

# CHAPTER V

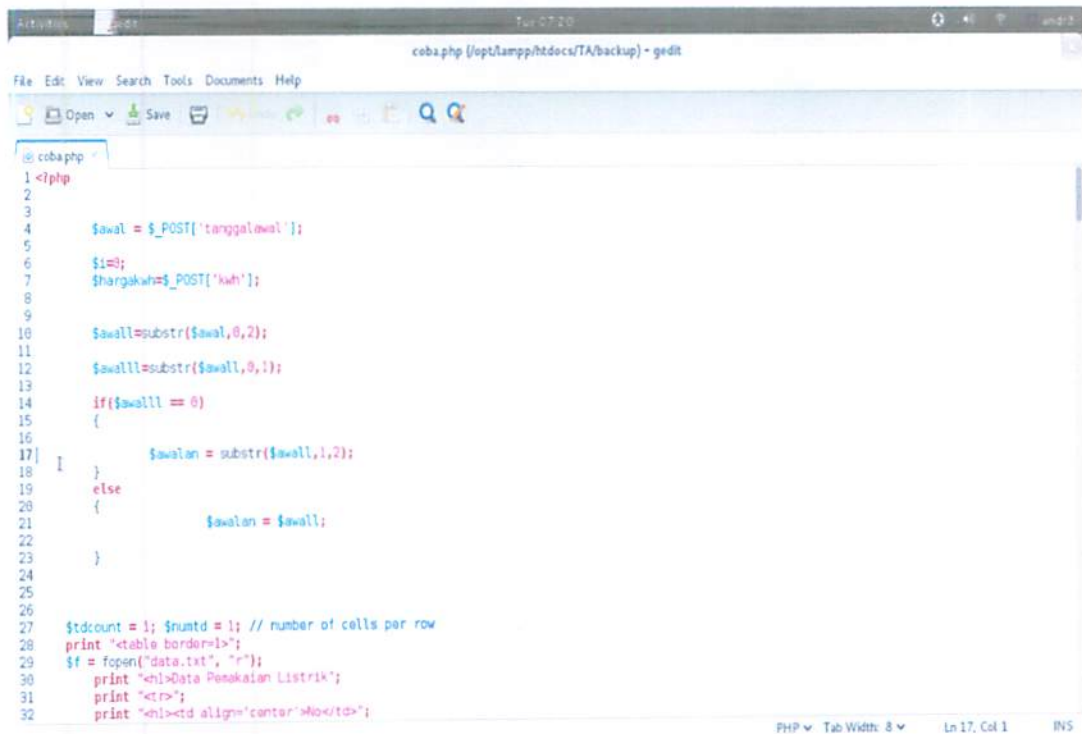
## IMPLEMENTATION AND TESTING

### 5.1 Implementation

First we need to enable localhost through the terminal in linux. After that we open a browser to view the application program by filling url with localhost name and the name of the php file in the program files.

#### 5.1.1 Step 1 - Preprocessing

Coding is intended to separate the date because in my output in the first localhost I have to input the date. then I use this coding to separate the digits in the date.

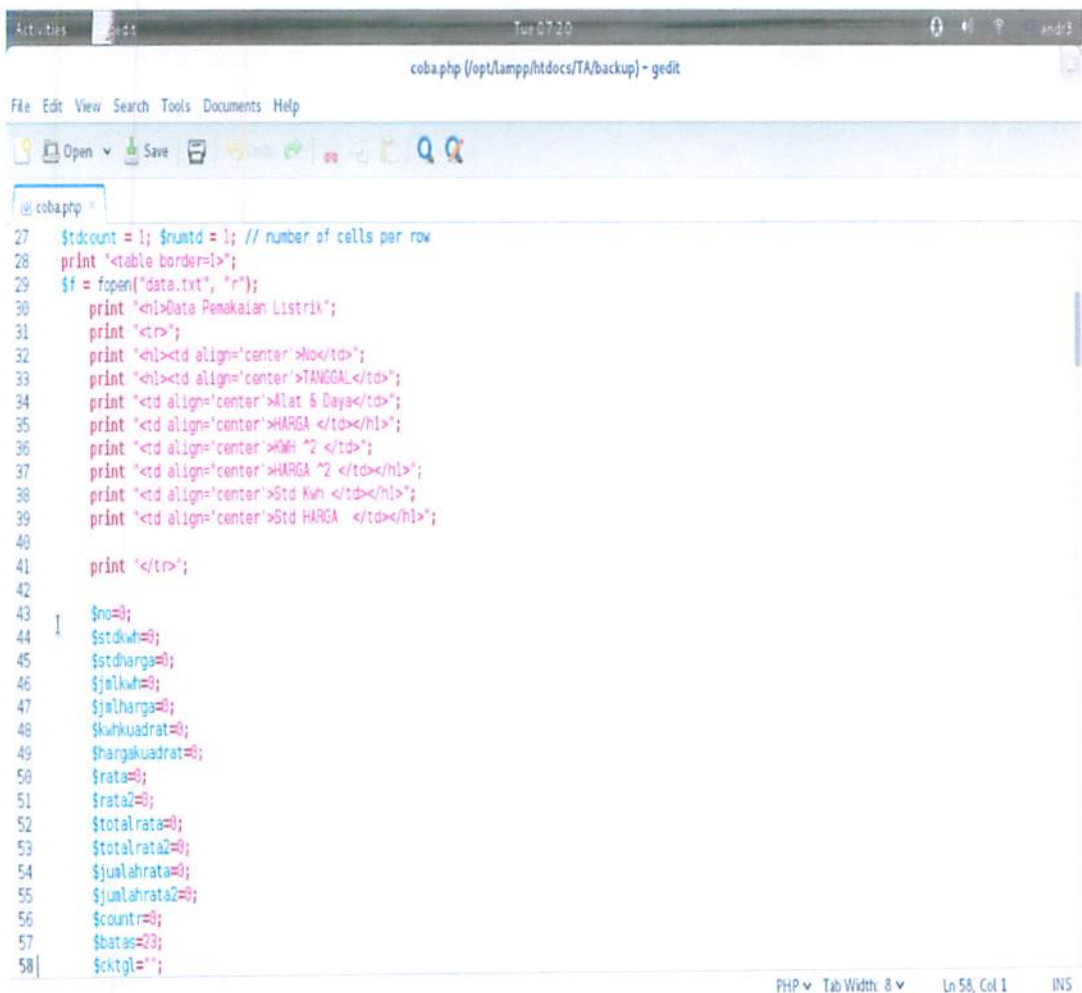


```
1 <?php
2
3
4     $awal = $_POST['tanggalawal'];
5
6     $i=0;
7     $hargakwh=$_POST['kwh'];
8
9
10    $swall=substr($awal,0,2);
11
12    $swall=substr($swall,0,1);
13
14    if($swall == 0)
15    {
16
17    }
18
19    else
20    {
21        $swalan = $swall;
22
23    }
24
25
26
27    $tdcount = 1; $numtd = 1; // number of cells per row
28    print "<table border=1>";
29    $f = fopen("data.txt", "r");
30    print "<h1>Data Penakalan Listrik";
31    print "<br>";
32    print "<h1><td align='center'>No</td>";
```

