IOSR Journal of Computer Engineering (IOSR-JCE)
e-ISSN: 2278-0661, p- ISSN: 2278-8727Volume 11, Issue 3 (May. - Jun. 2013), PP 57-61
www.iosrjournals.org

"A new approach for user identification in web usage mining preprocessing"

1.Arvind kumar Dangi, 2.Asst. Prof. Sunita Sangwan
1.(Software Engineering ,PDM College of engineering ,India) akdangi@gmail.com
2.(Computer Science & Engineering ,PDM College of engineering ,India) sunita2009@gmail.com

Abstract : *Web usage mining is a subset of data mining. In order to huge amount of data but the data is less appropriates "quantity and quality" of the web data is opposite to each other this is the main problem. Web data usage Mining is a variation of this field is untapped source of richly offered free textual information. The importance of web data usage mining is mounting along with the immense volumes of data generated in web habitual existence data always arrives in a various, continuous, rapid and time varying flow. Web data usage mining taking out procedures are important in extracting useful streaming on-line sources. As throughout the globe no. of web users are continuously and rapidly growing, it is necessary for the web usage miners to utilize efficient tools in order to discover, extort, clean and assess the desired information. The data pre-processing stage is the most important phase in the preprocessing for investigation of the web user & his usage behavior. To fulfill this requirement the navigations are recorded in web log file as well as the IP address of the website, session of usage & visited web link. In order to improve the performance & quality of data preprocessing in order to identify unique users and user sessions. We propose a new method for web data preprocessing in which it has three phases. "In the first phase some websites are selected and by different locations access these website & by applying the (java) tools & methods then find out the IP address of that websites, session usage time & navigations, in the final phase combine them i.e.(web link navigation + IP address of website + session of usage). This framework helps to investigate the web user usage behavior efficiently.*
Keywords *- :-weblink, navigation, threading, networking, diminution, web logs, session, Data clearout, Data makeover.*

I. INTRODUCTION

Data pre-processing is an important and required phase in Web usage mining. Different methods & techniques are employed in web usage mining to remove irrelevant items and identify IP address, sessions of usage and navigation along with the extraction information. There is no of steps define for preprocessing asData clear out also known as the routines work to "clean" the data by satisfying in missing values, smoothing noisy data, identifying or removing outliers, and resolving inconsistencies.If users believe the data is noisy, they are improbable to trust the results of any data mining that has been applied to it. Also, dirty data can cause uncertainty for the mining procedure, resulting in unreliable output. But, they are not always robust. *a new method for web data preprocessing in which it has three phases. "In the first phase some websites are selected and by different locations access these website & by applying the (java) tools & methods then find out the IP address of that websites, session usage time & navigations, in the final phase combine them i.e.(web link navigation + IP address of website + session of usage). This framework helps to investigate the web user usage behavior efficiently.*

II. INDENTATIONS AND EQUATIONS

2.1 Data clear out (cleaning)

Data clear out also known as the routines work to "clean" the data by satisfying in missing values, smoothing noisy data, identifying or removing outliers, and resolving inconsistencies.

2.2 IP address identification & Web link visited identification

Using the following function & code we Identify the IP address & web link visited by the end user using the java language.

```
try
    {
       Statement st=con.createStatement();
       int a=st.executeUpdate("INSERT INTO cdass.tracing (userid, `IP`, visited_page) \n" +"VALUES ("'+userid+'", "'+ip+'", "'+page.toString()+'");\n" +"");
    }catch(Exception e)
    {
       System.out.println("Error During tracing....."+e);
           }
    finally
    {     try {
           con.close();
       } catch (SQLException ex) {
     Logger.getLogger(track.class.getName()).log(Level.SEVERE, null, ex);
       }
    }
```

2.3Session of usage identification

Identify the session of usage by the user at particular web site or the web page.

```
      long d=session.getCreationTime();
      long dd=session.getLastAccessedTime();
      out.print(new Date(dd).getSeconds()-new Date(d).getSeconds());
      session.removeAttribute("userid");
```

