Capstone Project Report

Report Development

Using Jasper

Group No.11

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Abstract

The purpose of the project is to fetch the data from the database using code and generate the report in a format as desired by the user according to the query. The end product here gives a report displaying the information of the number of retailer shops, working under a specific mobile company for a particular period of time as requested by user. This project took place in NIIT University during 2018 year .The project involves the java code done in Spring MVC in Eclipse IDE with MySQL database using Tomcat server and Jaspersoft API tool .

Keywords: Java programming Spring MVC, database MySQL, Jaspersoft Studio, user based Interface, JSP, Tomcat Server.

Introduction

Objective

The objective of the project is to fetch the data from the database through java code and generate the report in a format desired by the user. The end product here was to give a report displaying the information of the number of retailer shops, working under a mobile company for a specific period of time as requested by user.

- The user have to login using Name and Password and select the UserType.
- After verification the user will be granted access to Homepage of our Mobile website.
- A brief Introduction about the company and a link to generate report is provided .
- The page that will be opened is titled as the dashboard.
- User has an option to select the type of document he prefers such as the HTML or the PDF form.
- The user have to enter the number of years .
- The number of years will show how many years a specific dealer has been associated with the company.
- The same page will have an option to add data which will redirect the user to another page.
- The add user page will have multiple options that will be required to be filled so that the data can be entered into the database.

- Once the user has inserted data, same can be cross checked using the terminal and the action is done dynamically.
- The pdf of the same will be generated and will be saved on the desktop of the user.
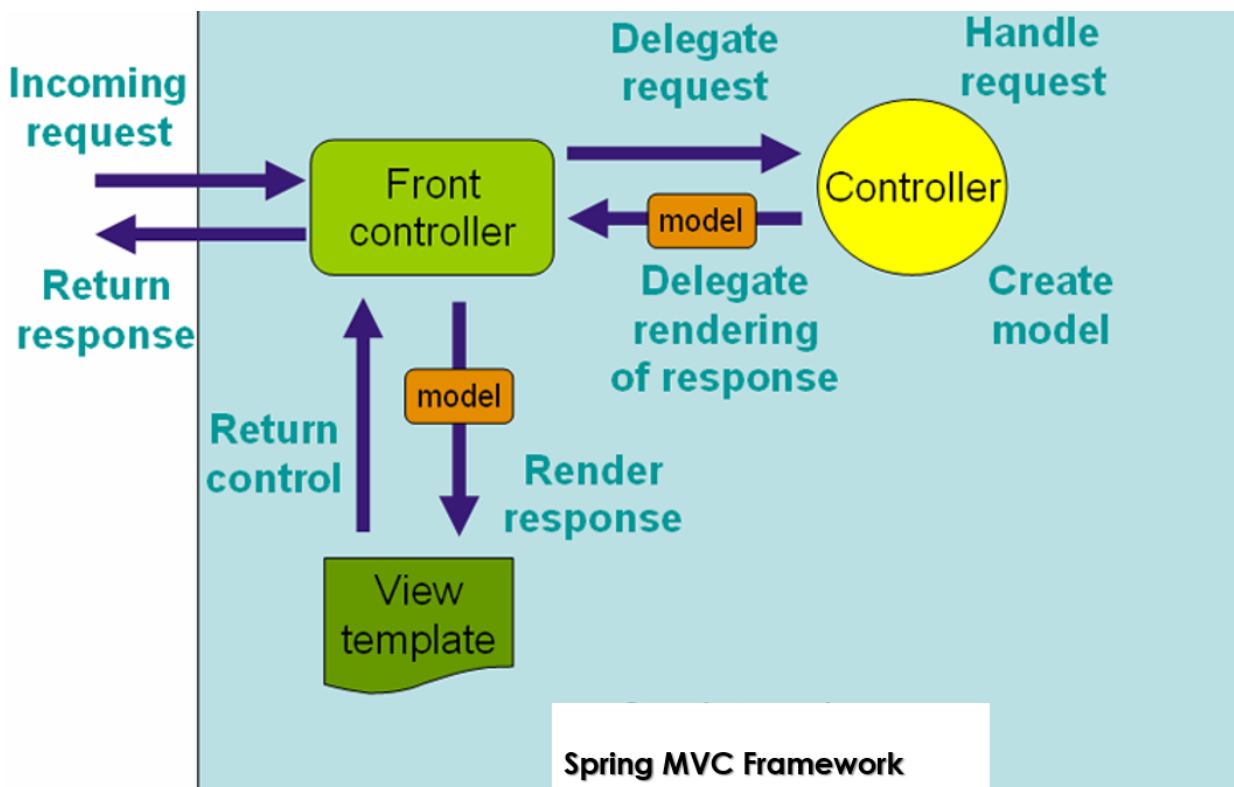
Problem Analysis

- The problem we are solving is important because it will make the job of finding relevant data very easy.
- The enormous amount of data that is increasing day by day is very difficult to sort through, hence the application we are developing will decrease the time to obtain the required information by a huge margin.
- Data obtained from these reports will also help in analyzing specific data set that can be used for further research purposes.

