

Implementation details (791 lines of code):

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

```
#include<conio.h>
```

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

```
#include<windows.h>
```

```
int i,j;
```

```
int main_exit;
```

```
//Declaration of menu function
```

```
void menu();
```

```
//Creating a common structure
```

```
//to store the date
```

```
struct date
```

```
{
```

```
    int month,day,year;
```

```
};
```

```
//Creating a structure to store
```

```
//the information of the customer's account
```

```
struct
```

```
{
```

```
    char name[60];
```

```
    int acc_no,age;
```

```
    char address[60];
```

```
    char citizenship[15];
```

```
    double phone;
```

```
    char acc_type[10];
```

```
    float amt;
```

```

    struct date dob;

    struct date deposit;

    struct date withdraw;
}add,upd,check,rem,transaction;


//Funtion to calculate the interest
//applicable to each account holder
float interest(float t,float amount,int rate)
{
    float SI;
    SI=(rate*t*amount)/100.0;
    return (SI);
}


//Funtion to create delay
void fordelay(int j)
{
    int i,k;
    for(i=0;i<j;i++)
        k=i;
}


//Funtion to create a new account
void new_acc()

{
    int choice;


    //File pointer
    FILE *ptr;

```

```
ptr=fopen("record.dat","a+");
```

```
account_no:
```

```
system("cls");
```

```
printf("\t\t\t\xB2\xB2\xB2\ ADD RECORD \xB2\xB2\xB2\xB2");
```

```
printf("\n\nEnter today's date(mm/dd/yyyy):");
```

```
scanf("%d/%d/%d",&add.deposit.month,&add.deposit.day,&add.deposit.year);
```

```
printf("\nEnter the account number:");
```

```
scanf("%d",&check.acc_no);
```

```
while(fscanf(ptr,"%d %s %d/%d/%d %d %s %s %lf %s %f
%d/%d/%d\n",&add.acc_no,add.name,&add.dob.month,&add.dob.day,&add.dob.year,&add.
age,add.address,add.citizenship,&add.phone,add.acc_type,&add.amt,&add.deposit.month,&a
dd.deposit.day,&add.deposit.year)!=EOF)
```

```
{
```

```
    if (check.acc_no==add.acc_no)
```

```
    {
```

```
        printf("Account no. already in use!");
```

```
        fordelay(1000000000);
```

```
        goto account_no;
```

```
    }
```

```
}
```

```
add.acc_no=check.acc_no;
```

```
printf("\nEnter the name:");
```

```
scanf("%s",add.name);
```

```
printf("\nEnter the date of birth(mm/dd/yyyy):");
```

```
scanf("%d/%d/%d",&add.dob.month,&add.dob.day,&add.dob.year);
```

```
printf("\nEnter the age:");
```

```
scanf("%d",&add.age);
```

```
printf("\nEnter the address:");
```

```
scanf("%s",add.address);
```

```
printf("\nEnter the citizenship number:");
```

```
scanf("%s",add.citizenship);
```

```
printf("\nEnter the phone number: ");
```

```
scanf("%lf",&add.phone);
```

```
printf("\nEnter the amount to deposit: Rupees ");
```

```
scanf("%f",&add.amt);
```

```
printf("\nType of account:\n\t#Saving\n\t#Current\n\t#Fixed1(for 1 year)\n\t#Fixed2(for 2 years)\n\t#Fixed3(for 3 years)\n\n\tEnter your choice:");
```

```
scanf("%s",add.acc_type);
```

```
fprintf(ptr,"%d %s %d/%d/%d %d %s %s %lf %s %f\n",add.acc_no,add.name,add.dob.month,add.dob.day,add.dob.year,add.age,add.address,add.citizenship,add.phone,add.acc_type,add.amt,add.deposit.month,add.deposit.day,add.deposit.year);
```

```
fclose(ptr);
```

```
printf("\nAccount created successfully!");
```

