About the application

Introduction

This application demonstrates the utilization of Complex Event Processing within the scope of web applications. It perceives the action users perform as the events. The events are then processed by means of rule engine with event processing capabilities. When the rules are triggered, they generate appropriate response such as notification, statistics or layout change. The events can also be viewed as assembled units which can be used as monitoring of users logged in.

The application can be explored at: https://fusionweb-ixi.rhcloud.com/
The source code can be at found: https://github.com/IxiCZ/fusionweb

Roles

The application can be browsed as one of the following roles: anonymous user, customer and administrator. For the easier use, the direct logging links are displayed in the right corner.

Log as Rick (customer)
Log as Hugo (administrator)

Log in
Register

Shopping cart: 0

With the use of common Log in link, there are three customers that can be applied (username/password): rick/1234, will/1234/, frodo/1234 and one adiminstrator: hugo/1234. Apart from that, new customer can be registered via Register link.

Any user can search,browse or view the products and add them to the shopping cart. However only a customer can perform the checkout and create the order. Administers can manage the content in a standard way, such as product, or orders administration. Furthermore then can utilize the event processing capabilities. Relevant menu items can be found in the Administration menu (logging in as administrator is required).

Administration

Products
Product categories
Orders

Notifications
Monitoring
Statistics

Notifications

As events meets a defined state, rules consequence is executed and notification can be created. Notifications in the picture below are the ones created not more than once an hour. You can easily try the situation by registrating 3 times within an hour, or making an order - by modifying the number of items in the shopping cart across one or multiple orders - for more than 100 products (these numbers are established in rules and are just demonstratory, real numbers would originated in application analysis).

Logged as: **hugo**
Log out
Shopping cart: 0

DRUSION SHOP
knows what you like

Search

Product categories

Computers
Cell phones
Televisions
Cameras
MP3 players

Administration

Products
Product categories
Orders

Notifications
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Statistics

Notifications

ALL   SEVERE   WARNING   INFO   GOOD

Date	Severity	Description	
16:57:34 01.05.2013	WARNING	There were too many product searches of 'Xiaomi MI2S' with no results in the last hour.	X
16:52:59 01.05.2013	SEVERE	In the last hour was product 39:Leica DLUX 6 been visited many times, but not bought a lot.	X
16:49:49 01.05.2013	GOOD	In the last hour was product 1:Dell Inspiron i15R-1633sLV 15.6-Inch Laptop bought at least 100 times.	X
16:48:19 01.05.2013	WARNING	There were too many customer registrations in the last hour.	X

To execute another notification rule, try to make a comment containing either "help" or "amazon".

Statistics

The events are also processed in every hour and day period to generate statistics. Same as notifications, statistics can be filtered by their character and paged from newest to oldest.

Product categories

Computers
Cell phones
Televisions
Cameras
MP3 players

Administration

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Statistics

Date	Frequency type	Description	
17:00:03 01.05.2013	HOURLY	The most visited category in the menu in the last hour was Computers(1).	X
17:00:02 01.05.2013	HOURLY	The most visited product in the last hour was Leica DLUX 6(39).	X
17:00:02 01.05.2013	HOURLY	In the last hour logged in 2 customers.	X
17:00:00 01.05.2013	HOURLY	In the last hour were created 1 order(s) and bought 105 product(s).	X

Monitoring

Events relating to a certain customer can be observed in a chronological order and present what and how are the user currently browsing the website.

Product categories

Computers
Cell phones
Televisions
Cameras
MP3 players

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User will

Time	Event
17:18:06 01.05.2013	Customer will logged out.
17:17:59 01.05.2013	Customer will visited 'MyOrders' menu option.
17:17:57 01.05.2013	User will bought product New Sony Xperia S (23).
17:17:57 01.05.2013	User will bought product Coby MP620-8GBLK (51).
17:17:57 01.05.2013	User will bought product Nikon COOLPIX S9200 (38).
17:17:57 01.05.2013	User will created new order with 3 items for total 578.24$
17:17:53 01.05.2013	User will visited shopping cart
17:17:49 01.05.2013	User will added comment for product New Sony Xperia S
17:17:44 01.05.2013	User will added product New Sony Xperia S(23) into shoppingCart.
17:17:22 01.05.2013	User will visited product New Sony Xperia S(23).
17:17:19 01.05.2013	User will succesfully searched 'sony'.
17:17:10 01.05.2013	User will added product Coby MP620-8GBLK(51) into shoppingCart.
17:17:08 01.05.2013	User will visited product Coby MP620-8GBLK(51).
17:17:06 01.05.2013	User will visited category MP3 players(5).
17:17:04 01.05.2013	User will added product Nikon COOLPIX S9200(38) into shoppingCart.
17:17:01 01.05.2013	User will visited category Cameras(4).
17:16:56 01.05.2013	Customer will logged in.

Layout

Layout is changed in accordance with defined logic relating to what are users currently doing. This is demonstrated by changing main product every whole hour (x.00) for the one most visited in the last hour.