

A Project Report on

Finding Out The Telephone Bill Of Customer With A Security Access

Submitted of
Course CSE-100: Software Development Project-1

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02-04-2018

Date

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Advisor’s name

02-04-2018

Date

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Group member name

Dedication

Dedicated to : **Kazi Mahmudul Hassan.**

ABSTRACT

PSTN (Public Switched Telephone Network) or Landline is popular since earlier century. Till now, most of the official task or institutional function are going on with this pstn or Landline Telephone network. In our project we have fixed our action on calculating the different type of call duration with its rate including vat and monthly rate of a sequential number of customer one by one. The software project also presents the current date and time after entering the valid username and password. After neglecting all invalid or illegal data input and taking relevant information from customer it outputs us a customer's total specific monthly telephone bill that he has to pay. Whenever any customer enters any wrong access permission or wrong data value it displays error and claims the correct information again. “[The Telephone Bill Of Customer With A Security Access](#)” is the project that helps us for calculating a customer's specific monthly telephone bill. It is noted that, We have developed our software project based on RanksTel operator which is defined as a fixed line PSTN operator.

RanksTel uses the following numbering scheme:

+880 44 R₁R₂R₃R₄R₅R₆R₇R₈

+880 is the [International subscriber dialling](#) Code for Bangladesh.

44 is the BTRC allocated code for RANKSTEL. Considering local dialling, 044 will be the general prefix

R₁ is the Division wise local code for RANKSTEL

R₂ is the Package identification number for the subscriber of RanksTel

R₃ to R₈ is Subscriber identification number for RanksTel

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CHAPTER01:INTRODUCTION

1.1 Introduction :

Since last century, Telephone is performing a great job in our everyday communicative-life. At present, along with a few Mobile Network Operators i.e: Grameenphone, Banglalink, Robi etc there are also some Fixed line network operators i.e: Bangla Phone, Telebarta, RanksTel, Bijoy Phone etc. “[The Telephone Bill Of Customer With A Security Access](#)” is the project that helps us to calculate individual customer’s total call duration of a specific month after granting correct username and password. It also calculates the cost of total call in Taka considering the monthly rent and also the vat. It is also noted that, while executing the software it shows us the current time and date. Finally after taking all input values that relevant to the customer it shows us the exact total amount that the customer has to pay for that month.

Whenever any illegal user or customer enters any wrong or invalid data the program shows him error and asks for the valid information again. This program can count maximum Customer no : 1000000’s individual calculation and each type of the minute type should not exceed upto 100000 minutes. In the approach of customer name and address each string should not exceed 10 characters and Telephone number should take only the last 8 digits associated with RanksTel operator.

Pre-provided data values are as follows :

Monthly Rent : 100 tk ; **LOCAL call rate :** 1.5 tk/min ; **ISD call rate :** 6.0 tk/min ; **NWD call rate :** 1.5 tk/min ; **VAT :** 30% of total cost.



FIG 1 : Fixed Line Telephone.

1.2 Background Study :

In distance wireless communication there are two types of device. Mobile network operator and Fixed line network operator. Different types of Fixed line network operators are available in market ,we have focused on RanksTel operator which is fixed line network operator as PSTN.



FIG 2 : RanksTel company Logo.

RanksTel uses the following numbering scheme:

+880 44 R₁R₂R₃R₄R₅R₆R₇R₈

+880 is the [International subscriber dialling](#) Code for Bangladesh

44 is the BTRC allocated code for RANKSTEL. Considering local dialling, 044 will be the general prefix

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R₂ is the Package identification number for the subscriber of RanksTel

R₃ to R₈ is Subscriber identification number for RanksTel

Basically, based on RanksTel operator we have developed our console based software to calculate a customer's monthly Telephone Bill.

1.3 Our Approach :

First, we studied about Telephone Billing of fixed line connection from online and developed our project. The project can overcome all the limitations of the existing system. The system provides proper security and reduces the manual work. The system is very simple in design and to implement. The system requires very low system resources and the system will work in almost all configurations.

1.4 Objectives :

Manually it is very difficult to calculate the total minute of a telephone bill along with individual customers relevant information and total cost of the customer counting the monthly rent and vat. With the help of computer it becomes easy and faster to manage the system. In this projects it is the facilities to take all information and calculate a customer's specific months total Telephone bill calculation in the system. The main objective of the system is which target to put a security to the user of the software and clculate his monthly total Telephone bill.

