

CO24997 PROGRAMMING PRACTICES

Assignment 07: Mini-project

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1 Objective of the mini project

The objective of the mini project is to make a billing system through C language. We can perform and manage billing operations like they do in Telecom companies. This project contains total ten functions through which we can maintain our billing records.

2 Functions used in this program:

2.1 Add new records-

This function helps the user to Add new records, add new data into file with name, phone number and amount to be paid.

2.2 View list of records-

This function helps the user to lists all telephone billing records.

2.3 Modify records-

This function helps the user to edit the added records; name, phone number and/or amount of payment can be edited.

2.4 View payment-

This function helps the user to shows amount to be paid.

2.5 Search records-

This function helps the user to search for added/updated records in file.

2.6 Delete records-

This function helps the user to removes data permanently from file.

3 Code in C Language

```
#include<stdio.h>
#include<conio.h>
#include<ctype.h>
#include<windows.h>
#include<stdlib.h>
struct subscriber
{
char phonenumber[20]; //User input there phone number.
char name[50];        // User inputted name.
float amount;         // User inputted amount.
}s;
void addrecords();     //Stores new record: add new data into file with name, phone number, amount.
void listrecords();    //This function lists all the telephone billing records.
void modifyrecords();  //This function edits the added records; name, phone number, amount.
void deleterecords();  //This function deletes data permanently.
void searchrecords();  //This function searches for records.
void payment();        //This function shows the amount to be paid.
char get;
int main()
{
    int password;      //set password
    int phonenumber;   //Enter the phone number
    char choice;

    system("cls");

    printf("\n\t\t\t\t\t—————WELCOME TO THE TELECOM BILLING MANAGEMENT SYSTEM————");

    Sleep(1000);
    getch();
    system("cls");
    while (1)
    {
        system("cls");
        printf("\n Enter\n A : for adding new records.\n L : for list of records");
        printf("\n M : for modifying records.\n P : for payment");
        printf("\n S : for searching records.");
        printf("\n D : for deleting records.\n E : for exit\n");
        choice=getche();
        choice=toupper(choice);
        switch(choice)
        {
            case 'P':
                payment(); break;
            case 'A':
                addrecords(); break;
```

```

        case 'L':
            listrecords(); break;
        case 'M':
            modifyrecords(); break;
        case 'S':
            searchrecords(); break;
        case 'D':
            deleterecords(); break;
        case 'E':
            system("cls");
            printf("\n\n\t\t\t\t\tTHANK YOU");
            printf("\n\n\n\n\n\n:\n\t\t\t\t\tFOR USING OUR SERVICE");
            Sleep(2000);
            exit(0);
            break;
        default:
            system("cls");
            printf("Incorrect Input");
            printf("\nAny key to continue");
            getch();
    }
}

void addrecords()
{
    FILE *f;
    char test;
    f=fopen("c:/file.ojs","ab+");
    if(f==0)
    {
        f=fopen("c:/file.ojs","wb+");
        system("cls");
        printf("please wait while we configure your computer");
        printf("/npress any key to continue");
        getch();
    }
    while(1)
    {
        system("cls");
        printf("\n Enter phone number:");
        scanf("%s",&s.phonenumber);
        printf("\n Enter name:");
        fflush(stdin);
        scanf("%[^\n]",&s.name);
        printf("\n Enter amount:");
        scanf("%f",&s.amount);
        fwrite(&s,sizeof(s),1,f);
        fflush(stdin);
        system("cls");
        printf("1 record successfully added");
        printf("\n Press esc key to exit , any other key to add other record:");
    }
}

```

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        test=getche();
        if (test==27)
            break;
    }
    fclose(f);
}
void listrecords()
{
    FILE *f;
    int i;
    if ((f=fopen("c:/file.ojs","rb"))==NULL)
        exit(0);
    system("cls");
    printf("Phone Number\t\tUser Name\t\tAmount\n");
    for (i=0;i<79;i++)
        printf("-");
    while (fread(&s,sizeof(s),1,f)==1)
    {
        printf("\n%-10s\t\t%-20s\t\tRs. %.2f /-",s.phonenumber,s.name,s.amount);
    }
    printf("\n");
    for (i=0;i<79;i++)
        printf("-");

fclose(f);
getch();
}
void deleterecords()
{
    FILE *f,*t;
    int i=1;
    char phonenumber[20];
    if ((t=fopen("c:/temp.ojs","w+"))==NULL)
        exit(0);
    if ((f=fopen("c:/file.ojs","rb"))==NULL)
        exit(0);
    system("cls");
    printf("Enter the phone number to be deleted from the Database");
    fflush(stdin);
    scanf("%s",&phonenumber);
    while (fread(&s,sizeof(s),1,f)==1)
    {
        if (strcmp(s.phonenumber,phonenumber)==0)
        {
            i=0;
            continue;
        }
        else
            fwrite(&s,sizeof(s),1,t);
    }
}

```

