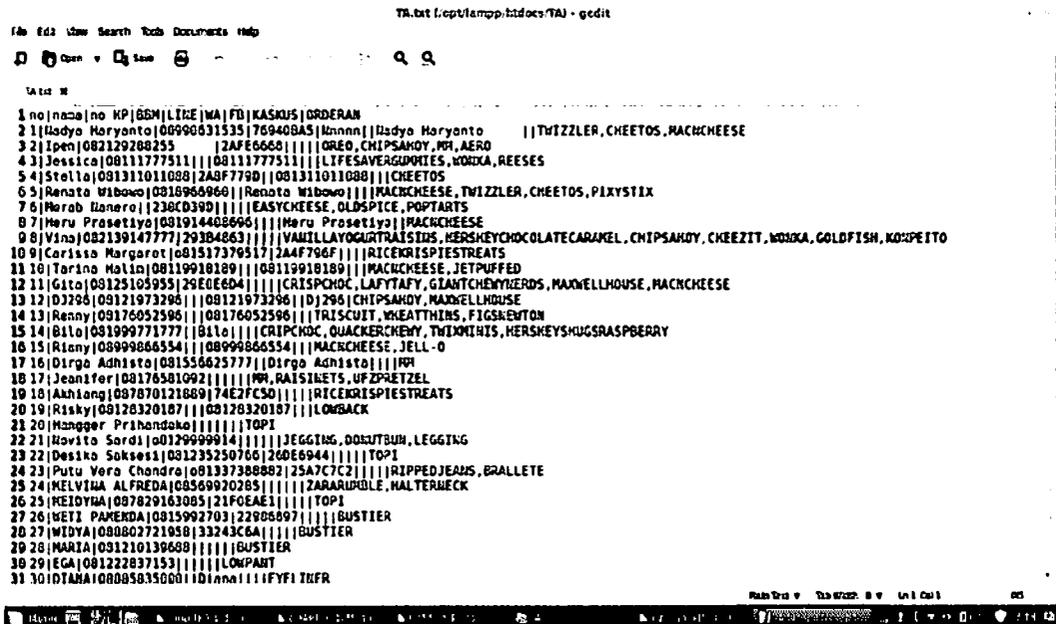


CHAPTER V

SOFTWARE IMPLEMENTATION & TESTING

5.1 Implementation

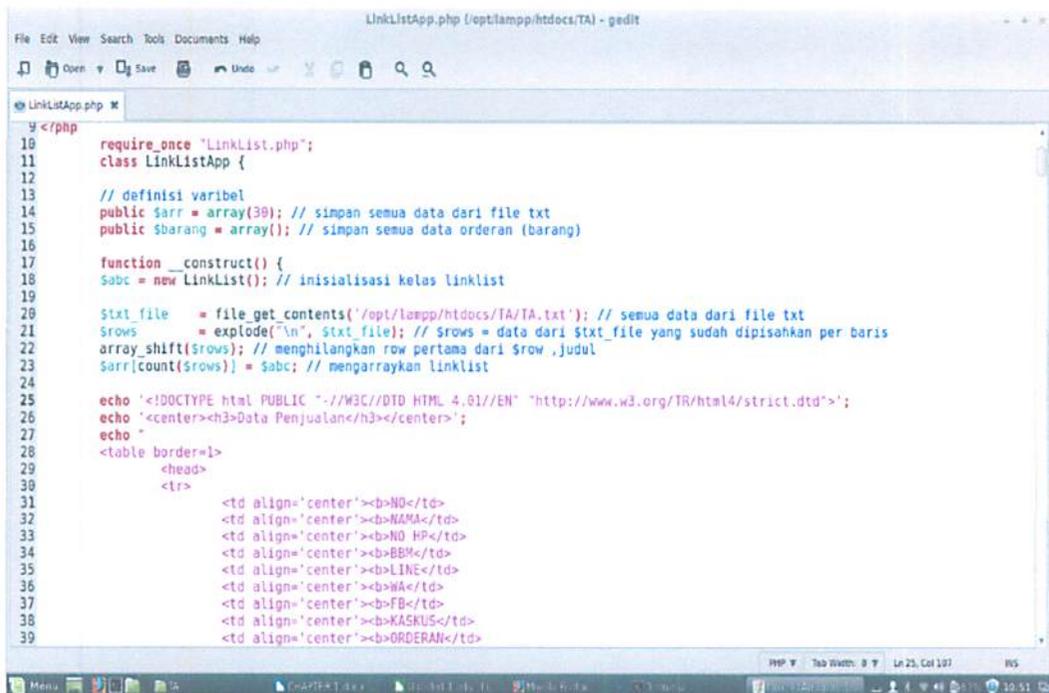
First, input the disposal data into text file (TXT) and every rows separated by parameter | (piped). That data consist of number, name, handphone number, pin bb, line, whatsapp, facebook, kaskus, and the orders. After that, save the text file with /opt/lampp/htdocs.



```
TR.txt (/opt/lampp/htdocs/TA) - gedit
File Edit View Search Tools Documents Help
Open Save
Vista W
1 no|nama|no KP|BBM|LINE|WA|FB|KASKUS|ORDERAN
2 1|Hadyo Haryanto|06990631535|76940BAS|Mnnn||Hadyo Haryanto ||TWIZZLER,CHEETOS,RACHKEESE
3 2|Ipen|08129288255||2AFE6668|||OREO,CHIPSAHOY,PI,AERO
4 3|Jessica|08111777511||08111777511||LIFESAVERGUMMIES,WOKKA,REESES
5 4|Stella|081311011088|2A8F779D||081311011088||CHEETOS
6 5|Renato Wibowo|0816965966||Renato Wibowo||MACRKEESE,TWIZZLER,CHEETOS,PIXYSTIX
7 6|Marab Hanero|238C030D|||EASYKEESE,OLDSPICE,POPTARTS
8 7|Meru Prasetyo|081014408696||Meru Prasetyo||MACRKEESE
9 8|Vina|082139147777|293B4863|||VAMILLAYOGURTRAISSIDS,HERSHEYCHOCOLATECARAMEL,CNIPSAHOY,CHEEZIT,WOKKA,GOLDFISH,KOZUPEITO
10 9|Carissa Margaret|081517379517|2AAF796F||RICEKRISPIESTREATS
