PROJECT ON

TELECOM BILLING MANAGEMENT SYSTEM

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PROGRAM - B.TECH (2021-2025)

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ABSTRACT:

Telecom Billing System is based on the concept of generating telecom office records, to add, update and maintain the daily records of their telecom payments. Telecom Billing is a process of collecting usage, aggregating it, applying required usage charges, and finally generating invoices for the customers. The Telecom Billing process also includes receiving and recording payments from the customers.
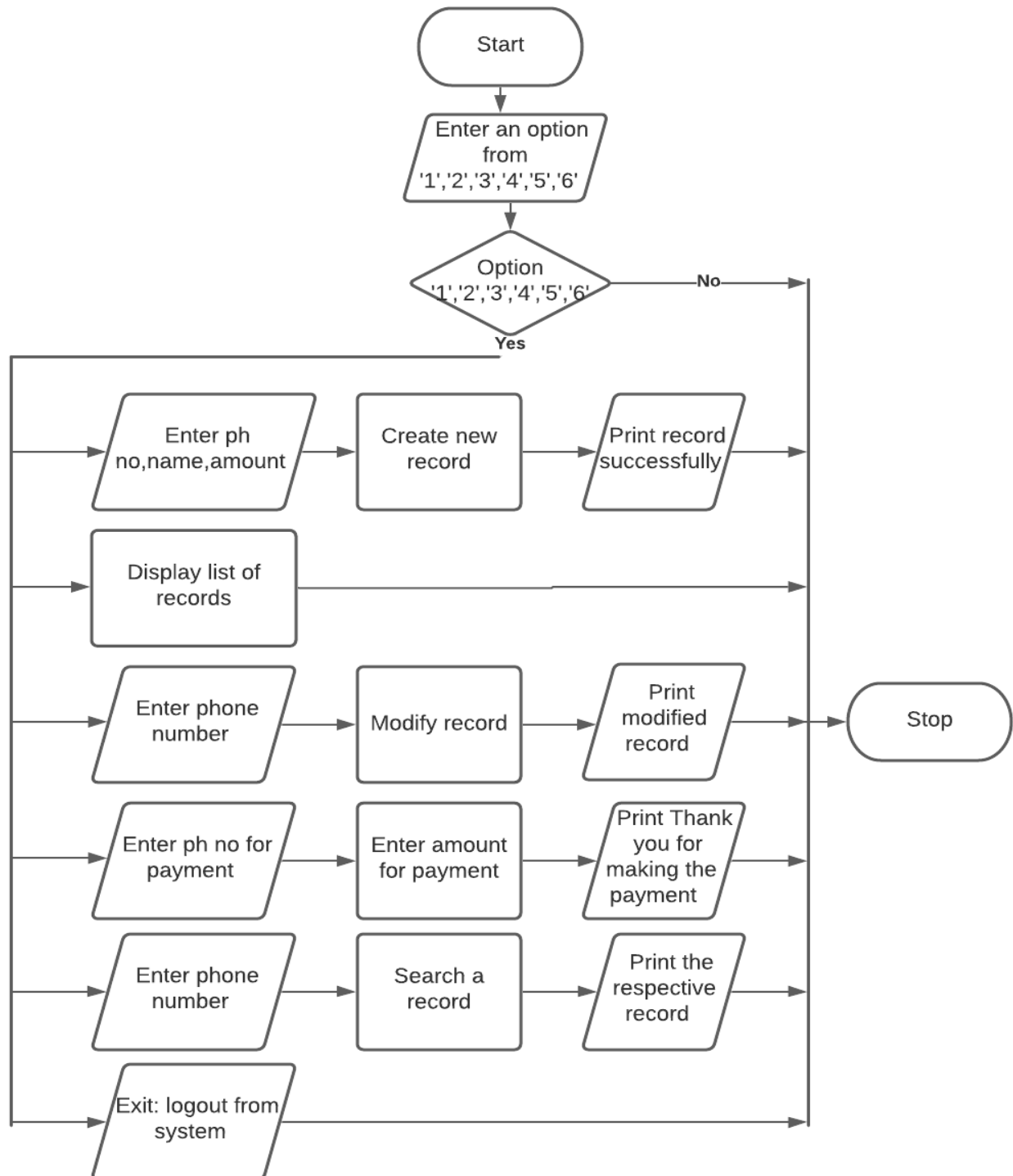
There could be very complex charging scenarios, which would be difficult to handle manually. This system can handle billing tasks very efficiently and provide lots of flexibilities to service providers to offer their services with different price structures. With this system, customers can make payments in parts as the system updates itself accordingly.