Figure 5.1.1 Preprocessing

### 5.1.2. Step 2 – Declared in the table column names and variable

This coding function to retrieve a txt database by using fopen while, after retrieving data from the database in the form of txt then we will take a column of the data txt, txt after retrieving data from the last few columns we made coding to retrieve data from the data txt through input by taking a date.

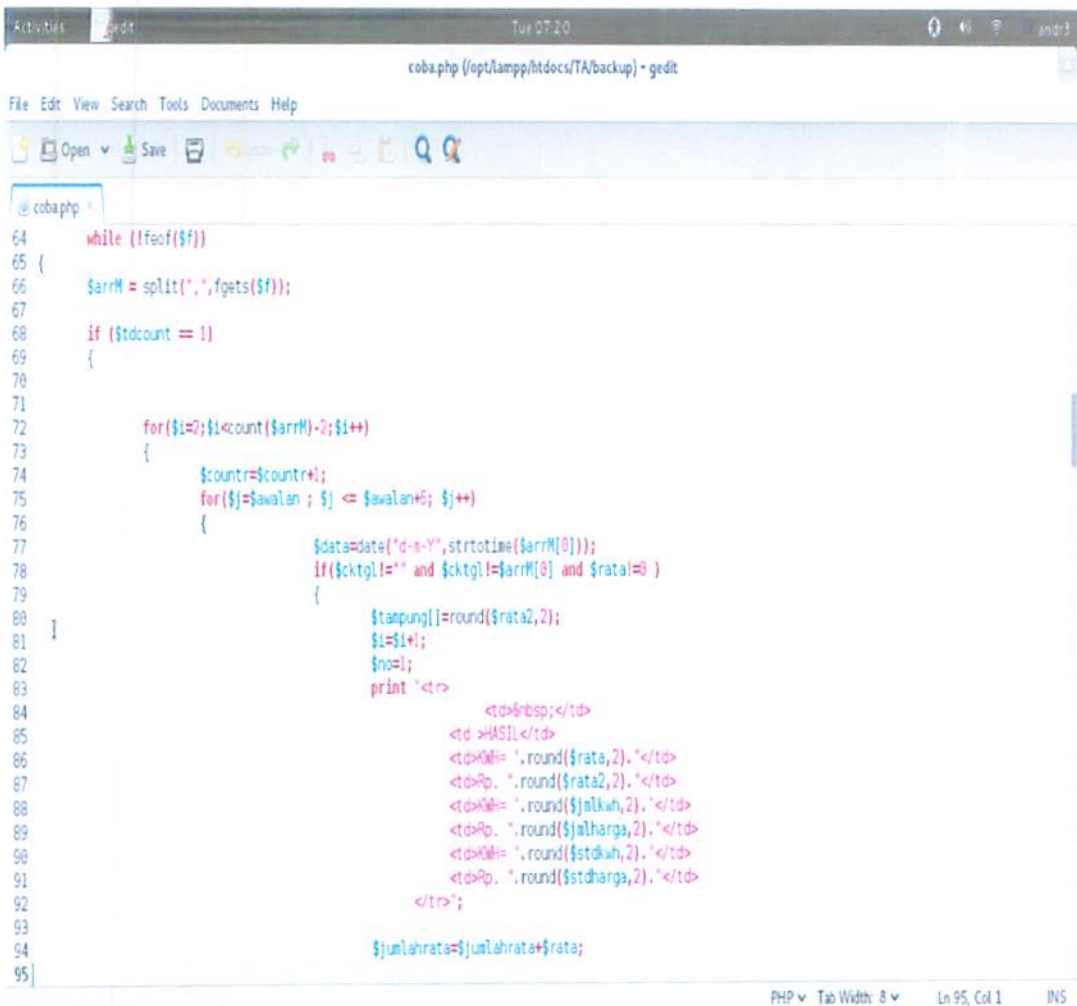


```
27 $dcount = 1; $rsumtd = 1; // number of cells per row
28 print "<table border=1>";
29 $f = fopen("data.txt", "r");
30 print "<h1>Data Pemakaian Listrik";
31 print "<br>";
32 print "<h1><td align='center'>No</td>";
33 print "<h1><td align='center'>TANGGAL</td>";
34 print "<td align='center'>Alat 6 Daya</td>";
35 print "<td align='center'>HARGA </td></h1>";
36 print "<td align='center'>kWh *2 </td>";
37 print "<td align='center'>HARGA *2 </td></h1>";
38 print "<td align='center'>Std kWh </td></h1>";
39 print "<td align='center'>Std HARGA </td></h1>";
40
41 print "</tr>";
42
43 $no=0;
44 $stdkwh=0;
45 $stdharga=0;
46 $jmlkwh=0;
47 $jmlharga=0;
48 $kwhkuadrat=0;
49 $hargakuadrat=0;
50 $rata=0;
51 $rata2=0;
52 $totalrata=0;
53 $totalrata2=0;
54 $jumlahrata=0;
55 $jumlahrata2=0;
56 $count=0;
57 $batas=23;
58 $ctg1="";
```

Figure 5.1.2 Declared in the table column names and variable

### 5.1.3 Step 3 – Open the database and specify the data input through the date

This coding function to retrieve a txt database by using fopen while, after retrieving data from the database in the form of txt then we will take a column of the data txt, txt after retrieving data from the last few columns we made coding to retrieve data from the data txt through input by taking a date.