11 10|Tarina Halia|08119918189||08119918189||MACRKEESE,JETPUFFED
12 11|Gita|08125105955|29E0E6D4|||CRISPCHOC,LAFYFAY,GIANTCHEMYZARDS,MAXWELLHOUSE,MACRKEESE
13 12|Dj296|08121973296||08121973296||D|296|CHIPSAHOY,MAXWELLHOUSE
14 13|Renny|08176052596||08176052596||TRISCUIT,WHEATTHINS,FIGSAWTON
15 14|Bila|081999771777||Bila||CRIPCHOC,QUACKERCHERY,TWIXMITHIS,HERSHEYSHUGSRASPBERRY
16 15|Riany|08999666554||08999666554||MACRKEESE,JELL-O
17 16|Dirgo Achista|081556625777|Dirgo Achista||RPI
18 17|Jeanifer|08176581092|||RPI,RAISINETS,UFZPRETZEL
19 18|Akhlang|087870121689|74E2FC50||RICEKRISPIESTREATS
20 19|Risky|08128320187||08128320187||LOWBACK
21 20|Manager Prihandaka|||TOPI
22 21|Novito Sardi|08129999914|||JEGGING,DOJUTBUN,LEGGING
23 22|Desiko Saksesi|081235250766|260E6944||TOPI
24 23|Putu Vera Chandra|081337388882|25A7C7C2||RIPPEDJEANS,BRALLETTE
25 24|KELVINA ALFREDA|08569920285|||ZARARUDILE,HALTERNECK
26 25|KEIDYHA|087829163085|21FOEAE1||TOPI
27 26|WETI PAMERDA|0815992703|22966897||BUSTIER
28 27|WIDYA|080802721958|33243C6A||BUSTIER
29 28|MARIA|0812210139688|||BUSTIER
30 29|EGA|081222837153|||LOWPART
31 30|DITANA|080808350001|DITANA||FYF1 TRFR
```