Methodology

- Our project is an online platform .

- Technologies used:

  - Spring MVC

  - MySQL 5.7 Command Line Client

  - MySQL Workbench 6.3

  - Microsoft Excel

  - Tomcat 8.5

  - JasperSoft Studio API

  - Oracle DB 11g

  - Glassfish 4

  - Eclipse JEE Oxygen

  - JSP (Java Servlet Pages)

We choose these technologies as they are the state of art technologies and we learnt a lot about developing a web app, database handling report generation, using Jasper and how to connect our front end from the back end and vice versa.

Spring MVC Framework Flow Diagram

Findings and Interpretations

- Findings

The main agenda of our project was to create a platform through which the users will be able to generate report with options that will be presented to them. This will make the task of finding the relevant data very easy and short.

- Interpretations

  o We first started by learning about the Jasper API and how it would be used in our project.

  o After that we learned about the Jaspersoft Studio and worked with it to understand the process of report generation.

  o We imported our Huge data set from excel sheet to MySQL workbench.

  o During the above process we learnt about the jrxml format of the report and we can code the design of the report.

  o Once we had understood the jasper reports, we started integrating it to a web application that we created for the project.

  o Here we took two approaches, one where the user will be able to find for how long a retailer has been associated with the company, and the second approach through which the users will be able to generate report of specific companies and cities using the options presented to him/her.

  o Once the user logs in, then the above approaches will be available to the user.

