

HATS USER TRACKING REPORT

This is admin utility to generate the report that is developed for tracking HATS application user navigating across the application. It is much similar to a tracker for storing, maintaining and displaying data to privileged (i.e. Admin) user.

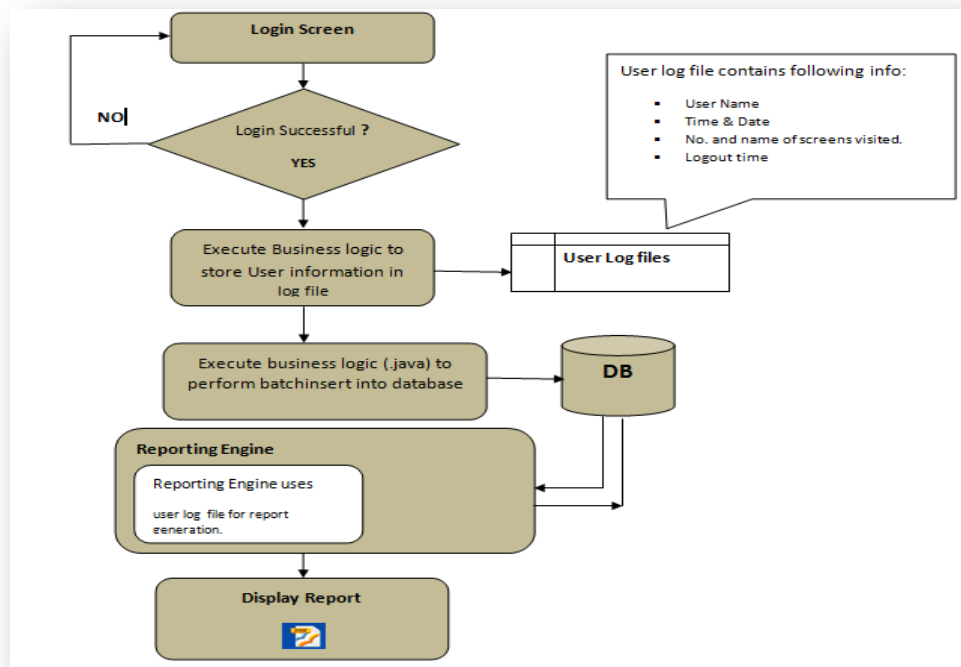
As there is no functionality given in any version of IBM HATS technology to keep track of authenticated application users. The circumstances arises, when ADMIN user of HATS application would like to view its users status for navigating HATS application.

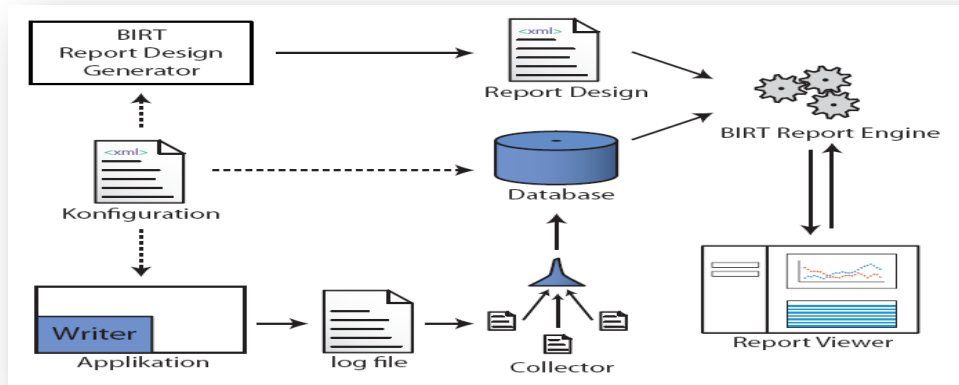
The User tracking reports can be generated in various forms like .pdf,.ppt,xls and etc. There are the following functionalities we can have:

- To generate the daily, weekly and monthly reports
- To generate the user specific reports
- To generate the date specific reports
- To generate the report in graphical bars and charts.
- To generate the report related to which user has accessed which screen in how many times?
- To make calculation about How many screens navigated by a user in particular span of time?
- and many more.

Understanding The Product's Design- HATS User Tracking report

The High level design of HATS user Tracking report utility is given below:





The HATS User tracking report's development is classified under following phases:

1. Creating and Maintaining User specific Log files

Upon login into application, technically, we develop the logger utility to create and read the user specific log files by using java. During the navigation following user specific information has been logged into files:

- User name
- Data & time
- Screen name

source code snap is given below:

```

/**
 * @author Administrator
 *
 */
public class Logger {

    public Logger(){

    }

    public void logWrite(String screenName,String userID,String fileName){
    public ArrayList logRead(IBusinessLogicInformation blInfo, String fileName){
    public void closeLog(String fileName) {

        File f1 = new File("C:\\"+fileName);
        boolean success = f1.delete();
        if (!success){
            System.out.println("Deletion failed.");
            System.exit(0);
        }else{
            System.out.println("User's log has been deleted...");
        }
    }

}

```

These log files are maintained till user does not logout the application and upon the logout, the information from log files are inserted into database and log file deleted.