Figure 5.1 Text file

5.1.1 Make LinkListApp.php

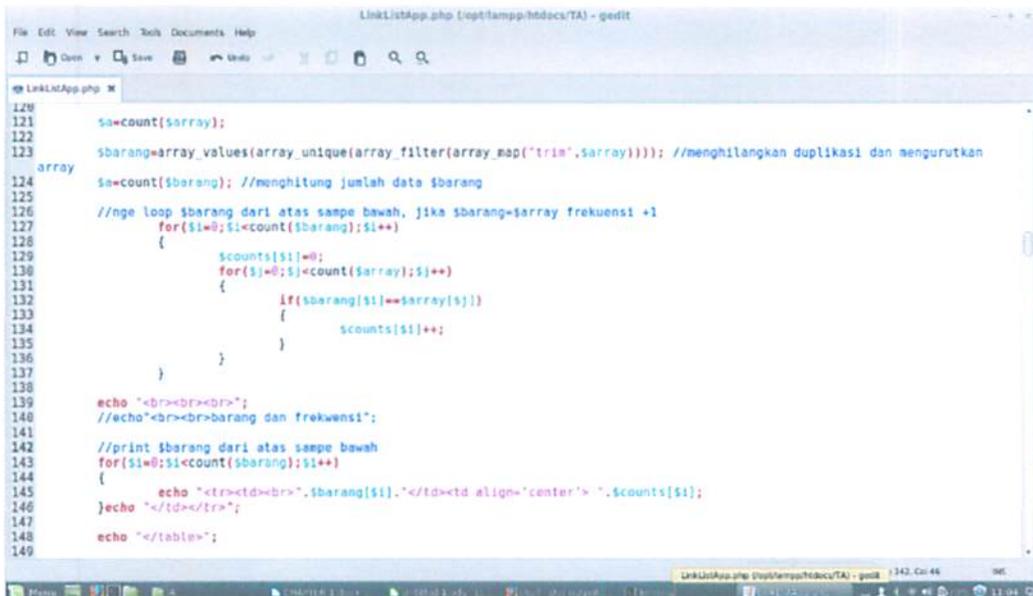


```
LinkListApp.php (opt/ta/htdocs/TA) - gedit
File Edit View Search Tools Documents Help
LinkListApp.php
10 </php
11     require_once 'LinkList.php';
12     class LinkListApp {
13         // definisi variabel
14         public $arr = array(30); // simpan semua data dari file txt
15         public $barang = array(); // simpan semua data orderan (barang)
16
17         function __construct() {
18             $abc = new LinkList(); // inisialisasi kelas linklist
19
20             $txt_file = file_get_contents('/opt/ta/htdocs/TA/TA.txt'); // semua data dari file txt
21             $rows = explode("\n", $txt_file); // $rows = data dari $txt_file yang sudah dipisahkan per baris
22             array_shift($rows); // menghilangkan row pertama dari $row , judul
23             $sarr[count($rows)] = $abc; // mengarraykan linklist
24
25             echo '<!DOCTYPE html PUBLIC "-//W3C//DTD HTML 4.01//EN" "http://www.w3.org/TR/html4/strict.dtd">';
26             echo '<center><h3>Data Penjualan</h3></center>';
27             echo '
28 <table border=1>
29 <thead>
30 <tr>
31 <td align=’center’><b>NO</td>
32 <td align=’center’><b>NAMA</td>
33 <td align=’center’><b>NO HP</td>
34 <td align=’center’><b>BBM</td>
35 <td align=’center’><b>LINE</td>
36 <td align=’center’><b>WA</td>
37 <td align=’center’><b>FB</td>
38 <td align=’center’><b>KASKUS</td>
39 <td align=’center’><b>ORDERAN</td>
```

Figure 5.1.1 LinkListApp.php

Make class LinklistApp, make public \$arr and \$barang to save all data from text file (TXT) and make the data be array. Make \$txt_file to get file from data text file to bring all the data TXT with file_gets_contents. After this, separating data taken from a text file with explode. Then, make array_shift to remove the first row of \$rows (no, nama, no hp, bbm, line, wa, fb, kaskus, orderan). And make an array for Linklist.