- The user can get the reports in two formats in the first approach i.e. pdf and html whereas in the second approach the user will get to download the report in only the pdf format.
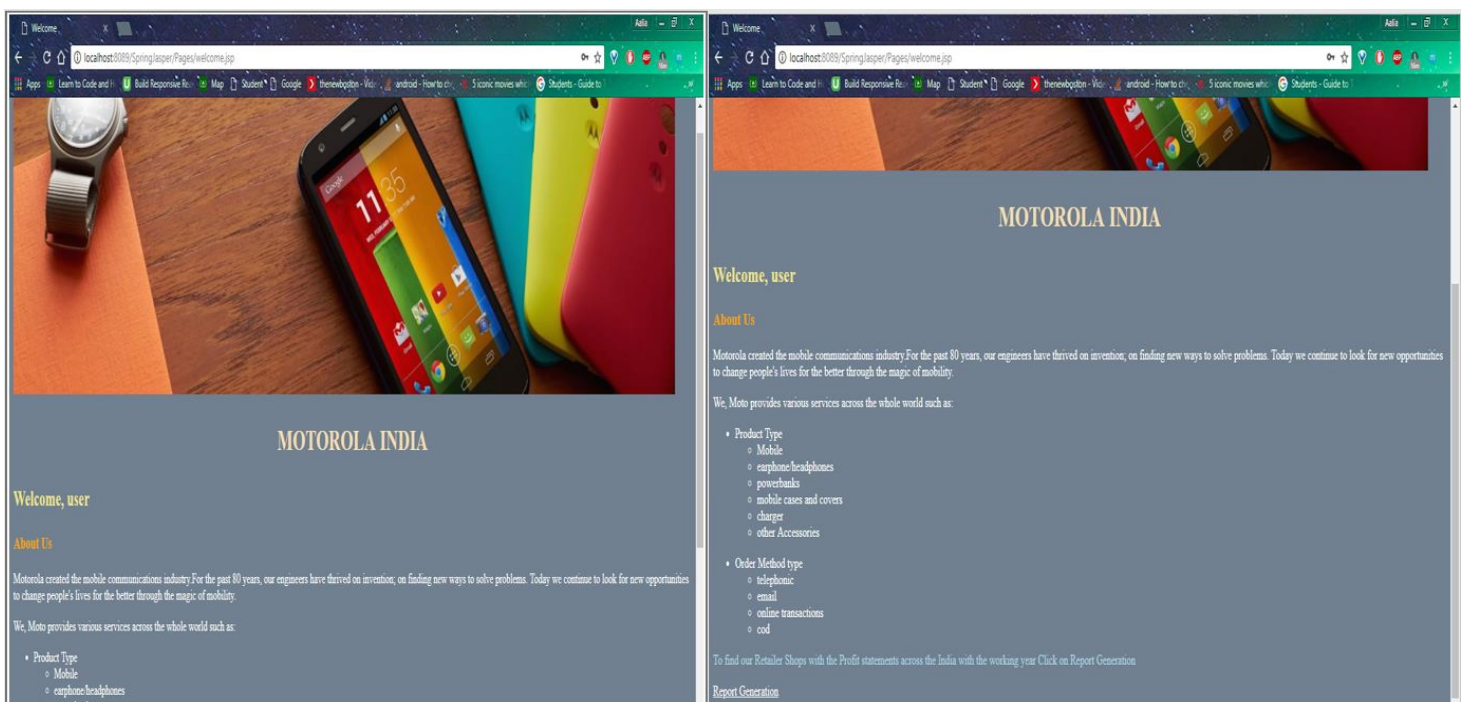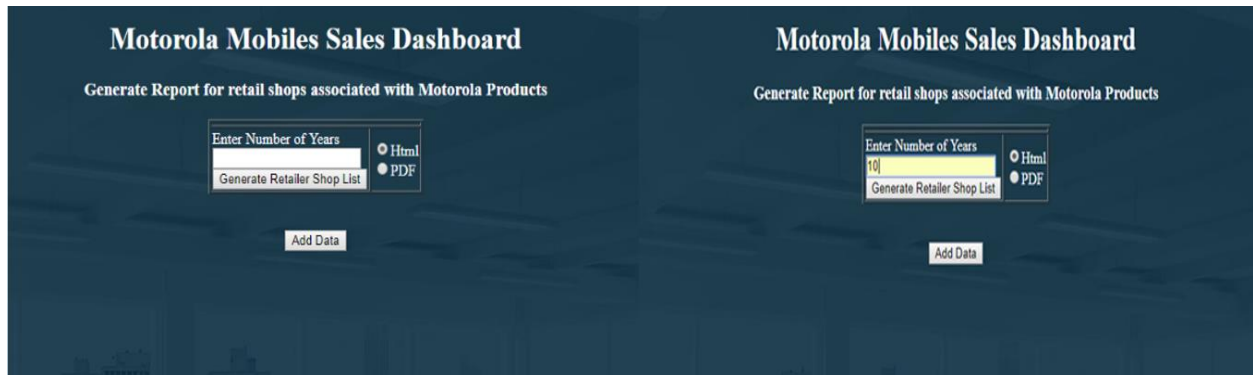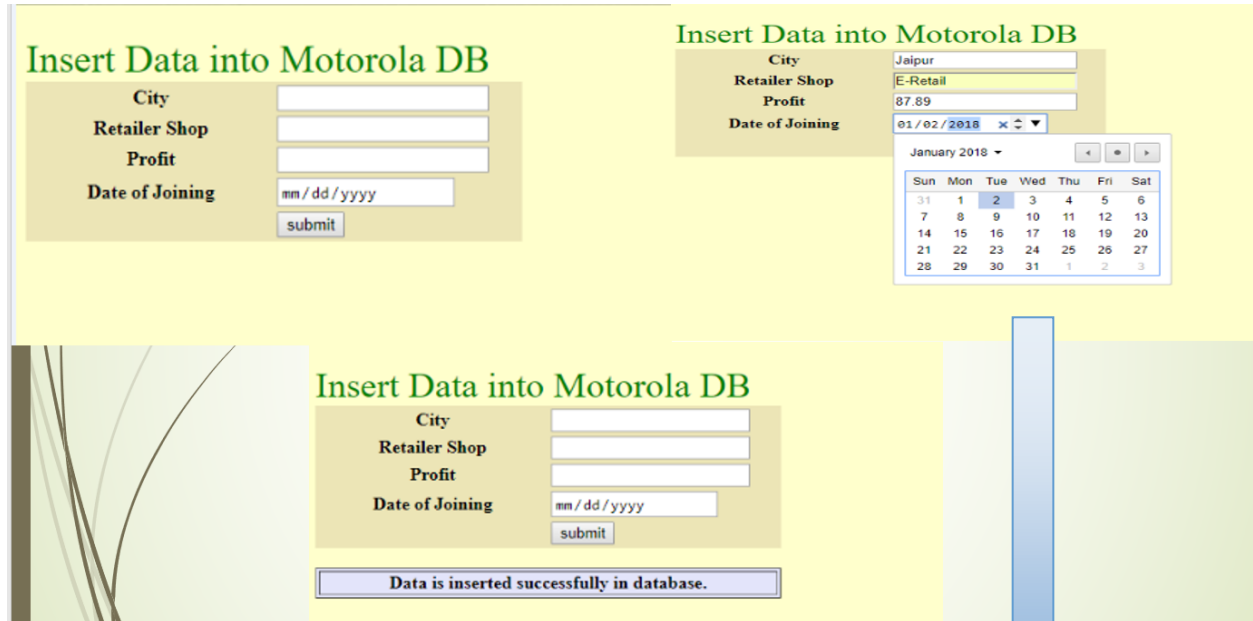
Result & Experiments

- The User Login page:

- The website of the Motorola Company

- Mobile Sales Dashboard

- Dynamically inserting data into database

Insert Data into Motorola DB

City	
Retailer Shop	
Profit	
Date of Joining	mm/dd/yyyy

submit

Data is inserted successfully in database.

