Resume Management System (RMS)

-Utkarsh Ashok Pathrabe

2012A7PS034P

Purpose

- To give an overview of Resume Management System.
- My Work:
  - Technical Database Documentation.
  - Designing User Interface (Website Development).
  - Software Unit Testing.
  - Excel Spreadsheet Parsing And Word Document Parsing.
  - Learning Server-Side Architecture of Web Application.

RMS Overview:

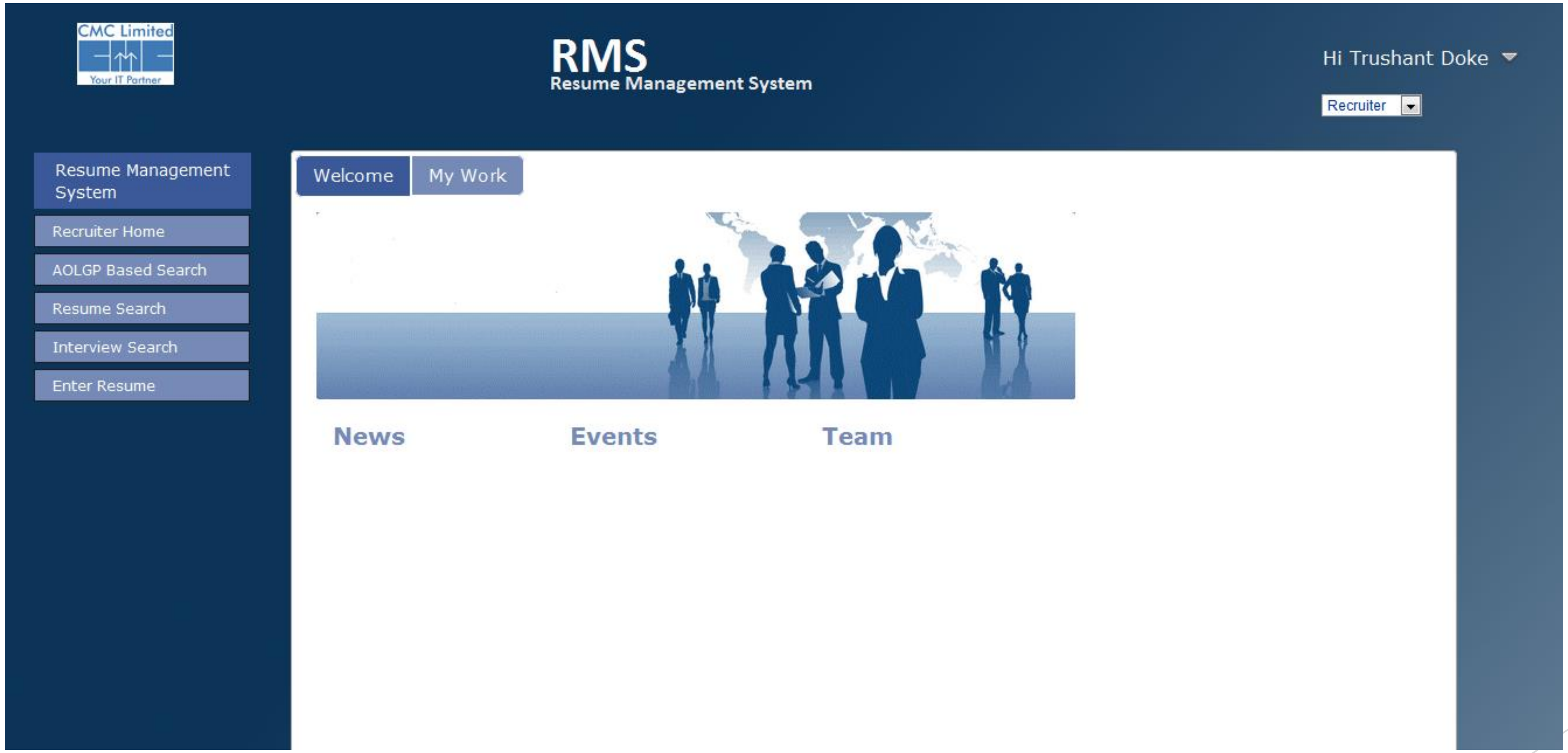
Resume Management Module aims to digitize below manual recruitment processes in CMC.

1. To collect resumes from CMC Vendors,CMC Recruiters.
2. To search matching AOLGP request for a candidates profile.
3. To search matching candidates for an AOLGP request.
4. To link candidate to matching AOLGP request.
5. To schedule candidate interviews for linked AOLGP request's and shortlist candidates.
6. To send shortlisted candidates to E-Offer generation.

What RMS does?

- RMS can collect resumes from all CMC vendors.
- RMS can collect resumes from all CMC HR's (recruiters).
- Using RMS, CMC HR's can search for AOLGP requests matching with skills of the received resumes and vice versa.
- Using RMS, CMC HR's can schedule several rounds of interviews for received resumes and mark the candidates pass/fail.
- Final shortlisted candidates in RMS will automatically flow to E-Offer for offer generation.

RMS Home Page


CMC Limited
Your IT Partner

RMS
Resume Management System

Hi Trushant Doke

Recruiter

Resume Management System
- Recruiter Home
- AOLGP Based Search
- Resume Search
- Interview Search
- Enter Resume