5.1.2 Search frequency of data “orderan”



```
LinkListApp.php (opt/lampp/htdocs/TA) - gedit
File Edit View Search Tools Documents Help
Open Save Undo Redo Find
LinkListApp.php
120
121 $s=count($sarray);
122
123 $sbarang=array_values(array_unique(array_filter(array_map("trim",$sarray)))); //menghilangkan duplikasi dan mengurutkan
array
124
125 $s=count($sbarang); //menghitung jumlah data $sbarang
126 //nge loop $sbarang dari atas sampe bawah, jika $sbarang=$sarray frekuensi +1
127 for($i=0;$i<count($sbarang);$i++)
128 {
129     $counts[$i]=0;
130     for($j=0;$j<count($sarray);$j++)
131     {
132         if($sbarang[$i]==$sarray[$j])
133         {
134             $counts[$i]++;
135         }
136     }
137 }
138
139 echo "<br><br><br>";
140 //echo"<br><br>barang dan frekuensi":
141
142 //print $sbarang dari atas sampe bawah
143 for($i=0;$i<count($sbarang);$i++)
144 {
145     echo "<tr><td><br>". $sbarang[$i]. "</td><td align='center'> ". $counts[$i];
146 }echo "</td></tr>";
147
148 echo "</table>";
149
```

Figure 5.1.2 Search frequency of data

First, separate the data \$order based comma with explode and make an array to be \$sorderan. Then, eliminate duplication of data if there same data in \$sorderan and sort the array with (array_values(array_unique(array_filter(array_map))))). After this, count the number of items “orderan” and make data “order” that has been separated by comma used as \$sbarang. Then, loop data \$sorderan from the top until the bottom if there is the same data, the frequency plus one.

5.1.3 Make html to be able to input a minimal support

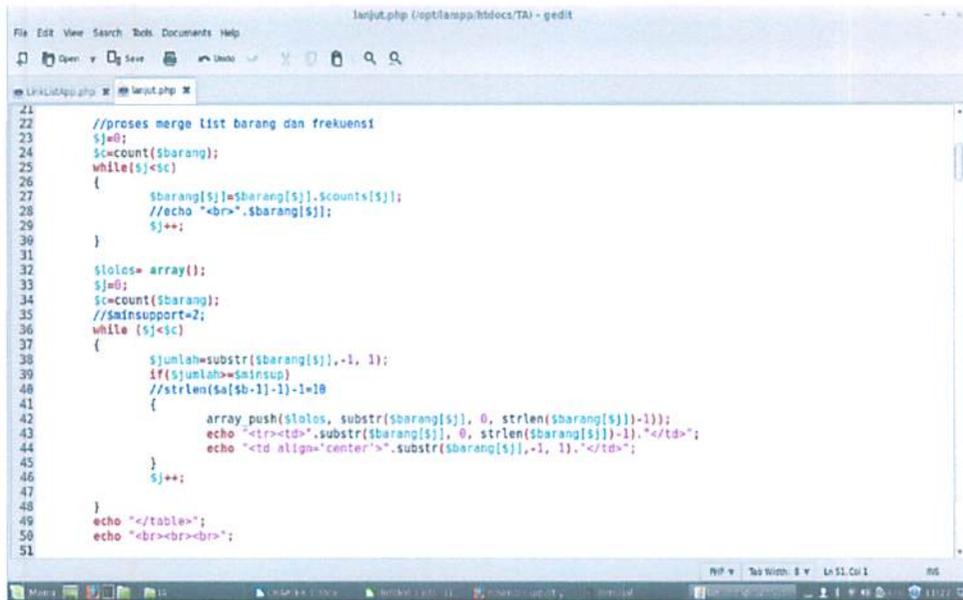
```
File Edit View Search Tools Documents Help
LirikLirikApp.php (C:\ppl\temp\index7A) - ged.t

LirikLirikApp.php
130     echo "<br><br><br>";
131     echo "<html>";
132     echo "<head>";
133     echo "<body>";
134     echo "<table>";
135     echo "<form action=lanjut.php?order=$barang[show]&counts=$counts[show]&order=$order[show] method=POST>";
136     //order" $order[show]
137     foreach ($barang as $svalue)
138     {
139         echo "<input type=hidden name=barang[] value=$svalue>";
140     }
141     foreach ($counts as $svalue1)
142     {
143         echo "<input type=hidden name=counts[] value=$svalue1>";
144     }
145     foreach ($order as $svalue2)
146     {
147         echo "<input type=hidden name=order[] value=$svalue2>";
148     }
149     echo "<tr>";
150         echo "<td>min support = </td>";
151         echo "<td><input type=number name=minsup /></td>";
152         echo "<td><input type=submit value=submit /></td>";
153     echo "</tr>";
154     echo "</form>";
155     echo "</table>";
156     echo "</body>";
157     echo "</html>";
158
159     echo "<br><br><br>";
```

