E - FINAL ASSIGNMENT

JANUARY 2020

TITLE: CALCULATE HOUSE ELECTRICITY BILL

SUBJECT CODE	: SPG 0513
SUBJECT NAME	: Programming in Java 1
ACADEMIC PERIOD	: January 2020
SEMESTER	: 2
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TRADE	:SET Sem 2
SUBMISSION DATE	: 18 July 2020

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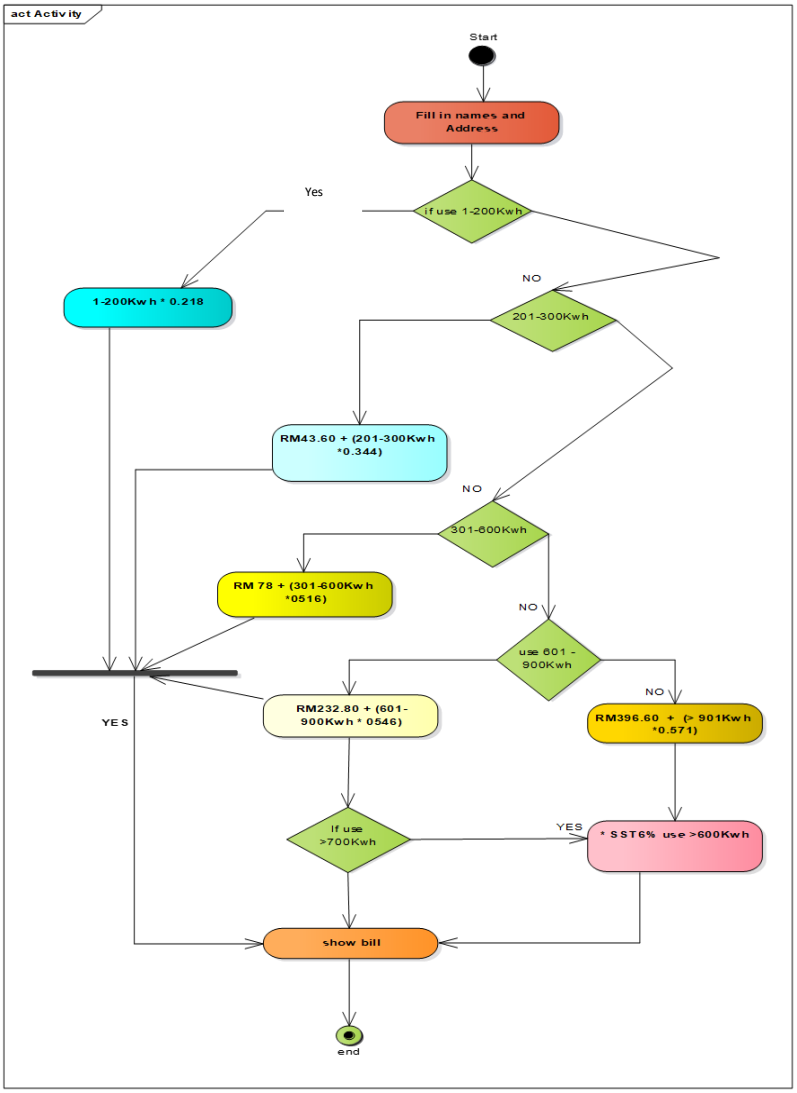
1. Introduction

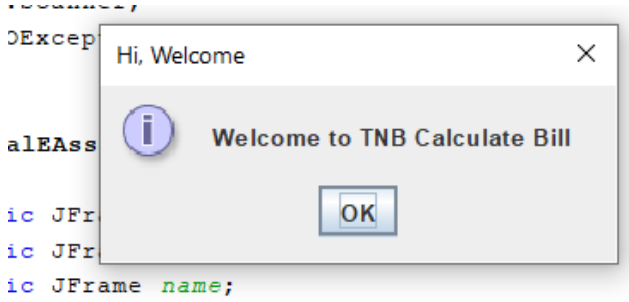
I am Myra Ophelia Iman develop **a program to calculate electricity tariff for the domestic household.** The project aims are serving the department of electricity by computerizing the billing system. It mainly focuses on the calculation of Units consumed during the specified time and the money to be paid to electricity offices. This computerized system will make the overall billing system easy, accessible, comfortable and effective for consumer

2. Design a flowchart based on the topic



3. Screenshot all the output, describe about each of the output and explain how to use the program one by one.

   i. First step: System will automatic display "Welcome to Tnb Calculate Bill"

