

Low Level Design

Wine Review Analysis

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1. Introduction

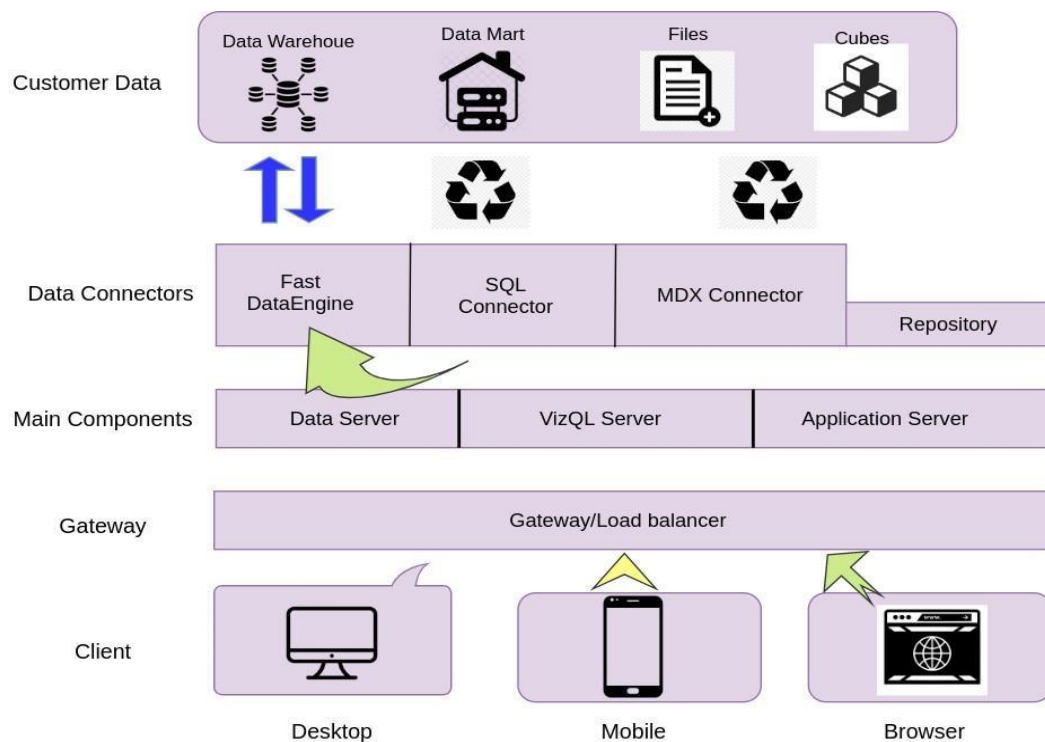
1.1 What is Low-Level design document?

The goal of the LDD or Low-level design document (LLDD) is to give the internal logic design of the actual program code for the House Price Prediction dashboard. LDD describes the class diagrams with the methods and relations between classes and programs specs. It describes the modules so that the programmer can directly code the program from the document.

1.2 Scope

Low-level design (LLD) is a component-level design process that follows a step-by-step refinement process. The process can be used for designing data structures, required software architecture, source code and ultimately, performance algorithms. Overall, the data organization may be defined during requirement analysis and then refined during data design work.

2. Architecture



3. Architecture Description

3.1. Data Description

The Dataset contains Wine Reviews for different Country, Province, Variety, Winery etc.

1. **Country:** The country that the wine is from.
2. **Description:** A few sentences from a sommelier describing the wine's taste, smell, look, feel, etc.
3. **Designation:** The vineyard within the winery where the grapes that made the wine are from.
4. **Points:** The number of points Wine Enthusiast rated the wine on a scale of 1-100 (though they say they only post reviews for wines that score ≥ 80).
5. **Price:** The cost for a bottle of the wine.
6. **Province:** The province or state that the wine is from.
7. **Region_1:** The wine growing area in a province or state (i.e. Napa).
8. **Region_2:** Sometimes there are more specific regions specified within a wine growing area (i.e. Rutherford inside the Napa Valley), but this value can sometimes be blank.

9. **Taster_name**: Name of the person who tasted and reviewed the wine.
10. **Taster_twitter_handle**: Twitter handle for the person who tasted and reviewed the wine.
11. **title**: The title of the wine review, which often contains the vintage if you're interested in extracting that feature.
12. **Variety**: The type of grapes used to make the wine (i.e. Pinot Noir).
13. **Winery**: The winery that made the wine.

3.2. Data Transformation

In the Transformation Process, we will convert our original datasets with other necessary attributes format. And will merge it with the Available dataset.

3.3. Deployment

3.3.1 Introduction

GitHub Actions offers features that let you control deployments. You can:

- Trigger workflows with a variety of events.
- Configure environments to set rules before a job can proceed and to limit access to secrets.
- Use concurrency to control the number of deployments running at a time.

For more information about continuous deployment, see "[About continuous deployment](#)."

3.3.2 Prerequisites

You should be familiar with the syntax for GitHub Actions. For more information, see "[Learn GitHub Actions](#)."

3.3.3 Triggering your deployment

You can use a variety of events to trigger your deployment workflow. Some of the most common are: pull_request, push, and workflow_dispatch.

For example, a workflow with the following triggers runs whenever:

- There is a push to the main branch.
- A pull request targeting the main branch is opened, synchronized, or reopened.
- Someone manually triggers it.

```
on: push:
  branches:
    - main
  pull_request:
```

branches: -
main
workflow_dispatch:
For more information, see "[Events that trigger workflows](#)."

3.3.4 Using environments

Environments are used to describe a general deployment target like production, staging, or development. When a GitHub Actions workflow deploys to an environment, the environment is displayed on the main page of the repository. You can use environments to require approval for a job to proceed, restrict which branches can trigger a workflow, or limit access to secrets. For more information about creating environments, see "[Using environments for deployment](#)."

3.3.5 Using concurrency

Concurrency ensures that only a single job or workflow using the same concurrency group will run at a time. You can use concurrency so that an environment has a maximum of one deployment in progress and one deployment pending at a time.

3.3.6 Viewing deployment history

When a GitHub Actions workflow deploys to an environment, the environment is displayed on the main page of the repository. For more information about viewing deployments to environments, see "[Viewing deployment history](#)."

3.3.7 Monitoring workflow runs

Every workflow run generates a real-time graph that illustrates the run progress. You can use this graph to monitor and debug deployments. For more information see, "[Using the visualization graph](#)."

You can also view the logs of each workflow run and the history of workflow runs. For more information, see "[Viewing workflow run history](#)."

4. Unit Test Cases

TEST CASE DESCRIPTION	EXPECTED RESULTS
Top wine makers by country	USA is on top of the list among the wine making countries at over 2000, followed by Italy and France slightly below 750 by volume.
Price distribution of wines	Most of the wines are on the lower side of the price range, with smaller of wines at prices over 40 per unit quantity.
Average Price of wines per country	Bulgaria and Romania have the lowest wine prices at just above 10 per unit quantity, while Hungary wine is the most expensive at about 60 price value per unit.
Scatter Plot of Price and Points	The higher the ratings points of the wine, the higher the price seems to be.
Top countries having highly rated wine	We can clearly see that Italy has the most rated wine in the world, followed closely by the USA and Australia.
Highest rated Wines in the world	Italy's Red Blend and France's Chardonnay are the top rated wine in the world.