add_invalid:

```
printf("\n\n\n\t\tEnter 1 to go to the main menu and 0 to exit:");
```

```
scanf("%d",&main_exit);
```

```
system("cls");
```

```
if (main_exit==1)
```

```
    menu();
```

```
else if(main_exit==0)
```

```
    close();
```

```
else
```

```
{
```

```
    printf("\nInvalid!\a");
```

```
    goto add_invalid;
```

```
}
```

```
}
```

```
//Function to view
```

```
//the list of customers
```

```
void view_list()
```

```
{
```

```
    FILE *view;
```

```
    view=fopen("record.dat","r");
```

```
    int test=0;
```

```
    system("cls");
```

```
printf("\nACC. NO.\tNAME\t\tADDRESS\t\tPHONE\n");
```

```
while(fscanf(view,"%d %s %d/%d/%d %d %s %s %lf %s %f
%d/%d/%d",&add.acc_no,add.name,&add.dob.month,&add.dob.day,&add.dob.year,&add.ag
e,add.address,add.citizenship,&add.phone,add.acc_type,&add.amt,&add.deposit.month,&add
.deposit.day,&add.deposit.year)!=EOF)
```

```
{
    printf("\n%6d\t %10s\t\t%10s\t\t%.0lf",add.acc_no,add.name,add.address,add.phone);
    test++;
}
```

```
fclose(view);
```

```
if (test==0)
```

```
{
    system("cls");
    printf("\nNO RECORDS!!\n");
}
```

```
view_list_invalid:
```

```
printf("\n\nEnter 1 to go to the main menu and 0 to exit:");
```

```
scanf("%d",&main_exit);
```

```
system("cls");
```

```
if (main_exit==1)
```

```
    menu();
```

```
else if(main_exit==0)
```

```
    close();
```

```

else
{
    printf("\nInvalid!\a");
    goto view_list_invalid;
}
}

//Function to edit details
//of an existing account
void edit()
{
    int choice,test=0;

    FILE *old,*newrec;

    old=fopen("record.dat","r");
    newrec=fopen("new.dat","w");

    printf("\nEnter the account no. of the customer whose info you want to change:");
    scanf("%d",&upd.acc_no);

    while(fscanf(old,"%d %s %d/%d/%d %d %s %s %lf %s %f
%d/%d/%d",&add.acc_no,add.name,&add.dob.month,&add.dob.day,&add.dob.year,&add.ag
e,add.address,add.citizenship,&add.phone,add.acc_type,&add.amt,&add.deposit.month,&add
.deposit.day,&add.deposit.year)!=EOF)
    {
        if (add.acc_no==upd.acc_no)
        {
            test=1;

```

```

printf("\nWhich information do you want to change?\n1.Address\n2.Phone\n\nEnter
your choice(1 for address and 2 for phone):");

scanf("%d",&choice);

system("cls");

if(choice==1)
{
printf("Enter the new address:");
scanf("%s",upd.address);

fprintf(newrec,"%d %s %d/%d/%d %d %s %s %lf %s %f
%d/%d/%d\n",add.acc_no,add.name,add.dob.month,add.dob.day,add.dob.year,add.age,upd.a
ddress,add.citizenship,add.phone,add.acc_type,add.amt,add.deposit.month,add.deposit.day,ad
d.deposit.year);

system("cls");

printf("Changes saved!");
}

else if(choice==2)
{
printf("Enter the new phone number:");
scanf("%lf",&upd.phone);

fprintf(newrec,"%d %s %d/%d/%d %d %s %s %lf %s %f
%d/%d/%d\n",add.acc_no,add.name,add.dob.month,add.dob.day,add.dob.year,add.age,add.a
ddress,add.citizenship,upd.phone,add.acc_type,add.amt,add.deposit.month,add.deposit.day,ad
d.deposit.year);

system("cls");

