Annexure

ANNEXURES

I. DATASET

File Edit Search View Tools Macros Configure Window Help

wiki-access.log

```
222.64.146.118 - - [19/Jun/2005:06:44:17 +0200] "GET /wximages/wxwidgets02-small.png HTTP/1.1" 200 12468 "http://blog.vckbase.com/bastet/" "Mozilla/4.0 (compatible; M
218.84.191.50 - - [19/Jun/2005:06:46:05 +0200] "GET /wximages/wxwidgets02-small.png HTTP/1.1" 200 12468 "http://blog.vckbase.com/bastet/" "Mozilla/4.0 (compatible; MS
202.201.245.20 - - [19/Jun/2005:06:47:37 +0200] "GET /wximages/wxwidgets02-small.png HTTP/1.1" 200 12468 "http://blog.vckbase.com/bastet/" "Mozilla/4.0 (compatible; M
138.243.201.10 - - [19/Jun/2005:06:48:40 +0200] "GET /wiki.pl?WxWidgets_Bounties HTTP/1.1" 200 8873 "http://www.wxwidgets.org/toolbar.htm" "Mozilla/5.0 (Windows; U; W
68.251.52.253 - - [19/Jun/2005:06:50:49 +0200] "GET /wiki.pl?WxWidgets_Compared_To_Other_Toolkits HTTP/1.1" 200 19476 "http://www.google.com/search?q=wxWidget+designe
68.251.52.253 - - [19/Jun/2005:06:50:49 +0200] "GET /wxwiki.css HTTP/1.1" 200 1540 "http://wiki.wxwidgets.org/wiki.pl?WxWidgets_Compared_To_Other_Toolkits" "Mozilla/5
68.251.52.253 - - [19/Jun/2005:06:50:49 +0200] "GET /wximages/wxwidgets02-small.png HTTP/1.1" 200 12468 "http://wiki.wxwidgets.org/wiki.pl?WxWidgets_Compared_To_Other_
68.251.52.253 - - [19/Jun/2005:06:50:50 +0200] "GET /favicon.ico HTTP/1.1" 200 3262 "-" "Mozilla/5.0 (Windows; U; Windows NT 5.1; en-US; rv:1.7.8) Gecko/20050511 Fire
61.177.31.179 - - [19/Jun/2005:06:52:36 +0200] "GET /wximages/wxwidgets02-small.png HTTP/1.1" 200 12468 "http://blog.vckbase.com/bastet/" "Mozilla/4.0 (compatible; MS
216.148.248.43 - - [19/Jun/2005:06:53:14 +0200] "GET / HTTP/1.0" 200 3369 "-" "Mozilla/4.0 (compatible;)"
61.145.240.229 - - [19/Jun/2005:06:54:01 +0200] "GET /wximages/wxwidgets02-small.png HTTP/1.1" 304 - "http://blog.vckbase.com/bastet/" "Mozilla/4.0 (compatible; MSIE
218.58.4.221 - - [19/Jun/2005:06:54:19 +0200] "GET /wximages/wxwidgets02-small.png HTTP/1.1" 200 12468 "http://blog.vckbase.com/bastet/" "Mozilla/4.0 (compatible; MSI
61.143.48.33 - - [19/Jun/2005:06:54:29 +0200] "GET /wximages/wxwidgets02-small.png HTTP/1.1" 200 12468 "http://blog.vckbase.com/bastet/" "Mozilla/4.0 (compatible; MSI
64.4.8.94 - - [19/Jun/2005:06:59:08 +0200] "GET /robots.txt HTTP/1.0" 200 138 "-" "msnbot/1.0 (+http://search.msn.com/msnbot.htm)"
64.4.8.94 - - [19/Jun/2005:06:59:09 +0200] "GET /wiki.pl?RecentChanges HTTP/1.0" 200 11708 "-" "msnbot/1.0 (+http://search.msn.com/msnbot.htm)"
221.232.64.93 - - [19/Jun/2005:06:59:55 +0200] "GET /wximages/wxwidgets02-small.png HTTP/1.1" 304 - "http://blog.vckbase.com/bastet/archive/2005/06/09/6274.html" "Moz
218.231.191.173 - - [19/Jun/2005:07:00:49 +0200] "GET /wiki.pl?Dev-Cpp_Instructions HTTP/1.1" 200 2056 "-" "Opera/7.54u1 (Windows NT 5.1; U) [ja]"
218.231.191.173 - - [19/Jun/2005:07:00:49 +0200] "GET /wxwiki.css HTTP/1.1" 200 1540 "-" "Opera/7.54u1 (Windows NT 5.1; U) [ja]"
218.231.191.173 - - [19/Jun/2005:07:00:49 +0200] "GET /favicon.ico HTTP/1.1" 200 3262 "-" "Opera/7.54u1 (Windows NT 5.1; U) [ja]"
218.231.191.173 - - [19/Jun/2005:07:00:50 +0200] "GET /wximages/wxwidgets02-small.png HTTP/1.1" 200 12468 "-" "Opera/7.54u1 (Windows NT 5.1; U) [ja]"
218.231.191.173 - - [19/Jun/2005:07:00:55 +0200] "GET /wiki.pl?WxWiki HTTP/1.1" 200 3381 "-" "Opera/7.54u1 (Windows NT 5.1; U) [ja]"
220.174.41.165 - - [19/Jun/2005:07:02:11 +0200] "GET /wximages/wxwidgets02-small.png HTTP/1.1" 200 12468 "http://blog.vckbase.com/bastet/" "Mozilla/4.0 (compatible; M
218.86.81.217 - - [19/Jun/2005:07:02:58 +0200] "GET /wximages/wxwidgets02-small.png HTTP/1.1" 304 - "http://blog.vckbase.com/bastet/" "Mozilla/4.0 (compatible; MSIE 6
69.17.25.14 - - [19/Jun/2005:07:03:31 +0200] "GET /wiki.pl?WxWidgets_Bounties HTTP/1.1" 200 8873 "http://www.wxwidgets.org/toolbar.htm" "Mozilla/5.0 (Windows; U; Windo
69.17.25.14 - - [19/Jun/2005:07:03:33 +0200] "GET /wxwiki.css HTTP/1.1" 200 1540 "http://wiki.wxwidgets.org/wiki.pl?WxWidgets_Bounties" "Mozilla/5.0 (Windows; U; Windo
69.17.25.14 - - [19/Jun/2005:07:03:33 +0200] "GET /wximages/wxwidgets02-small.png HTTP/1.1" 200 12468 "http://wiki.wxwidgets.org/wiki.pl?WxWidgets_Bounties" "Mozilla/