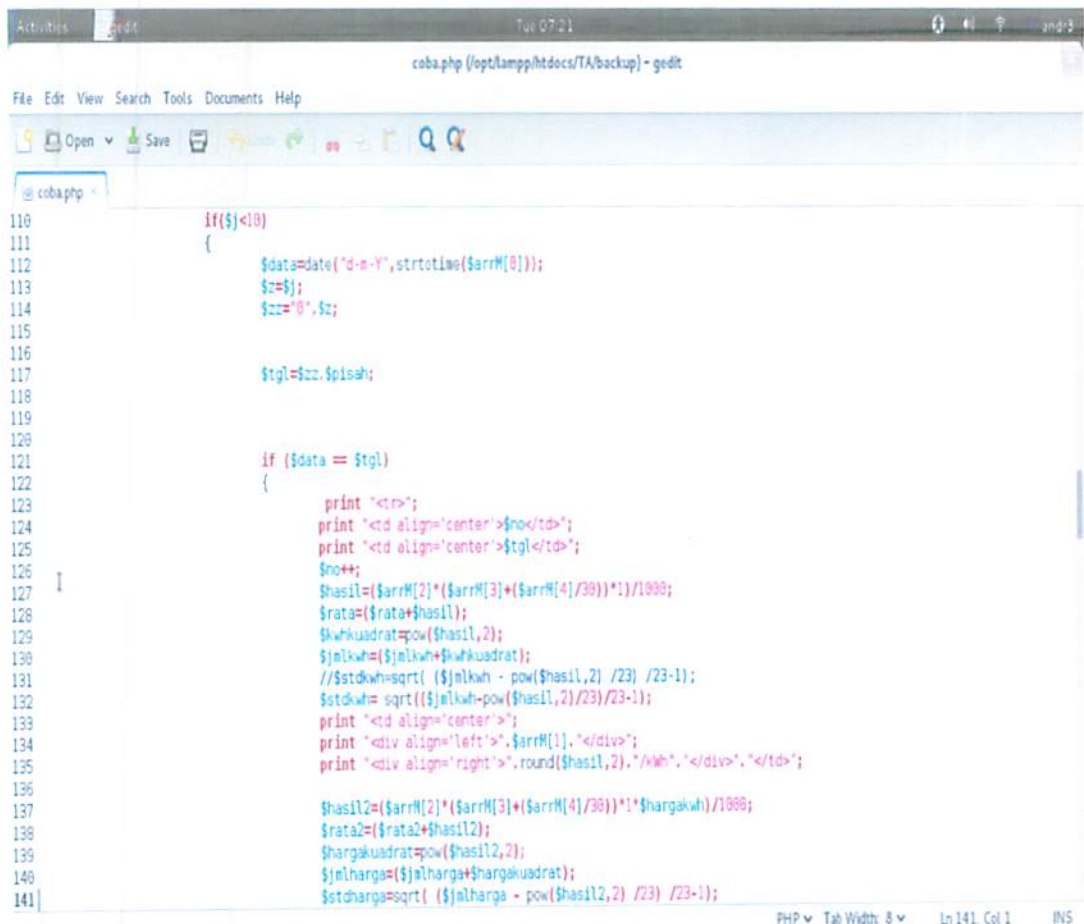


```
64 while (!feof($f))
65 {
66     $arrM = split(", ", fgets($f));
67
68     if ($tdcount == 1)
69     {
70
71
72         for($i=2;$i<count($arrM)-2;$i++)
73         {
74             $count=$count+1;
75             for($j=$awaln; $j <= $awalan+6; $j++)
76             {
77                 $data=date("d-m-Y",strtotime($arrM[0]));
78                 if($cktbl!=" " and $cktbl!=$arrM[0] and $rata!=0 )
79                 {
80                     $stampung[]=round($rata,2);
81                     $i=$i+1;
82                     $no=1;
83                     print "<tr>
84
85                         <td>&nbsp;</td>
86                         <td>HASIL</td>
87                         <td>K&#228;= ".round($rata,2)."</td>
88                         <td>Rp. ".round($rata,2)."</td>
89                         <td>K&#228;= ".round($jmlkwh,2)."</td>
90                         <td>Rp. ".round($jmlharga,2)."</td>
91                         <td>K&#228;= ".round($stdkwh,2)."</td>
92                         <td>Rp. ".round($stdharga,2)."</td>
93
94                     </tr>";
95
96                     $jumlahrata=$jumlahrata+$rata;
```

Figure 5.1.3 Open the database and specify the data input through the date

### 5.1.4 Step 4 – Calculating Percentage of Text Similarity

This coding is used to seek input date data in a way that has been split between the date of the month and year that already exists in the database txt. After searching the data through the last date we scored a table that contains a column of data that has been determined from the coding above earlier. After scoring table then we start counting results amount of electricity per day, the average daily usage, and standard deviation.