```



```

        printf("Changes saved!");
    }
}

else

    fprintf(newrec,"%d %s %d/%d/%d %d %s %s %lf %s %f
%d/%d/%d\n",add.acc_no,add.name,add.dob.month,add.dob.day,add.dob.year,add.age,add.a
ddress,add.citizenship,add.phone,add.acc_type,add.amt,add.deposit.month,add.deposit.day,ad
d.deposit.year);
}

fclose(old);
fclose(newrec);
remove("record.dat");
rename("new.dat","record.dat");

if(test!=1)
{
    system("cls");

    printf("\nRecord not found!!\a\a\a");

    edit_invalid:
    printf("\nEnter 0 to try again,1 to return to main menu and 2 to exit:");
    scanf("%d",&main_exit);

    system("cls");

    if (main_exit==1)
        menu();

```

```

else if (main_exit==2)
    close();

else if(main_exit==0)
    edit();

else
{
    printf("\nInvalid!\a");
    goto edit_invalid;
}
}

else
{
    printf("\n\nEnter 1 to go to the main menu and 0 to exit:");
    scanf("%d",&main_exit);
    system("cls");

    if (main_exit==1)
        menu();

    else
        close();
}
}

```

//Function to perform transaction

//i.e. deposit or withdrawal

void transact()

```

{
    int choice,test=0;

    FILE *old,*newrec;

    old=fopen("record.dat","r");
    newrec=fopen("new.dat","w");

    printf("Enter the account no. of the customer:");
    scanf("%d",&transaction.acc_no);

    while (fscanf(old,"%d %s %d/%d/%d %d %s %s %lf %s %f
%d/%d/%d",&add.acc_no,add.name,&add.dob.month,&add.dob.day,&add.dob.year,&add.ag
e,add.address,add.citizenship,&add.phone,add.acc_type,&add.amt,&add.deposit.month,&add
.deposit.day,&add.deposit.year)!=EOF)
    {
        if(add.acc_no==transaction.acc_no)
        {
            test=1;

            if(strcmpi(add.acc_type,"fixed1")==0||strcmpi(add.acc_type,"fixed2")==0||strcmpi(add.acc_t
ype,"fixed3")==0)
            {
                printf("\a\a\a\n\nYOU CANNOT DEPOSIT OR WITHDRAW CASH IN FIXED
ACCOUNTS!!!!");

                fordelay(10000000000);

                system("cls");

                menu();
            }
        }
    }
}

```

```
printf("\n\nDo you want to\n1.Deposit\n2.Withdraw?\n\nEnter your choice(1 for deposit and 2 for withdraw):");
```

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

```
if (choice==1)
```

```
{
```

```
printf("Enter the amount you want to deposit: Rupees ");
```

```
scanf("%f",&transaction.amt);
```

```
add.amt+=transaction.amt;
```

```
fprintf(newrec,"%d %s %d/%d/%d %d %s %s %lf %s %f\n",add.acc_no,add.name,add.dob.month,add.dob.day,add.dob.year,add.age,add.address,add.citizenship,add.phone,add.acc_type,add.amt,add.deposit.month,add.deposit.day,add.deposit.year);
```

```
printf("\n\nDeposited successfully!");
```

```
}
```

```
else
```

```
{
```

```
printf("Enter the amount you want to withdraw:$ ");
```

```
scanf("%f",&transaction.amt);
```

```
add.amt-=transaction.amt;
```

```
fprintf(newrec,"%d %s %d/%d/%d %d %s %s %lf %s %f\n",add.acc_no,add.name,add.dob.month,add.dob.day,add.dob.year,add.age,add.address,add.citizenship,add.phone,add.acc_type,add.amt,add.deposit.month,add.deposit.day,add.deposit.year);
```

```
printf("\n\nWithdrawn successfully!");
```

```

    }
}

else
{
    fprintf(newrec,"%d %s %d/%d/%d %d %s %s %lf %s %f
%d/%d/%d\n",add.acc_no,add.name,add.dob.month,add.dob.day,add.dob.year,add.age,add.a
ddress,add.citizenship,add.phone,add.acc_type,add.amt,add.deposit.month,add.deposit.day,ad
d.deposit.year);
}
}

fclose(old);
fclose(newrec);
remove("record.dat");
rename("new.dat","record.dat");

if(test!=1)
{
    printf("\n\nRecord not found!!");

    transact_invalid:
    printf("\n\nEnter 0 to try again,1 to return to main menu and 2 to exit:");
    scanf("%d",&main_exit);

    system("cls");

    if (main_exit==0)
        transact();

    else if (main_exit==1)