MySQL 5.7 Command Line Client

```
| Chennai     | Croma                       |   16 | 2000-11-15 |
| Kochi       | E-Retail                    |   42 | 2010-06-30 |
| Agra        | Samsung Smart Cafe          |  220 | 1997-03-15 |
| Jaipur      | iStore                      |    7 | 1997-11-15 |
| Mysore      | 91mobiles                   | -383 | 2007-04-13 |
| Agra        | The Mobile Store            |    3 | 1999-11-06 |
| Bangalore   | Croma                       |   14 | 2016-05-08 |
| Kolkata     | E-Retail                    |    2 | 2015-06-25 |
| Jaipur      | Samsung Smart Cafe          |   91 | 2018-02-10 |
| Kochi       | Nokia Mobile Shop           |    6 | 2001-03-26 |
| Surat       | Croma                       |   34 | 2014-07-24 |
| Lucknow     | Reliance Digital JIO Store  |   85 | 2000-10-24 |
| Chandigarh  | iStore                      |   68 | 1997-04-10 |
| Chennai     | Nokia Mobile Shop           |    5 | 2009-12-28 |
| Kochi       | 91mobiles                   |  133 | 1998-10-06 |
| Agra        | Nokia Mobile Shop           | -124 | 2012-08-24 |
| Jaipur      | The Mobile Store            |   -4 | 1996-10-24 |
| Mysore      | Croma                       |   13 | 2000-11-17 |
| Dehradun    | E-Retail                    |   10 | 2011-11-11 |
| Srinagar    | The Mobile Store            |    2 | 2016-08-08 |
| Goa         | Croma                       |   16 | 1996-05-02 |
| Karnataka   | E-Retail                    |   42 | 1993-01-19 |
| Goa         | Samsung Smart Cafe          |  220 | 2015-12-31 |
| Dehradun    | 91 mobiles                  |   59 | 2010-03-28 |
| Delhi       | Jumbo Electronics           |   96 | 2009-08-17 |
| Jaipur      | E-Retail                    |   88 | 2018-01-02 |
+-------------+-----------------------------+------+------------+
172 rows in set (0.00 sec)

mysql>
```

- Our Second Approach :

http://localhost:8082/FinalCapstone/faces/Mainweb.xhtml

Mobile Sales Data

Company:

Apple ☐ Asus ☐   Gionee ☐ Honor ☐ Intex ☐ Jio ☐   Karbonn ☐ Lava ☐   Lenovo ☐ Letv ☐ LG ☐
MI ☐ Micromax ☐   Moto ☐ Nokia ☐ One Plus ☐ Oppo ☐   Samsung ☐ Sony ☐   Vivo ☐

City:

Agra ☐   Bangalore ☐ Chandigarh ☐ Chennai ☐ Dehradun ☐ Delhi NCR ☐ Jaipur ☐ Kochi ☐
Kolkata ☐ Lucknow ☐   Mumbai ☐ Mysore ☐   Srinagar ☐   Surat ☐

Generate Bill

- Sample reports generated :

Mobile Sales Report

Company	City	Product Type	Quantity	Order-Method	Retailer	Year	Month	Revenue	Profit
Sony	Chennai	Power Bank	133	Special	Croma	2014	January	20003.2	68.35680
Lenovo	Mumbai	Mounts &	296	Special	E-Retail	2016	November	15122.72	16.01099
Sony	Chennai	Power Bank	133	Special	Croma	2014	January	20003.2	68.35680
Lenovo	Mumbai	Mounts &	296	Special	E-Retail	2016	November	15122.72	16.01099
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Retailer Joined after 2016/05/08

Delhi - NCR
5/8/16 12:00 AM

Mumbai
2/10/18 12:00 AM

Chandigarh
5/28/16 12:00 AM

Delhi - NCR
5/8/16 12:00 AM

Conclusion

In this course we learnt a lot of things which surely expanded our technical knowledge and inculcated the spirit of team-work. We learnt about modern technologies and how to use them in sync with each other. We distributed our work and then combined it together to develop the full working product. We faced some difficulties at the start of making the project as everyone was not familiar about the technologies, but we overcome them by having a positive attitude and the spirit to learn and develop. In the end we successfully developed the product we were aiming for and more.

FUTURE WORK

Extra features to existing report:

➡ Saving the document

➡ Creation of one more template.

➡ Showcasing reports in different formats like excel, doc etc.

Optional as per user's choice

➡ Header and Footer,

➡ Page Number

➡ Border