

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)

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**NARASARAOPETA ENGINEERING COLLEGE: NARASARAOPET
(AUTONOMOUS)**

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING



CERTIFICATE

This is to certified that Dibbamadugu Divya, Roll No: 23471A05HJ, 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..

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S.no	Discription
1.	Banking system: Implement account creation,transactions,and balance inquiry with file storage

Banking system with file storage

Aim:

Write a c program to implement account creation, transactions, and balance inquiry with file storage

```
#include <stdio.h>
```

```
#include <stdlib.h>
```

```
#include <string.h>
```

```
#define FILENAME "accounts.dat"
```

```
typedef struct { int account_number; char name[50]; float  
balance; } Account;
```

```
void createAccount(), deposit(), withdraw(), balanceInquiry(),  
displayMenu();
```

```
void saveAccount(Account account);
```

```
int loadAccount(int account_number, Account *account);
```

```
int main() {
```

```
    int choice;
```

```
while (1) {  
    displayMenu();  
    printf("Enter your choice: ");  
    scanf("%d", &choice);  
    switch (choice) {  
        case 1: createAccount(); break;  
        case 2: deposit(); break;  
        case 3: withdraw(); break;  
        case 4: balanceInquiry(); break;  
        case 5: printf("Exiting...\n"); exit(0);  
        default: printf("Invalid choice! Please try again.\n");  
    }  
    printf("\n");  
}  
return 0;  
}
```

```
void displayMenu() {  
    printf("==== Banking System =====\n1. Create  
Account\n2. Deposit\n3. Withdraw\n4. Balance Inquiry\n5.  
Exit\n=====");  
}
```

```

void createAccount() {
    Account account; FILE *file = fopen(FILENAME, "ab");
    if (!file) { printf("Error opening file!\n"); return; }
    printf("Enter account number: "); scanf("%d",
&account.account_number);

    printf("Enter name: "); scanf(" %[^\n]", account.name);
    account.balance = 0.0;

    fwrite(&account, sizeof(Account), 1, file); fclose(file);
    printf("Account created successfully!\n");
}

void deposit() {
    int account_number; float amount; Account account;
    printf("Enter account number: "); scanf("%d",
&account_number);

    if (!loadAccount(account_number, &account)) {
        printf("Account not found!\n"); return; }

    printf("Enter amount to deposit: "); scanf("%f", &amount);
    account.balance += amount; saveAccount(account);

    printf("Deposit successful! New balance: %.2f\n",
account.balance);
}

```

```
void withdraw() {  
    int account_number; float amount; Account account;  
    printf("Enter account number: "); scanf("%d",  
&account_number);  
    if (!loadAccount(account_number, &account)) {  
        printf("Account not found!\n"); return; }  
    printf("Enter amount to withdraw: "); scanf("%f",  
&amount);  
    if (amount > account.balance) printf("Insufficient  
balance!\n");  
    else { account.balance -= amount; saveAccount(account);  
        printf("Withdrawal successful! New balance: %.2f\n",  
account.balance); }  
}
```

```
void balanceInquiry() {  
    int account_number; Account account;  
    printf("Enter account number: "); scanf("%d",  
&account_number);  
    if (!loadAccount(account_number, &account)) {  
        printf("Account not found!\n"); return; }  
}
```

```
    printf("Account Number: %d\nAccount Holder:  
%s\nBalance: %.2f\n", account.account_number,  
account.name, account.balance);  
}
```

```
int loadAccount(int account_number, Account *account) {  
    FILE *file = fopen(FILENAME, "rb");  
    if (!file) return 0;  
    while (fread(account, sizeof(Account), 1, file)) if (account-  
>account_number == account_number) { fclose(file); return  
1; }  
    fclose(file); return 0;  
}
```

```
void saveAccount(Account account) {  
    FILE *file = fopen(FILENAME, "rb+"); Account temp;  
    if (!file) { printf("Error opening file!\n"); return; }  
    while (fread(&temp, sizeof(Account), 1, file))  
        if (temp.account_number == account.account_number) {  
fseek(file, -sizeof(Account), SEEK_CUR); fwrite(&account,  
sizeof(Account), 1, file); fclose(file); return; }  
    fclose(file);  
}
```


output

===== Banking System =====

1. Create Account
2. Deposit
3. Withdraw
4. Balance Inquiry
5. Exit

=====

Enter your choice: 1

Enter account number: 234567890

Enter name: nani

Account created successfully!

===== Banking System =====

1. Create Account
2. Deposit
3. Withdraw
4. Balance Inquiry
5. Exit

=====

Enter your choice: 2

Enter account number: 234567890

Enter amount to deposit: 15000

Deposit successful! New balance: 15000.00

===== Banking System =====

1. Create Account

2. Deposit

3. Withdraw

4. Balance Inquiry

5. Exit

=====

Enter your choice: 3

Enter account number: 234567890

Enter amount to withdraw: 4500

Withdrawal successful! New balance: 10500.00

===== Banking System =====

1. Create Account

2. Deposit

3. Withdraw

4. Balance Inquiry

5. Exit

=====

Enter your choice: 4

Enter account number: 234567890

Account Number: 234567890

Account Holder: nani

Balance: 10500.00

===== Banking System =====

1. Create Account

2. Deposit

3. Withdraw

4. Balance Inquiry

5. Exit

=====

Enter your choice: 5

Exiting...