69.17.25.14 - - [19/Jun/2005:07:03:35 +0200] "GET /favicon.ico HTTP/1.1" 200 3262 "-" "Mozilla/5.0 (Windows; U; Windows NT 5.1; en-US; rv:1.7.8) Gecko/20050511 Firefo
218.4.222.177 - - [19/Jun/2005:07:05:21 +0200] "GET /wximages/wxwidgets02-small.png HTTP/1.1" 304 - "http://blog.vckbase.com/bastet/" "Mozilla/4.0 (compatible; MSIE 6
67.71.21.114 - - [19/Jun/2005:07:05:32 +0200] "GET /wiki.pl?WxStyledTextCtrl HTTP/1.1" 200 10351 "http://www.google.com/search?q=wxWidgets+control+array&sourceid=mozi
67.71.21.114 - - [19/Jun/2005:07:05:33 +0200] "GET /wxwiki.css HTTP/1.1" 200 1540 "http://wiki.wxwidgets.org/wiki.pl?WxStyledTextCtrl" "Mozilla/5.0 (Windows; U; Windo
67.71.21.114 - - [19/Jun/2005:07:05:34 +0200] "GET /wximages/wxwidgets02-small.png HTTP/1.1" 200 12468 "http://wiki.wxwidgets.org/wiki.pl?WxStyledTextCtrl" "Mozilla/5
67.71.21.114 - - [19/Jun/2005:07:05:36 +0200] "GET /favicon.ico HTTP/1.1" 200 3262 "-" "Mozilla/5.0 (Windows; U; Windows NT 5.1; en-US; rv:1.7.8) Gecko/20050511 Firef
67.71.21.114 - - [19/Jun/2005:07:06:42 +0200] "GET / HTTP/1.1" 200 3381 "-" "Mozilla/5.0 (Windows; U; Windows NT 5.1; en-US; rv:1.7.8) Gecko/20050511 Firefox/1.0.4"
61.134.39.235 - - [19/Jun/2005:07:07:57 +0200] "GET /wximages/wxwidgets02-small.png HTTP/1.1" 200 12468 "http://blog.vckbase.com/bastet/" "Mozilla/4.0 (compatible; MS
218.87.142.18 - - [19/Jun/2005:07:08:07 +0200] "GET /wximages/wxwidgets02-small.png HTTP/1.1" 200 12468 "http://blog.vckbase.com/bastet/" "Mozilla/4.0 (compatible; MS
67.71.21.114 - - [19/Jun/2005:07:08:34 +0200] "GET /wiki.pl?Table_Of_Contents HTTP/1.1" 200 26242 "http://wiki.wxwidgets.org/" "Mozilla/5.0 (Windows; U; Windows NT 5.
67.71.21.114 - - [19/Jun/2005:07:08:43 +0200] "GET /wiki.pl?Writing_Your_First_Application HTTP/1.1" 200 3109 "http://wiki.wxwidgets.org/wiki.pl?Table_Of_Contents" "M
67.71.21.114 - - [19/Jun/2005:07:08:46 +0200] "GET /wiki.pl?Resources HTTP/1.1" 200 5882 "http://wiki.wxwidgets.org/wiki.pl?Table_Of_Contents" "Mozilla/5.0 (Windows;
222.57.124.145 - - [19/Jun/2005:07:08:56 +0200] "GET /wximages/wxwidgets02-small.png HTTP/1.1" 200 12468 "http://blog.vckbase.com/bastet/" "Mozilla/4.0 (compatible; M
67.71.21.114 - - [19/Jun/2005:07:09:06 +0200] "GET /wiki.pl?WxButton HTTP/1.1" 200 1947 "http://wiki.wxwidgets.org/wiki.pl?Table_Of_Contents" "Mozilla/5.0 (Windows; U
67.71.21.114 - - [19/Jun/2005:07:09:24 +0200] "GET /wiki.pl?Writing_Your_First_Application/Adding_A_Button HTTP/1.1" 200 8382 "http://wiki.wxwidgets.org/wiki.pl?Writi
221.228.226.219 - - [19/Jun/2005:07:12:06 +0200] "GET /wximages/wxwidgets02-small.png HTTP/1.1" 200 12468 "http://blog.vckbase.com/bastet/" "Mozilla/4.0 (compatible;
222.136.104.143 - - [19/Jun/2005:07:13:53 +0200] "GET /wximages/wxwidgets02-small.png HTTP/1.1" 200 12468 "http://blog.vckbase.com/bastet/" "Mozilla/4.0 (compatible;
218.201.79.85 - - [19/Jun/2005:07:14:02 +0200] "GET /wximages/wxwidgets02-small.png HTTP/1.1" 200 12468 "http://blog.vckbase.com/bastet/" "Mozilla/4.0 (compatible; MS
61.173.98.13 - - [19/Jun/2005:07:14:34 +0200] "GET /wximages/wxwidgets02-small.png HTTP/1.1" 200 12468 "http://blog.vckbase.com/bastet/" "Mozilla/4.0 (compatible; MSI
220.163.28.60 - - [19/Jun/2005:07:15:15 +0200] "GET /wximages/wxwidgets02-small.png HTTP/1.1" 304 - "http://blog.vckbase.com/bastet/" "Mozilla/4.0 (compatible; MSIE 6
220.173.161.117 - - [19/Jun/2005:07:16:12 +0200] "GET /wximages/wxwidgets02-small.png HTTP/1.1" 200 12468 "http://blog.vckbase.com/bastet/" "Mozilla/4.0 (compatible;
60.17.138.45 - - [19/Jun/2005:07:17:38 +0200] "GET /wximages/wxwidgets02-small.png HTTP/1.1" 200 12468 "http://blog.vckbase.com/bastet/" "Mozilla/4.0 (compatible; MSI
61.138.215.218 - - [19/Jun/2005:07:17:59 +0200] "GET /wximages/wxwidgets02-small.png HTTP/1.1" 200 12468 "http://blog.vckbase.com/bastet/" "Mozilla/4.0 (compatible; M
219.150.221.221 - - [19/Jun/2005:07:18:38 +0200] "GET /wximages/wxwidgets02-small.png HTTP/1.1" 200 12468 "http://blog.vckbase.com/bastet/" "Mozilla/4.0 (compatible;
203.24.19.228 - - [19/Jun/2005:07:19:25 +0200] "GET /wiki.pl?Compiling_WxWidgets HTTP/1.0" 200 15564 "http://www.google.com/search?q=libxl1.so+missing+dylib&btnG=Sear
203.24.19.228 - - [19/Jun/2005:07:19:25 +0200] "GET /wxwiki.css HTTP/1.0" 200 1540 "http://wiki.wxwidgets.org/wiki.pl?Compiling_WxWidgets" "Mozilla/5.0 (Macintosh; U;
```

