ARCHITECTURE DESIGN DOCUMENT

FIFA WORLD CUP ANALYSIS

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1.ABSTRACT

The objective of this article is to explore the FIFA World Cup data and find the insights and trends. The **FIFA World Cup**, often simply called the **World Cup**, is an international association football competition contested by the senior men's national teams of the members of the *Fédération Internationale de Football Association* (FIFA, the International Federation of Association Football), the sport's global governing body. The championship has been awarded every four years since the inaugural tournament in 1930, except in 1942 and 1946 when it was not held because of the Second World War. The World Cups dataset show all information about all the World Cups in the history, while the World Cup Matches dataset shows all the results from the matches contested as part of the cups.

2.ARCHITECTURE DESIGN

The architecture design document is a technical document describing the components and specifications required to support the solution and ensure that the specific business and technical requirements of the design are satisfied.

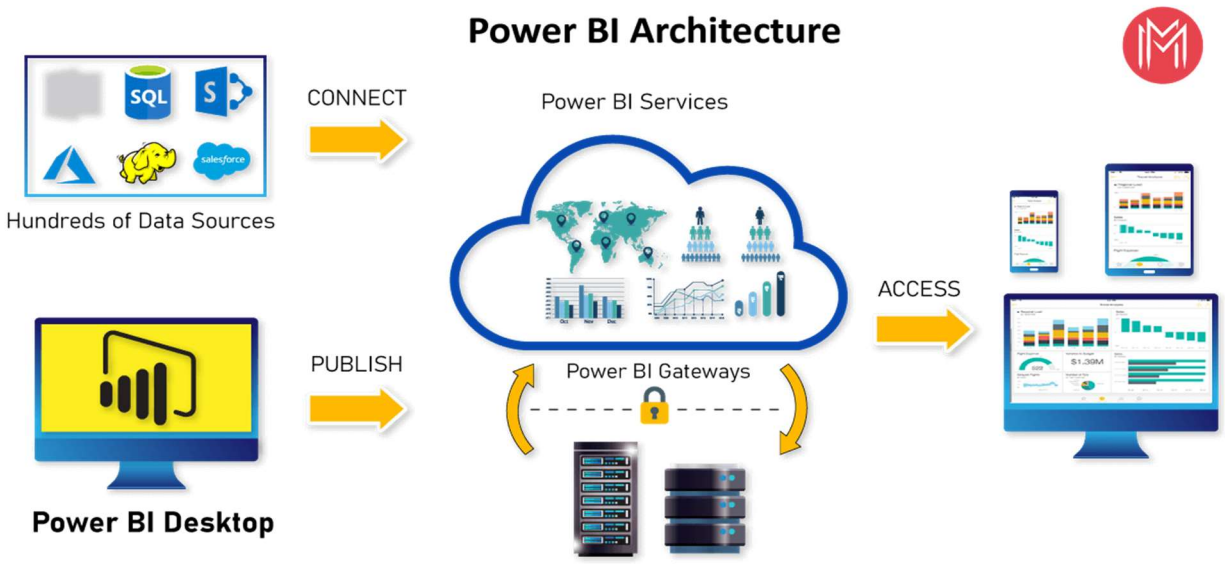
The architect creates the architecture design document to document the design factors and the specific choices that have been made to satisfy those factors. The document serves as a way for the architect to show his work when making design decisions. The architecture design document includes the conceptual, logical, and physical designs.

The software that is built for computer-based systems can exhibit one of these many architectural styles.
Each style will describe a system category that consists of :

- A set of components (eg: a database, computational modules) that will perform a function required by the system.
- The set of connectors will help in coordination, communication, and cooperation between the components.
- Conditions that how components can be integrated to form the system.
- Semantic models that help the designer to understand the overall properties of the system.

3.ARCHITECTURE OF PROJECT

4.POWER BI ARCHITECTURE



Power BI architecture is a service built on top of Azure. There are multiple data sources that Power BI can connect to. Power BI Desktop allows you to create reports and data visualizations on the dataset. Power BI gateway is connected to on-premise data sources to get continuous data for reporting and analytics. Power BI services refer to the cloud services that are used to publish Power BI reports and data visualizations. Using Power BI mobile apps, you can stay connected to their data from anywhere. Power BI apps are available for Windows, iOS, and Android platforms.

These components include:

- Query with a lot of power
- Power BI Desktop is a business intelligence application.
- Power BI Mobile is a mobile version of Power BI (for Android, iOS, Windows phones)
- Power Pivot is an acronym that stands for Power Pivot (for in-memory tabular data modeling)
- View from a position of strength (for viewing data visualizations)
- Power Flow Diagram (for visualizing 3D geo-spatial data)
- Q&A Session with Influence (for natural language Q&A)

5.COMPONENTS of POWER BI

Power Query

Power Query is the data transformation and mash up the engine. It enables you to discover, connect, combine, and refine data sources to meet your analysis need. It can be downloaded as an add-in for Excel or can be used as part of the Power BI Desktop.

Power Pivot

Power Pivot is a data modeling technique that lets you create data models, establish relationships, and create calculations. It uses Data Analysis Expression (DAX) language to model simple and complex data.

Power View

Power View is a technology that is available in Excel, Sharepoint, SQL Server, and Power BI. It lets you create interactive charts, graphs, maps, and other visuals that bring your data to life. It can connect to data sources and filter data for each data visualization element or the entire report.

Power Map

Microsoft's Power Map for Excel and Power BI is a 3-D data visualization tool that lets you map your data and plot more than a million rows of data visually on Bing maps in 3-D format from an Excel table or Data Model in Excel. Power Map works with Bing maps to get the best visualization based on latitude, longitude, or country, state, city, and street address information.

Power BI Desktop

Power BI Desktop is a development tool for Power Query, Power Pivot, and Power View. With Power BI Desktop, you have everything under the same solution, and it is easier to develop BI and data analysis experience.

Power Q&A

The Q&A feature in Power BI lets you explore your data in your own words. It is the fastest way to get an answer from your data using natural language. An example could be what was the total sales last year? Once you've built your data model and deployed that into the Power BI website, then you can ask questions and get answers quickly.

6.DEPLOYMENT

A **Deployment Pipeline** is the process of removing code from version control and making it automatically available to users of your application. When a team of developers is working on a project or feature, they need a reliable and efficient way to build, test, and deploy their work.

Power BI Deployment Pipelines allow creators to create and test content in the Power BI service before it is consumed by users. In simple terms, these Power BI Deployment Pipelines are in charge of managing the lifecycle of organizational content. Reports, paginated reports, dashboards, datasets, and dataflows are among the content types.

A Power BI Deployment Pipeline has three stages:

1) Development

This stage is used to collaborate with other creators to design, build, and upload new content. This is the initial stage of a Power BI deployment pipeline.

2) Test

After making the necessary changes, in the testing stage, you can upload the modified content in order for it to be moved to this testing stage. Some of the examples of what can be accomplished in a testing environment are as follows:

- Distribute content to testers and reviewers.
- Load and run tests on larger amounts of data.
- Test your application to see how it will appear to your customers.

3) Production

After testing the report content, you can move to the production stage. In this stage, you can share the final version of your content with the stakeholders across the organization during the production stage.

7. REFERENCES

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