Figure 5.1.3 Make html to be able to input a minimal support

Html to make column to input minimal support with input type number and make button submit with input type submit. Then, create form action that use to continue this application to other php (lanjut.php). After this, send data "minsup", "order" and frequency to lanjut.php with input type hidden. Data "minsup" is minimal support that input by user, data "order" is data order name (\$barang), and frequency is frequency of each data order (\$counts).

5.1.4 Make lanjut.php



```
21
22 //proses merge list barang dan frekuensi
23 $j=0;
24 $c=count($sbarang);
25 while($j<$c)
26 {
27     $sbarang[$j]=$sbarang[$j].$counts[$j];
28     //echo "<br>".$sbarang[$j];
29     $j++;
30 }
31
32 $lolos= array();
33 $j=0;
34 $c=count($sbarang);
35 // $mainsupport=2;
36 while ($j<$c)
37 {
38     $jumlah=substr($sbarang[$j],-1, 1);
39     if($jumlah>=$mainsup)
40         //strlen($a[$b-1])-1=10
41         {
42             array_push($lolos, substr($sbarang[$j], 0, strlen($sbarang[$j])-1));
43             echo "<tr><td>".substr($sbarang[$j], 0, strlen($sbarang[$j])-1)."</td>";
44             echo "<td align='center'>".substr($sbarang[$j],-1, 1)."</td>";
45         }
46     $j++;
47 }
48 echo "</table>";
49 echo "<br><br><br>";
50
51
```

Figure 5.1.4 Make lanjut.php

First, require once launcher.php to require lanjut.php with launcher.php. Then, take the data “order” and frequency sent with \$_POST and make data “order” to be \$order, data minimal support to be \$mainsup and data frequency to be \$counts. Then, Merge list data order and frequency and separate between the name and the item number of the frequency. Then, compare the frequency with minimal support, if the frequency is bigger or same with minimal support, then it is get out to join 1.

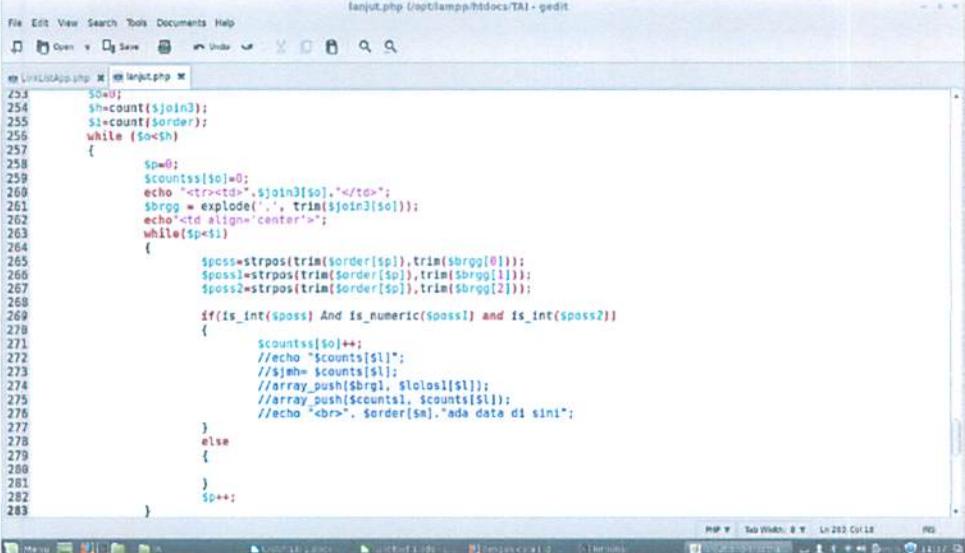
5.1.5 Join 1

```
lang(ut.php (opt/iampp/htdocs/TA) - gedit
File Edit View Search Tools Documents Help
[Icons] Open v Save [Icons] Undo [Icons] [Icons] [Icons] [Icons] [Icons]
@ lang(ut.php @ lang(ut.php
87 $counts= array();
88 $brgl = array();
89 $i=0;
90 $e=count($order);
91 $f=count($order);
92 // $j= array();
93 while($i<$e)
94 {
95     $m=0;
96     $counts[$i]=0;
97     //echo "etra";
98     //echo "<td>". $order[$i]. "</td>";
99     $brg = explode(" ", trim($order[$i]));
100     //echo "<td align='center'>";
101     while($m<$f)
102     {
103         //echo "<br>". trim(strpos($order[$m], $brg[0]),1);
104         $pos=strpos(trim($order[$m]), trim($brg[0]));
105         $pos2=strpos(trim($order[$m]), trim($brg[1]));
106
107         if((is_int($pos) And is_numeric($pos2))
108         {
109             $counts[$i]++;
110             //echo "counts[$i]";
111             // $j= $counts[$i];
112             //array_push($brgl, $order[$i]);
113             //array_push($counts, $counts[$i]);
114             //echo "<br>". $order[$m]. "ada data di sini";
115         }
116         else
117         {
```

