Data Automation in Servicing A Case Study

Manually maintaining data in excel is hard

The client is a tyre manufacturing company in a very large scale. They manufacture tyres which may cost up to a minimum of 3.5 million Indian Rupees. Currently they maintain their data related to the tyres and clients in excel sheets. The challenge is to extract the data from excel sheet and load it to a database, apply formulas to the data and analyze various parameters of the tyre's life cycle and also to generate graphical reports for the clients.

We setup a database and automated the calculations

The client were in need of a database to be set up for the huge set of existing data that has been maintained in excel sheets. We will design a database schema based on the received files and implement the schema on a MySQL database. Scripts will be used to load the contents of the file to the database.

Once the database has the information, they are in need of a design of an operating program which uses the information within the database and workout the concurrent tyre life based upon its status of fitment, removal, repair, spare, scrap etc. in a CSV format. The operating program will also derive information from the PLM input and its correlation with the tyres. All information that is used to compute these metrics should already be in the database. The operating program will be able to extract information for a tyre or tyres by its life, position, tread depth, pressure, temperature, status such as spare working, repair, scrap, or any other metric in the database. The extracted information would be in the form of a CSV file, and not a graphical format at this stage.

At last they also are in need of a reporting system, which will convert the extracted CSV file from the operating program into a report in a graphical format to submit to their clients. These reports can have time periods which

Client

Leading Tyre Manufacturer

Industry Sector

Manufacturing

Technology

- Zend Apache Server v2.2
- PHP v5.3
- Mysql v5.1
- PhpMyAdmin v3.4.7
- Jasper Report server 4.2.1

are fixed or variable, and input criteria which may vary from month on month. These reports will be available as HTML files that may accessed via the Internet as well. The reports may be printed to PDF using a PDF Printer tool that we can provide. Any sections of the report may be embedded in PowerPoint using a screen capture tool that we can provide.

The project will be executed in 3 stages:

1. Database setup
2. Operating Program creation
3. Reporting Module

Architecture
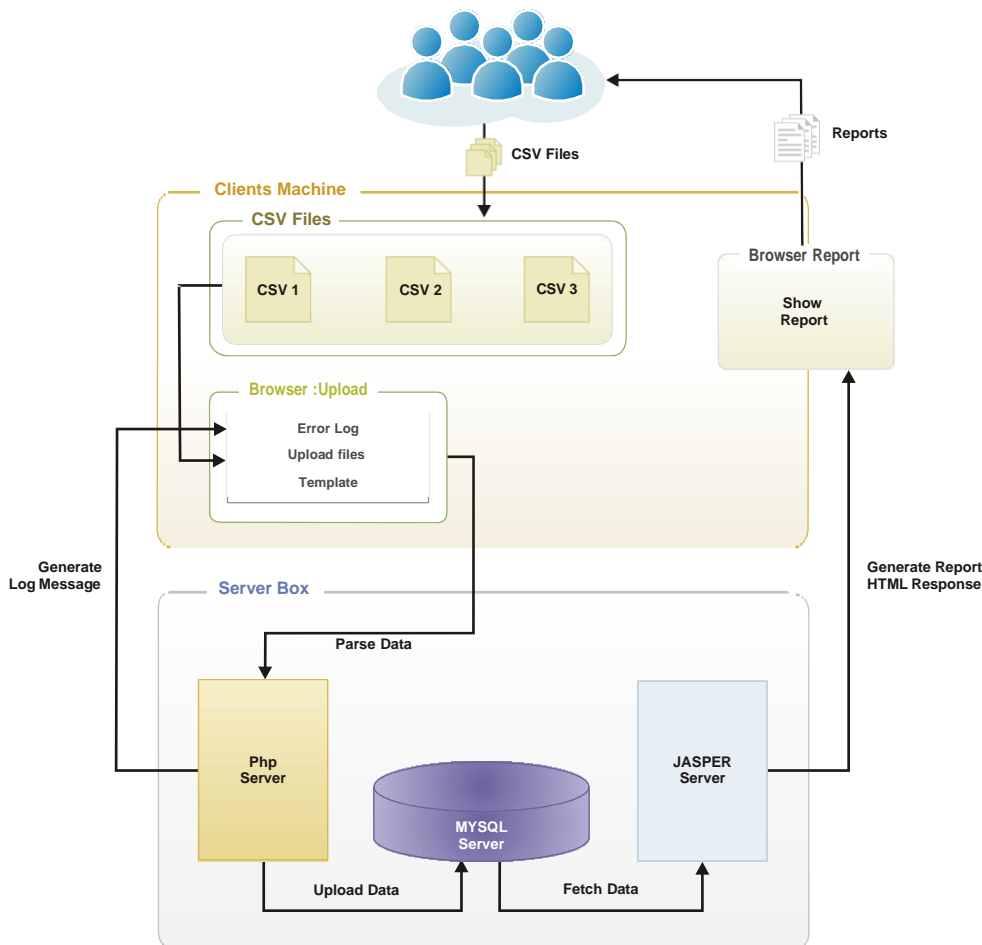
Benefits to the Client

- **Consolidate** data in a single location.
- **Query** by any combination of parameters.
- **Scale** well beyond the limits in terms of size of data.
- **Modification** of formulas applied in data will be easier.
- **Maintenance** will be simpler.
- **Data reliability** is increased.
- **Recoverability** is also increased.
- Data will be **protected /manipulated** with access control.
- **Automated calculation** of metrics.
- The **reliability** of these calculations is high.
- More metrics to be **calculated** retrospectively.
- **Exported** into a CSV file for further analysis using Excel.
- **Automatic** generation of reports.
- **Customisation of reports** for specific subsets of data.
- Improving the **reliability** of the data.
- Viewable **online** to the internal team, and potentially by customers.
- Reports will be **protected** using access control

For More Information

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