From this system users can Add, List, Modify, Delete records, as well as this program, contains a Payment system too which helps for the bill payments of the customers. All the records can be managed and payments can be done within a short period of time. This whole project is designed in 'C' Programming language & different variables and strings have been used for the development of this project. It's easy to operate and understand by users.

The functions and features used in this project are listed below:

- Add new records: add new data into a record with name, phone number and amount to be paid
- View list of records – lists all telephone billing records
- Modify records – edit the added records, that includes editing- name, phone number, and/or amount of payment can be edited
- Make payment – shows amount to be paid and then helps in the payment process
- Search records – search for added/updated records in a file using given phone number
- Exit – Logs you out from the system

FLOWCHART:

PROGRAM:

```c
#include<stdio.h>
#include<string.h>
#include<ctype.h>
#include<stdlib.h>
struct subscriber   //structure for subscriber data
{
char phonenumber[20];
char name[50];
float amount;
}s;
void addrecords();  //function for adding records
void listrecords();  //function for list of record
void modifyrecords();  // function for modifying the record
void searchrecords();    //function for searching the record
void payment();  //function for updating payment of individual subscriber
char get;
int main()  //main function
{
int phonenumber;
int choice;
printf("\n\n\n\n\n\n\n\n****************************************************
****");
printf("\n\t\t------WELCOME TO THE TELECOM BILLING MANAGEMENT SYSTEM---");
printf("\n\t\t***********************************************************");
while (choice!=6)
{
printf("\n Enter\n 1 : for adding new records.\n 2 : for list of records");
printf("\n 3 : for modifying records.\n 4 : for payment");
printf("\n 5 : for searching records.");
printf("\n 6 : for exit\n");
scanf("%d",&choice);
switch(choice)
{
case 1:
addrecords();break;
case 2:
listrecords();break;
case 3:
modifyrecords();break;
case 4:
payment();break;
case 5:
searchrecords();break;
case 6:
printf("\n\n\t\t\t\tTHANK YOU FOR USING OUR SERVICE");
```

```c
exit(0);
break;
default:
printf("Incorrect Input");
printf("\nAny key to continue");
break;
}
}
}

void addrecords()
{
FILE *f;
int test=1;
f=fopen("file.ojs","ab+");
if(f==0)
{   f=fopen("file.ojs","wb+");
printf("please wait while we configure your computer");
printf("/npress any key to continue");
}
while(test!=27)
{
printf("\n Enter phone number:");
scanf("%s",s.phonenumber);
printf("\n Enter name:");
scanf("%s[^\n]",s.name);
printf("\n Enter amount:");
scanf("%f",&s.amount);
fwrite(&s,sizeof(s),1,f);
printf("1 record successfully added");
printf("\n Press 27 to exit, any other key to add other record:");
scanf("%d",&test);
if(test==27)
break;
}
fclose(f);
}

void listrecords()
{
FILE *f;
int i;
if((f=fopen("file.ojs","rb"))==NULL)
exit(0);
system("cls");
printf("Phone Number\t\tUser Name\t\t\tAmount\n");
```

```c
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);
}

void searchrecords()
{
FILE *f;
char phonenumber[20];
int flag=1;
f=fopen("file.ojs","rb+");
if(f==0)
exit(0);
fflush(stdin);
printf("Enter Phone Number to search in our database");
scanf("%s", phonenumber);
while(fread(&s,sizeof(s),1,f)==1)
{
if(strcmp(s.phonenumber,phonenumber)==0)
{
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)
{
printf("Requested Phone Number Not found in our database");
}
}
fclose(f);
}

void modifyrecords()
{
FILE *f;
char phonenumber[20];
long int size=sizeof(s);
```

```c
if((f=fopen("file.ojs","rb+"))==NULL)
exit(0);
printf("Enter phone number of the subscriber to modify:");
scanf("%s[^\n]",phonenumber);
fflush(stdin);
while(fread(&s,sizeof(s),1,f)==1)
{
if(strcmp(s.phonenumber,phonenumber)==0)
{
printf("\n Enter phone number:");
scanf("%s",s.phonenumber);
printf("\n Enter name: ");
fflush(stdin);
scanf("%s[^\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("file.ojs","rb+"))==NULL)
exit(0);
printf("Enter phone number of the subscriber for payment");
scanf("%s[^\n]",phonenumber);
fflush(stdin);
while(fread(&s,sizeof(s),1,f)==1)
{
if(strcmp(s.phonenumber,phonenumber)==0)
{
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("-");
```

```c
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;
}
}
printf("THANK YOU %s FOR YOUR TIMELY PAYMENTS",s.name);
fclose(f);
}
```

