LOW LEVEL DESIGN (LLD)

ANALYZE DEBT STATISTICS

DOCUMENT VERSION CONTROL

Date Issue	Version	Description	Author
09/03/2023	1	Initial LLD – V 1.0	Abdul Jaweed
20/06/2023	2	Final LLD - V 2.0	Abdul Jaweed Prateek Kumar Chaurasia

CONTENT

ABSTRACT

It's not that we humans only take debts to manage our necessities. A country may also take debt to manage its economy. For example, infrastructure spending is one costly ingredient required for a country's citizens to lead comfortable lives. The World Bank is the organization that provides debt to countries.

In this project, you are going to analyze international debt data collected by The World Bank. The data-set contains information about the amount of debt (in USD) owed by developing countries across several categories.

INTRODUCTION

What is a Low Level Design Document?

The goal of LLD or a low-level design document (LLDD) is to give the internal logical design of the actual program code for International Debt Statistics. LLD describes the class diagrams with the methods and relations between classes and program specs. It describes the modules so that the programmer can directly code the program from the document. Low-level design is a detailed description of every module of software. It describes every module in detail by incorporating the logic behind every component in the system. It delves deep into every specification of every system, providing a micro-level design.

Scope

Low Level Design (LLD) is a component level design process that follows a step by step refinement process. This process can be used to design data structure, required software architecture, source code and ultimately performance algorithm. Overall, the data organization may be defined during requirement analysis and then refined during data design work.

PROJECT INTRODUCTION

The International Debt Statistics project provides a comprehensive analysis of global debt trends. It aims to understand and monitor the dynamics of international debt, which profoundly impact economic stability and development worldwide.

PROBLEM STATEMENT

It's not that we humans only take debts to manage our necessities. A country may also take debt to manage its economy. For example, infrastructure spending is one costly ingredient required for a country's citizens to lead comfortable lives. The World Bank is the organization that provides debt to countries.

DATASET INFORMATION

The Dataset contains the country name, debt amount from 1970 to 2028 of all countries. The dataset contains information about the amount of debt (in USD) owed by developing countries across several categories. It contains both national and regional debt statistics for several countries across the globe as recorded from 1970 to 2015.

ATTRIBUTE INFORMATION

- 1) Country Name
- 2) Country Code
- 3) Counterpart-Area Name
- 4) Counterpart-Area Code
- 5) Series Name
- 6) Series Code
- 7) 1970 to 2028

ARCHITECTURE

The architecture of the International Debt Statistics project encompasses several key components that work together to collect, analyze, and present global debt trends. While the specific technical details may vary, here is a high-level overview of the project's architecture:

Data Collection:

The project relies on a variety of sources to collect data on external debt. These sources include national statistical agencies, central banks, international organizations, and other reputable data providers. The data is gathered through standardized data collection processes and protocols.

Data Processing and Integration:

Once collected, the raw data goes through a processing phase where it is standardized, cleaned, and validated. This step ensures consistency and quality in the dataset. The processed data is then integrated into a centralized database, which serves as the foundation for analysis and reporting.

Analysis and Visualization:

Advanced analytical techniques are applied to the integrated dataset to derive insights and identify global debt trends. This may involve statistical analysis, econometric modeling, and other quantitative methods. The results of the analysis are then visualized using interactive charts, graphs, and maps to facilitate data exploration and comprehension.

Storage and Retrieval:

The processed data, along with the derived analysis, is stored in a structured manner to allow for efficient retrieval and querying. This may involve a database management system that enables fast and reliable access to the data. The storage architecture ensures the availability and integrity of the dataset for users.

Reporting and Dissemination:

The project generates reports, publications, and an online platform to disseminate the findings and insights derived from the data. Reports provide in-depth analysis and commentary on global debt trends, while publications offer specialized studies and research papers. The online platform serves as a dynamic repository of data, visualizations, and real-time updates, accessible to a wide range of users.

POWER BI DASHBOARD

Power BI is a business analytics service by Microsoft that provides interactive visualizations and business intelligence capabilities with an interface that is simple enough for end users to create their own reports and dashboards.

Power BI dashboards can be created using a variety of data sources, such as Excel spreadsheets, SQL databases, and cloud-based applications like Salesforce and Google Analytics. Power BI also provides connectors to many other data sources, making it easy to bring in data from multiple sources.

Once data is connected, Power BI allows users to create visually appealing and interactive dashboards. Users can drag and drop visualizations onto the canvas, customize the appearance of the dashboard, and add filters and slicers to allow for interactive exploration of the data.

Power BI dashboards also have a variety of sharing options. Users can share dashboards with others within their organization, publish dashboards to the web, or embed them into websites and other applications.

Power BI also has many advanced features, such as the ability to perform complex data modeling and calculations using DAX formulas, and the ability to create and share reports with others.

Overall, Power BI dashboards are a powerful tool for organizations to gain insights into their data, improve decision-making, and drive business success.

HEART DISEASE DIAGNOSTIC VISUALIZATION DASHBOARD