```

```

        menu();

    else if (main_exit==2)
        close();

    else
    {
        printf("\nInvalid!");
        goto transact_invalid;
    }

}

else
{
    printf("\nEnter 1 to go to the main menu and 0 to exit:");
    scanf("%d",&main_exit);

    system("cls");

    if (main_exit==1)
        menu();

    else
        close();
}

}

//Function to delete

```

```

//an existing account
void erase()
{
    FILE *old,*newrec;

    int test=0;

    old=fopen("record.dat","r");
    newrec=fopen("new.dat","w");

    printf("Enter the account no. of the customer you want to delete:");
    scanf("%d",&rem.acc_no);

    while (fscanf(old,"%d %s %d/%d/%d %d %s %s %lf %s %f
%d/%d/%d",&add.acc_no,add.name,&add.dob.month,&add.dob.day,&add.dob.year,&add.age,add.address,add.citizenship,&add.phone,add.acc_type,&add.amt,&add.deposit.month,&add.deposit.day,&add.deposit.year)!=EOF)
    {
        if(add.acc_no!=rem.acc_no)

            fprintf(newrec,"%d %s %d/%d/%d %d %s %s %lf %s %f
%d/%d/%d\n",add.acc_no,add.name,add.dob.month,add.dob.day,add.dob.year,add.age,add.address,add.citizenship,add.phone,add.acc_type,add.amt,add.deposit.month,add.deposit.day,add.deposit.year);

        else
        {
            test++;

            printf("\nRecord deleted successfully!\n");
        }
    }

    fclose(old);

```

```
fclose(newrec);
remove("record.dat");
rename("new.dat", "record.dat");

if(test==0)
{
    printf("\nRecord not found!!\a\a\a");

    erase_invalid:

    printf("\nEnter 0 to try again, 1 to return to main menu and 2 to exit:");
    scanf("%d", &main_exit);

    if (main_exit==1)
        menu();

    else if (main_exit==2)
        close();

    else if(main_exit==0)
        erase();

    else
    {
        printf("\nInvalid!\a");
        goto erase_invalid;
    }
}

else
{
```



```

printf("\nEnter 1 to go to the main menu and 0 to exit:");
scanf("%d",&main_exit);

system("cls");

if (main_exit==1)
    menu();

else
    close();
}
}

//Function to view the details
//of an existing account
void see()
{
    FILE *ptr;

    int test=0,rate;
    int choice;
    float time;
    float intrst;

    ptr=fopen("record.dat","r");

    printf("Do you want to check by\n1.Account no\n2.Name\nEnter your choice:");
    scanf("%d",&choice);

    if (choice==1)

```

```

{
    printf("Enter the account number:");
    scanf("%d",&check.acc_no);

    while (fscanf(ptr,"%d %s %d/%d/%d %d %s %s %lf %s %f
%d/%d/%d",&add.acc_no,add.name,&add.dob.month,&add.dob.day,&add.dob.year,&add.ag
e,add.address,add.citizenship,&add.phone,add.acc_type,&add.amt,&add.deposit.month,&add
.deposit.day,&add.deposit.year)!=EOF)
    {
        if(add.acc_no==check.acc_no)
        {
            system("cls");

            test=1;

            printf("\nAccount NO.:%d\nName:%s \nDOB:%d/%d/%d \nAge:%d \nAddress:%s
\nCitizenship No:%s \nPhone number:%.0lf \nType Of Account:%s \nAmount deposited:$
%.2f \nDate Of
Deposit:%d/%d/%d\n\n",add.acc_no,add.name,add.dob.month,add.dob.day,add.dob.year,add.
age,add.address,add.citizenship,add.phone,

            add.acc_type,add.amt,add.deposit.month,add.deposit.day,add.deposit.year);

            if(strcmpi(add.acc_type,"fixed1")==0)
            {
                time=1.0;
                rate=9;

                intrst=interest(time,add.amt,rate);

                printf("\n\nYou will get Rupees %.2f as interest on
%d/%d/%d",intrst,add.deposit.month,add.deposit.day,add.deposit.year+1);
            }