i. Original data

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
4	68.251.52.253	19/Jun/20	"GET /favi "	200	3262	"-"	"Mozilla/5.0 (Windows; U; Windows NT 5.1; en-US; rv:1.7.8) Gecko/20050511 Firefox/1.0.4"								
5	216.148.248.43	19/Jun/20	"GET / HTT"	200	3369	"-"	"Mozilla/4.0 (compatible;)"								
6	64.4.8.94	19/Jun/20	"GET /wik "	200	1170	"-"	"msnbot/1.0 (+http://search.msn.com/msnbot.htm)"								
7	218.231.191.173	19/Jun/20	"GET /wik "	200	2056	"-"	"Opera/7.54u1 (Windows NT 5.1; U) [ja]"								
8	218.231.191.173	19/Jun/20	"GET /wxv "	200	1540	"-"	"Opera/7.54u1 (Windows NT 5.1; U) [ja]"								
9	218.231.191.173	19/Jun/20	"GET /favi "	200	3262	"-"	"Opera/7.54u1 (Windows NT 5.1; U) [ja]"								
10	218.231.191.173	19/Jun/20	"GET /wik "	200	3381	"-"	"Opera/7.54u1 (Windows NT 5.1; U) [ja]"								
11	69.17.25.14	19/Jun/20	"GET /wik "	200	8873	"http://w	"Mozilla/5.0 (Windows; U; Windows NT 5.1; en-US; rv:1.7.8) Gecko/20050511 Firefox/1.0.4"								
	69.17.25.														