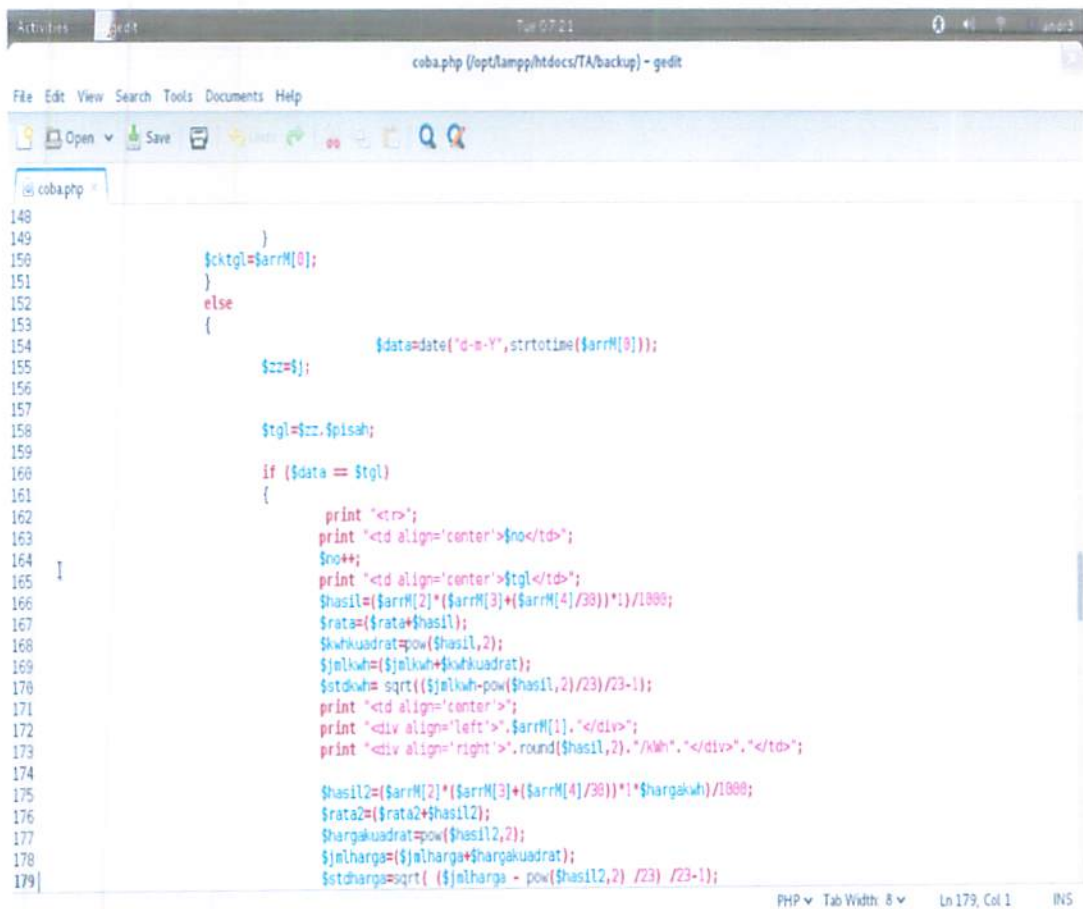


```
110         if($j<10)
111         {
112             $data=date("d-m-Y",strtotime($arrM[0]));
113             $z=$j;
114             $zz="0".$z;
115
116
117             $tgl=$zz.$pisah;
118
119
120
121             if ($data == $tgl)
122             {
123                 print "<br>";
124                 print "<td align='center'>$no</td>";
125                 print "<td align='center'>$tgl</td>";
126                 $no++;
127                 $hasil=($arrM[2]*($arrM[3]+($arrM[4]/30))*1)/1000;
128                 $rata=($rata+$hasil);
129                 $kwkuadrat=pow($hasil,2);
130                 $jmlkw=($jmlkw+$kwkuadrat);
131                 // $stdkw=sqrt( ($jmlkw - pow($hasil,2) /23) /23-1);
132                 $stdkw= sqrt(($jmlkw-pow($hasil,2)/23)/23-1);
133                 print "<td align='center'>";
134                 print "<div align='left'>".$arrM[1]."</div>";
135                 print "<div align='right'>.round($hasil,2)."/kWh". "</div>". "</td>";
136
137                 $hasil2=($arrM[2]*($arrM[3]+($arrM[4]/30))*1*$hargakwh)/1000;
138                 $rata2=($rata+$hasil2);
139                 $hargakuadrat=pow($hasil2,2);
140                 $jmlharga=($jmlharga+$hargakuadrat);
141                 $stdharga=sqrt( ($jmlharga - pow($hasil2,2) /23) /23-1);
```

Figure 5.1.4 Calculating Data

### 5.1.5 Step 5 – Check the data through the date

This coding function for sorting the data that will come out per day or to say we check the data through date, ie the date of our data the number 23 in the output at the date of going to print as many as 23 data and if we want to insert data in the database, the data will be will automatically appear in line with the date.

