Low Level Design(LLD)

Store Sales Prediction

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Contents		
Document version	control	3
Abstract		4
1 Introduction	5	
1.1 Why this Low-	-Level-Design Document? 5	
1.2 Scope 5		
1.3 Constraints	5	
2 Technical Speci	fication 5	
2.1 Logging 5		
2.2 Database	6	
3 Deployment	6	
4 Technology Sta	ck 6	
5 Proposed Soluti	on 7	
6 Architecture	7	
7 Error Handling	7	
8 KPIS (Key Perfo	ormance Indicators) 7	
9 Conclusion	8	
10		

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Abstract

Nowadays, shopping malls and Big Marts keep track of individual item sales data in order to forecast future client demand and adjust inventory management. In a data warehouse, these data stores hold a significant amount of consumer information and particular item details. By mining the data store from the data warehouse, more anomalies and common patterns can be discovered.

1 Introduction

1.1 Why this Low Level Design Document

The purpose of this Low-Level Design (LLD) Document is to add the necessary detail to the current project description to represent a suitable model for coding. This document is also intended to help detect contradictions prior to coding, and can be used as a reference manual for how the modules interact at a high level.

The LLD will:

- Present all of the design aspects and define them in a detail
- Describe the user interface being implemented Includes design features and architecture of the project List and describe the non functional attribute like:
 - o Reliability
 - Maintainability
 - Portability
 - Reusability
 - Application compatibility
 - Serviceability

1.2 Scope

The HLD documentation presents the structure of the system, such as the database architecture, application architecture(layers), application flow(navigation), and technology architecture. The HLD uses non-technical to mildly-technical terms which should be understandable to the administrator of the system.

1.3 Constraints

The System must be user-friendly, as automated as possible, and the user should not be required to know any other work.

2. Technical specifications

2.1 Logging

The system should log every event so that the user will know what process is running internally.

Initial Step-By-Step Description

- 1. The system identifies at what step logging required
- 2. The system should be able to log each and every system flow
- 3. Developers can choose a logging method. You can choose database logging or file logging as well
- 4. System should not hang even after so many loggins. Logging just because we can debug issues, so logging is mandatory.

2.2 Database

System needs to store each and every record in the database, dataset as well as logging. And it has to send data to the user on request. Here we have used a MongoDB database.

3. Deployment







4.Technology stack

Front End	HTML/CSS/JS/Bootstrap
Backend	Python/ Flask
Database	MongoDB
Deployment	Heroku
version control	GitHub

5. Proposed Solution

Here a system has been created which predicts the sales of an item in a particular outlet

Architecture 6. Data from Data insertion in Data Start client to be database Validation predicted Export data Model call for from database Data Data clustering specific cluster preprocessing to csv for prediction Export Prediction END prediction to csv

7. Error Handling

Should errors be encountered, an explanation will be displayed as to what went wrong? An error will be defined as anything that falls outside the normal and intended usage.

8. KPIS (Key Performance Indicators)

1. Organization can predict the sales easily

9. Conclusion

Nowadays, shopping malls and Big Marts keep track of individual item sales data in order to forecast future client demand and adjust inventory management. In a data

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warehouse, these data stores hold a significant amount of consumer information and particular item details. By mining the data store from the data warehouse, more anomalies and common patterns can be discovered.