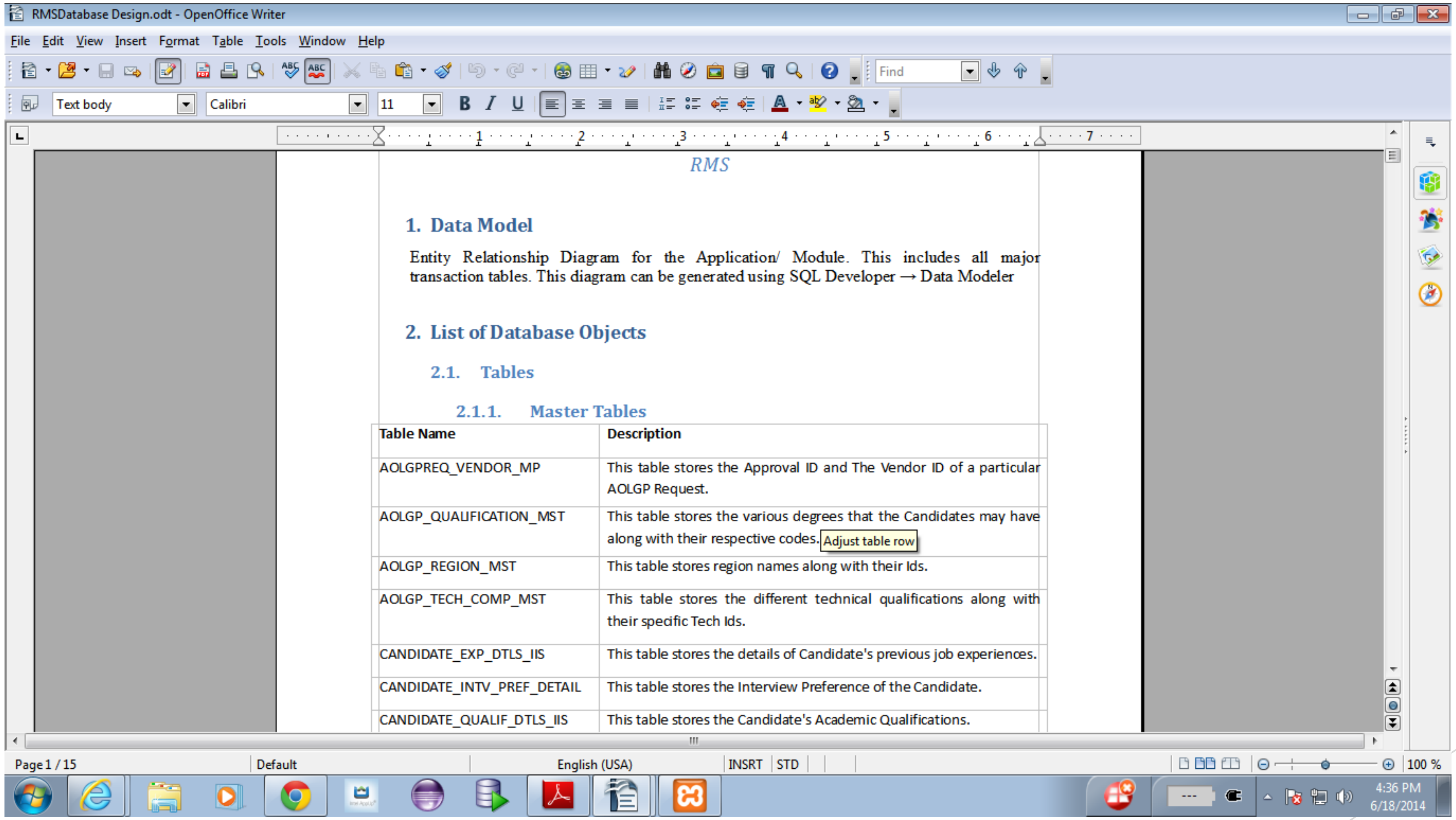
Welcome | My Work

News | Events | Team

Technical Database Documentation

- In today's world, some 80% of production databases don't have sufficient documentation, which creates lot of problems for different peoples.
- Database Documentation is important, because:
  - Provides a common language between business decision makers and IT personnel.
  - Provides a shortcut to finding 'hot-spots'.
  - Facilitates a 'no-panic' rule.
  - Makes maintenance easier, and reduces risk when extending or upgrading a system.
  - Reduces training costs, by acting as a mediator between newcomers and existing staff.
  - Improves productivity of both newcomers and seasoned employees, reducing the likelihood of costly misunderstandings by providing a glossary of commonly used terms, naming conventions, and even commonly-used strategy patterns.

Screenshot of Database Documentation


RMSDatabase Design.odt - OpenOffice Writer
File Edit View Insert Format Table Tools Window Help
Text body
Calibri
11
Find
Page 1 / 15
Default
English (USA)
INSRT
STD
100 %
4:36 PM
6/18/2014

RMS

1. Data Model

Entity Relationship Diagram for the Application/ Module. This includes all major transaction tables. This diagram can be generated using SQL Developer → Data Modeler

2. List of Database Objects

2.1. Tables

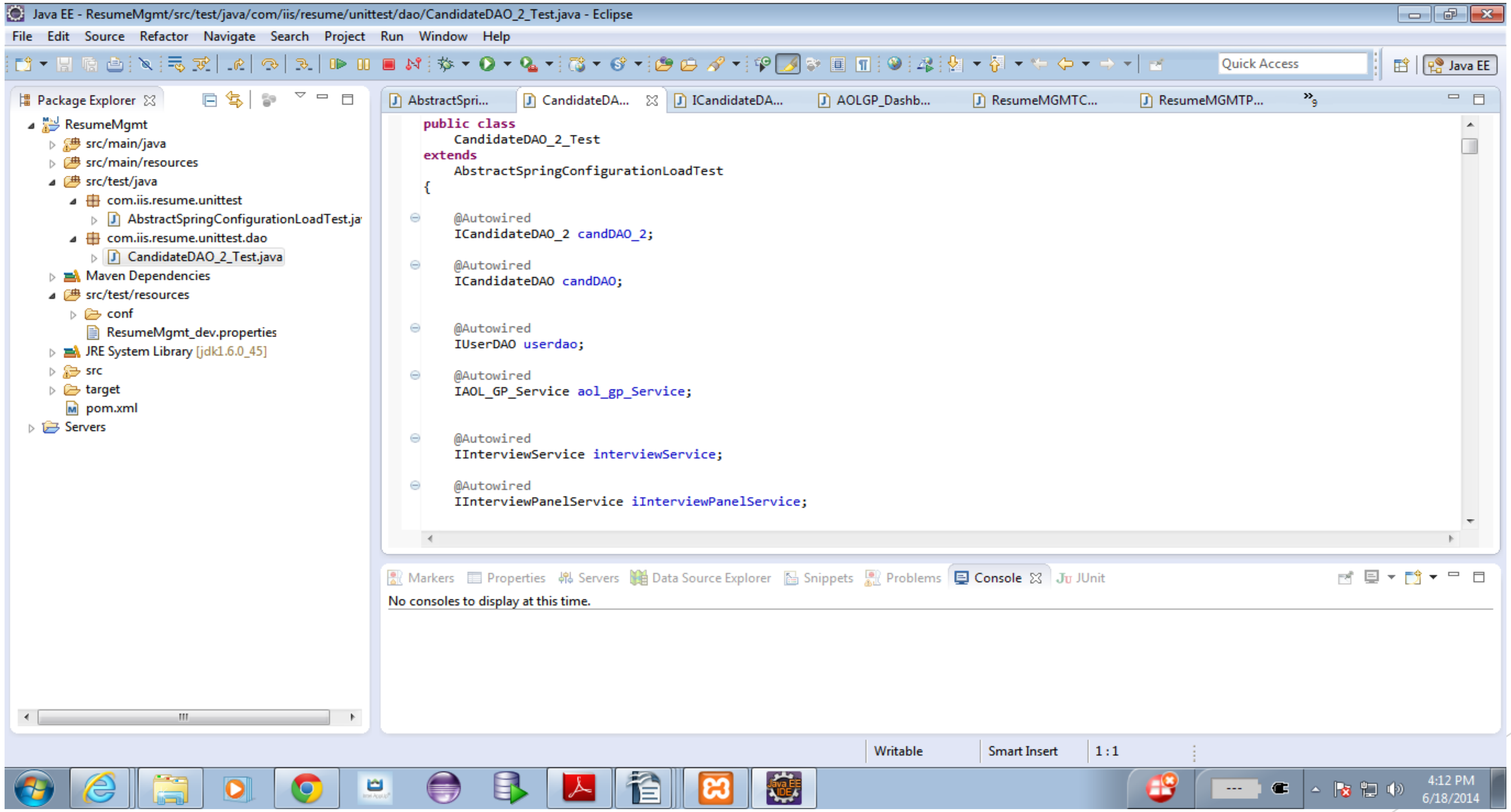
2.1.1. Master Tables

Table Name	Description
AOLGPREQ_VENDOR_MP	This table stores the Approval ID and The Vendor ID of a particular AOLGP Request.
AOLGP_QUALIFICATION_MST	This table stores the various degrees that the Candidates may have along with their respective codes. Adjust table row
AOLGP_REGION_MST	This table stores region names along with their Ids.
AOLGP_TECH_COMP_MST	This table stores the different technical qualifications along with their specific Tech Ids.
CANDIDATE_EXP_DTLS_IIS	This table stores the details of Candidate's previous job experiences.
CANDIDATE_INTV_PREF_DETAIL	This table stores the Interview Preference of the Candidate.
CANDIDATE_QUALIF_DTLS_IIS	This table stores the Candidate's Academic Qualifications.