```

        if (i==1)
        {
            system("cls");
            printf("Phone number \"%s\" not found", phonenumber);
            remove("c:/file.ojs");
            rename("c:/temp.ojs", "c:/file.ojs");
            getch();
            fclose(f);
            fclose(t);
            main();
        }
        remove("c:/file.ojs");
        rename("c:/temp.ojs", "c:/file.ojs");
        system("cls");
        printf("The Number %s Successfully Deleted!!!!", phonenumber);
        fclose(f);
        fclose(t);
        getch();
    }
    void searchrecords()
    {
        FILE *f;
        char phonenumber[20];
        int flag=1;
        f=fopen("c:/file.ojs", "rb+");
        if (f==0)
            exit(0);
        fflush(stdin);
        system("cls");
        printf("Enter Phone Number to search ");
        scanf("%s", phonenumber);
        while (fread(&s, sizeof(s), 1, f)==1)
        {
            if (strcmp(s.phonenumber, phonenumber)==0)
            {
                system("cls");
                printf("Record Found ");
                printf("\n\nPhonenumber: %s\nName: %s\nAmount: Rs.%0.2f\n", s.phonenumber, s.name, s.amount);
                flag=0;
                break;
            }
            else if (flag==1)
            {
                system("cls");
                printf("Requested Phone Number Not found!");
            }
        }
        getch();
        fclose(f);
    }
    void modifyrecords()
    {
        FILE *f;

```

```

char phonenumber[20];
long int size=sizeof(s);
if((f=fopen("c:/file.ojs","rb+"))==NULL)
    exit(0);
system("cls");
printf("Enter phone number of the subscriber to modify:");
scanf("%[^\\n]",phonenumber);
fflush(stdin);
while(fread(&s,sizeof(s),1,f)==1)
{
    if(strcmp(s.phonenumber,phonenumber)==0)
    {
        system("cls");
        printf("\\n Enter phone number:");
        scanf("%s",&s.phonenumber);
        printf("\\n Enter name: ");
        fflush(stdin);
        scanf("%[^\\n]",&s.name);
        printf("\\n Enter amount: ");
        scanf("%f",&s.amount);
        fseek(f,-size,SEEK_CUR);
        fwrite(&s,sizeof(s),1,f);
        break;
    }
}
fclose(f);
}
void payment()
{
    FILE *f;
    char phonenumber[20];
    long int size=sizeof(s);
    float amt;
    int i;
    if((f=fopen("c:/file.ojs","rb+"))==NULL)
        exit(0);
    system("cls");
    printf("Enter phone number of the subscriber for payment");
    scanf("%[^\\n]",phonenumber);
    fflush(stdin);
    while(fread(&s,sizeof(s),1,f)==1)
    {
        if(strcmp(s.phonenumber,phonenumber)==0)
        {
            system("cls");
            printf("\\n Phone No.: %s",s.phonenumber);
            printf("\\n Name: %s",s.name);
            printf("\\n Current amount: %f",s.amount);
            printf("\\n");
            for(i=0;i<79;i++)

```

```

        printf("—");
        printf("\n\nEnter amount of payment :");
        fflush(stdin);
        scanf(" %f",&amt);
        s.amount=s.amount-amt;
        fseek(f,-size,SEEK_CUR);
        fwrite(&s,sizeof(s),1,f);
        break;
    }
}
system("cls");
printf("THANK YOU %s FOR YOUR TIMELY PAYMENTS",s.name);
getch();
fclose(f);
}

```

4 Output of the above code

—WELCOME TO THE TELECOM BILLING MANAGEMENT SYSTEM—

Enter
A : for adding new records.
L : for list of records
M : for modifying records.
P : for payment
S : for searching records.
D : for deleting records.
E : for exit

Phone Number	User Name	Amount
7489221071	isha singhai	Rs.500.00/-
49454521	Tanish Jain	Rs.7.00/-
93029125656	Naman	Rs.560.00/-

Enter phone number of the subscriber to modify:

THANK YOU Naman FOR YOUR TIMELY PAYMENTS

Record Found
Phonenumber: 93029125656
Name : Naman
Amount : Rs.560.00

The Number 9301925656 Successfully Deleted!!!!

THANK YOU

FOR USING OUR SERVICE

5 Statistically information about the program development:

Statistically information	
Starting date	15-11-22
End date	22-11-22
Total time required	9 hours
Total line of code in C	263
Total line of code in Latex	353
Total number of functions	10

6 Coding Standards Organisation:

GeeksforGeeks