Session Tracing

```
<%
tracing.track.setTracking((String)session.getAttribute("userid"),request.getRemoteAddr(),request.getRequestURL());
  %>
<%
      long d=session.getCreationTime();
      long dd=session.getLastAccessedTime();
     // out.print(new Date(d).getSeconds());
      out.print(new Date(dd).getSeconds()-new Date(d).getSeconds());
    //  out.println((dd-d)/60);
    //  System.out.println(session.getLastAccessedTime());
      session.removeAttribute("userid");
     // response.sendRedirect("login_form.jsp");
      %>
```

Packages used for achieving the above tasks

import java.sql.Connection;

The JDBC (Java Database Connectivity) API defines interfaces and classes for writing database applications in Java by making database connections. Using JDBC you can send SQL, PL/SQL statements to almost any relational database. JDBC is a Java API for executing SQL statements and supports basic SQL functionality. It provides RDBMS access by allowing you to embed SQL inside Java code. Because Java can run on a thin client, applets embedded in Web pages can contain downloadable JDBC code to enable remote database access.

import java.sql.Statement;

To execute a SQL statement on your table, you set up a Statement object. So add this import line to the top of your code:

import java.sql.Statement;

In the **try** part of the **try … catch** block add the following line (add it just below your Connection line):
Statement stmt = con.createStatement( );
Here, we're creating a Statement object called **stmt**. The Statement object needs a Connection object, with the **createStatment** method.
We also need a SQL Statement for the Statement object to execute. So add this line to your code:
String SQL = "SELECT * FROM Workers";
The above statement selects all the records from the database table called **Workers**.
We can pass this SQL query to a method of the Statement object called **executeQuery**. The Statement object will then go to work gathering all the records that match our query.

import java.util.logging.Level;
The java.util.logging package provides the logging capabilities via the Logger class.
To create a logger in your Java coding you can use the following snippet.
Import java.util.logging.logger
Private final static logger logger = logger.getlogger(myclass.class.getname())
The Logger you create a actually a hierarchy of Loggers, and a . (dot) in the hierarchy indicates a level in the hierarchy. So if you get a Logger for the com.example key this Logger is a child of the com Logger and the com Logger is child of the Logger for the empty String. You can configure the main logger and this affects all its children.

SIGN IN TIME	SIGN OUT TIME	BROWSER AGENT	URL	IP

2.4 Data integration

Integration we mean that a dataset can be retrieved and added to other datasets to create greater, more robust and useful datasets.The discipline of **data integration** comprises the practices, architectural techniques and tools for achieving the consistent access and delivery of data across the spectrum of data subject areas and data structure types in the enterprise to meet the data consumption requirements of all applications and business processes.

2.5 Data makeover

Data makeover process applies on the data which is collected from different sources of the data. In the make over process it organized the data minimizes redundancy and dependency of the data.

2.6 Data diminution

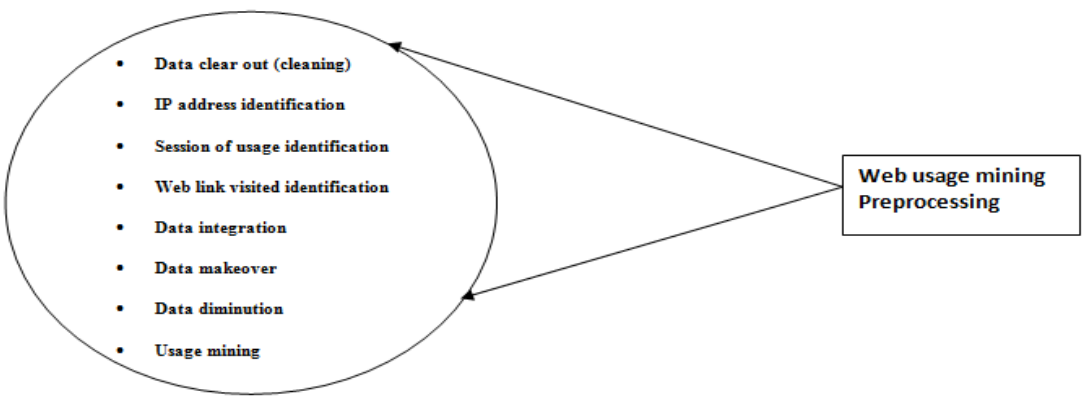
These are the technique that can be applied to get a reduced representation of the data set that is much smaller in volume maintain the data integrity of the original data.