Software Unit Testing

- Tested some of the modules of the RMS software using JUnit.
- JUnit is a unit testing framework for the Java programming language.
- JUnit has been important in the development of test-driven development, and is one of a family of unit testing frameworks which is collectively known as xUnit that originated with SUnit.
- JUnit is a simple framework to write repeatable tests.
- It is an instance of the xUnit architecture for unit testing frameworks.

Screenshot of Java JUnit Code.



Java EE - ResumeMgmt/src/test/java/com/iis/resume/unittest/dao/CandidateDAO_2_Test.java - Eclipse
File Edit Source Refactor Navigate Search Project Run Window Help
Quick Access
Java EE
Package Explorer
ResumeMgmt
src/main/java
src/main/resources
src/test/java
com.iis.resume.unittest
AbstractSpringConfigurationLoadTest.ja
com.iis.resume.unittest.dao
CandidateDAO_2_Test.java
Maven Dependencies
src/test/resources
conf
ResumeMgmt_dev.properties
JRE System Library [jdk1.6.0_45]
src
target
pom.xml
Servers
AbstractSpri...
CandidateDA...
ICandidateDA...
AOLGP_Dashb...
ResumeMGMTC...
ResumeMGMTP...
Markers Properties Servers Data Source Explorer Snippets Problems Console JUnit
Writable
Smart Insert
1 : 1
4:12 PM
6/18/2014

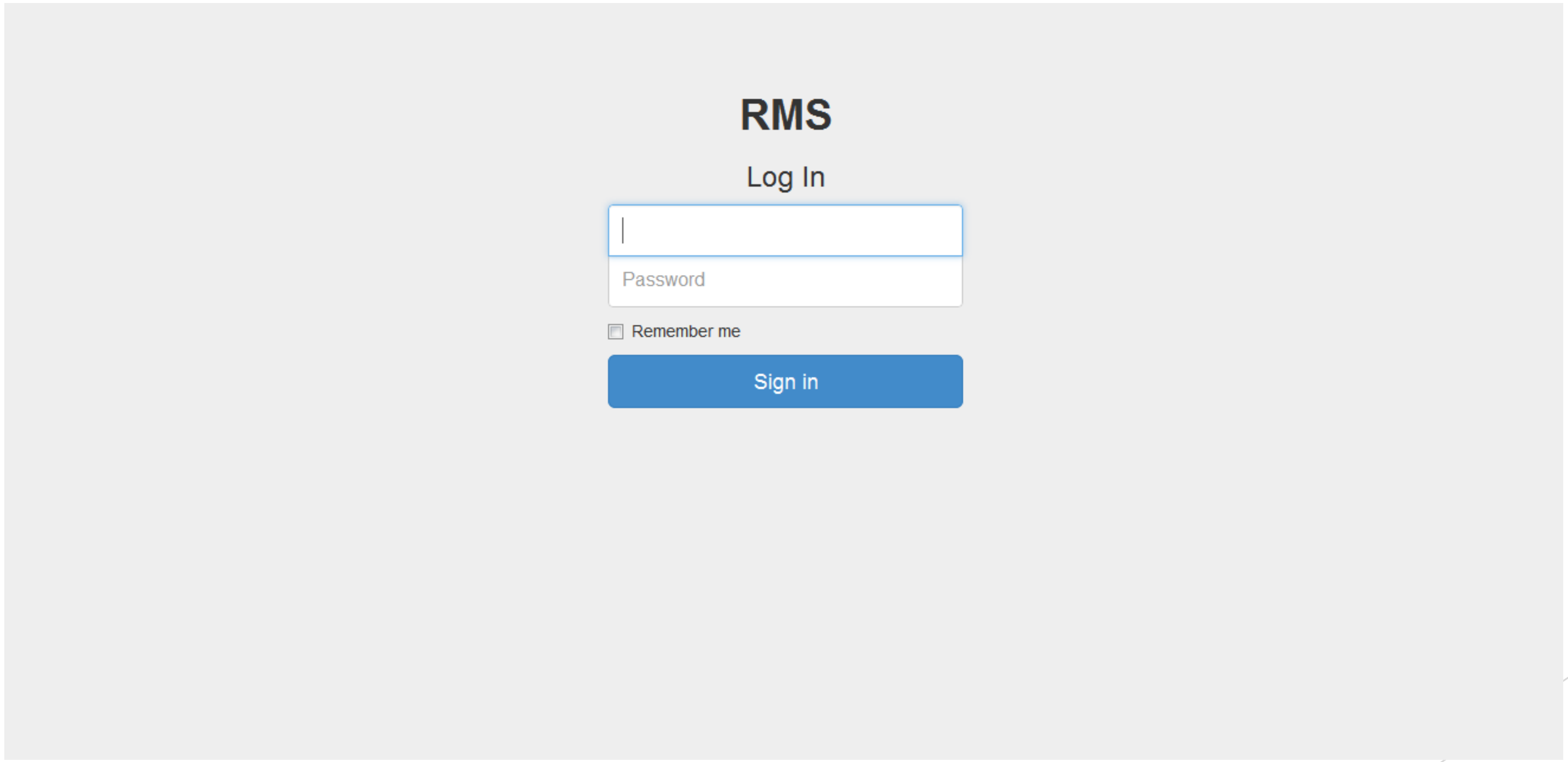
```
public class
    CandidateDAO_2_Test
extends
    AbstractSpringConfigurationLoadTest
{

    @Autowired
    ICandidateDAO_2 candDAO_2;

    @Autowired
    ICandidateDAO candDAO;


    @Autowired
    IUserDAO userdao;

    @Autowired
    IAOL_GP_Service aol_gp_Service;


    @Autowired
    IInterviewService interviewService;

    @Autowired
    IInterviewPanelService iInterviewPanelService;
```

```
No consoles to display at this time.
```

Designing User-Interface

- Created a User-Interface for RMS using:
  - XHTML
  - CSS
  - JavaScript
  - HTML5
  - Twitter Bootstrap

Screenshot of User-Interface (Log in of RMS.)