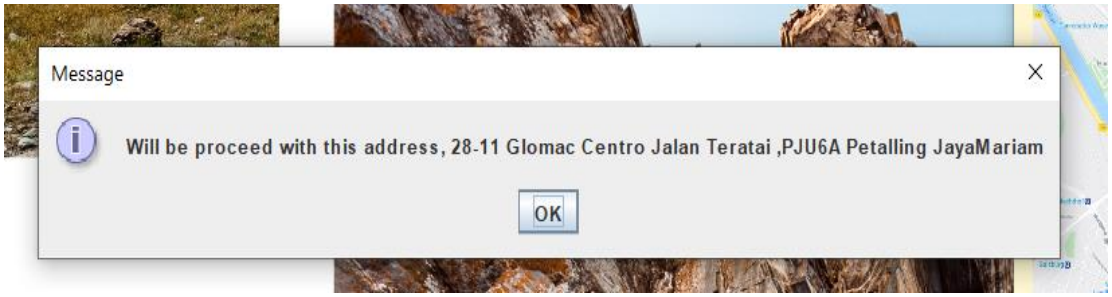


   ii. System will ask for customer name /user

   iii. System friendly reply:"

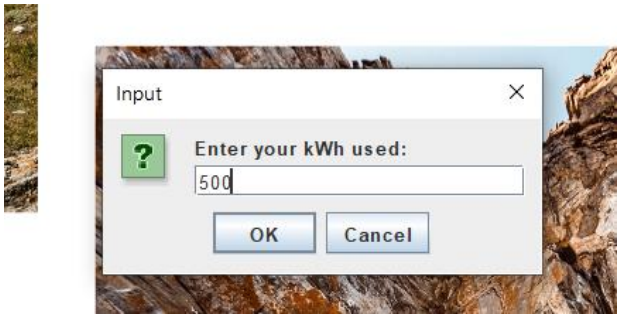
iv. System will ask user to fill up user's address.

v. System will ask " wants to proceed with this address" ?



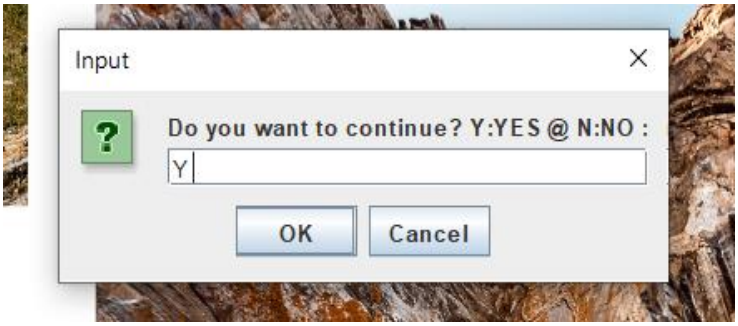
vi. The system will ask for total Kwh that have been use":