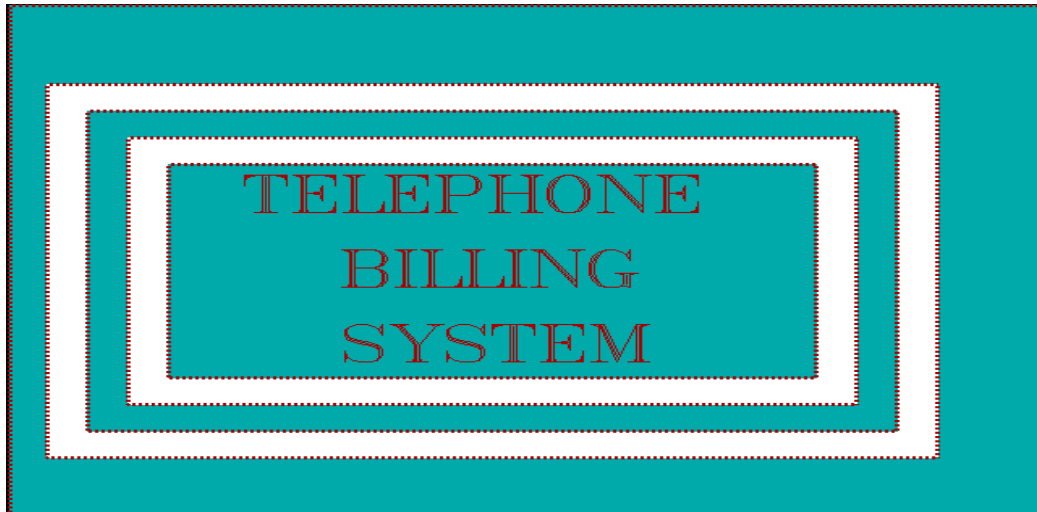


FIG 3 : Telephone Billing System.

1.5 Key Features Of Proposed System :

The project will have the following key features :

- (1) Username and password facility.
- (2) Current date and time notification while executing.
- (3) Automatic date input feature.
- (4) Excellent data validation.
- (5) Can calculate more than one customers Telephone bill in a single start-up.

1.6 Keyword :

The keyword that we have applied in our projects are as follow :

char, break, if, else, float, for, return, while.

Special Functions we have used here are : `system("pause") ; system("cls") ; strlen(), strcmp() ; strcmpi() ; gotoxy() ; atof()`.

1.7 Organization Of This Report :

This report is organized in four chapter. The introductory information of the project work have already discussed in this chapter.

Chapter 1: Introduction

In this part we have introduced what our project is and how it can help a person to calculate a customers monthly Telephone Bill .We have also described what features and facilities our proposed system will have.

Chapter 2: Software Overview

The Telephone Bill Of Customer With A Security Access is the project which is mainly developed for calculating a customer's total monthly Telephone cost with relation of His total call duration.It also shows the executing start-up time and date and also considers all data validation.

Chapter 3: The Telephone Bill Of Customer With A Security Access

In this section the traditional and conventional ways of software development is described briefly .We also described which development process we followed during the development of this proposed system. The system architecture and model is also included textually and visually. We described the software model through necessary Screenshots in this chapter.Basically Pictorial description of software project is given in this section.

Chapter 4: Program Analysis and Design

We discussed about the specific steps which are taken to develop the proposed system. We represented our software projecvt with Flow chart and state diagrfam in this chapter.We also explained here abouthow it works and data validation.

Chapter 5: Result and Discussion.

In this section we have discussed and shown the final output of our Software Development Project. We also described about the testing part, scope and limitation, further development.

CHAPTER 02 : Software Overview

2.1 Motivation :

Realizing the theme of taking the records of monthly total call duration and calculating them with other circumstances with security acces in order to get a fluent concept of total cost of bill of a specific month.

2.2 Tools :

(1) We used an IDE named codeblocks :: 17.12 to implement,build and operate the code.