RMS

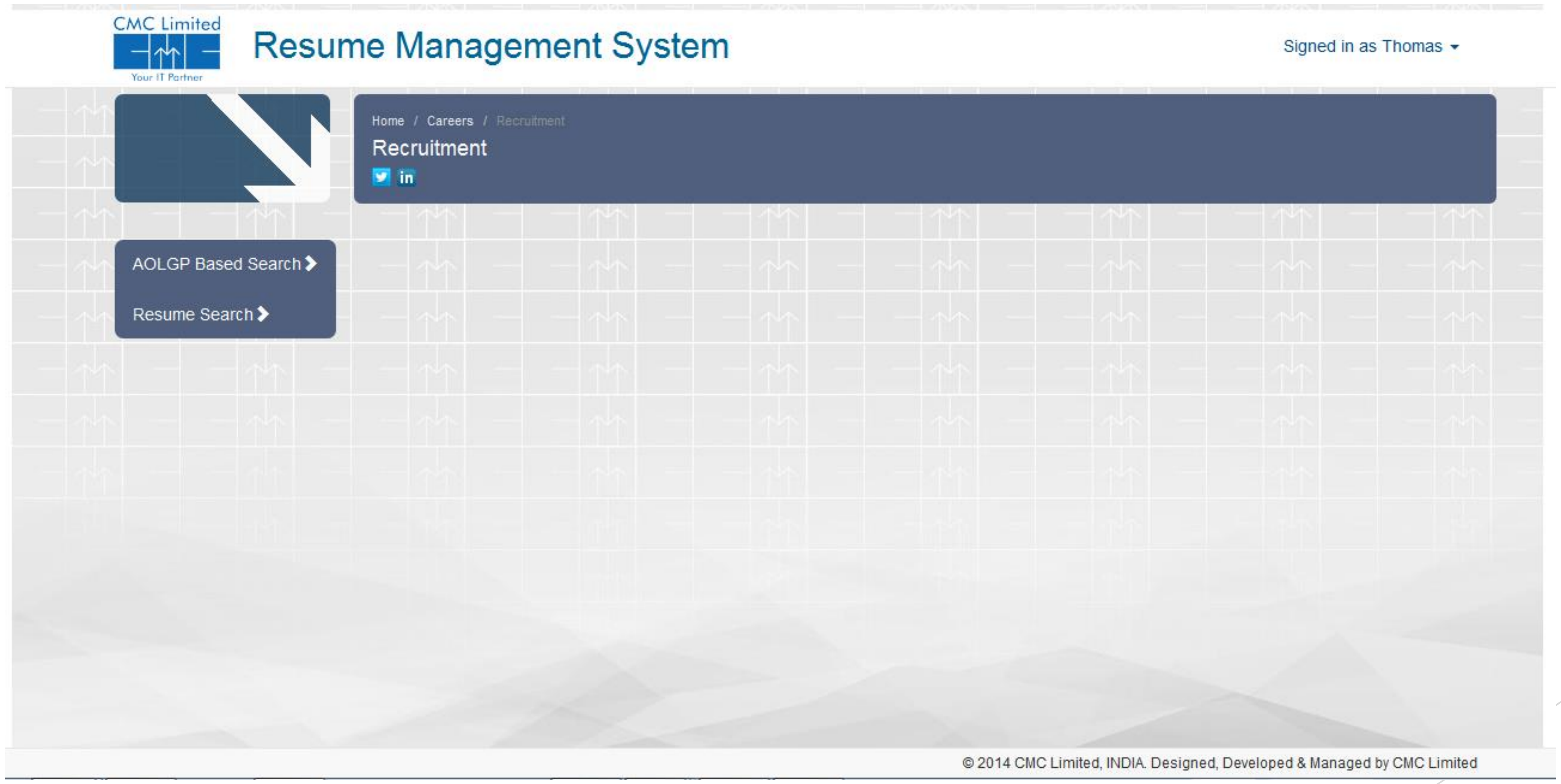
Log In

Password

Remember me

Sign in

Screenshot of User-Interface (Home Page of RMS, after the user logs in.)



CMC Limited

Your IT Partner

Resume Management System

Signed in as Thomas

Home / Careers / Recruitment

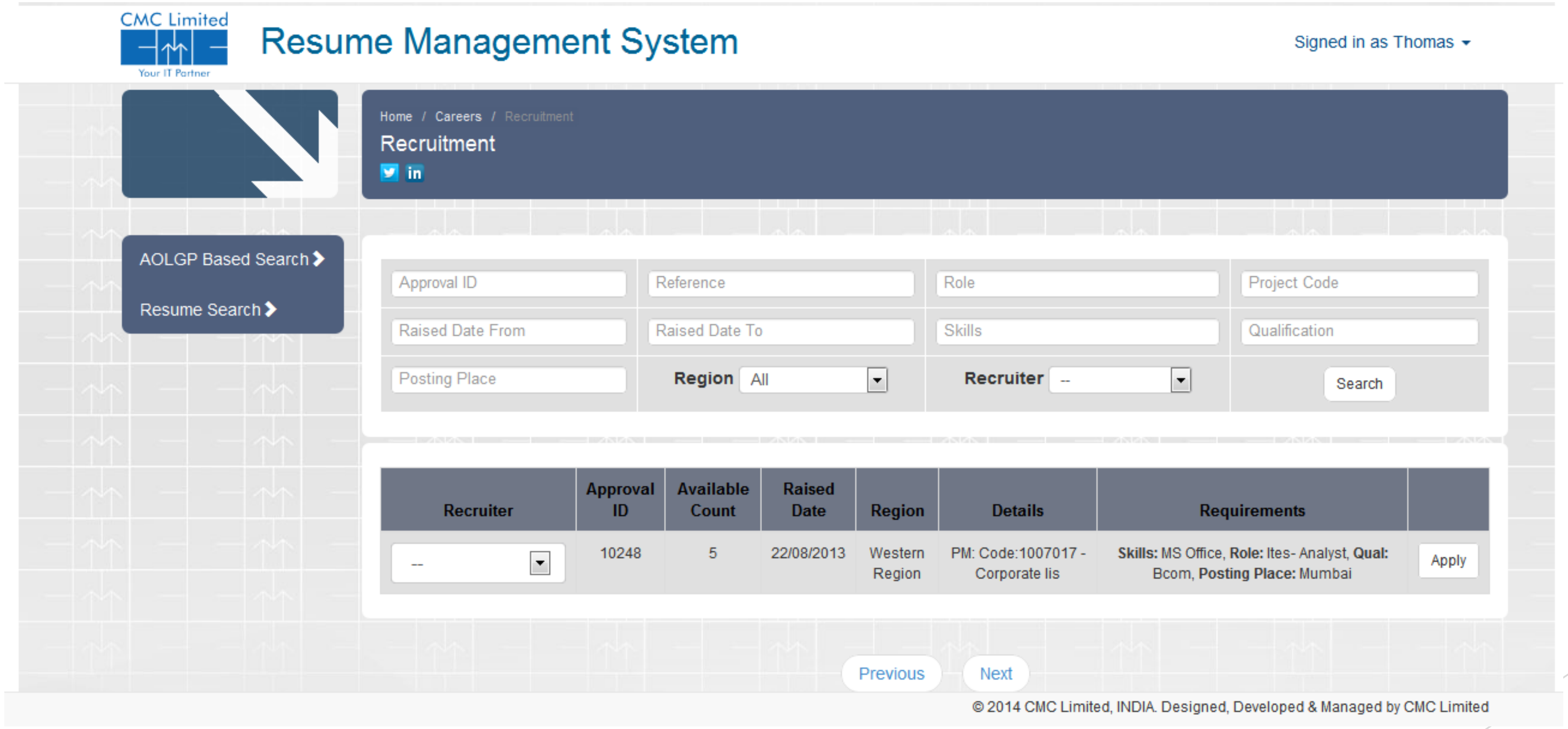
Recruitment

AOLGP Based Search

Resume Search

© 2014 CMC Limited, INDIA. Designed, Developed & Managed by CMC Limited

Screenshot of User-Interface
(After the user presses AOLGP Based Search Button.)