```

```

else if(strcmpi(add.acc_type,"fixed2")==0)
{
    time=2.0;
    rate=11;

    intrst=interest(time,add.amt,rate);

    printf("\n\nYou will get Rupees %.2f as interest on
%d/%d/%d",intrst,add.deposit.month,add.deposit.day,add.deposit.year+2);
}

else if(strcmpi(add.acc_type,"fixed3")==0)
{
    time=3.0;
    rate=13;

    intrst=interest(time,add.amt,rate);

    printf("\n\nYou will get Rupees %.2f as interest on
%d/%d/%d",intrst,add.deposit.month,add.deposit.day,add.deposit.year+3);
}

else if(strcmpi(add.acc_type,"saving")==0)
{
    time=(1.0/12.0);
    rate=8;

    intrst=interest(time,add.amt,rate);

    printf("\n\nYou will get Rupees %.2f as interest on %d of every
month",intrst,add.deposit.day);
}

```

```

    }

    else if(strcmpi(add.acc_type,"current")==0)
    {
        printf("\n\nYou will get no interest\n");
    }
}
}
}

else if (choice==2)
{
    printf("Enter the name:");
    scanf("%s",&check.name);

    while (fscanf(ptr,"%d %s %d/%d/%d %d %s %s %lf %s %f
%d/%d/%d",&add.acc_no,add.name,&add.dob.month,&add.dob.day,&add.dob.year,&add.ag
e,add.address,add.citizenship,&add.phone,add.acc_type,&add.amt,&add.deposit.month,&add
.deposit.day,&add.deposit.year)!=EOF)
    {
        if(strcmpi(add.name,check.name)==0)
        {
            system("cls");

            test=1;

            printf("\nAccount No.:%d\nName:%s \nDOB:%d/%d/%d \nAge:%d \nAddress:%s
\nCitizenship No:%s \nPhone number:%.0lf \nType Of Account:%s \nAmount
deposited:$%.2f \nDate Of
Deposit:%d/%d/%d\n\n",add.acc_no,add.name,add.dob.month,add.dob.day,add.dob.year,add.
age,add.address,add.citizenship,add.phone,
            add.acc_type,add.amt,add.deposit.month,add.deposit.day,add.deposit.year);

```

```
if(strcmpi(add.acc_type,"fixed1")==0)
{
    time=1.0;
    rate=9;

    intrst=interest(time,add.amt,rate);

    printf("\n\nYou will get Rupees %.2f as interest on
%d/%d/%d",intrst,add.deposit.month,add.deposit.day,add.deposit.year+1);
}

else if(strcmpi(add.acc_type,"fixed2")==0)
{
    time=2.0;
    rate=11;

    intrst=interest(time,add.amt,rate);

    printf("\n\nYou will get Rupees %.2f as interest on
%d/%d/%d",intrst,add.deposit.month,add.deposit.day,add.deposit.year+2);
}

else if(strcmpi(add.acc_type,"fixed3")==0)
{
    time=3.0;
    rate=13;

    intrst=interest(time,add.amt,rate);

    printf("\n\nYou will get Rupees %.2f as interest on
%d/%d/%d",intrst,add.deposit.month,add.deposit.day,add.deposit.year+3);
```

```

    }

    else if(strcmpi(add.acc_type,"saving")==0)
    {
        time=(1.0/12.0);
        rate=8;

        intrst=interest(time,add.amt,rate);

        printf("\n\nYou will get Rupees %.2f as interest on %d of every
month",intrst,add.deposit.day);
    }

    else if(strcmpi(add.acc_type,"current")==0)
    {
        printf("\n\nYou will get no interest\n\n");
    }
}

}

fclose(ptr);

if(test!=1)
{
    system("cls");

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

    see_invalid:

    printf("\nEnter 0 to try again,1 to return to main menu and 2 to exit:");