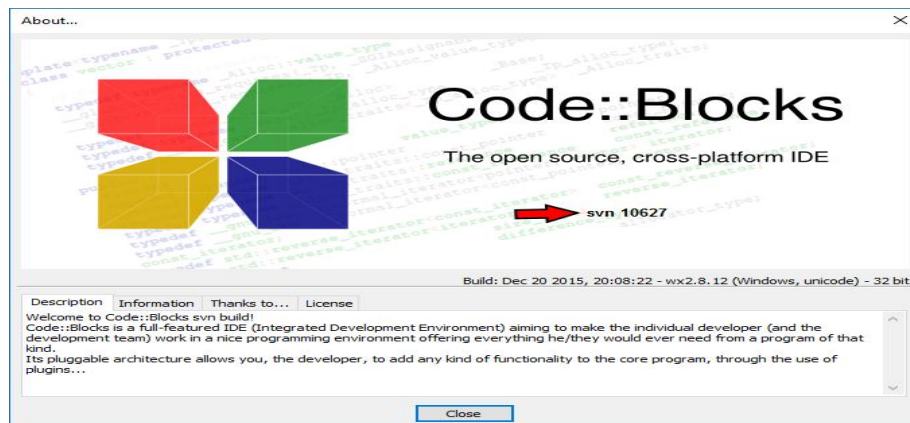


FIG 4 : Code :: Blocks IDE.

(2) We took the help of C language to build our software project.



FIG 5 : C language theme



FIG 6 : C language Symbol

2.3 Overview Of The Software :

The software we developed here is simple to use. Whenever the authority need to calculate the customers total telephone bill of a specific month they just have to click the software icon. Then the software will ask them the required username and password. If the authority is legal they will enter the correct username and password and can get access to the main function of the software. The software then shows them the current time and date. Firstly, asking for the customer's serial number, the program will gradually ask for customer's name (3 strings), address (3 strings), telephone no, specific billing month. The date is automatically accepted. The software then asks for customers total call duration (Local, NWD and ISD) individually. After taking all data this program calculates them and shows the total Telephone costs of the customer of that month in a nice formation pattern. It is also be noted that, while calculating the total bill the program itself adds monthly rent of Tk. 100 and vat 30% in total cost of calculation. Finally we get the exact cost that the customer has to pay.