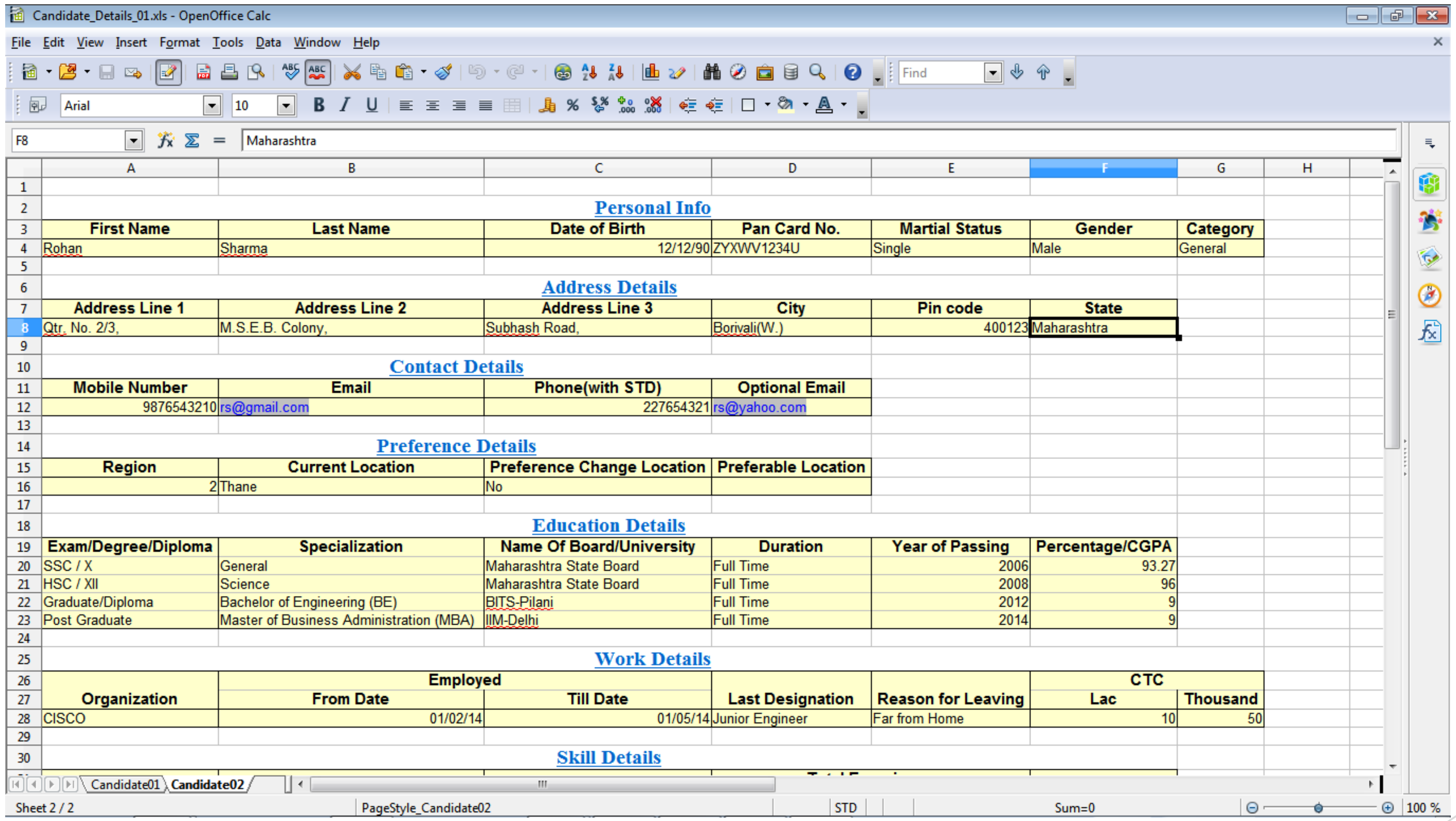
Recruiter	Approval ID	Available Count	Raised Date	Region	Details	Requirements	
--	10248	5	22/08/2013	Western Region	PM: Code:1007017 - Corporate lis	**Skills:** MS Office, **Role:** Ites- Analyst, **Qual:** Bcom, **Posting Place:** Mumbai	Apply

© 2014 CMC Limited, INDIA. Designed, Developed & Managed by CMC Limited

Excel Spread Sheet and Word Document Parsing

- Designed an Excel Spread Sheet for taking Candidate Details from the vendors and HRs in an Excel Spreadsheet, as an alternative to directly feeding the candidate details using the UI of RMS, in case the database is not available for updating.
- Using the Candidates' data in the Excel Spread Sheet, I wrote a program in java that made Candidate Objects using the 'Apache POI' which is a software that provides pure Java libraries for reading and writing files in Microsoft Office formats, such as Word, PowerPoint and Excel.
- Using the data in Candidates' resume, which would be a word document. I wrote a program in java that made Candidate Objects using 'Apache POI' software.