2. Data source Creation and Maintenance

Upon login into application, technically we create the data source connection static in nature. it opens connection with external data source and read log files and execute batch insert into it. The source code snapshot is given below:

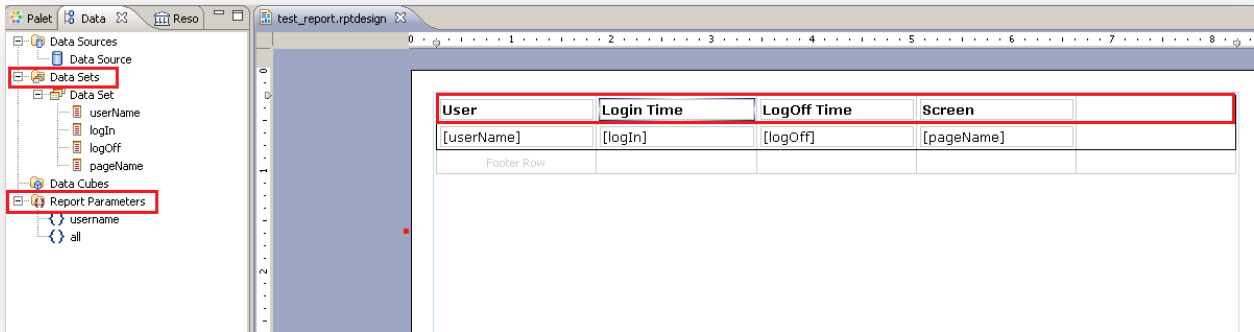
```
try {
    Statement statement = connection.createStatement();
    for (int i=0; i< ScreenList.size();i++){
        System.out.println("- --- "+ScreenList.get(i));
        UserInfo userinfo = (UserInfo)ScreenList.get(i);
        statement.addBatch("INSERT INTO USER (userName, logIn, logOff, pageName) VALUES("
    )
    int[] updateCounts = statement.executeBatch();
}
```

When log file data has been inserted into database, its respective log file gets deleted upon the logout from application as given in source code snap below.

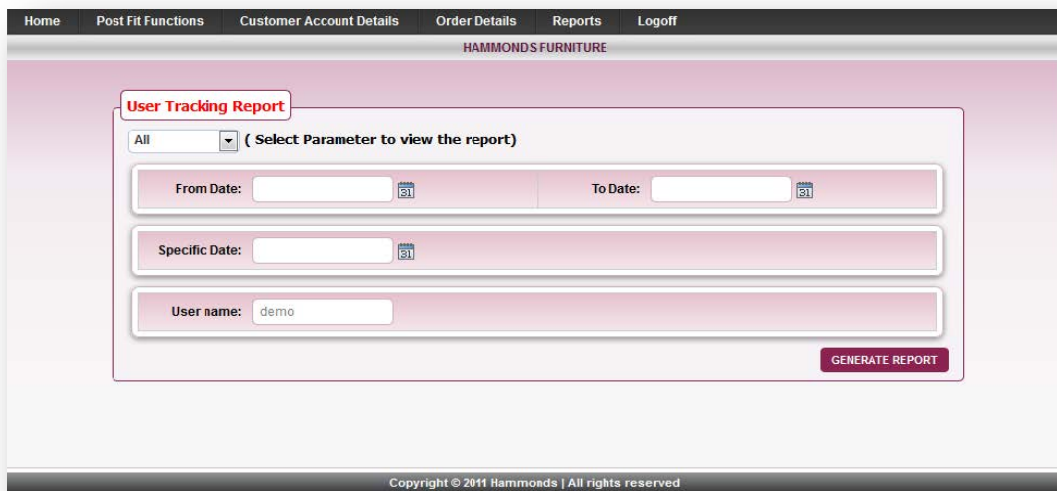
```
public void closeLog(String fileName) {
    File fi = new File("C:\\"+fileName);
    boolean success = fi.delete();
    if (!success){
        System.out.println("Deletion failed.");
        System.exit(0);
    }else{
        System.out.println("User's log has been deleted...");
    }
}
```

3. Generating and Displaying User Tracking report

Now, it is time to generate and display the user tracking report. For this, we used **Business Intelligence Reporting Tool** simply called as **BIRT** to generate and display report. In BIRT tool, we design the report and set all parameters and data source to fetch data. The snap of design is given below:



Afterwards, we developed the web selection criteria for sending parameters to BIRT reporting engine to process and generate and display the report. The snapshot of web selection screen is given below:



Finally the BIRT reporting engine, display it on its Report-Viewer. where you can have multiple export options to .xls,.pdf,.ppt and many others formats as well. The snapshot is given below:

BIRT Report Viewer export options

Showing page 1 of 1 Go to page:

User Tracking Report

User	Login Time	LogOff Time	Screen
Demo	2011-8-29 07:34:00	2011-10-29 07:34:00	Sign On
Demo	2011-8-29 07:34:00	2011-10-29 07:34:00	Post Fit Functions
Demo	2011-8-29 07:34:00	2011-10-29 07:34:00	Customer Account Details
Demo	2011-8-29 07:34:00	2011-10-29 07:34:00	Order Details
Demo	2011-8-29 07:34:00	2011-10-29 07:34:00	** Sign Off **

and the graphical representation is given below:



In summing up, we successfully developed this utility to meet ongoing customers needs for tracking and logging the HATS application users which is not given in IBM HATS technology.