CHAPTER 03 : The Telephone Bill Of Customer With A Security Access

3.3 Pictorial Description :

Our Software project related all necessary screenshots are provided below :-

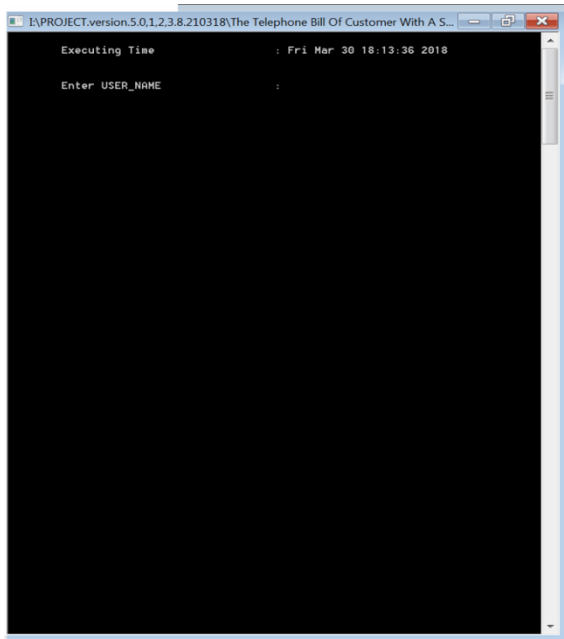


FIG 7 : screenshot1

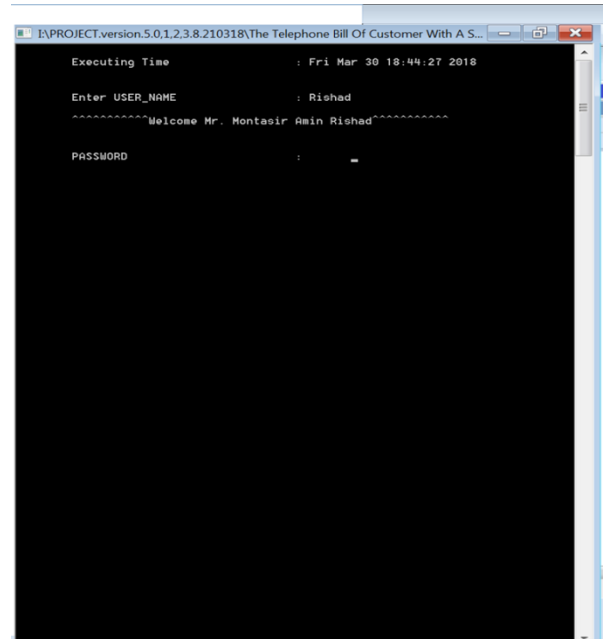


FIG 8 : screenshot2

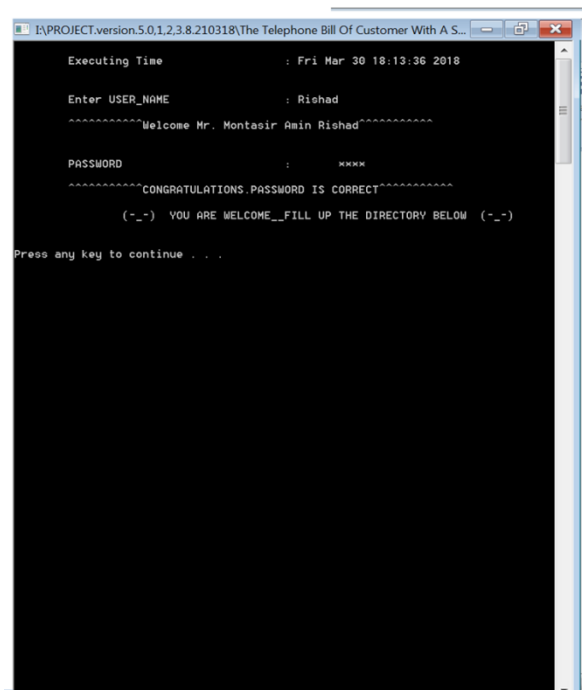


FIG 9 : screenshot3

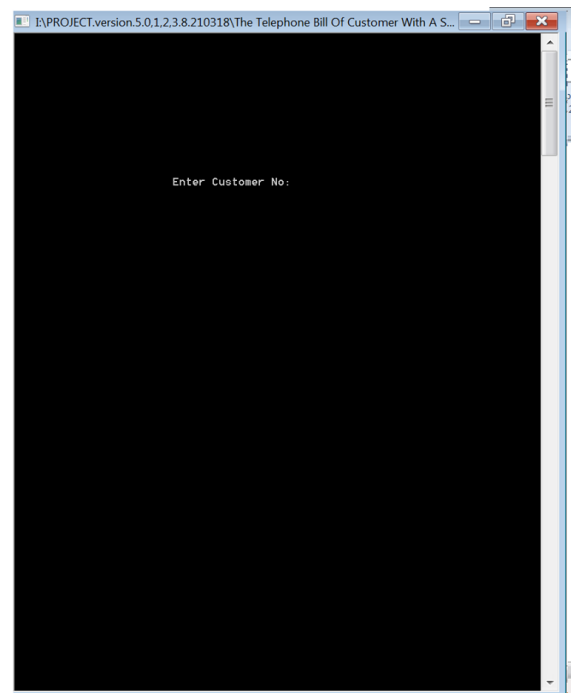


FIG 10 : screenshot4

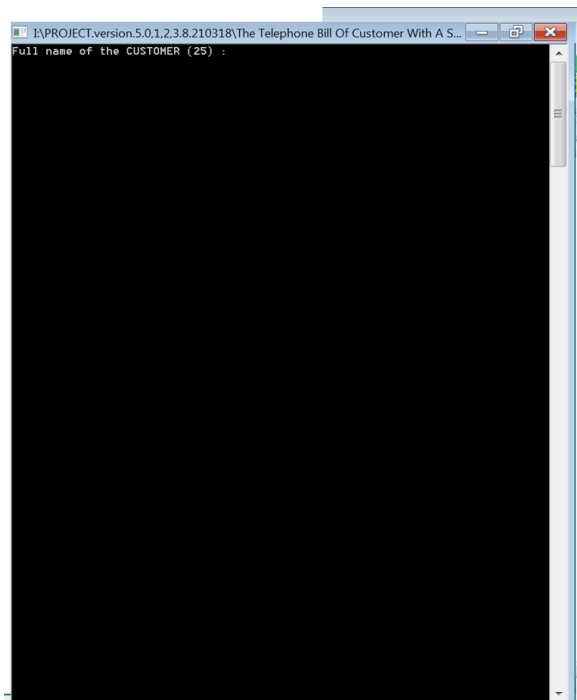


FIG 11 : screenshot5

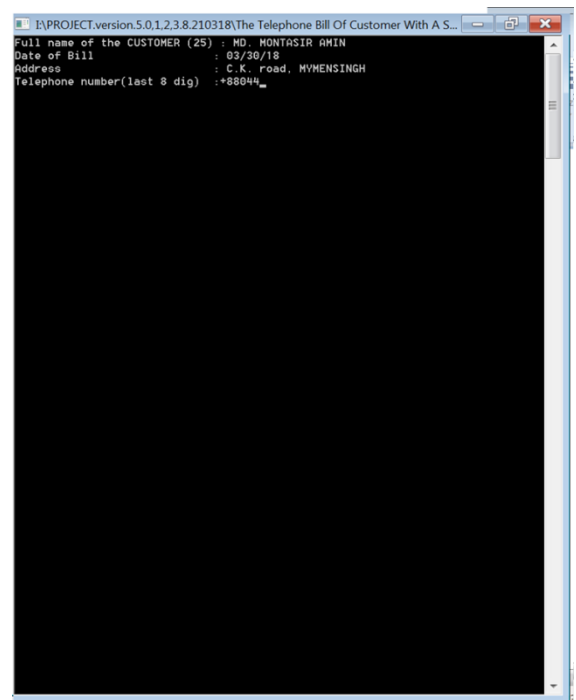


FIG 12 : screenshot6