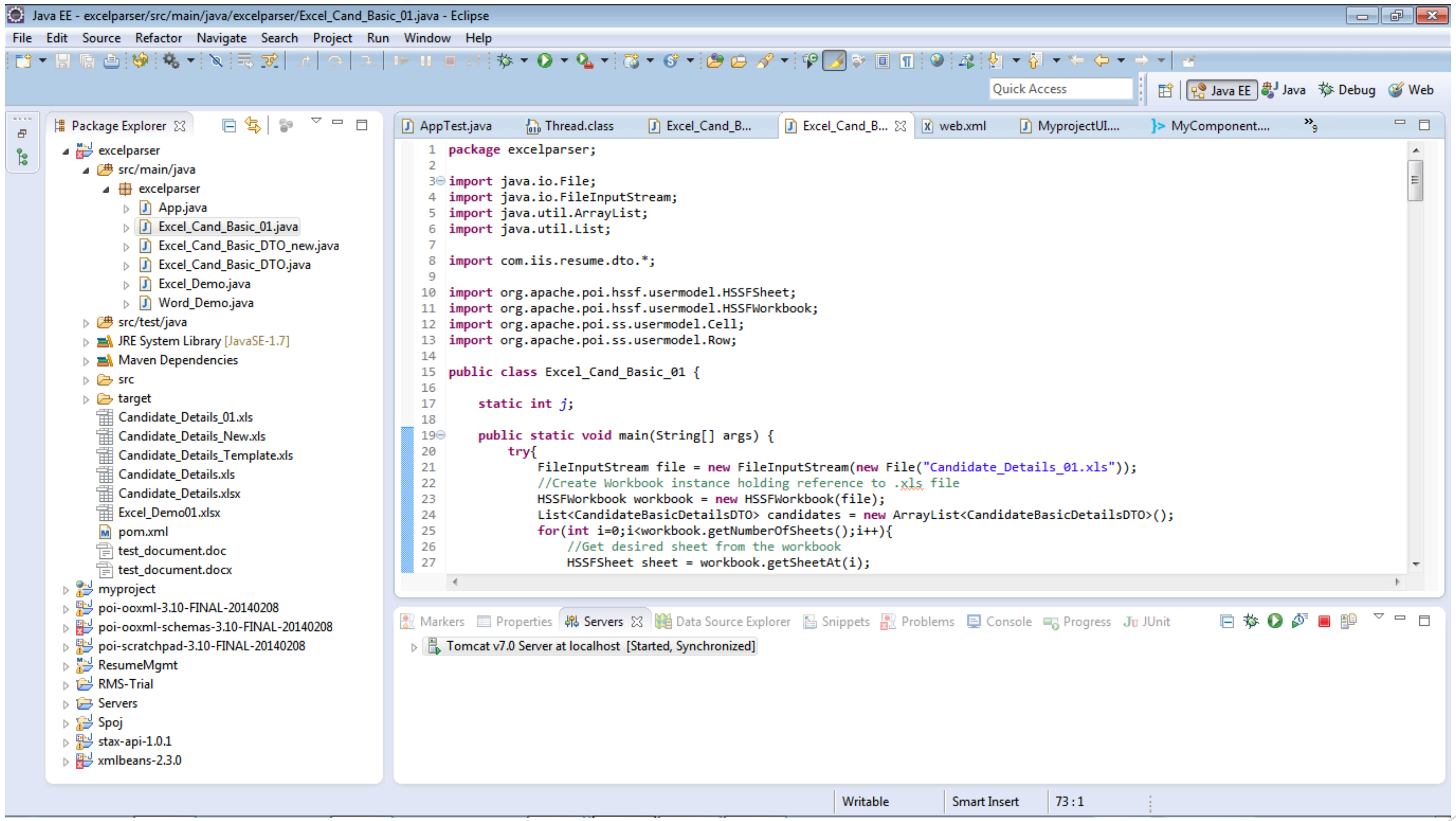
Screenshot of Candidate Details Excel Spreadsheet



Candidate_Details_01.xls - OpenOffice Calc
File Edit View Insert Format Tools Data Window Help
Find
Arial
10
F8
Maharashtra
Candidate01
Candidate02
Sheet 2 / 2
PageStyle_Candidate02
STD
Sum=0
100 %

	A	B	C	D	E	F	G
1							
2			Personal Info				
3	First Name	Last Name	Date of Birth	Pan Card No.	Martial Status	Gender	Category
4	Rohan	Sharma	12/12/90	ZYXWV1234U	Single	Male	General
5							
6			Address Details				
7	Address Line 1	Address Line 2	Address Line 3	City	Pin code	State	
8	Qtr. No. 2/3,	M.S.E.B. Colony,	Subhash Road,	Borivali(W.)	400123	Maharashtra	
9							
10		Contact Details					
11	Mobile Number	Email	Phone(with STD)	Optional Email			
12	9876543210	rs@gmail.com	227654321	rs@yahoo.com			
13							
14		Preference Details					
15	Region	Current Location	Preference Change Location	Preferable Location			
16	2	Thane	No				
17							
18			Education Details				
19	Exam/Degree/Diploma	Specialization	Name Of Board/University	Duration	Year of Passing	Percentage/CGPA	
20	SSC / X	General	Maharashtra State Board	Full Time	2006	93.27	
21	HSC / XII	Science	Maharashtra State Board	Full Time	2008	96	
22	Graduate/Diploma	Bachelor of Engineering (BE)	BITS-Pilani	Full Time	2012	9	
23	Post Graduate	Master of Business Administration (MBA)	IIM-Delhi	Full Time	2014	9	
24							
25			Work Details				
26		Employed				CTC	
27	Organization	From Date	Till Date	Last Designation	Reason for Leaving	Lac	Thousand
28	CISCO	01/02/14	01/05/14	Junior Engineer	Far from Home	10	50
29							
30			Skill Details				

Screenshot of Excel Spread Sheet Parsing Java Code



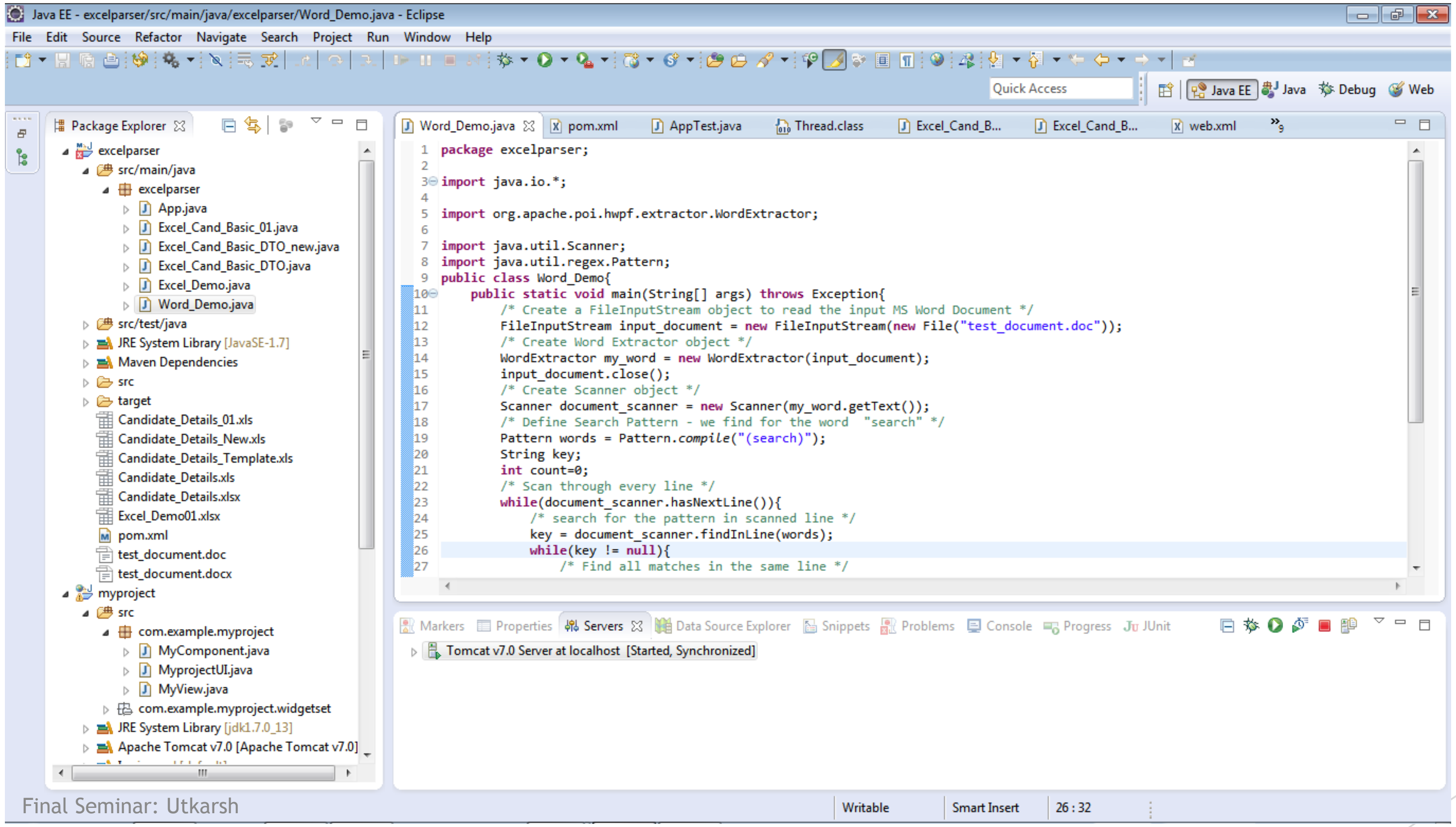
```
excelparser
  src/main/java
    excelparser
      App.java
      Excel_Cand_Basic_01.java
      Excel_Cand_Basic_DTO_new.java
      Excel_Cand_Basic_DTO.java
      Excel_Demo.java
      Word_Demo.java
  src/test/java
  JRE System Library [JavaSE-1.7]
  Maven Dependencies
  src
  target
  Candidate_Details_01.xls
  Candidate_Details_New.xls
  Candidate_Details_Template.xls
  Candidate_Details.xls
  Candidate_Details.xlsx
  Excel_Demo01.xlsx
  pom.xml
  test_document.doc
  test_document.docx
myproject
poi-ooxml-3.10-FINAL-20140208
poi-ooxml-schemas-3.10-FINAL-20140208
poi-scratchpad-3.10-FINAL-20140208
ResumeMgmt
RMS-Trial
Servers
Spoj
stax-api-1.0.1
xmlbeans-2.3.0
```

```java
package excelparser;

import java.io.File;
import java.io.FileInputStream;
import java.util.ArrayList;
import java.util.List;

import com.iis.resume.dto.*;

import org.apache.poi.hssf.usermodel.HSSFSheet;
import org.apache.poi.hssf.usermodel.HSSFWorkbook;
import org.apache.poi.ss.usermodel.Cell;
import org.apache.poi.ss.usermodel.Row;

public class Excel_Cand_Basic_01 {

    static int j;

    public static void main(String[] args) {
        try{
            FileInputStream file = new FileInputStream(new File("Candidate_Details_01.xls"));
            //Create Workbook instance holding reference to .xls file
            HSSFWorkbook workbook = new HSSFWorkbook(file);
            List<CandidateBasicDetailsDTO> candidates = new ArrayList<CandidateBasicDetailsDTO>();
            for(int i=0;i<workbook.getNumberOfSheets();i++){
                //Get desired sheet from the workbook
                HSSFSheet sheet = workbook.getSheetAt(i);
```

```
Tomcat v7.0 Server at localhost  [Started, Synchronized]
```