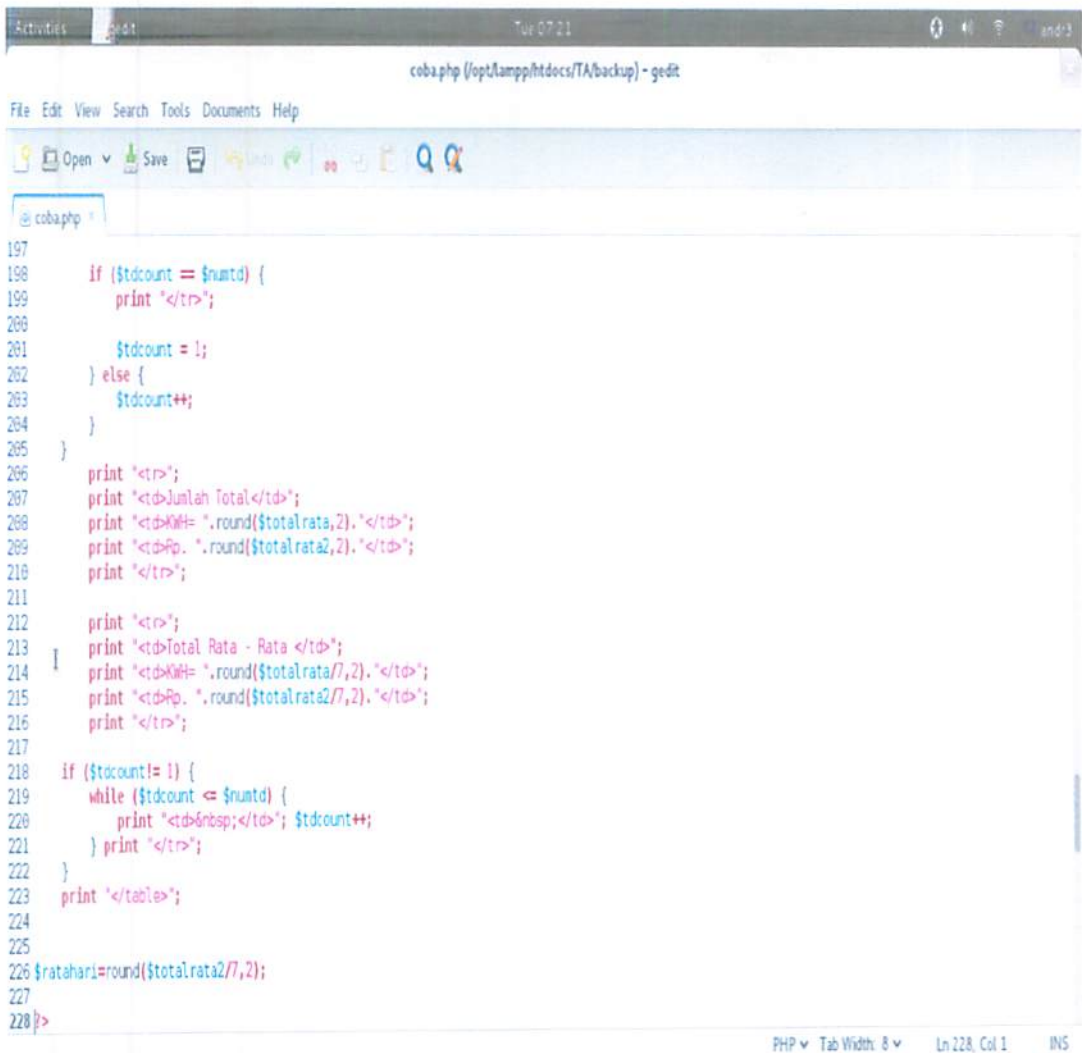


```
148
149
150     $ktgl=$arrM[0];
151   }
152   else
153   {
154       $data=date("d-m-Y",strtotime($arrM[3]));
155       $zz=$j;
156
157
158       $tgl=$zz.$pisah;
159
160       if ($data == $tgl)
161       {
162           print "<tr>";
163           print "<td align='center'>$no</td>";
164           $no++;
165           print "<td align='center'>$tgl</td>";
166           $hasil=($arrM[2]*($arrM[3]+($arrM[4]/30)))/1000;
167           $rata=($rata+$hasil);
168           $kwkuadrat=pow($hasil,2);
169           $jmlkw=($jmlkw+$kwkuadrat);
170           $stdkw= sqrt(($jmlkw-pow($hasil,2)/23)/23-1);
171           print "<td align='center'>";
172           print "<div align='left'>". $arrM[1]. "</div>";
173           print "<div align='right'>". round($hasil,2). "</div>". "</td>";
174
175           $hasil2=($arrM[2]*($arrM[3]+($arrM[4]/30)))*$hargakwh/1000;
176           $rata2=($rata2+$hasil2);
177           $hargakuadrat=pow($hasil2,2);
178           $jmlharga=($jmlharga+$hargakuadrat);
179           $stdharga=sqrt( ($jmlharga - pow($hasil2,2) /23) /23-1);
```

Figure 5.1.5 Check the data through the date

### 5.1.6 Step 6 – Print the final result

Print end table and print the results of the calculation results average per day and per day and the total amount per day.