```

```
scanf("%d",&main_exit);
```

```
system("cls");
```

```
if (main_exit==1)
```

```
    menu();
```

```
else if (main_exit==2)
```

```
    close();
```

```
else if(main_exit==0)
```

```
    see();
```

```
else
```

```
{
```

```
    system("cls");
```

```
    printf("\nInvalid!\a");
```

```
    goto see_invalid;
```

```
}
```

```
}
```

```
else
```

```
{
```

```
    printf("\nEnter 1 to go to the main menu and 0 to exit:");
```

```
    scanf("%d",&main_exit);}
```

```
if (main_exit==1)
```

```
{
```

```
    system("cls");
```

```
    menu();
```

```

    }

else
{
    system("cls");
    close();
}
}

//Function displaying
//the closing statement
void close()
{
    printf("\n\n\t\t*****Thank you!!!*****\n\n");
}

//Function displaying the
//main menu and storing the choice
void menu()
{
    int choice;

    system("cls");

    system("color 9");

    printf("\n\n\t\t*****");

    printf("\n\t\t*****");

```



```
printf("\n\n\t\t\tCUSTOMER ACCOUNT BANKING MANAGEMENT SYSTEM");
```

```
printf("\n\n\t\t\t*****");
```

```
printf("\n\t\t\t*****");
```

```
printf("\n\n\n\t\t\t\xB2\xB2\xB2\xB2\xB2\xB2\xB2 WELCOME TO THE MAIN MENU\n\n\n\t\t\t\xB2\xB2\xB2\xB2\xB2\xB2\xB2");
```

```
printf("\n\n\n\t\t\t1. Create new account\n\n\n\t\t\t2. Update information of existing account\n\n\n\t\t\t3. For transactions\n\n\n\t\t\t4. Check the details of existing account\n\n\n\t\t\t5. Removing existing account\n\n\n\t\t\t6. View customer's list\n\n\n\t\t\t7. Exit\n\n\n\n\n\t\t\tEnter your choice: ");
```

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

```
system("cls");
```

```
switch(choice)
```

```
{
```

```
case 1:
```

```
new_acc();
```

```
break;
```

```
case 2:
```

```
edit();
```

```
break;
```

```
case 3:
```

```
transact();
```

```
break;
```

```
case 4:
```

```
    see();
```

```
    break;
```

```
case 5:
```

```
    erase();
```

```
    break;
```

```
case 6:
```

```
    view_list();
```

```
    break;
```

```
case 7:
```

```
    close();
```

```
    break;
```

```
}
```

```
}
```

```
//Main function
```

```
void main()
```

```
{
```

```
    char ch,pass[10],password[10]="hello";
```

```
    int i;
```

```
    printf("\n\n\t\tEnter the password to login:");
```

```
    for (i = 0; i < 10; i++)
```

```
    {
```

```
        ch = getch();
```

```
        if (ch != 13)
```

```
        {
```

```

        pass[i] = ch;
        ch = '*';
        printf("%c", ch);
    }
    else
        break;
}

if (strcmp(pass,password)==0)
{
    printf("\n\nPassword Match!\n\nLOADING");

    for(i=0;i<=6;i++)
    {
        fordelay(1000000000);
        printf(".");
    }

    system("cls");

    menu();
}
else
{
    printf("\n\nWrong password!!\a");

    login_try:
    printf("\n\nEnter 1 to try again and 0 to exit:");
    scanf("%d",&main_exit);

```

```
if (main_exit==1)
{

    system("cls");
    main();
}

else if (main_exit==0)
{
    system("cls");
    close();
}

else
{
    printf("\nInvalid!");

    fordelay(10000000000);

    system("cls");

    goto login_try;
}
}
```