Figure 5.1.5 Join 1

Join 1: combining the two names of items with separated comma that get out from minimal support. First, get the data passes from a minimal support and make it an array. After this, combining the two names of items with separated comma that get out from minimal support. Then count frequency itemset join 1 from data "order", if there are two names of the items in each transaction, frequency of data "order" plus one.

5.1.6 Join 2



```
lanjut.php /opt/lampp/htdocs/TA1 - gedit
File Edit View Search Tools Documents Help
Open Save Undo Redo Find

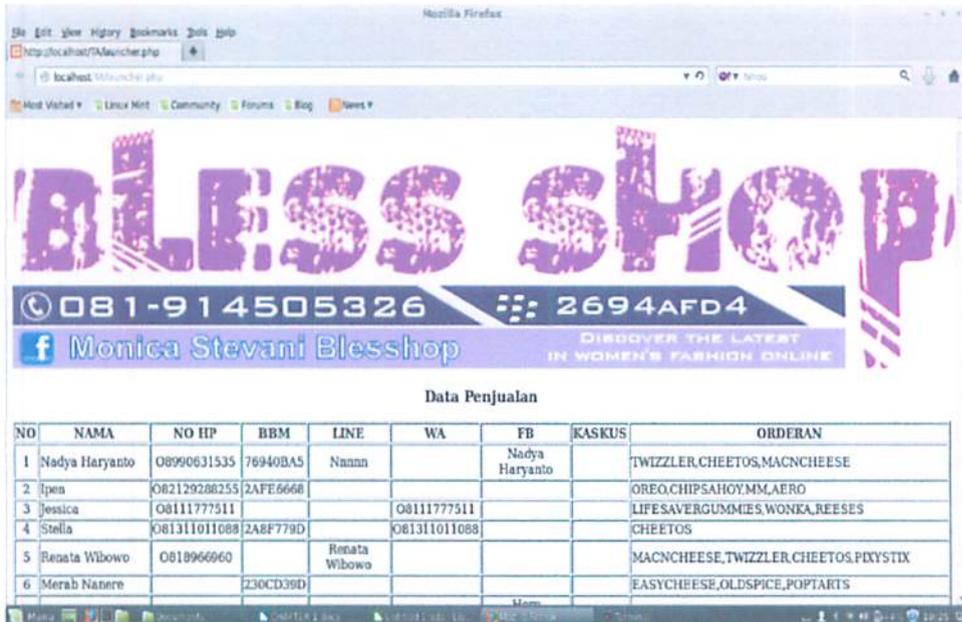
lanjut.php
253 $o=0;
254 $h=count($join3);
255 $i=count($order);
256 while ($o<$h)
257 {
258     $p=0;
259     $countss[$o]=0;
260     echo "<tr><td>". $join3[$o]. "</td>";
261     $brgg = explode('.', trim($join3[$o]));
262     echo "<td align='center'>";
263     while($p<$i)
264     {
265         $spos=strpos(trim($order[$p]),trim($brgg[0]));
266         $spos1=strpos(trim($order[$p]),trim($brgg[1]));
267         $spos2=strpos(trim($order[$p]),trim($brgg[2]));
268
269         if(is_int($spos) And is_numeric($spos1) and is_int($spos2))
270         {
271             $countss[$o]++;
272             //echo "counts[$i]";
273             // $jsh= $countss[$i];
274             //array_push($brgl, $jshos[$i]);
275             //array_push($countss1, $countss[$i]);
276             //echo "<br>". $order[$p]. "ada data di sini";
277         }
278         else
279         {
280             }
281         $p++;
282     }
283 }
```