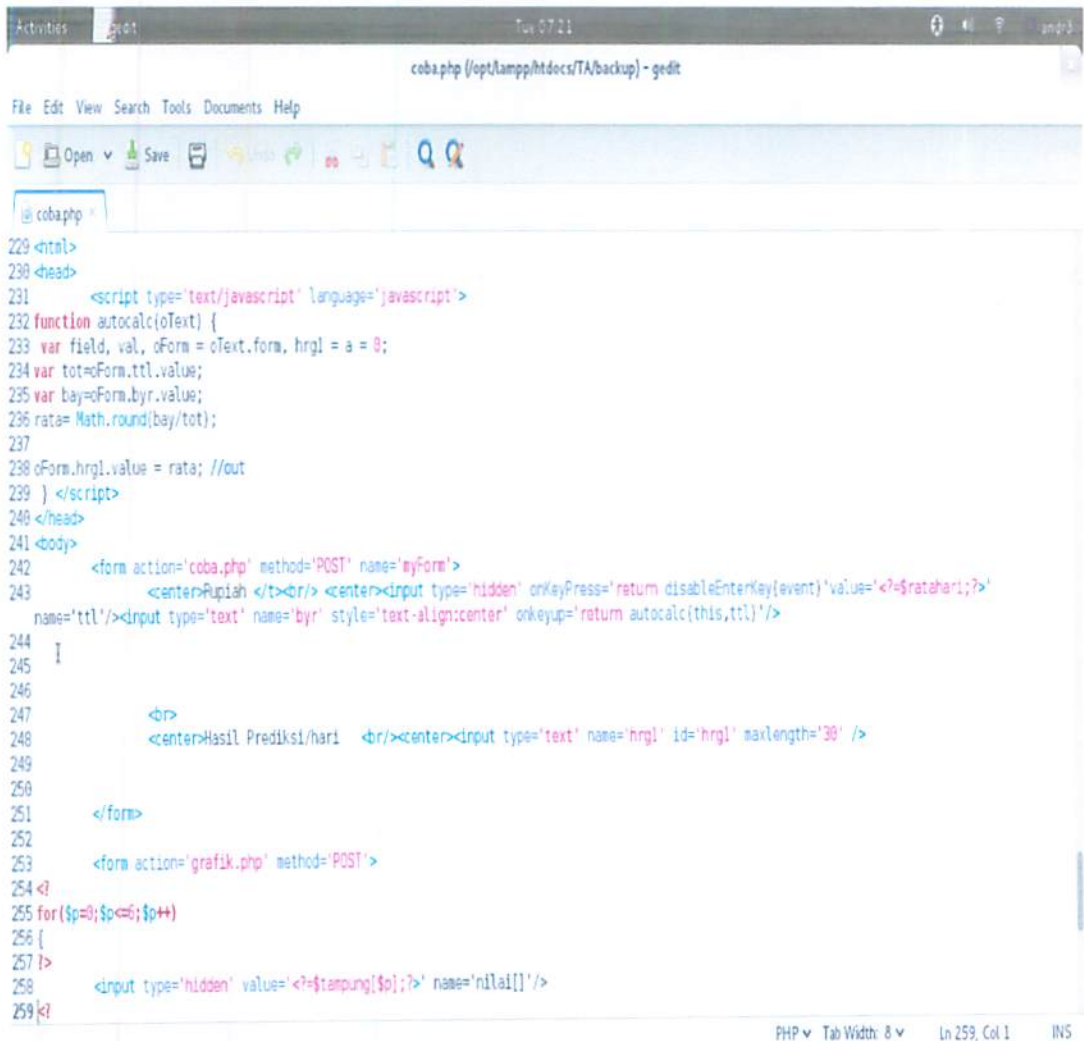


```
197
198     if ($tdcount == $numtd) {
199         print "</tr>";
200
201         $tdcount = 1;
202     } else {
203         $tdcount++;
204     }
205 }
206 print "<br>";
207 print "<td>Jumlah Total</td>";
208 print "<td>KWH= ".round($totalrata,2). "</td>";
209 print "<td>Rp. ".round($totalrata2,2). "</td>";
210 print "</tr>";
211
212 print "<br>";
213 print "<td>Total Rata - Rata </td>";
214 print "<td>KWH= ".round($totalrata/7,2). "</td>";
215 print "<td>Rp. ".round($totalrata2/7,2). "</td>";
216 print "</tr>";
217
218 if ($tdcount != 1) {
219     while ($tdcount <= $numtd) {
220         print "<td>&nbsp;</td>"; $tdcount++;
221     } print "</tr>";
222 }
223 print "</table>";
224
225
226 $ratahari=round($totalrata/7,2);
227
228 }>
```

Figure 5.1.6 Print the final result

### 5.1.7 Step 7 – Predictions

The following coding is used to calculate the predicted price in the form of dollars by determining a benchmark of the average daily electricity usage.

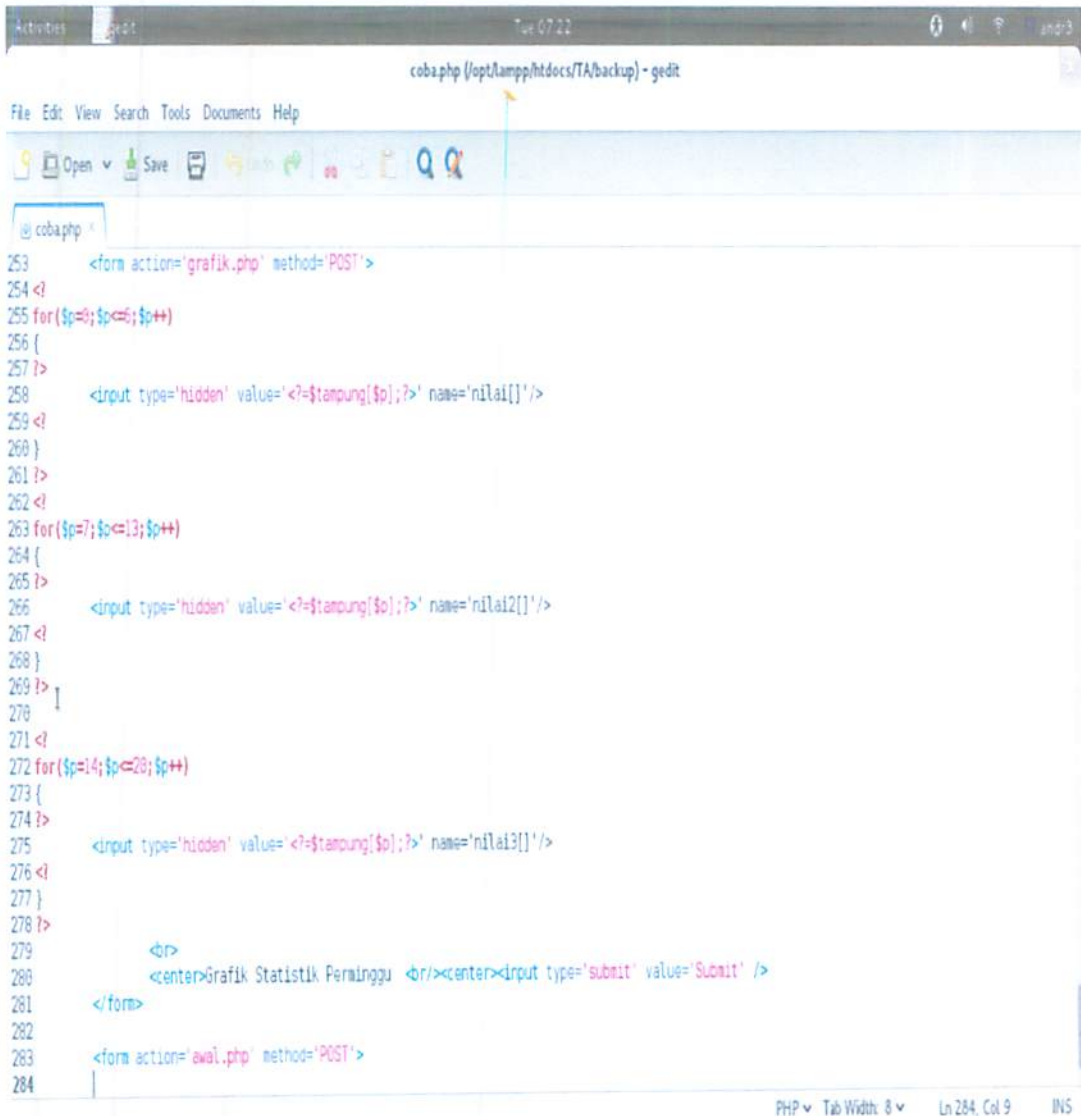


```
229 <html>
230 <head>
231     <script type='text/javascript' language='javascript'>
232     function autocalc(oText) {
233     var field, val, oForm = oText.form, hrgl = a = 0;
234     var tot=oForm.ttl.value;
235     var bay=oForm.byr.value;
236     rata= Math.round(bay/tot);
237
238     oForm.hrgl.value = rata; //out
239     } </script>
240 </head>
241 <body>
242     <form action='coba.php' method='POST' name='myForm'>
243         <center>Rpiah </t><br/> <center><input type='hidden' onKeyDown='return disableEnterKey(event)' value='<?=$retahari;?'
name='ttl' /><input type='text' name='byr' style='text-align:center' onKeyUp='return autocalc(this,ttl)'/>
244
245
246
247         <br>
248         <center>Hasil Prediksi/hari <br/><center><input type='text' name='hrgl' id='hrgl' maxlength='30' />
249
250
251     </form>
252
253     <form action='grafik.php' method='POST'>
254 <?
255 for($p=0;$p<=0;$p++)
256 {
257 <?>
258     <input type='hidden' value='<?=$tampung[$p];?' name='nilai[' />
259 <?>
```

