

## Latex Code:

```
\documentclass{article}
\usepackage[utf8]{inputenc}
\usepackage{graphicx}
\graphicspath{ {C:\Users\ISHA\Desktop} }
\usepackage{amsmath}
\usepackage{fancyhdr}
\usepackage{fullpage}
\usepackage{geometry}
\usepackage{listings}
\lstdefinestyle{chstyle}{
  basicstyle=\small,
  showstringspaces=false,
  %captionpos=b,
}
\begin{document}
\begin{center}
  {\large \textbf{CO24997 PROGRAMMING PRACTICES}} \\
\end{center}
\begin{center}
  { \textbf{Assignment #07: Mini-project}} \\
  \flushright \chapter{Isha Singhai\ 0801CS211045}
\end{center}
\hrule
\section{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.
\section{Functions used in this program:}
\subsection{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.

\subsection{View list of records-} This function helps the user to lists all telephone billing records.

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

\subsection{View payment-} This function helps the user to shows amount to be paid.

\subsection{Search records-} This function helps the user to search for added/updated records in file.

\subsection{Delete records-} This function helps the user to removes data permanently from file.

\section{Code in C Language}

\begin{lstlisting}[style=chstyle]

```
#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 to be paid.
```

```
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-----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\tTHANK YOU");
        printf("\n\n\n\n\n\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:");
        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);
}

\\end{lstlisting}

\\section{Output of the above code}

```

\hrule

\vspace{50pt}\

-----WELCOME TO THE TELECOM BILLING MANAGEMENT SYSTEM---

\vspace{50pt}\hrule

\vspace{50pt} \hrule

\vspace{20pt}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 \\\ \vspace{20pt} \hrule

\hrule \vspace{30pt} \\\ \\\ \\\ \\\

\hrule \vspace{20pt} Phone Number \hspace{15pt} User Name \hspace{15pt} Amount \\\

-----\\

\hspace{5pt}7489221071\hspace{15pt} isha singhai\hspace{15pt} Rs.500.00/-

\\\hspace{15pt}

\hspace{5pt}49454521 \hspace{25pt} Tanish Jain\hspace{15pt} Rs.7.00/- \hspace{15pt} \\\

\hspace{5pt}93029125656 \hspace{15pt} Naman \hspace{25pt} Rs.560.00/- \\\

-----\\

\vspace{30pt}

\hrule \vspace{50pt} Enter phone number of the subscriber to modify:\vspace{30pt}

\vspace{30pt}

\hrule \vspace{50pt} THANK YOU Naman FOR YOUR TIMELY PAYMENTS \vspace{50pt}\hrule

\hrule \vspace{20pt} \hspace{10pt} Record Found \\\

\\ Phonenumner: 93029125656 \\\

Name : Naman \\

Amount : Rs.560.00

\\vspace{20pt}\\hrule

\\hrule \\vspace{20pt}

The Number 9301925656 Successfully Deleted!!!! \\vspace{20pt}

\\hrule

\\vspace{30pt}

\\hrule \\vspace{50pt} \\hspace{150pt}THANK YOU \\ \\

\\ \\ \\ \\ \\vspace{50pt}

FOR USING OUR SERVICE \\vspace{30pt} \\hrule

\\includegraphics{output3}

\\section{Statistically information about the program development:}

\\begin{center}

\\begin{tabular}{|l|l|}

\\hline

\\multicolumn{2}{|c|}{Statistically information} \\

\\hline

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 \\

\\hline

\\end{tabular}

\end{center}

\section{Coding Standards Organisation:}

\space GeeksforGeeks

\end{document}