Writable | Smart Insert | 73 : 1

Screenshot of Word Document Parsing Java Code

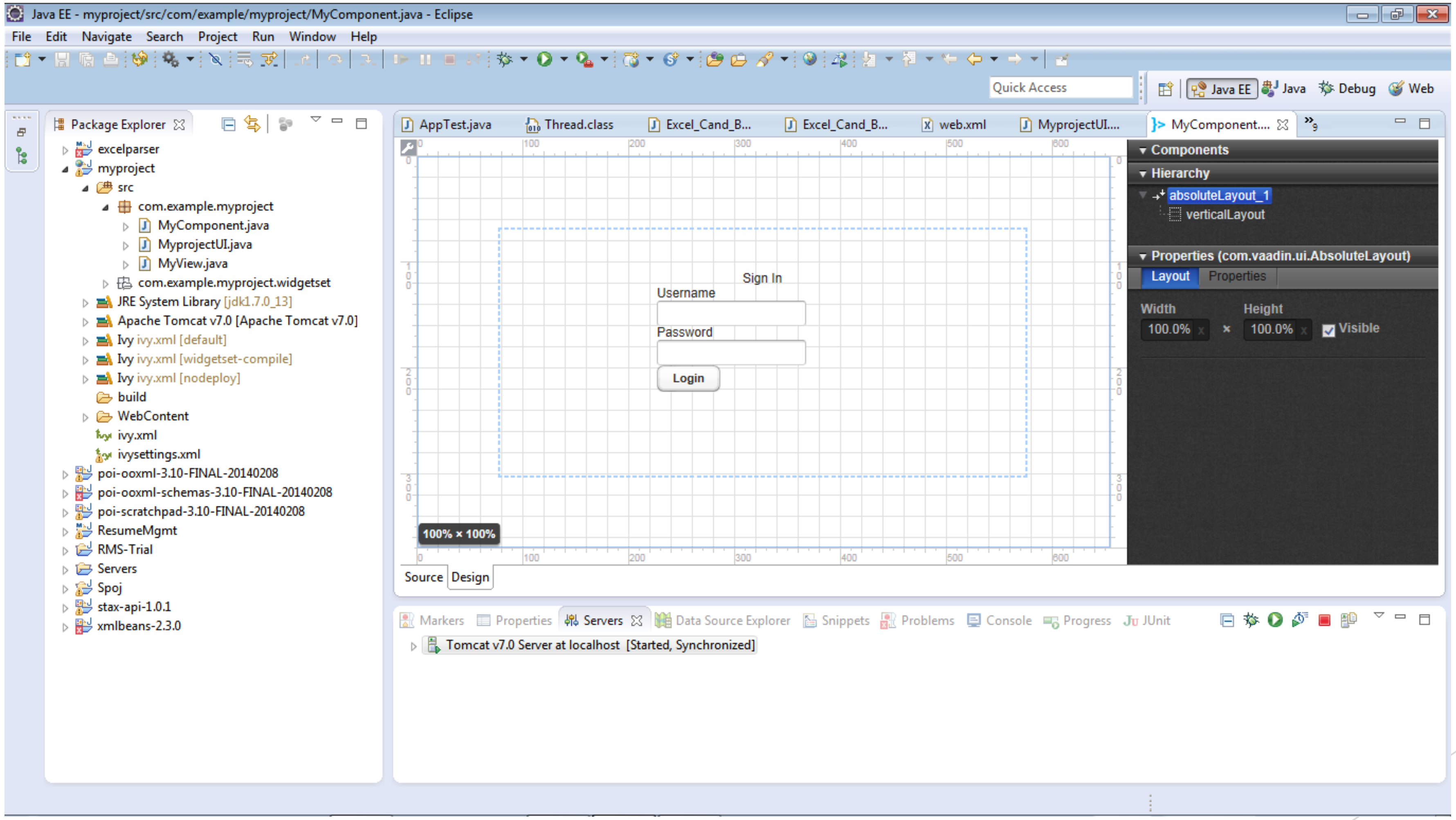


```java
package excelparser;

import java.io.*;

import org.apache.poi.hwpf.extractor.WordExtractor;

import java.util.Scanner;
import java.util.regex.Pattern;
public class Word_Demo{
    public static void main(String[] args) throws Exception{
        /* Create a FileInputStream object to read the input MS Word Document */
        FileInputStream input_document = new FileInputStream(new File("test_document.doc"));
        /* Create Word Extractor object */
        WordExtractor my_word = new WordExtractor(input_document);
        input_document.close();
        /* Create Scanner object */
        Scanner document_scanner = new Scanner(my_word.getText());
        /* Define Search Pattern - we find for the word  "search" */
        Pattern words = Pattern.compile("(search)");
        String key;
        int count=0;
        /* Scan through every line */
        while(document_scanner.hasNextLine()){
            /* search for the pattern in scanned line */
            key = document_scanner.findInLine(words);
            while(key != null){
                /* Find all matches in the same line */
```

Server Side Architecture of Web Applications

- Studied the server side architecture of web applications using Vaadin.
- **Vaadin** is an open source Web application framework for rich Internet applications.
- In contrast to JavaScript libraries and browser-plugin based solutions, it features a server-side architecture, which means that the majority of the logic runs on the servers.
- Vaadin uses Java as the programming language for creating web content. The framework incorporates event-driven programming and widgets, which enables a programming model that is closer to GUI software development than traditional web development with HTML and JavaScript.

