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#include <stdio.h>
#include <stdlib.h>
#include <string.h>

#define FILENAME "addressbook.txt"

struct Person {
    char name[50];
    char phone[15];
    char email[50];
};

// Function to create a new address book (clears existing file)
void createAddressBook() {
    FILE *fp = fopen(FILENAME, "w");
    if (!fp) {
        printf("Error creating address book file!\n");
        return;
    }
    fclose(fp);
    printf("New Address Book created successfully.\n");
}

// Function to view all records
void viewAddressBook() {
    FILE *fp = fopen(FILENAME, "r");
    struct Person p;
    if (!fp) {
        printf("No address book found. Create one first.\n");
        return;
    }
```

```
printf("\n---- Address Book ----\n");
while (fread(&p, sizeof(struct Person), 1, fp)) {
    printf("Name : %s\n", p.name);
    printf("Phone: %s\n", p.phone);
    printf("Email: %s\n", p.email);
    printf("-----\n");
}
fclose(fp);
}
```

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// Function to insert a new record
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```
void insertRecord() {
    FILE *fp = fopen(FILENAME, "ab");
    struct Person p;
```

```
if (!fp) {
    printf("Error opening file.\n");
    return;
}
```

```
printf("Enter name: ");
scanf(" %[^\n]", p.name);
printf("Enter phone: ");
scanf(" %[^\n]", p.phone);
printf("Enter email: ");
scanf(" %[^\n]", p.email);
```

```
fwrite(&p, sizeof(struct Person), 1, fp);
fclose(fp);
printf("Record added successfully.\n");
```

```
}

// Function to delete a record by name

void deleteRecord() {

    FILE *fp = fopen(FILENAME, "rb");

    FILE *temp = fopen("temp.txt", "wb");

    struct Person p;

    char name[50];

    int found = 0;

    if (!fp) {

        printf("No address book found.\n");

        return;

    }

    printf("Enter name to delete: ");

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

    while (fread(&p, sizeof(struct Person), 1, fp)) {

        if (strcmp(p.name, name) != 0) {

            fwrite(&p, sizeof(struct Person), 1, temp);

        } else {

            found = 1;

        }

    }

    fclose(fp);

    fclose(temp);

    remove(FILENAME);

    rename("temp.txt", FILENAME);
```

```
if (found)
    printf("Record deleted successfully.\n");
else
    printf("Record not found.\n");
}

// Function to modify a record
void modifyRecord() {
    FILE *fp = fopen(FILENAME, "rb+");
    struct Person p;
    char name[50];
    int found = 0;

    if (!fp) {
        printf("No address book found.\n");
        return;
    }

    printf("Enter name to modify: ");
    scanf(" %[^\n]", name);

    while (fread(&p, sizeof(struct Person), 1, fp)) {
        if (strcmp(p.name, name) == 0) {
            printf("Enter new name: ");
            scanf(" %[^\n]", p.name);
            printf("Enter new phone: ");
            scanf(" %[^\n]", p.phone);
            printf("Enter new email: ");
            scanf(" %[^\n]", p.email);
        }
    }
}
```

```

fseek(fp, -sizeof(struct Person), SEEK_CUR);
fwrite(&p, sizeof(struct Person), 1, fp);
found = 1;
break;
}

}

fclose(fp);

if (found)
printf("Record modified successfully.\n");
else
printf("Record not found.\n");
}

// ----- MAIN FUNCTION -----
int main() {
int choice;
while (1) {
printf("\n===== ADDRESS BOOK MENU =====\n");
printf("1. Create Address Book\n");
printf("2. View Address Book\n");
printf("3. Insert Record\n");
printf("4. Delete Record\n");
printf("5. Modify Record\n");
printf("6. Exit\n");
printf("Enter your choice: ");
scanf("%d", &choice);

switch (choice) {
case 1: createAddressBook(); break;

```

```
        case 2: viewAddressBook(); break;
        case 3: insertRecord(); break;
        case 4: deleteRecord(); break;
        case 5: modifyRecord(); break;
        case 6: printf("Exiting...\\n"); exit(0);
    default: printf("Invalid choice! Try again.\\n");
}
}

return 0;
}
```

Output

===== ADDRESS BOOK MENU =====

1. Create Address Book
2. View Address Book
3. Insert Record
4. Delete Record
5. Modify Record
6. Exit

Enter your choice: 1

New Address Book created successfully.

Enter your choice: 3

Enter name: Vaishnavi

Enter phone: 9876543210

Enter email: vaishnavi@gmail.com

Record added successfully.

Enter your choice: 2

---- Address Book ----

Name : Vaishnavi

Phone: 9876543210

Email: vaishnavi@gmail.com

Enter your choice: 5

Enter name to modify: Vaishnavi

Enter new name: Vaishnavi Jadhav

Enter new phone: 9823456789

Enter new email: vaishnavi.j@gmail.com

Record modified successfully.

Enter your choice: 4

Enter name to delete: Vaishnavi Jadhav

Record deleted successfully.

Enter your choice: 6

Exiting...