High Level Design(HLD)

Investment Analytics

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❖ Abstract

The act of investing has the goal of generating income and increasing value over time. An investment can refer to any mechanism used for generating future income. This includes the purchase of stocks, or property, and some other examples. One of the examples also includes Foreign Direct Investments.
Foreign direct investment (FDI) is an ownership stake in a foreign company or project made by an investor, company, or government from another country. FDI is an important monetary source for India's economic development.FDI has steadily increased in India. Today India is a part of the top 100-club on Ease of Doing Business (EoDB) and globally ranks number 1 in the greenfield FDI ranking.

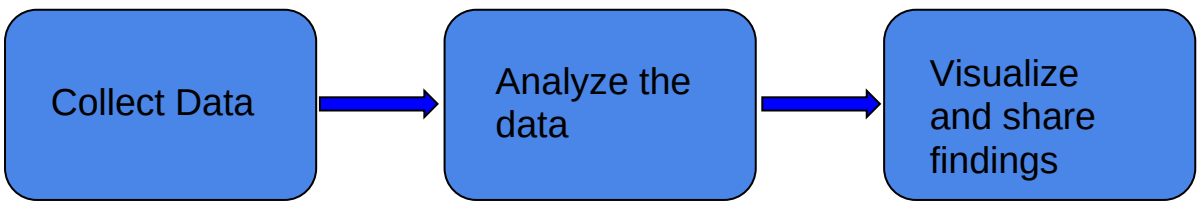
❖ Scope

The aim of this project is to find year- wise and sector - wise investments made from the year 2000 - 2017 and to find the highly invested and least invested sectors. All insights are found using MS Excel and also the dashboard is created using it. Tableau is used for better experience of data visualization. Through this dashboard one can easily find the Foreign Direct Investments made year-wise and sector-wise.

❖ Problem Statement

An investment involves putting capital to use today in order to increase its value over time.One of the examples of investments are Foreign Direct Investments(FDI).So to minimize the risk before investing into things we always look for historic data of investment to reduce the risk of loss that may happen in future. This project focuses on analysis of FDI made in India from the year 2000 - 2017 in various sectors.
The objective of the project is to perform data visualization techniques to understand the insight of the data. This mainly aims to apply visualization tools such as Tableau . Also use Microsoft Excel to get a better understanding of the data.

❖ Functional Architecture



❖ Tools Used

Business Intelligence tools such as Tableau and Microsoft Excel is used for Analysis and Visualization.

Microsoft Excel is used for finding the insights from given dataset and and creating charts out of it.

Tableau is used to create a dashboard, for showcasing the insights in a creative way.

❖ Optimization

- Optimization was not much needed as the dataset contained only the Years and Sectors name.
- Performed calculations using Excel ,where possible, used SUM MIN , MAX or AVG.
- Since there were 64 sectors we displayed top 5 sectors and bottom 5 sectors and also rising sectors to make it easy to understand where the investments can be made in the next coming year.
- Made use of Slicer to show Sector Wise investments. For example: If you select a sector the graph will display year wise investments for that selected sector.

❖ Key Performance Indicator(KPI)

Key Performance Indicator displaying the investments details year wise and sector wise.
Dashboard will be used to display following KPI's and relevant information.

1. Sector Wise Analysis
2. Year Wise Analysis
3. Highly invested sector from year 2000- 2017
4. Least invested sector from year 2000 - 2017
5. Top five sectors.
6. Bottom five sectors.
7. Rising sectors.

8. Deployment

- Data visualization is one of the most important capabilities of any business intelligence (BI) and analytics solution. It helps people translate complex data into a visual context, like a chart or a graph, identify trends numbers alone can't easily reveal, and discover hidden patterns in your dashboard.
- To make creative and easy data visualization some tools are used by companies out of which Tableau is one of them
- Tableau is so popular, interactive, simple, fast and user-friendly and has a huge fan base in the public and enterprise world. The great thing about tableau is that it doesn't need any technical or any kind of programming skills to operate. It has accumulated interest among the people across various sectors like different industries, business, and researchers.
- Advantages of Tableau:
  Quickly create interactive visualizations.
  Ease of implementations
  Tableau can handle large number of data
  Mobile support and Responsive dashboard
- Disadvantages of Tableau:
  Scheduling or notification of reports
  No Custom Visual Import
  Custom Formatting in Tableau
  Scaling and Pricing for enterprise