As Example I insert 500 Kwh

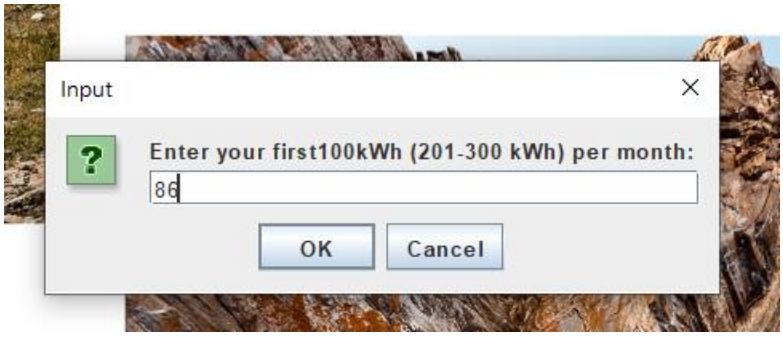


vii. Reenter first 200Kwh
Example: 45 in between 1-200Kwh
Balance: 455Kwh

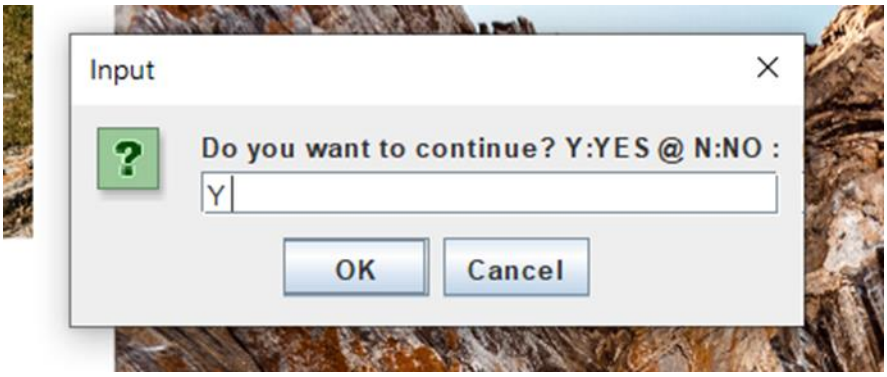
viii. Yes or Not to second stage



ix. Enter first 100Kwh (201-300Kwh
Insert number 86
Balance 369

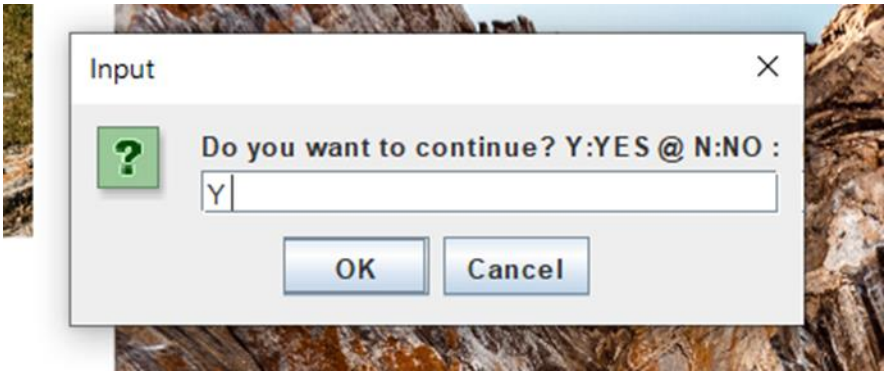


x. Choose Yes or Not to Next stage

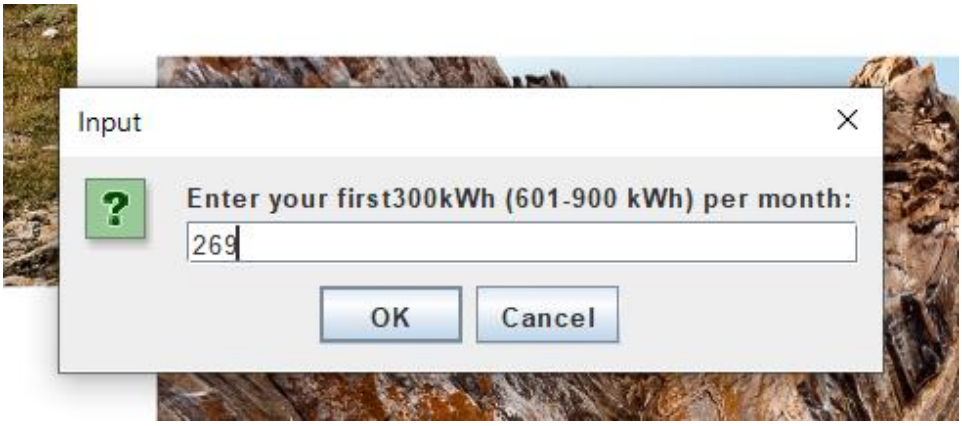


xi. Insert the next 300Kwh (301-600)
Insert number 100
Balance:269

xii. Choose Yes or Not to Last stage



xiii. Insert the next 300Kwh (301-600)
Insert number 269
Balance:0



xiv. After user insert all the Kwh this is the end steps where user can see their insert Kwh number
I also include total consumption, total electricity consumptions.
Moreover, if user use more than 700Kwh there will be charge 6% of SST.

```
init:
Deleting: C:\DSETjan2020  myraopheliaiman\build\built-jar.properties
deps-jar:
Updating property file: C:\DSETjan2020  myraopheliaiman\build\built-jar.properties
Compiling 1 source file to C:\DSETjan2020  myraopheliaiman\build\classes
compile-single:
run-single:
Enter your first200kWh (1-200 kWh) per month: 200RM43.6
Enter your first100kWh (201-300 kWh) per month: 100RM34.4
Enter your first300kWh (301-600 kWh) per month: 300RM154.8
Enter your first300 kWh (601-900 kWh) per month: 269RM146.87400000000002
Total Consumption (RM): 379.67400000000004
Total Electricity consumptions (kWh): 869.0
6% SST will be charge because Use >600kWh are used: 10.139999999999999
Total current bill is: 389.814
 Your Address  28-11 Glomac Centro Jalan Teratai , PJU6A Petalling JayaMariam Hajah
...........!Thank You!.........Mariam Hajah
```