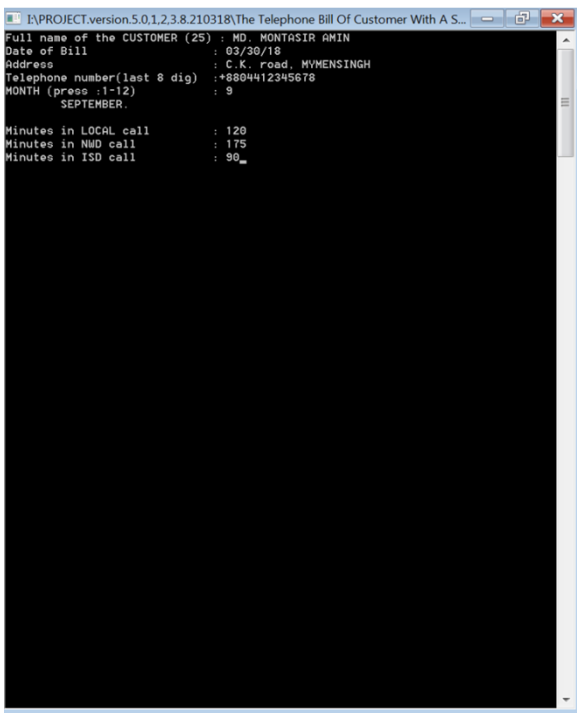


FIG 13 : screenshot7

FIG 14 : screenshot8

```
I:\PROJECT.version.5.0,1,2,3.8.210318\The Telephone Bill Of Customer With A S...
*****TELEPHONE BILL*****

For the month : 9th
Name : MD. MONTASIR AMIN Date : 03/30/18
Address: C.K. road, MYMENSINGH Telephone: +880912345678

Type      MINUTE      Rate      Total TK
-----
Local      120.0      1.5      180.0
NWD        175.0      3.5      612.5
Foreign     90.0      6.0      540.0
Monthly Rent      100.00
UAT        429.75
Grand Total: In TK:1862.25

Press any key to continue . . . _
```

