**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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**2024-20****25**

**NARASARAOPETA ENGINEERING COLLEGE: NARASARAOPET**

**(AUTONOMOUS)**

**DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING**



**CERTIFICATE**

**This is to certify that Palavelli Prem Kumar, Roll No: 23471A0546, 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 HEAD OF THE DEPARTMENT

**Ms.CH.Rajini. M.Tech.**  **Dr. S. N. Tirumala Rao,** **M.Tech., Ph.D.**

**Asst. Professor Professor**

**#include <stdio.h>**

**#include <stdlib.h>**

**#include <string.h>**

**#define MAX\_CONTACTS 100**

**#define NAME\_LENGTH 50**

**#define PHONE\_LENGTH 15**

**typedef struct {**

**char name[NAME\_LENGTH];**

**char phone[PHONE\_LENGTH];**

**} Contact;**

**Contact contacts[MAX\_CONTACTS];**

**int contact\_count = 0;**

**void addContact() {**

**if (contact\_count < MAX\_CONTACTS) {**

**printf("Enter name: ");**

**scanf(" %[^\n]s", contacts[contact\_count].name);**

**printf("Enter phone number: ");**

**scanf(" %[^\n]s", contacts[contact\_count].phone);**

**contact\_count++;**

**printf("Contact added successfully!\n");**

**} else {**

**printf("Address book is full.\n");**

**}**

**}**

**void deleteContact() {**

**char name[NAME\_LENGTH];**

**printf("Enter the name of the contact to delete: ");**

**scanf(" %[^\n]s", name);**

**for (int i = 0; i < contact\_count; i++) {**

**if (strcmp(contacts[i].name, name) == 0) {**

**for (int j = i; j < contact\_count - 1; j++) {**

**contacts[j] = contacts[j + 1];**

**}**

**contact\_count--;**

**printf("Contact deleted successfully!\n");**

**return;**

**}**

**}**

**printf("Contact not found.\n");**

**}**

**void updateContact() {**

**char name[NAME\_LENGTH];**

**printf("Enter the name of the contact to update: ");**

**scanf(" %[^\n]s", name);**

**for (int i = 0; i < contact\_count; i++) {**

**if (strcmp(contacts[i].name, name) == 0) {**

**printf("Enter new name: ");**

**scanf(" %[^\n]s", contacts[i].name);**

**printf("Enter new phone number: ");**

**scanf(" %[^\n]s", contacts[i].phone);**

**printf("Contact updated successfully!\n");**

**return;**

**}**

**}**

**printf("Contact not found.\n");**

**}**

**void searchContact() {**

**char name[NAME\_LENGTH];**

**printf("Enter the name of the contact to search: ");**

**scanf(" %[^\n]s", name);**

**for (int i = 0; i < contact\_count; i++) {**

**if (strcmp(contacts[i].name, name) == 0) {**

**printf("Name: %s, Phone: %s\n", contacts[i].name, contacts[i].phone);**

**return;**

**}**

**}**

**printf("Contact not found.\n");**

**}**

**void displayContacts() {**

**if (contact\_count == 0) {**

**printf("No contacts to display.\n");**

**} else {**

**printf("Contacts:\n");**

**for (int i = 0; i < contact\_count; i++) {**

**printf("%d. Name: %s, Phone: %s\n", i + 1, contacts[i].name, contacts[i].phone);**

**}**

**}**

**}**

**int main() {**

**int choice;**

**while (1) {**

**printf("\nAddress Book Menu:\n");**

**printf("1. Add Contact\n");**

**printf("2. Delete Contact\n");**

**printf("3. Update Contact\n");**

**printf("4. Search Contact\n");**

**printf("5. Display All Contacts\n");**

**printf("6. Exit\n");**

**printf("Enter your choice: ");**

**scanf("%d", &choice);**

**switch (choice) {**

**case 1:**

**addContact();**

**break;**

**case 2:**

**deleteContact();**

**break;**

**case 3:**

**updateContact();**

**break;**

**case 4:**

**searchContact();**

**break;**

**case 5:**

**displayContacts();**

**break;**

**case 6:**

**printf("Exiting program...\n");**

**exit(0);**

**default:**

**printf("Invalid choice. Please try again.\n");**

**}**

**}**

**return 0;**

**}**

**Address Book Menu:**

**1. Add Contact**

**2. Delete Contact**

**3. Update Contact**

**4. Search Contact**

**5. Display All Contacts**

**6. Exit**

**Enter your choice: 1**

**Enter name: premkumar**

**Enter phone number: 9398747699**

**Contact added successfully!**

**Address Book Menu:**

**1. Add Contact**

**2. Delete Contact**

**3. Update Contact**

**4. Search Contact**

**5. Display All Contacts**

**6. Exit**

**Enter your choice: 1**

**Enter name: jashuva**

**Enter phone number: 7654398909**

**Contact added successfully!**

**Address Book Menu:**

**1. Add Contact**

**2. Delete Contact**

**3. Update Contact**

**4. Search Contact**

**5. Display All Contacts**

**6. Exit**

**Enter your choice: 5**

**Contacts:**

**1. Name: premkumar, Phone: 9398747699**

**2. Name: jashuva, Phone: 7654398909**

**Address Book Menu:**

**1. Add Contact**

**2. Delete Contact**

**3. Update Contact**

**4. Search Contact**

**5. Display All Contacts**

**6. Exit**

**Enter your choice: 2**

**Enter the name of the contact to delete: jashuva**

**Contact deleted successfully!**

**Address Book Menu:**

**1. Add Contact**

**2. Delete Contact**

**3. Update Contact**

**4. Search Contact**

**5. Display All Contacts**

**6. Exit**

**Enter your choice: 4**

**Enter the name of the contact to search: premkumar**

**Name: premkumar, Phone: 9398747699**

**Address Book Menu:**

**1. Add Contact**

**2. Delete Contact**

**3. Update Contact**

**4. Search Contact**

**5. Display All Contacts**

**6. Exit**

**Enter your choice: 6**

**Exiting program...**