4. Source Code

```
import java.io.InputStream;
import javax.swing.JFrame;
import javax.swing.JOptionPane;
import java.util.Scanner;
import java.io.IOException;


public class FinalEAssignment {

   private static JFrame address;
   private static JFrame greet;
   private static JFrame name;

   public static void main(String[] args) {

       greet=new JFrame();
        JOptionPane.showMessageDialog(greet, "Welcome to
TNB Calculate Bill ",
          "Hi, Welcome  ",
JOptionPane.INFORMATION_MESSAGE);
       name=new JFrame();
         String  Name = JOptionPane.showInputDialog(name,
"What's your name?");
         JOptionPane.showMessageDialog(name, "Nice to meet
you , gucci gang  " + Name );

       address=new JFrame();
         String Address =JOptionPane.showInputDialog(address,
"Fill in your address house?");
              JOptionPane.showMessageDialog(address, "Will be
proceed with this address, " + Address +""+ Name );
```

```
        try
        {
            Scanner scan = new Scanner(System.in);
            char respond;

            int ratekWh[] = {200,100,300,300,901};
            String ratekWhDisplay[] = {"1-200","201-300","301-
600","601-900",">901"};
            String input = JOptionPane.showInputDialog("Enter
your kWh used: ");
            double First = Double.parseDouble(input);
            while(First > 200)
                {
                input = JOptionPane.showInputDialog("RE-Enter your
first" +ratekWh[0]+ "kWh ("+ratekWhDisplay[0]+" kWh) per
month: ");
                First = Double.parseDouble(input);
                }
            int count = 1;
            input = JOptionPane.showInputDialog("Do you want to
continue? Y:YES @ N:NO :");
            respond = input.charAt(0);

            int electricity = 0;
            if(respond == 'Y')
            {
                for (int i=1; i<5; i++)
                {
                    input = JOptionPane.showInputDialog("Enter your
first" +ratekWh[i]+ "kWh ("+ratekWhDisplay[i]+" kWh) per
month: ");
                    electricity = Integer.parseInt(input);

                        while(electricity > ratekWh[i])
```

```
            {
                input = JOptionPane.showInputDialog("RE-Enter
your first" +ratekWh[i]+ "kWh ("+ratekWhDisplay[i]+" kWh) per
month: ");
                electricity = Integer.parseInt(input);
                }

              count++;
              input = JOptionPane.showInputDialog("Do you
want to continue? Y:YES @ N:NO :");
              respond = input.charAt(0);

              if(respond == 'N')
              break;
            }
          }

          else
          {
            System.out.print("WARNING! Insert incorrect ");
          }

          double pricePerUnit[] =
{0.218,0.344,0.516,0.546,0.571};
          double estimatedBill = 0.0;
          double totalConsumption = 0;
          double SST = 0.0;
          if (count == 1)
          {
            System.out.println("Enter your first" +ratekWh[0]+
"kWh ("+ratekWhDisplay[0]+" kWh) per month: "
+ratekWh[0]+"RM"+(First*pricePerUnit[0]));
            estimatedBill = First*pricePerUnit[0];
            totalConsumption = ratekWh[0];
```

```
            }
            else
            {
               for(int i=0; i<count-1; i++)
            {
               System.out.println("Enter your first" +ratekWh[i]+
"kWh ("+ratekWhDisplay[i]+" kWh) per month: "
+ratekWh[i]+"RM"+(ratekWh[i]*pricePerUnit[i]));
               estimatedBill = estimatedBill +
ratekWh[i]*pricePerUnit[i];
               totalConsumption = totalConsumption + ratekWh[i];
            }

            System.out.println("Enter your first" +ratekWh[count-
1]+" kWh ("+ratekWhDisplay[count-1]+" kWh) per month: "
+electricity+"RM"+(electricity*pricePerUnit[count-1]));
            estimatedBill = estimatedBill +
(electricity*pricePerUnit[count-1]);
            totalConsumption = totalConsumption + (electricity);
            }
            System.out.println("Total Consumption (RM): "
+estimatedBill);
            System.out.println("Total Electricity consumptions
(kWh): " +totalConsumption);

            if (totalConsumption>700)
            SST = (totalConsumption - 700)*0.06;
            System.out.println("6% SST will be charge because Use
>600kWh are used: " +SST);
            System.out.println("Total current bill is: " +(estimatedBill
+ SST));

            throw new IOException();
            }
            catch (IOException ioe)
            {
```

```
                System.out.println(" Your Address  "  + Address + ""
+ Name);
                System.out.println(".....!"
                        + "Thank You!....."+ Name );
            }
       }

}
```

5. Conclusion

A new software system to modernize the electricity billing procedure is required. This electricity billing system project would replace the existing traditional and analogy type of electricity billing system ensuring security, ease and comfort in billing. It meets the current user demands, and new features can be easily integrated into the system in future as per user requirements.

6. References

- https://www.codewithc.com/electricity-billing-system-project-java/
- https://www.mytnb.com.my/residential/understand-your-bill/bill-calculator