;

    }

    else

    {

        printf("Stock is full!\n");

    }

}

void removeItem()

{

    int i;

    char name[50];

    printf("Enter item name: ");

    scanf("%s", name);

    for (i = 0; i < itemCount; i++)

    {

        if (strcmp(stock[i].name, name) == 0)
```

```c
        {

            for (i=0; i < itemCount - 1; i++)

            {

                stock[i] = stock[i + 1];

            }

            itemCount--;

            printf("Item removed!\n");

            return;

        }

    }

    printf("Item not found!\n");

}

void updateQuantity()

{

    int i;

    char name[50];

    int quantity;

    printf("Enter item name: ");

    scanf("%s", name);

    for (i = 0; i < itemCount; i++)

    {
```

```c
        if (strcmp(stock[i].name, name) == 0)

        {

            printf("Enter new quantity: ");

            scanf("%d", &quantity);

            stock[i].quantity = quantity;

            printf("Quantity updated!\n");

            return;

        }

    }

    printf("Item not found!\n");

}

void generateBill()

{

    float total = 0;

    printf("\nBill of Stock:\n");

    printf("---------------\n");

    for (int i = 0; i < itemCount; i++)

    {

        float subtotal = stock[i].quantity * stock[i].price;

        total += subtotal;

        printf("Item: %s\n", stock[i].name);

        printf("Quantity: %d\n", stock[i].quantity);
```

```c
            printf("Price: $%.2f\n", stock[i].price);

            printf("Subtotal: $%.2f\n\n", subtotal);

        }

        printf("Total: $%.2f\n", total);

    }

    int main()

    {

        int choice;

        while (1)

        {

            printf("\nStock Management System\n");

            printf("1. Add Item\n");

            printf("2. Remove Item\n");

            printf("3. Update Quantity\n");

            printf("4. Generate Bill\n");

            printf("5. Exit\n");

            printf("Enter your choice: ");

            scanf("%d", &choice);

            switch (choice)

            {

                case 1:

                    addItem();
```

```c
                break;
            case 2:
                removeItem();
                break;
            case 3:
                updateQuantity();
                break;
            case 4:
                generateBill();
                break;
            case 5:
                exit(0);
            default:
                printf("Invalid choice. Please try again.\n");
        }
    }
    return 0;
}
```

OUTPUT:

```
Output                                                    Clear

Stock Management System
1. Add Item
2. Remove Item
3. Update Quantity
4. Generate Bill
5. Exit
Enter your choice: 1
Enter item name: BOTTLE
Enter quantity: 5
Enter price: 70

Stock Management System
1. Add Item
2. Remove Item
3. Update Quantity
4. Generate Bill
5. Exit
Enter your choice: 4

Bill of Stock:
----------------
Item: BOTTLE
Quantity: 5
Price: $70.00
Subtotal: $350.00
```

```
Stock Management System
1. Add Item
2. Remove Item
3. Update Quantity
4. Generate Bill
5. Exit
Enter your choice: 5
```