ii. Preprocessed data

II. PROGRAM CODE

```
clc;
clear all;
close all;
warning off all;
while(1)
inp=menu('Web log Mining','Readdatabase','DBSCANalgorithm','FP-growth
algorithm','FLAMEalgorithm','Performancecomparison','Exit');
ifinp==1
dt=fileread('Data\data1000.log');
end
ifinp==2
    [nop1,nos1]=main(dt);
end
ifinp==3
    [nop2,nos2]=main1(dt);
end
ifinp==4
    [nop3,nos3]=main2(dt);
end
ifinp==5
load graph
nop=[0 0 0;nop1 nop2 nop3;0 0 0];
nos=[0 0 0;nos1 nos2 nos3;0 0 0];
   /fpgrowth/
figure('name','Average Number of patterns comparision','numbertitle','off')
bar(nop)
axis([1,3,0,100])
set(gca,'xticklabel',{"","",""})
xlabel('Methods')
ylabel('Average Patterns')
```

```
    legend('DBSCAN algorithm','FP-growth algorithm','FLAMEalgorithm','location','best'
figure('name','Number of sessions identified comparision','numbertitle','off')
bar(nos)
axis([1,3,0,15])
set(gca,'xticklabel',{"","",""})
xlabel('Methods')
ylabel('Sessions Identified')
    legend('DBSCAN algorithm','FP-growth algorithm','FLAMEalgorithm','location','best')
    f = figure('name','Comparision table','numbertitle','off','Position',[200 200 750 300]);
dat = [nop1 nop2 nop3;nos1 nos2 nos3];
rnames={'Average patterns','Sessions identified'};
cnames = {'DBSCAN algorithm','FP-growth algorithm','FLAME algorithm'};
    t =
uitable('Parent',f,'Data',dat,'ColumnName',cnames,'RowName',rnames,'ColumnWidth',{150},'
Position',[20 20 700 250]);
end
ifinp==6
break;
end
end
/dbscan/
function [IDX, isnoise]=DBSCAN(X,epsilon,MinPts)
C=0;
n=size(X,1);
IDX=zeros(n,1);
D=pdist2(X,X);
visited=false(n,1);
isnoise=false(n,1);
for i=1:n
if ~visited(i)
visited(i)=true;
    Neighbors=RegionQuery(i);
ifnumel(Neighbors)<MinPts
isnoise(i)=true;
```

```
else
        C=C+1;
ExpandCluster(i,Neighbors,C);
end
end
end
functionExpandCluster(i,Neighbors,C)
IDX(i)=C;
            k = 1;
while true
        j = Neighbors(k);
if ~visited(j)
visited(j)=true;
            Neighbors2=RegionQuery(j);
ifnumel(Neighbors2)>=MinPts
                Neighbors=[Neighbors Neighbors2];   %#ok
end
end
if IDX(j)==0
IDX(j)=C;
end
                    k = k + 1;
if k >numel(Neighbors)
break;
end
end
end
function Neighbors=RegionQuery(i)
      Neighbors=find(D(i,:)<=epsilon);
end
end
function [C,AllE,FPtree]=flame(AllETrans)
[M,N]=size(AllETrans);
Ni=5;
```

```
CC=zeros(Ni,2);
for k=1:N
  [Mk,Nk]=size(AllETrans{k});                % Counting the frequence of the items.
for i=1:Nk
CC(AllETrans{k}(i),1)=AllETrans{k}(i);
     CC(AllETrans{k}(i),2)=CC(AllETrans{k}(i),2)+1;
end
end
C=zeros(Ni,3);
for i=1:Ni                  % Arrange the items according to frequence sequence degression.
  [A,P]=max(CC(:,2));
C(P,1)=i;
C(i,2:3)=CC(P,:);
CC(P,2)=-2*i;
end
for k=1:N                   % Arange the items of each transaction according to frequence
sequence degression.
  CR=zeros(1,Ni);
  [Mk,Nk]=size(AllETrans{k});
for i=1:Nk
     CR(C(AllETrans{k}(i),1))=AllETrans{k}(i);
end
  j=0;
for i=1:Ni
if CR(i)>0.5
        j=j+1;
AllE{k}(j)=CR(i);
end
end
end
R=0;
FPtree{1,1}=zeros(1,5);
for k=1:N                   % Create frequent pattern tree
   [Mk,Nk]=size(AllE{k});
```

```
  J=ones(1,Nk);
ifFPtree{1,1}(1,2)<1
FPtree{1,1}=[0 1 1 1 1];  % The first element of each cell
     R=R+1;               % The second element of each cell
for i=1:Nk
FPtree{1,i+1}=[AllE{k}(i) 1 R i R];
end
FPtree{1,i+1}(5)=0;    % The third element of each cell
else                    % The forth element of each cell
FPtree{1,1}(1,2)=FPtree{1,1}(1,2)+1;
for i=1:Nk             % The fifth element of each cell
       [Mfp,Nfp]=size(FPtree{J(i),i});
ifFPtree{J(i),i}(Nfp)==0
FPtree{R,i+1}=[AllE{k}(i) 1 J(i) i 0];
FPtree{J(i),i}(Nfp)=R;
J(i+1)=R;
else
          j=5;
while j<=Nfp
            if FPtree{FPtree{J(i),i}(j),i+1}(1)==AllE{k}(i)
               FPtree{FPtree{J(i),i}(j),i+1}(2)=FPtree{FPtree{J(i),i}(j),i+1}(2)+1;
               j=Nfp+10;
else
               j=j+1;
end
if j==Nfp+1
               R=R+1;
FPtree{R,i+1}=[AllE{k}(i) 1 J(i) i 0];
FPtree{J(i),i}(j)=R;
J(i+1)=R;
end
end
end
end
```

```
end
end

/FPgrowth/
function out=FPGrowth(T,MST,MCT)
% Step 1: Create Sorted Items List, in order of Descending Frequency
Items=[];
for i=1:numel(T)
   Items=union(Items,T{i});
end
Items=reshape(Items,1,[]);
Count=zeros(size(Items));
for i=1:numel(T)
   Count=Count+ismember(Items,T{i});
end
[~, SortOrder]=sort(Count,'descend');
Items=Items(SortOrder);
% Step 2: Create FP-Tree
empty_node.Name=[];
empty_node.Count=0;
empty_node.Parent=[];
empty_node.Children=[];
empty_node.Path=[];
empty_node.Patterns={};
empty_node.PatternCount=[];
% Add Base Node
Node(1)=empty_node;
Node(1).Name='n';
Node(1).Parent=0;
LastIndex=1;
for i=1:numel(T)
      A=[];
for item=Items
ifismember(item,T{i})
```