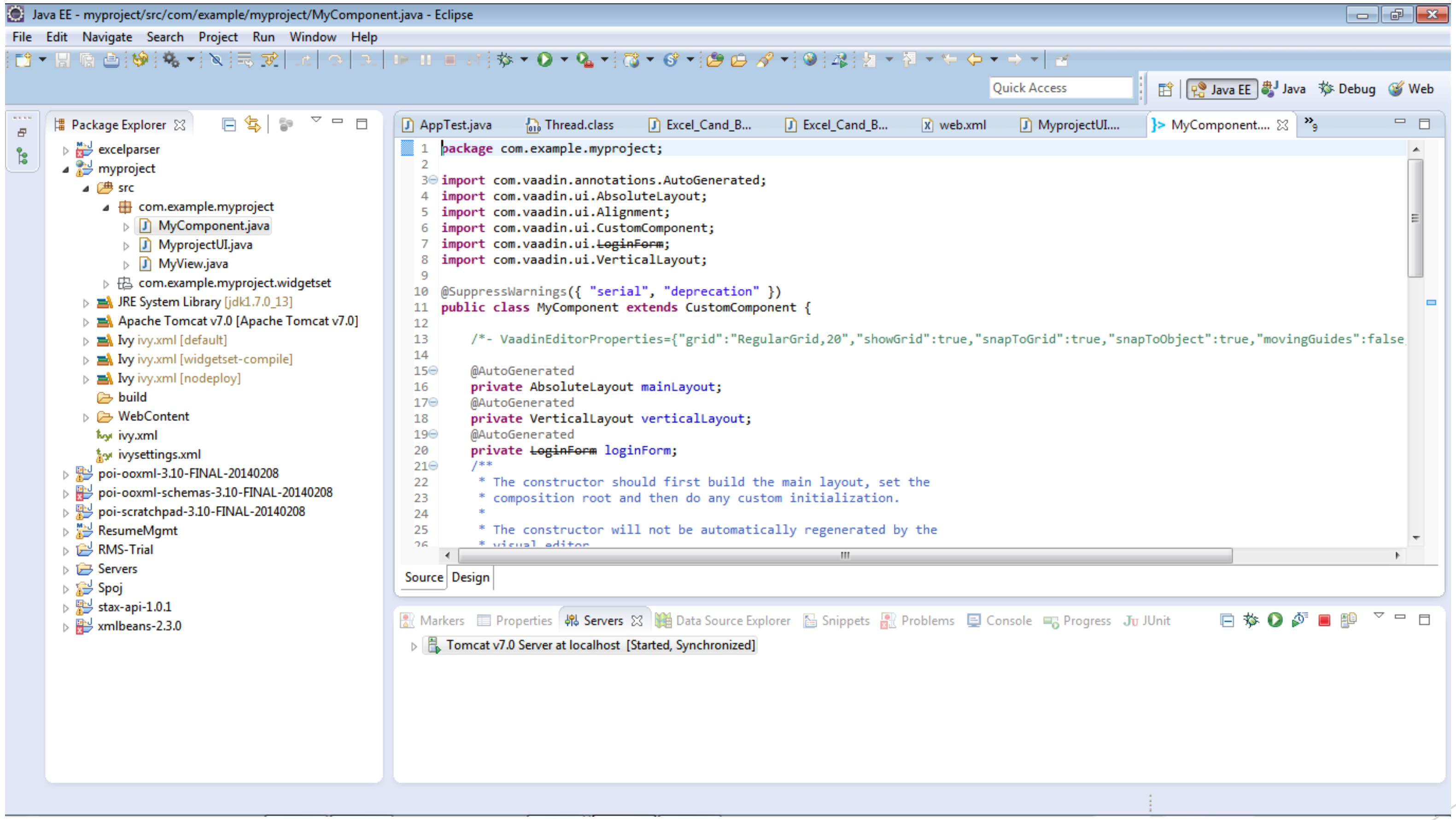
Screenshot of Vaadin UI Design in Eclipse IDE



Width 100.0% × Height 100.0% [✓ Visible]

Tomcat v7.0 Server at localhost [Started, Synchronized]

Screenshot of Vaadin UI Source Code in Eclipse IDE



Java EE - myproject/src/com/example/myproject/MyComponent.java - Eclipse

Package Explorer

- excelparser
- myproject
  - src
    - com.example.myproject
      - MyComponent.java
      - MyprojectUI.java
      - MyView.java
    - com.example.myproject.widgetset
  - JRE System Library [jdk1.7.0_13]
  - Apache Tomcat v7.0 [Apache Tomcat v7.0]
  - Ivy ivy.xml [default]
  - Ivy ivy.xml [widgetset-compile]
  - Ivy ivy.xml [nodeploy]
  - build
  - WebContent
  - ivy.xml
  - ivysettings.xml
- poi-ooxml-3.10-FINAL-20140208
- poi-ooxml-schemas-3.10-FINAL-20140208
- poi-scratchpad-3.10-FINAL-20140208
- ResumeMgmt
- RMS-Trial
- Servers
- Spoj
- stax-api-1.0.1
- xmlbeans-2.3.0

```java
package com.example.myproject;

import com.vaadin.annotations.AutoGenerated;
import com.vaadin.ui.AbsoluteLayout;
import com.vaadin.ui.Alignment;
import com.vaadin.ui.CustomComponent;
import com.vaadin.ui.~~LoginForm~~;
import com.vaadin.ui.VerticalLayout;

@SuppressWarnings({ "serial", "deprecation" })
public class MyComponent extends CustomComponent {

    /*- VaadinEditorProperties={"grid":"RegularGrid,20","showGrid":true,"snapToGrid":true,"snapToObject":true,"movingGuides":false

    @AutoGenerated
    private AbsoluteLayout mainLayout;
    @AutoGenerated
    private VerticalLayout verticalLayout;
    @AutoGenerated
    private ~~LoginForm~~ loginForm;
    /**
     * The constructor should first build the main layout, set the
     * composition root and then do any custom initialization.
     *
     * The constructor will not be automatically regenerated by the
     * visual editor
```

Servers: Tomcat v7.0 Server at localhost [Started, Synchronized]

THANK YOU