Figure 5.1.7 Predictions

### 5.1.8 Step 8 – Graph

Coding function below to see how it compares to the use of electrical pulses from week one to week through the other graphs that have been shown through the above calculation.



```
253 <form action='grafik.php' method='POST'>
254 <?
255 for($p=0;$p<=6;$p++)
256 {
257 ?>
258 <input type='hidden' value='<?=$tampung[$p];?>' name='nilai1[]' />
259 <?
260 }
261 ?>
262 <?
263 for($p=7;$p<=13;$p++)
264 {
265 ?>
266 <input type='hidden' value='<?=$tampung[$p];?>' name='nilai2[]' />
267 <?
268 }
269 ?>
270
271 <?
272 for($p=14;$p<=20;$p++)
273 {
274 ?>
275 <input type='hidden' value='<?=$tampung[$p];?>' name='nilai3[]' />
276 <?
277 }
278 ?>
279
280 <center>Grafik Statistik Perminggu </center><input type='submit' value='Submit' />
281 </form>
282
283 <form action='awal.php' method='POST'>
284
```

Figure 5.1.8 Graph



## 5.2 Interface

### 5.2.1 Main Menu Window

After enabling localhost ago we entered our browser, after that we can see how we can input the date of the month and year that we wanted. In addition we can also choose the type of power supply voltage that we use at home.



### Input Tanggal

*Figure 5.2.1 Main Menu*

Figure 5.2.2 Process Displayed in Browser

No	TANGGAL	AM & DYS	HARGA	KWH * 2	HARGA * 2	Std Kwh	Std HARGA
1	01-04-2014	lamp1	Rp. 0.34	0	Rp. 40.21		
2	01-04-2014	lamp2	Rp. 0.44.03	0.38	Rp. 50945.47		
3	01-04-2014	lamp3	Rp. 212.52	0.27	Rp. 45163.39		
4	01-04-2014	lamp4	Rp. 142.82	0.12	Rp. 20366.8		
5	01-04-2014	lamp5	Rp. 254.2	0.38	Rp. 64917.94		
6	01-04-2014	lamp6	Rp. 152.38	0.14	Rp. 20220.98		
7	01-04-2014	lamp7	Rp. 236.85	0.24	Rp. 57528.02		
8	01-04-2014	lamp8	Rp. 117.53	0.08	Rp. 13814.08		
9	01-04-2014	lamp9	Rp. 247.37	0.38	Rp. 61180.27		
10	01-04-2014	lamp1	Rp. 89.22	0.06	Rp. 8944.81		
11	01-04-2014	lamp2	Rp. 326.47	0.53	Rp. 10501.81		
12	01-04-2014	lamp3	Rp. 116.51	0.08	Rp. 13574.18		
13	01-04-2014	lamp1	Rp. 110.87	0.07	Rp. 12315.08		

After input the date and the type of electricity that we use so that we can look at the details of the form of the name of the tool and the watts used and unused money shown in the third week.

### 5.2.2 Result Window

### 5.2.3 Process Window

Once we look at our data and we can do the calculation predictions by filling the textbox with a nominal dollars that we want, when we input nominal dollars it will immediately appear in the form of the number of days predicted results.