RESULT:

The Telecom Billing Management System was successfully implemented. Based on the program source code and output, customers can now have a mini statement of bills that contains customer name, phone number, and payment details.

OUTPUT SCREENSHOTS:

```
**************************************************************
                ------WELCOME TO THE TELECOM BILLING MANAGEMENT SYSTEM---
                **********************************************************************
 Enter
 1 : for adding new records.
 2 : for list of records
 3 : for modifying records.
 4 : for payment
 5 : for searching records.
 6 : for exit
1

 Enter phone number:7658493456

 Enter name:Beck

 Enter amount:450
1 record successfully added
 Press 27 to exit, any other key to add other record:2

 Enter phone number:9876786545

 Enter name:Jack

 Enter amount:560
1 record successfully added
 Press 27 to exit, any other key to add other record:
```

```
 Enter
 1 : for adding new records.
 2 : for list of records
 3 : for modifying records.
 4 : for payment
 5 : for searching records.
 6 : for exit
2
sh: 1: cls: not found
Phone Number            User Name                        Amount
----------------------------------------------------------------------------
7658493456              Beck                             Rs. 450.00 /-
9876786545              Jack                             Rs. 560.00 /-
8767898734              Kyra                             Rs. 320.00 /-
----------------------------------------------------------------------------
```

```
Enter
1 : for adding new records.
2 : for list of records
3 : for modifying records.
4 : for payment
5 : for searching records.
6 : for exit
4
Enter phone number of the subscriber for payment8767898734

 Phone No.: 8767898734
 Name: Kyra
 Current amount: 320.000000
-------------------------------------------------------------------------

Enter amount of payment :300
THANK YOU Kyra FOR YOUR TIMELY PAYMENTS
```

```
Enter
1 : for adding new records.
2 : for list of records
3 : for modifying records.
4 : for payment
5 : for searching records.
6 : for exit
5
Enter Phone Number to search in our database7658493456
 Record Found

Phonenumber: 7658493456
Name: Beck
Amount: Rs.450.00

Enter
1 : for adding new records.
2 : for list of records
3 : for modifying records.
4 : for payment
5 : for searching records.
6 : for exit
6


                    THANK YOU FOR USING OUR SERVICE

...Program finished with exit code 0
Press ENTER to exit console.
```

DECLARATION:

I hereby declare that the project report on "Telecom Billing Management System" is based on my own work carried out during the course of our study under the supervision of Dr. R. Rajkumar, DSBS, School Of Computing, SRMIST.

REFERENCES:

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- https://itsourcecode.com/free-projects/c-projects/telecom-billing-management-system-in-c-with-source-code/
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