Figure 5.1.6 Join 2

Join 2: combining the three names of items with separated comma that get out from join 1. First, get the data passes from join 1 and make it an array. After this, combining the three names of items with separated comma that get out from join 1. Then, count frequency from data “order”, if there are three names of the items in each transaction, frequency of data “order” plus one.

5.2 Testing

Make sure that lammpp is already installed and start lammpp, apache & mysql in terminal. Then, copy all code in /opt/lampp/htdocs and do not forget to chmod first /opt/lampp/htdocs. After this, open browser and type in address bar: localhost/"folder project"/launcher.php. And the data will shown into table form as below



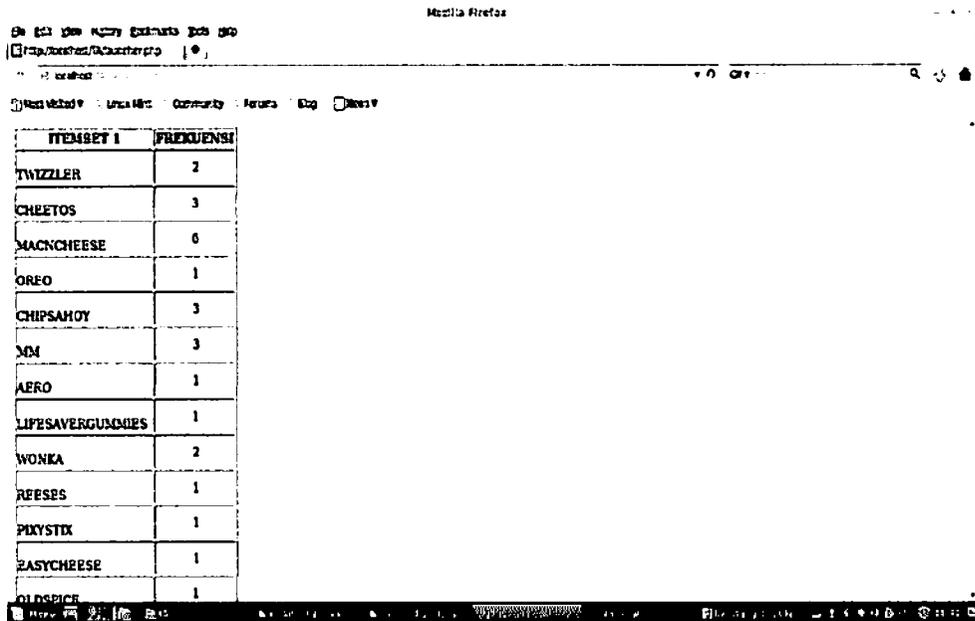
BLESS SHOP
☎ 081-914505326 📞 2694AFD4
📘 Monica Stevani Blessshop DISCOVER THE LATEST IN WOMEN'S FASHION ONLINE

Data Penjualan

NO	NAMA	NO HP	BBM	LINE	WA	FB	KASKUS	ORDERAN
1	Nadya Haryanto	08990631535	76940BA5	Nannn		Nadya Haryanto		TWIZZLER,CHEETOS,MACNCHEESE
2	Ipen	082129288255	2AFE6668					OREO,CHIPS,SAHOY,MM,AERO
3	Jessica	08111777511			08111777511			LIFESAVERGUMMIES,WONKA,REESES
4	Stella	081311011088	2A8F779D		081311011088			CHEETOS
5	Renata Wibowo	0818966960		Renata Wibowo				MACNCHEESE,TWIZZLER,CHEETOS,PIXYSTIX
6	Merab Nanere		230CD39D					EASYSYCHEESE,OLDSPICE,POPTARTS

Figure 5.2.1

When the user start the application, this application will directly display all sales data from text file in the table by `file_get_contents`. This application also directly search frequency data "orderan" when you enter in txt and remove data if there is the same data as below.



