1. Structure

Mainly, there are two parts in server side. Crawl server runs on tomcat 6.0. It is to crawl bug’s info from onebug site. Other site runs on tomcat 7.0. It uses restlet framework, spring framework and hibernate framework. There are mainly three layers. DAO layer is responsible for interacting with MySQL database. Service layer mainly contains business logic. Resource layer contains those resources that client can access. Also there is filter layer to filter clients’ requests.

Web Client

(JQuery,Ajax)

DataMart

MySQL

API

Spring

Framework

JDBC

Hibernate

Restlet Framework

DAO

Service

Resource

Crawl

Client

Filter

Crawl Server

**SOAP**

**Restful**

1. Package diagram



Mainly functions of each package

|  |  |
| --- | --- |
| filter | It uses the filter of restlet framework to filter the user’s request. |
| bean | It contains entity of database. |
| dao | It uses hibernate framework to interact with mysql database |
| database | It interacts with datamart. |
| timer | It contains one class that checks if buginfo has changed. |
| crawl | It is the client to crawl buginfo from anther server side using SOAP web serivce |
| resource | It represents resources that clients can request |
| service | It contains main business logic of the system |
| util | Some constants and helpful methods |

1. Connection with datamart

DatamartAccess.java

(1).getDifferentBugByOldList

It is for timer to find those buginfo list that their owners have been changed.

The timer will check every 30 minute.

(2). getOwnerBuginfoList

When user registers in this website, it will use this method to get one’s owner buginfo list.

(3). getBugInfoByBugId

When user adds a bug in the website, it will use this method to find more info of buginfo from datamart

1. Others

(1). About svcacct\_gsnkg account.

This account has the access to datamart. So, tomcat 7.0 that runs bugtrackingSystem must runs as this account. But this account has no authority to view the site of datamart. So I choose to use anther tomcat that runs as my owner account. And bugtracksystem uses SOAP web service to communicate with this server side.

(2). About frameworks

The server side uses Spring, restlet and hibernate framework. All [dependency relationship](http://cnc.dict-client.iciba.com/2013-01-22/?action=client&word=%E4%BE%9D%E8%B5%96%E5%85%B3%E7%B3%BB&dictlist=201,2,1,101,6,104,7,105,5,103,203,202,8,9,204,205,10,11,3,4,&zyid=&hyzonghe_tag=0&nav_status=1&type=0&authkey=2d8932ebe1733492fffb628af427cce2&uuid=379CB9BC97A6B45FCB04FE3995C8A6D9&v=2013.12.30.042&tip_show=2,1,3,4,5,6,&fontsize=0&channel=1.00###)s are configured in file restlet-spring.xml. And it uses restlet’s filter to filter ths user request.

(3) About datamart

[http://citrixwiki.citrite.net/Engineering\_Datamarts](%20%20%20%20http://citrixwiki.citrite.net/Engineering_Datamarts)

In our system, we just use jdbc and sql to interact with datamart.

1. Local Database

There are four tables in local database.

|  |  |
| --- | --- |
| buginfo | It stores meta-data of buginfo |
| managedbugs | It stores relationships between user and his managed bug |
| ownerbugs | It stores relationships between user and his owner bug |
| userinfo | It stores user’s info, such as username, password, etc. |

1. Some reference

Site: Restlet framework site: <http://restlet.org/>

Blog: <http://ajaxcn.iteye.com/>

Book: <<restlet in action>>

<<restful web service>>