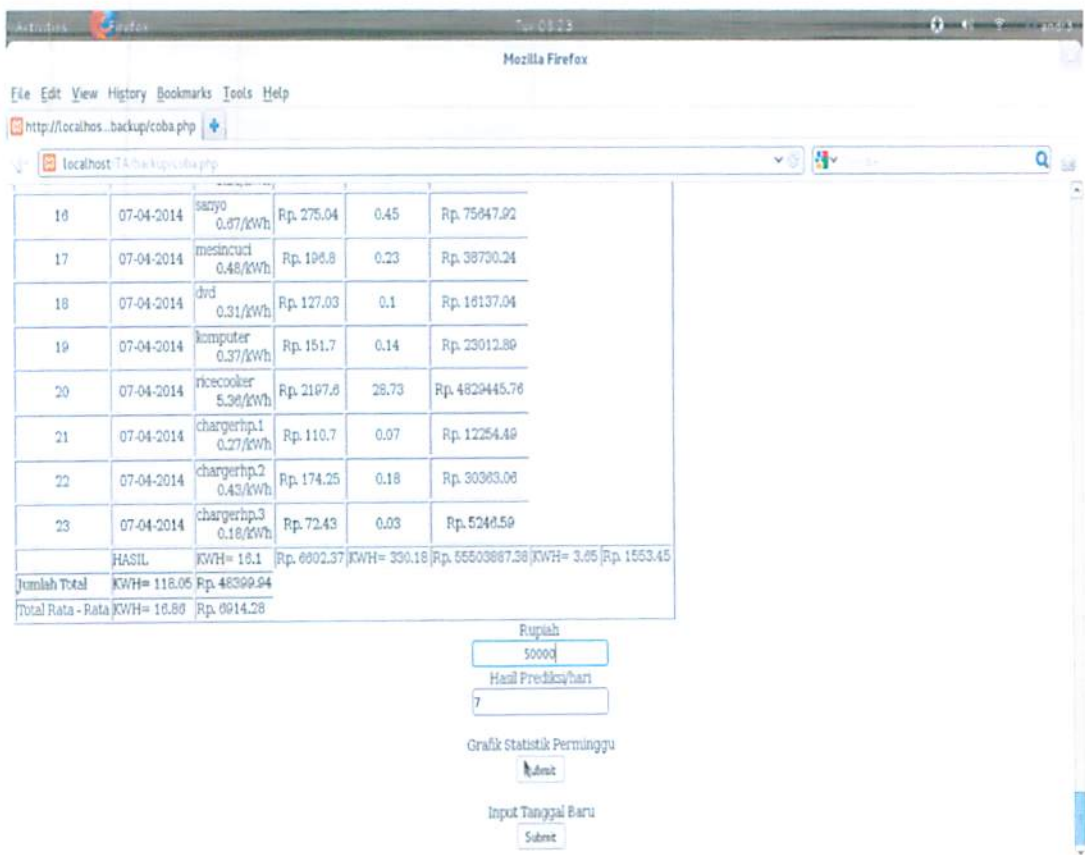


Figure 5.2.3 Process Prediction

## 5.2.4 Graph Window

Once we predict our electricity usage and then we submit the link graph and statistical graph will appear that will show the comparison of electricity consumption per week for three weeks.

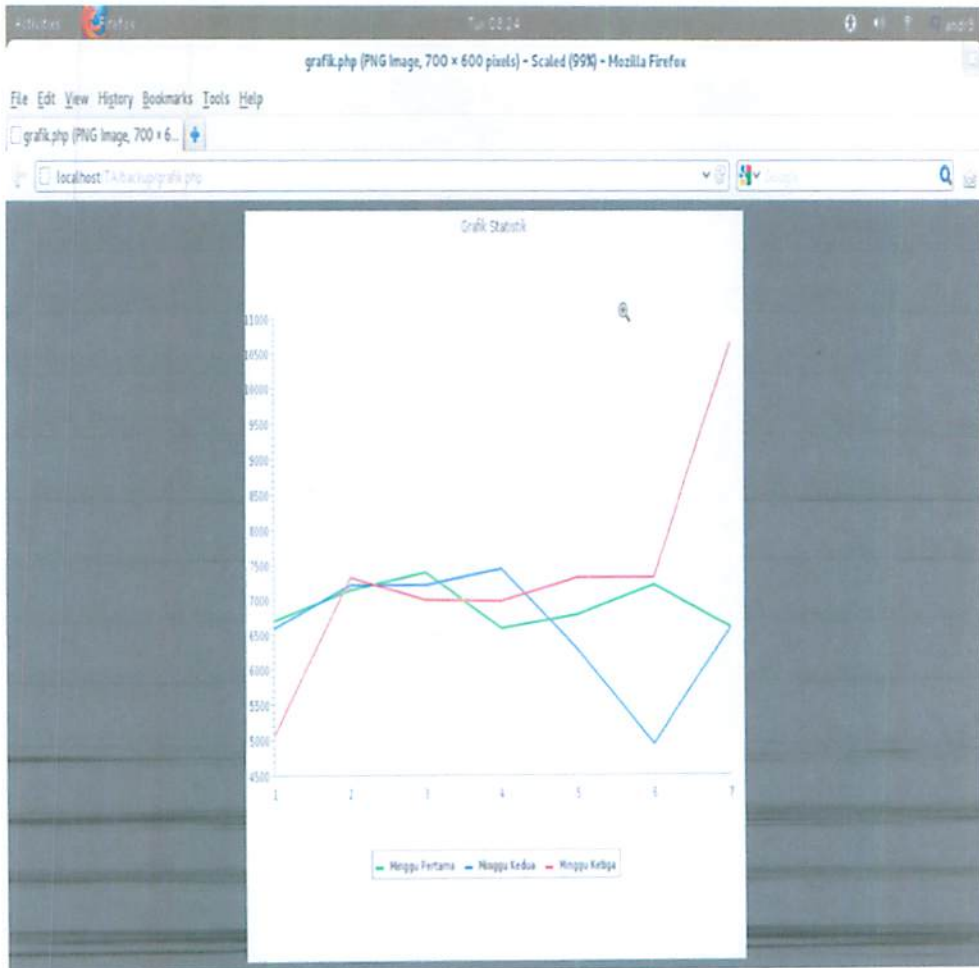


Figure 5.2.4 Process Displayed Graph

### 5.2.5 Main Menu Window

Once we predicted electricity usage and see the electricity usage comparison chart for three weeks, and if we want to look at different dates of our stay click the *Input New Date* and will return to the initial menu.



### Input Tanggal

Figure 5.2.5 Back to Main menu