FIG 15 : screenshot9

CHAPTER 04 : Program Analysis and Design

4.1 Flowchart :

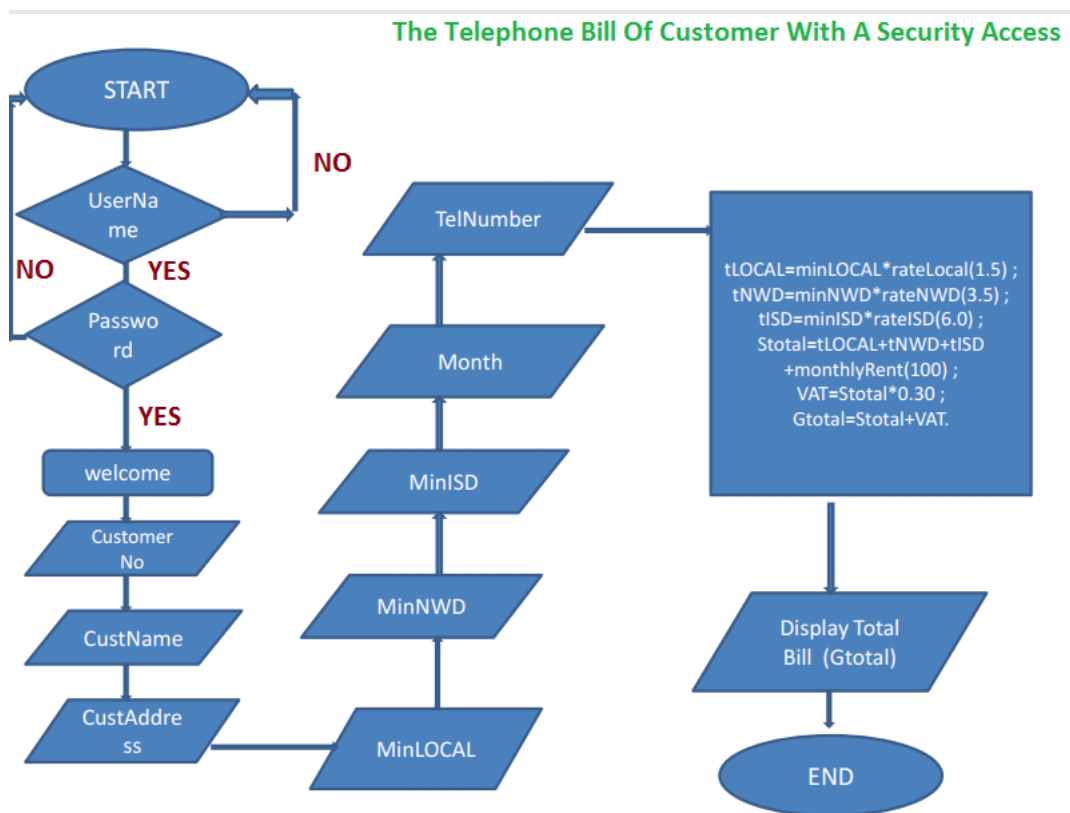


Figure 16 : Flowchart of the Project (Telephone Bill Of Customer With A Security Access)

4.2 State Diagram :

State Diagram:

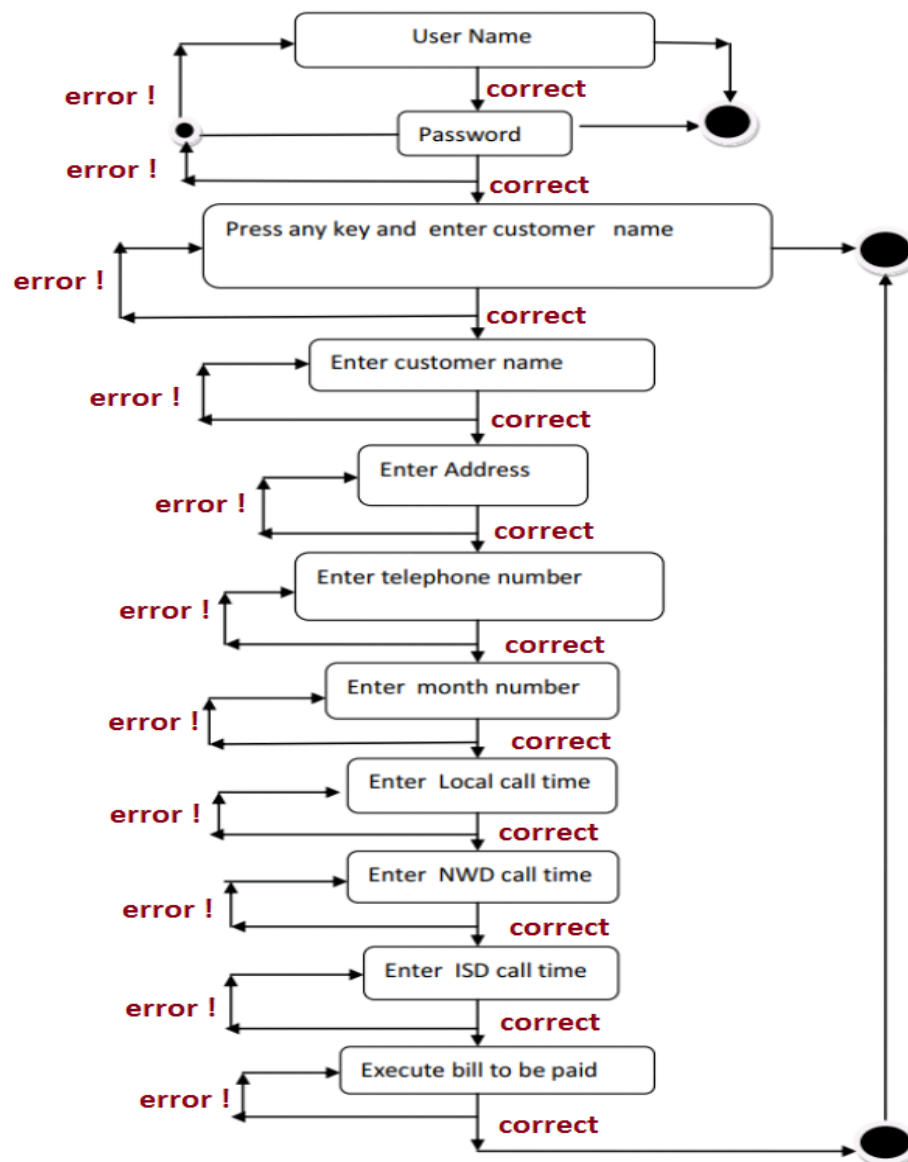


Figure 17 : State Diagram of the Project (Telephone Bill Of Customer With A Security Access)

4.3 How It Works :

The project is simple to use. It was developed by C language. With the help of C's built-in function, the software is developed. After accessing the grant permission, the software asks all necessary information for processing and calculating the total bill part by part. At last, calculating all legal value, it outputs the final value in a tabular formation.

4.4 Data Validation :

The software project also has the feature of data validation. That means whenever you enter any illegal data or special type mistakes, it shows an error and claims the correct information until it receives the legal data.

CHAPTER 05: RESULT AND DISCUSSION

5.1 Limitations :

Though the project helps us calculating total bill and saves our time it has some limitations which are described below :

- (1) This software is unable to search customers name.
- (2) It can not store a customers data in a file for the purpose of using them later.
- (3) The software is not build up as web connected so that someone can keep web contact through the software.

Though this system has many functionalities it will takes more time to develop at all.



FIG 17 : Search Icon



FIG 18 : Storage Memory Icon

5.2 Further Development(future work) :

Our system has all the functionalities to manage a telephone bill calculation process. But we have some plan to make it more efficient, reliable.

Our expectation is that in future we can make sure to add Some important features i.e :

- (1) Printer interface in this software so that authority can print out the copy of the Final bill report.
- (2) Also, we expect to add the fascility for searching customer's name and storing each customers all data and information in a file for the purpose of later of later use.
- (3) We also expect to add a web base interface in this software project so that one can directly connect to the authority through Web by the help of this software project.
- (4) A feature of data analytic.



FIG 19 : A Colour Printer



FIG 20 : Symbol For Web Connectivity

5.3 Result & Discussion :

We tried to develop an efficient and advance software for calculating the monthly total Telephone bill of a customer. Our system can successfully do calculations and data validations for the customer. It has a very simplified and easy to use user interface. It is a console application and designed to support computer devices, it has different layout for devices having different screen sizes. It is kept secure with a username and default password. It has a nice and ordered architecture, it's easily understandable and functionable. It can save enormous amount of time and energy of the necessary calculations. Also, manual calculations are error prone which can be a great problem, but this system ensures error free calculations. Reports can be generated in seconds and invoice is created dynamically. Besides the existing features and functionalities, it will be more advanced as we have lots of features planned for further development.

References

References Websites

1. <http://www.techopedia.com>
2. <http://www.wikipedia.org>

