**Proposal for Project work**

Base Information

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**C Project on Electricity Billing System**

Start date:

End Date:

Project work type: Management Project

**1. Introduction**

We have studied C language, now we come to real life problems and see how we can solve them. Here, in this program to develop one real life project a simple project life cycle using Dev C++. Our project entitled “Electrical Billing System” aims to generate electricity bill with the charge and penalty with customers records. The aim of our project is to develop system that partially computerize the work performed in electricity board.

**2. Background**

In the existing system of electricity billing system there are many downgrades. There is lack of security of data, more manpower are needed. It is time consuming, it consumes large number of paper works, it needs manual calculation which may be faulty and they cannot calculate actual price to unit and so on.

**3. Aim**

The main aim of this system is to make the electricity billing system more effective and efficient. To provide a system where the authority members can be catch defaulters and not let them misuse electricity. Making the billing system faster, to minimize the loss of money and electricity for better service, minimize manual data entry, minimum time required.

**4. Objectives**

The main objective of the project i.e. electricity billing system is to manage the details of electricity bill, connection, customers. The purpose of the project is to build a program to reduce the manual work for managing the electricity, unit of energy connections bill. It tracks all the details about current unit, past month reading unit, cost and the fines and discounts. It shows the information and description of the customers. It also manages the information of stored records.

**5. Expected outcome**

This is GUI based project so everything will be black coloured . It will work according to input. We have developed system which can easily work in electricity board like generating monthly electricity bill, record of consuming unit of energy, stored record of the custumer and previous unpaid record. It is very easy to used.

**6. Methodology**

It includes follows:

***Design phase***: Electricity billing system is Software based application developed in C programing   language. The project aims at the serving department of electricity by computerizing the billing System. It mainly focuses on the Calculation of units consumed during the specified time and the money to be paid to electricity Offices .

**Welcome to electricity management system**

***Menu***

**1.Add custumer details**

**2.View custumer details**

**3.Modify record of custumer**

**4.Delete record of custumer**

**5.Search record of custumer**

**6.Make bill of custumer**

**7.Payment by custumer**

**8.View total**

**Enter your choice**

**Switch**

Break

Case1

**1.Add custumer details**

Break

Case2

**2.View custumer details**

Break

Case3

**3.Modify record of custumer**

Case4

Break

**4.Delete record of custumer**

Break

Case5

**5.Search record of custumer**

Break

Case6

**6.Make bill of custumer**

Case7

Break

**7.Payment by custumer**

Case8

Break

**8.View total**

default

**While(choice!=9)**

**Incorrect input**

Yes

No

Exit(0)

**Thankyou for using our service**

**1.Add custumer details.**

**printf("\n Name:")**

**scanf("%s",&obj.name)**

**printf("\n Address:");**

**scanf("%s",&obj.address)**

**printf("\n Meter Number:")**

**scanf("%d",&obj.meterno)**

**fwrite(&obj,sizeof(obj),1,f)**

**printf("1 record successfully added")**

**Break:**

**2.View custumer records**

**if((f=fopen("electricity.txt","rb"))==NULL)**

Yes

**Exit(0)**

No

**printf("Name\t\tAddress\t\t\tMeter Number\n")**

**while(fread(&obj,sizeof(obj),1,f)==1**)

**printf("\n\n%s\t%s\t%d",obj.name,obj.address,obj.meterno)**

**Break:**

**3.Modify records of custumer**

**printf("Enter meter number of the customer to modify:")**

**if((obj.meterno,meterno)==0)**

**while(fread(&obj,sizeof(obj),1,f)==1)**

**printf("\n Enter Name:")**

**printf("\n Enter Address: ")**

**printf("\n Enter Meter Number: ")**

**fseek(f,-size,SEEK\_CUR)**

**fwrite(&obj,sizeof(obj),1,f)**

**Break:**

**4.Delete record of custumer**

**Enter the meter number to be deleted from the Database**

**if((obj.meterno,meternumber)==0)**

No

**Meter number not found**

yes

**Continue**

**Remove the meter number**

**Break:**

**5.Search record of custumer**

**Enter Meter Number to search in our database**

**if((obj.meterno,meternumber)==0)**

Yes

No

**printf(" Record Found ")**

**printf("Requested Meter Number Not found in our database")**

**Break:**

**6.Make bill of custumer**

**Enter the meter whose you want to make bill**

**Enter current reading of meter**

No

**Else if (Current unit<=20)**

**If (current unit<=10)**

Yes

No

Yes

**Energy charge=Current unit\*5**

**Energy charge=50+(Current charge-10)\*8**

**Else if(Current unit<=30)**

No

Yes

**Energy charge=130+(C.U-30)\*10**

**Else E.C.=50+(C.U-30)\*8**

**Total Energy charge**

**Break:**

**7.Payment by custumer**

**If flag==1**

**Enter the meter whose you want to make bill**

**Requested meter not found**

**Enter date of meter reading**

**If day2<day1**

Yes

No

**Fine=(2/100)\*Obj.Energy Charge**

**Discount=(2/100)\*obj.Energey charge**

**Break:**

**8.View total**

**Total amount=E.C+fine+Discount**

**Printf” total amout collected=%f”, amount**

**Break:**

**9.Default**

**Exit(0)**

**Thankyou for using our services**

**Incorrect input**

***Implementation phase***: For the implementation of hardware this system there are various hardware and software. Energy meter is a hardware device which designed to receive analog current and voltage signal input and convert them to digital signals. This system uses Pc billing software with database.

***Testing Phase:*** In the energy meter. The value the measured current and voltage displayed on LCD compared with standard current and voltage. The testing of the software   there are no run time error in the program. The Program executed as expected.

***Evaluation:*** The operation of Billing system and Meter Reading was studied. Here Bills are generated by pc software. The outputs were found to be accurate. This device can helps all Nepali people to billing and energy theft.

**7. Time Plan**

Our time plan for the project life cycle is listed below:-

Week 1: Research about project and prepare proposal

Week 2: Flowchart design

Week 3 & 4: Startcoding

Week 5: Coding may completed

Week 6: Report making

Week 7: Project Complete