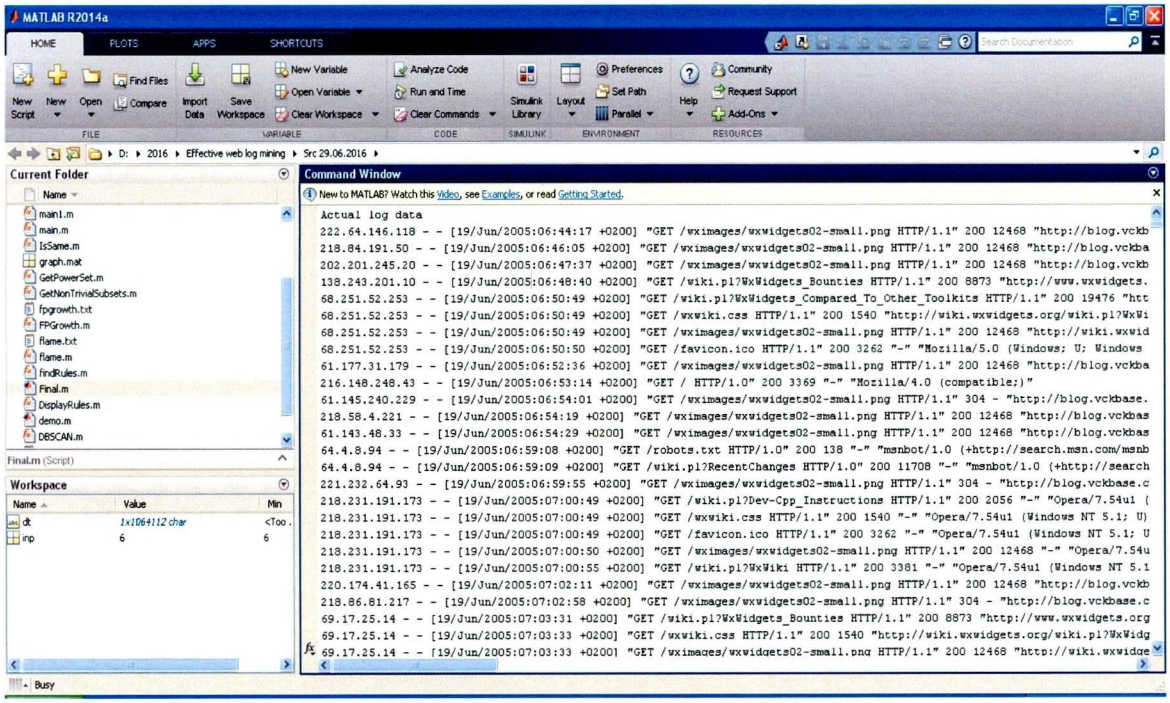
```
        A=[A item];                         %#ok
end
end
CurrentNode=1;
Node(CurrentNode).Count=Node(CurrentNode).Count+1;  %#ok
for a=A
ChildNodeExists=false;
for c=Node(CurrentNode).Children
if Node(c).Name==a
ChildNodeExists=true;
break;
end
end
ifChildNodeExists
CurrentNode=c;
else
NewNode=empty_node;
NewNode.Name=a;
NewNode.Parent=CurrentNode;
NewNode.Path=[Node(CurrentNode).Path NewNode.Name];
LastIndex=LastIndex+1;
Node(LastIndex)=NewNode;
Node(CurrentNode).Children=[Node(CurrentNode).Children LastIndex];
CurrentNode=LastIndex;
end
Node(CurrentNode).Count=Node(CurrentNode).Count+1;
end
end
% Step 3: Pattern Mining
for i=2:numel(Node)
      % Dedicated Patterns
   S=GetPowerSet(Node(i).Path(1:end-1))';
Node(i).Patterns=cell(size(S));        %#ok
Node(i).PatternCount=zeros(size(S));    %#ok
```

```
for j=1:numel(Node(i).Patterns)
Node(i).Patterns{j}=[S{j} Node(i).Name];
Node(i).PatternCount(j)=Node(i).Count;
end
    % Trasfer Dedicated Patterns to Parents
  k=i;
while true
        p=Node(k).Parent;
if p==0
break;
end
for j=1:numel(Node(i).Patterns)
Pj=Node(i).Patterns{j};
PatternFound=false;
for l=1:numel(Node(p).Patterns)
        Pl=Node(p).Patterns{l};
ifIsSame(Pj,Pl)
PatternFound=true;
break;
end
end
if ~PatternFound
        l=numel(Node(p).Patterns)+1;
Node(p).Patterns{l}=Pj;
Node(p).PatternCount(l)=0;
end
Node(p).PatternCount(l)=Node(p).PatternCount(l)+Node(i).PatternCount(j);
end
        k=p;
end
end
Patterns=Node(1).Patterns;
PatternCount=Node(1).PatternCount;
Patterns=Patterns(PatternCount/numel(T)>=MST);
```