The screenshot shows a web browser window with a table of snack items and their frequencies. The table has two columns: 'ITEMSET 1' and 'FREKUENSI'. The items listed are TWIZZLER, CHEETOS, MACNCHEESE, OREO, CHIPSADY, MM, AERO, LIFESAVERGUMMIES, WONKA, REESE'S, PIXYSTIX, EASYCHEESE, and OLDSPICE. The frequencies are 2, 3, 6, 1, 3, 3, 1, 1, 2, 1, 1, 1, and 1 respectively.

ITEMSET 1	FREKUENSI
TWIZZLER	2
CHEETOS	3
MACNCHEESE	6
OREO	1
CHIPSADY	3
MM	3
AERO	1
LIFESAVERGUMMIES	1
WONKA	2
REESE'S	1
PIXYSTIX	1
EASYCHEESE	1
OLDSPICE	1

Figure 5.2.2

And then, user need to give minimal support and click submit. What is minimal support? Minimal support is minimal frequency for each items to pass to next join. How to count minimal support is the division between the needed frequency and the number of transaction. Example: user input minimal support "2" and then click submit.

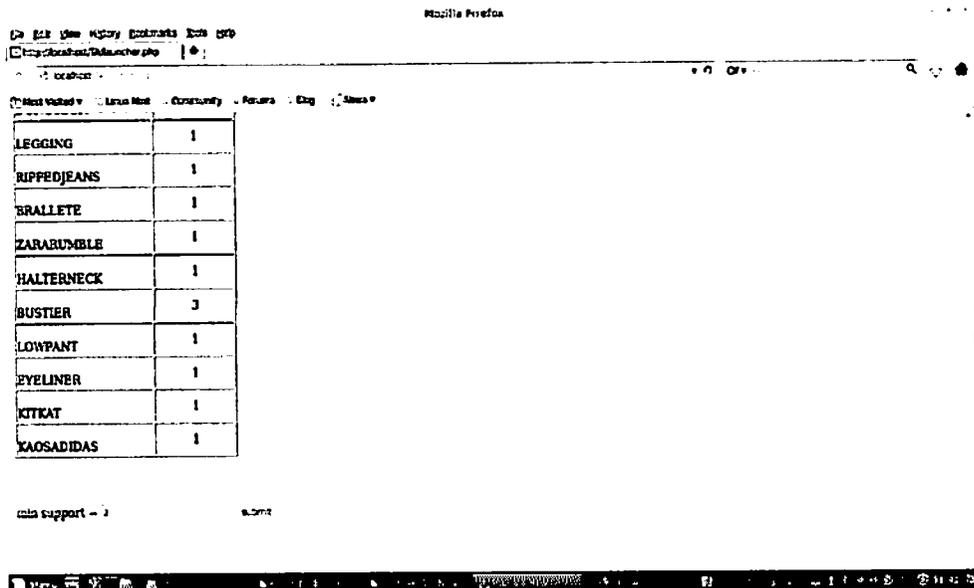


Figure 5.2.3

The data that allow from minimal support. Then, it will be joined with two items and the frequency must bigger than minimal support. Next, it will be joined with 3 items and the frequency must bigger than minimal support and that is the result (TWIZZLER, CHEETOS,MACNCHEESE).

Mozilla Firefox

Daftar Item: TWIZZLER, CHEETOS, MACNCHEESE, CHIPS, WONKA

Item: TWIZZLER, CHEETOS, MACNCHEESE, CHIPS, WONKA

ITEM	ITEM	ITEM	ITEM
RICHKUSPIESTREATS	2		
MAXWELLHOUSE	2		
TOPI	3		
BUSTIER	3		

JOIN 1

JOIN 1	FILEKUENSI
TWIZZLER,CHEETOS	2
TWIZZLER,MACNCHEESE	2
CHEETOS,MACNCHEESE	2
MACNCHEESE,MAXWELLHOUSE	1
CHIPSAHOT,MM	1
CHIPSAHOT,WONKA	1
CHIPSAHOT,MAXWELLHOUSE	1
MM,WONKA	1

JOIN 2

JOIN 2	FILEKUENSI
TWIZZLER,CHEETOS,MACNCHEESE	2

Jadi barang yang sering dibeli = TWIZZLER,CHEETOS,MACNCHEESE

Figure 5.2.5