2.7 Usage mining

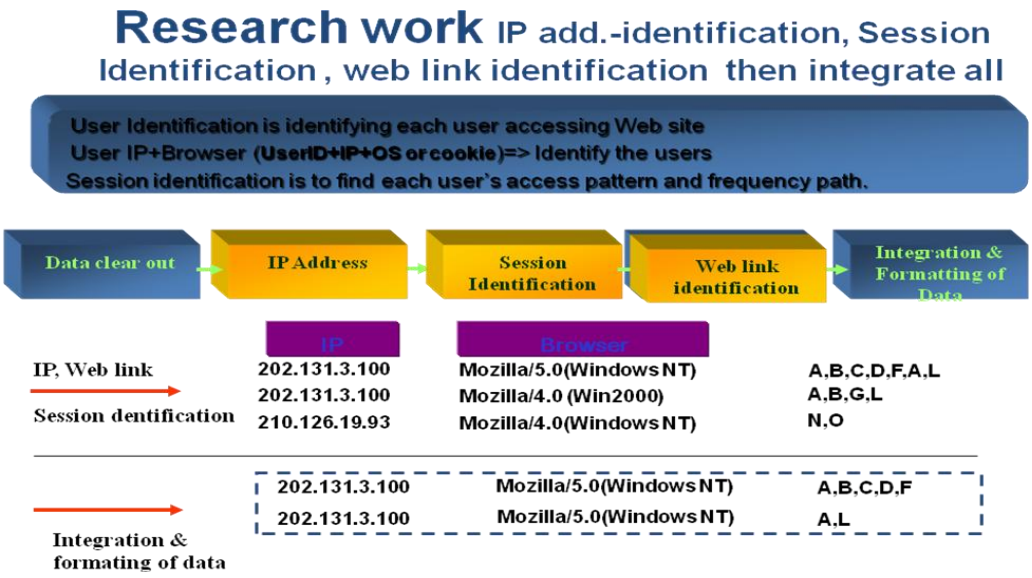
Web Usage Mining process is a user session file that gives an exact account about the user accessed the Web site, what pages were visited and in what order, and how much time each page was visited. A user session is the set of the page accesses that occur during a single visit to a Web site. the information contained in a raw Web server log represent a user session file before data preprocessing