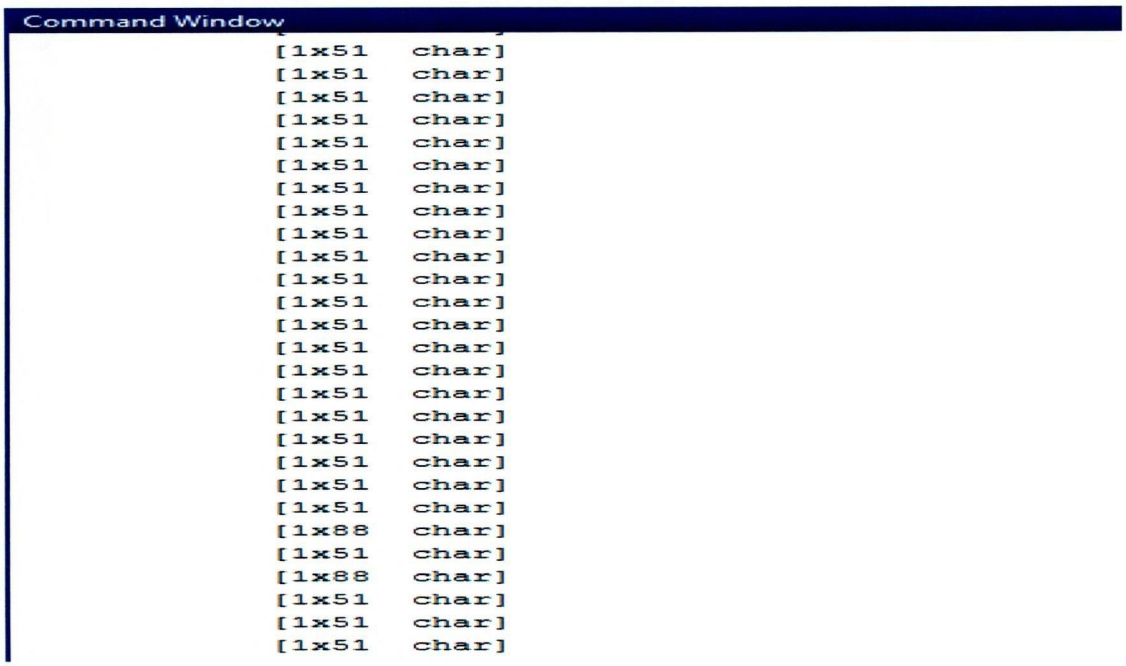
```
PatternCount=PatternCount(PatternCount/numel(T)>=MST);
for j=1:size(Patterns,2)
Patterns{2,j}=PatternCount(j);
end
% Step 4: Extract Rules
Rules=cell(0,5);
Supp=[];
Conf=[];
Lift=[];
r=0;
for j=1:size(Patterns,2)
   P=Patterns{1,j};
ifnumel(P)<2
continue;
end
countP=PatternCount(j);
      S=GetNonTrivialSubsets(P);
   Q=S(end:-1:1);
   % S{k} --> Q{k}
for k=1:numel(S)
for l=1:size(Patterns,2)
ifIsSame(S{k},Patterns{1,l})
countS=PatternCount(l);
break;
end
end
for l=1:size(Patterns,2)
ifIsSame(Q{k},Patterns{1,l})
countQ=PatternCount(l);
break;
end
end
supp=countP/numel(T);
conf=countP/countS;
```

```
lift=countP/(countS*countQ/numel(T));
            r=r+1;
      Rules{r,1}=S{k};
      Rules{r,2}=Q{k};
      Rules{r,3}=supp;
      Rules{r,4}=conf;
      Rules{r,5}=lift;
Supp(r)=supp;  %#ok
Conf(r)=conf;  %#ok
      Lift(r)=lift;  %#ok
end
end
Supp
Conf
Lift
FinalRules=Rules(Conf>=MCT & Lift>=1,:);
out.Node=Node;
out.Patterns=Patterns;
out.PatternCount=PatternCount;
out.Rules=Rules;
out.Supp=Supp;
out.Conf=Conf;
out.Lift=Lift;
out.FinalRules=FinalRules;
end
```