III. FIGURES AND TABLES

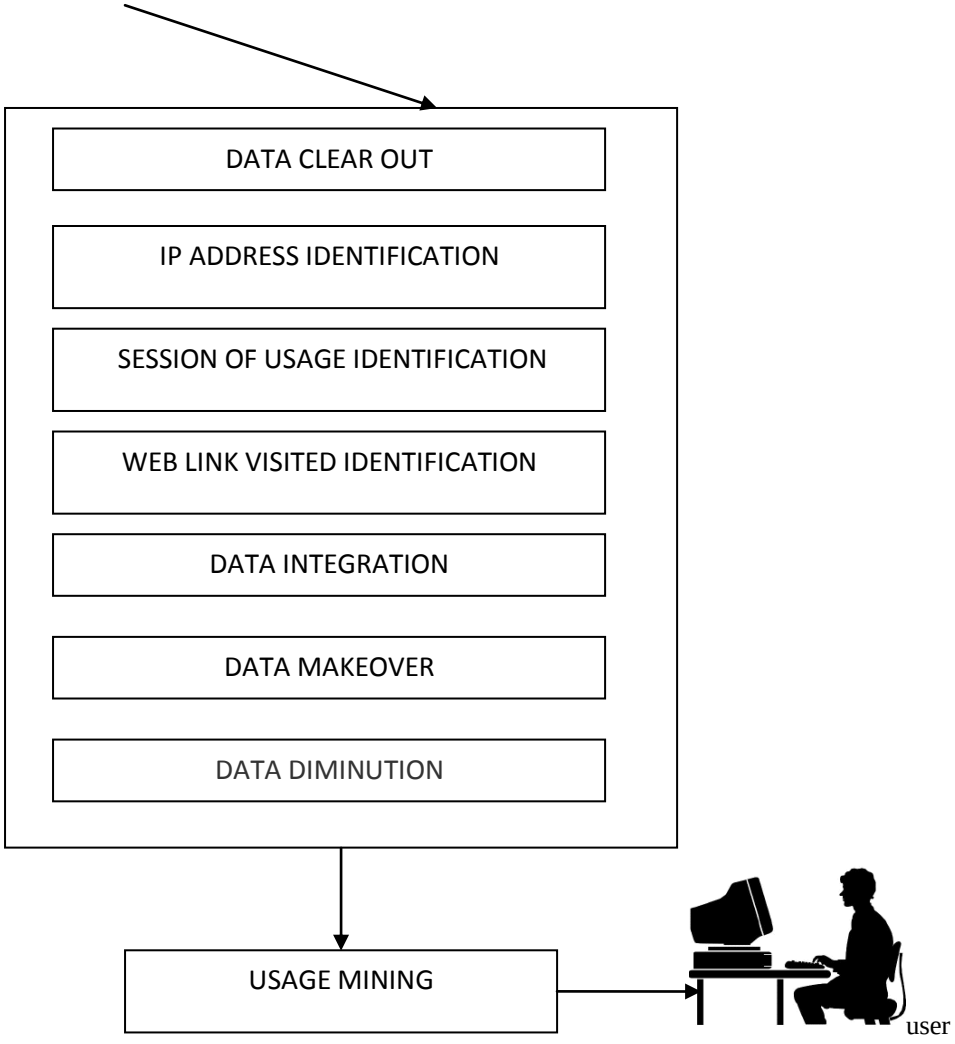
3.1Framework of activities



3.2Research work representation



3.3 Sequential steps which followed for the research work



IV. CONCLUSION

There are several data preprocessing techniques. Data cleaning can be applied to remove noise and correct inconsistencies in data. Data integration merges data from multiple sources into a logical data store such as a data warehouse. Data diminution can reduce data size by, for instance, aggregating, eliminating redundant features, or clustering. Usage of data mining method and data extraction on the web is now highlighting of the boosting number of researchers. web usage mining is a type of data mining technique that can be useful in suggesting the web usage type with the identification of user session, this research also help in identification of the end user behavior with the help of the identification of the user **(IP address + web link navigation + session usage**) and combine them together for identification user behavior more accurately for preprocessing data. This research mainly concentrates on providing another approach for preprocessing the data more accurately. Experimental results suggest the significance of the proposed approach.

REFERENCES

[1] Dr. M. Giri and Dr. Akash Kumar, "An Efficient Web Content Mining using elevance Analysis Approach", International Journal of Multidisciplinary Research in Advanced Engineering, pages. 201-210, 2012.

[2] Dr. M. Giri and Dr. Akash Kumar, "An Efficient Web Content Mining using Divide and Conquer Approach", International journal of Computational Intelligence Research, pages. 201-210, 2012.

[3] Dr. M. Giri and Dr. Akash Kumar, "An Efficient Web Content Mining using Multi Threading Approach", International Journal of Systems, Algorithms and Applications, pages. 1-4, 2012

[4] Yan LI, Boqin FENG and Qinjiao MAO, "Research on Path Completion Technique In Web Usage Mining", *IEEE International Symposium On Computer Science and Computational Technology*, pp. 554-559, 2008.

[5] JING Chang-bin and Chen Li, " Web Log Data Preprocessing Based On Collaborative Filtering ", *IEEE 2nd International Workshop On Education Technology and Computer Science*, pp.118-121, 2010.

[6] Huiping Peng, "Discovery of Interesting Association Rules Based On Web Usage Mining", *IEEE Coference*, pp.272-275, 2010.

[7] Tasawar Hussain, Dr. Sohail Asghar and Nayyer Masood, "Hierarchical Sessionization at Preprocessing Level of WUM Based on Swarm Intelligence ", *6th International Conference on Emerging Technologies (ICET) IEEE*, pp. 21- 26, 2010.