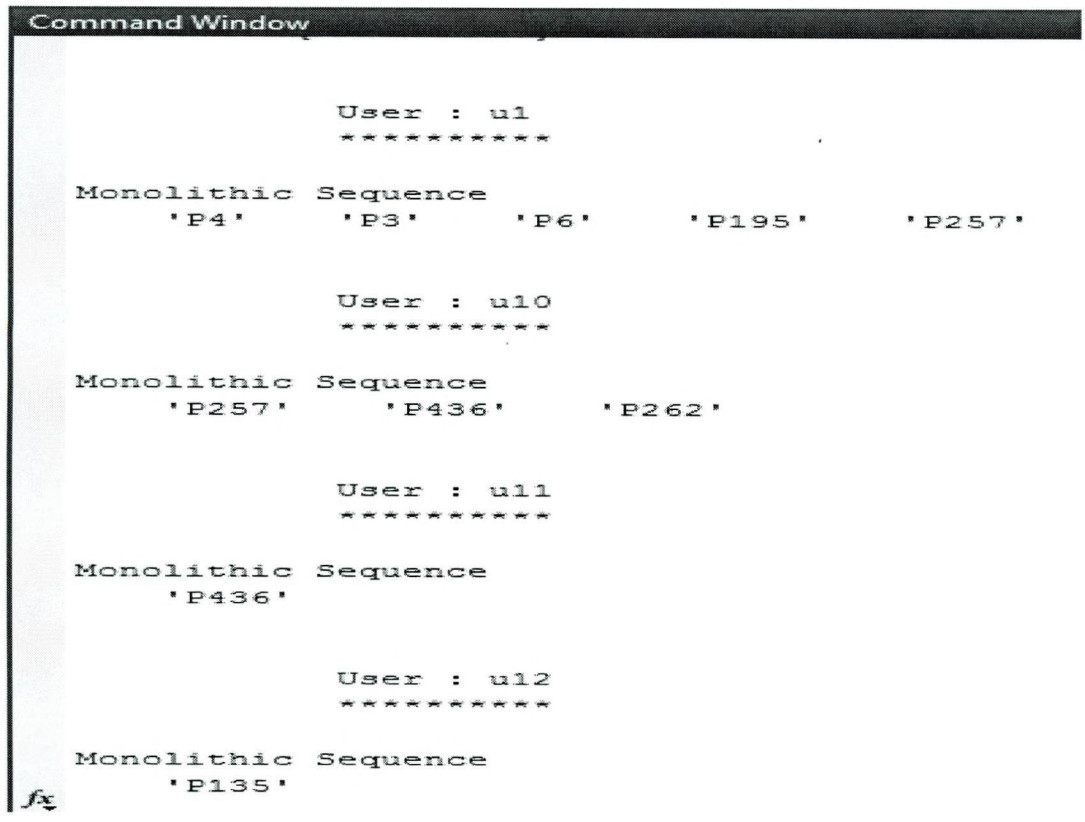
III. SCREENSHOTS



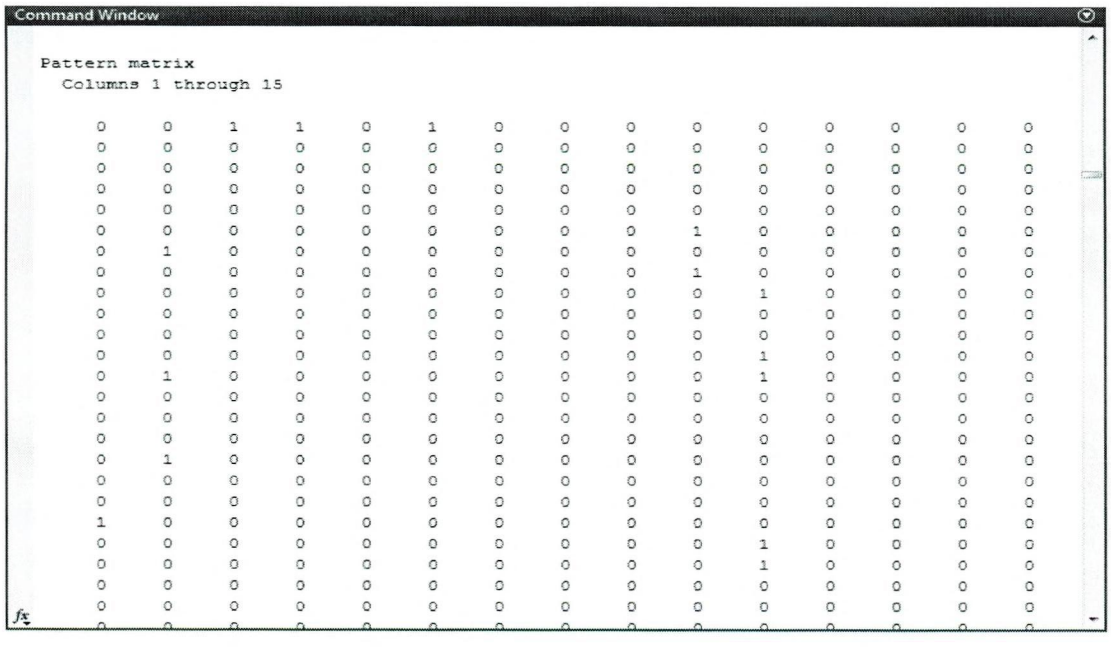
Loading dataset in Matlab



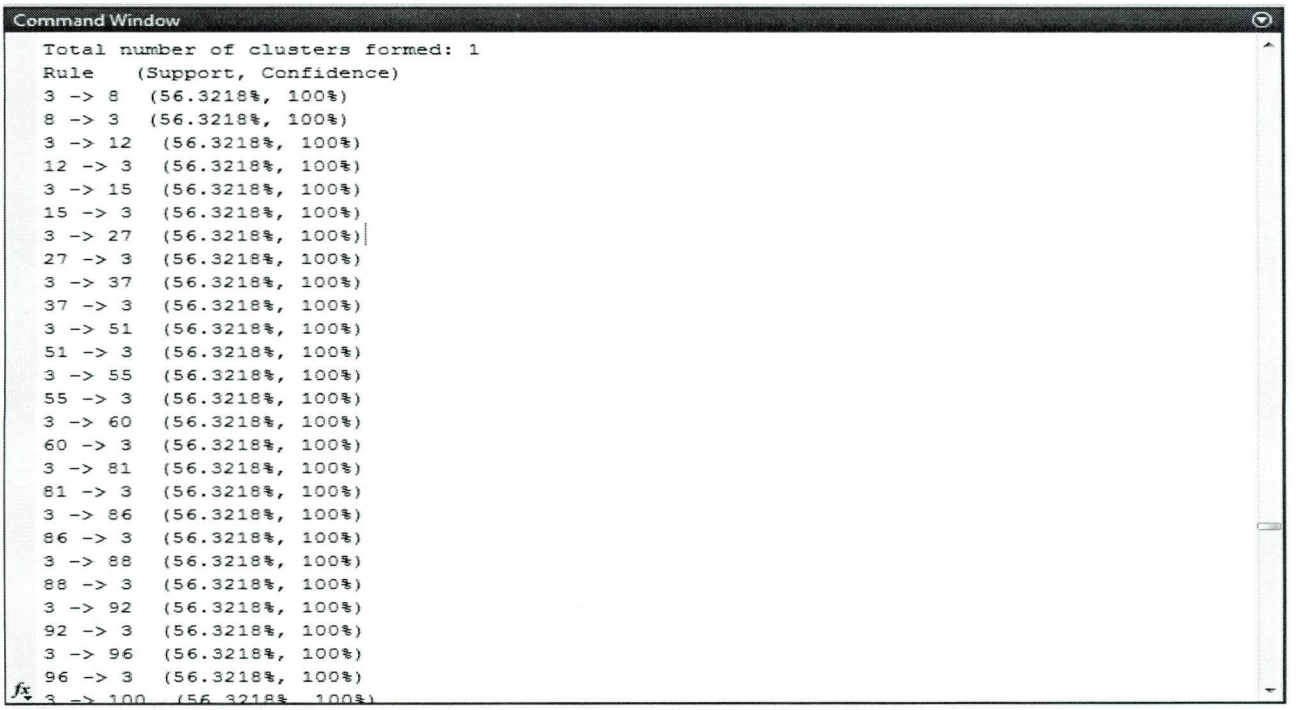
Splitting data to columns



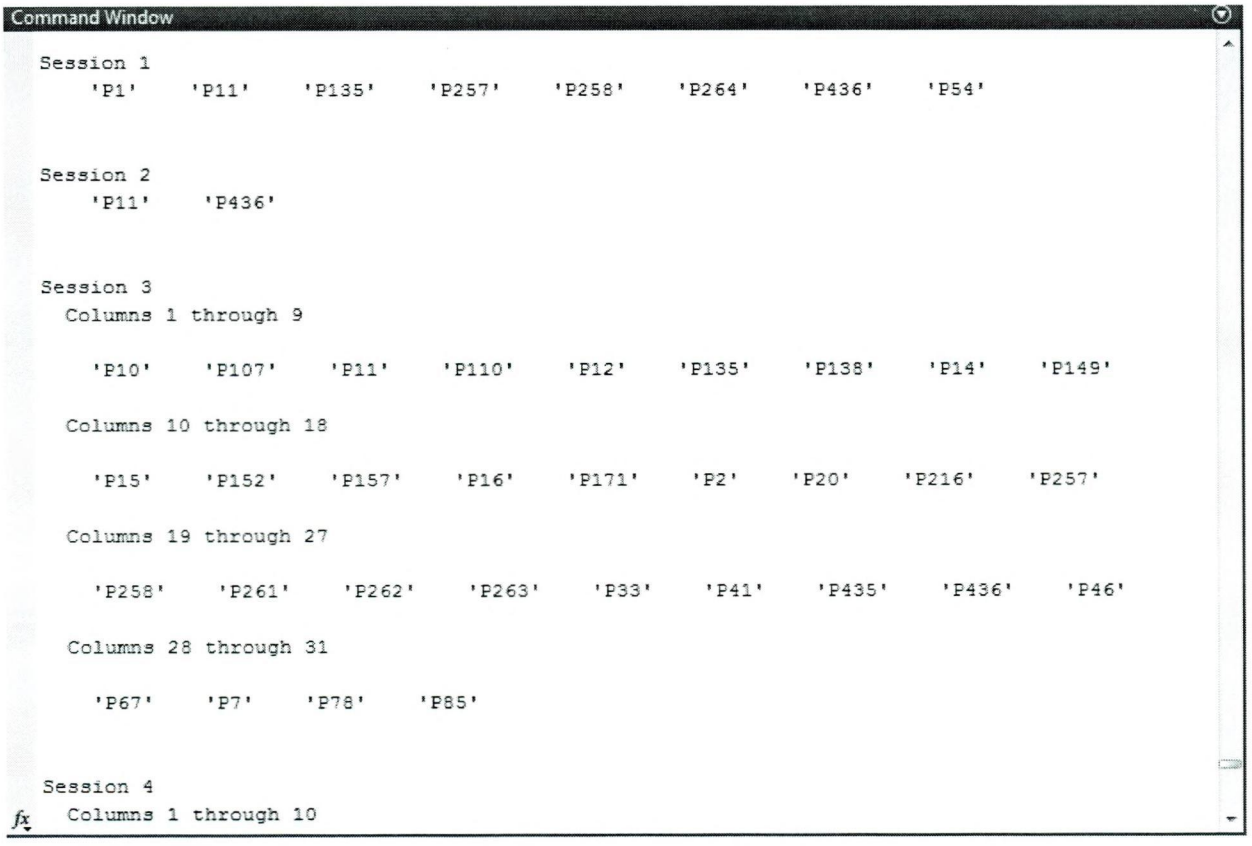
Pattern detected as monolithic or shared



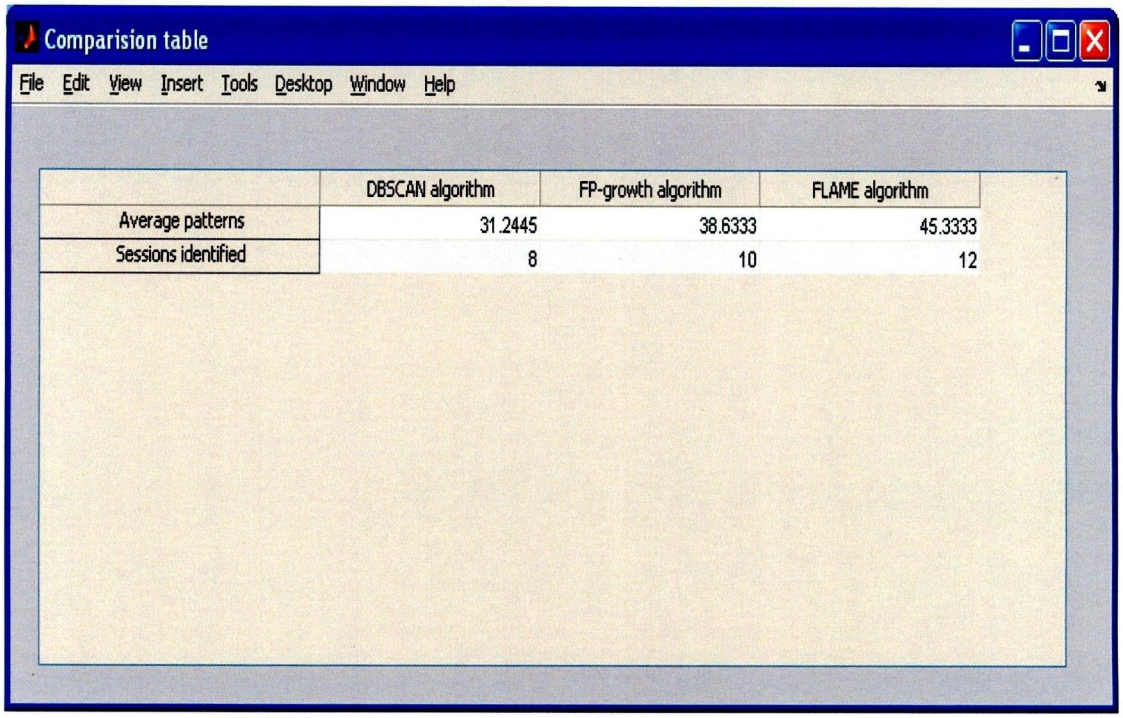
Pages viewed by the user in Matrix format



Clusters formed



Sessions identified



Comparison table