Project Design Phase-I
Solution Architecture

Date	5 May 2023
Team ID	NM2023TMID21199
Project Name	Data-Driven insights on Olympic Sports Participation and Performances
Maximum Marks	4 Marks

Solution Architecture:

Basic Workflow:

1. Research the history of the Olympic Games and the various changes and adaptations that have occurred over time. This can include looking at primary sources, such as official Olympic documents and reports, as well as secondary sources like books, articles, and academic journals.
2. Identify key themes and trends that have emerged in the history of the Olympics, such as the evolution of amateurism to professionalism, the impact of technological advancements etc.
3. Develop a problem statement that clearly articulates the argument or perspective on the topic. This can be informed by research and should be a concise statement that outlines the main points of the project.
4. Organize research and ideas into a coherent outline. This can include breaking down arguments into sub-points, identifying key examples and evidence to support the claims made, and considering the best order and structure for presenting these ideas.
5. Write a draft of the project, using the outline as a guide. Be sure to clearly introduce the topics and problem statement, support the claims with evidence and examples, and provide a strong conclusion that summarizes the main points.
6. Revise and edit the draft, paying close attention to the clarity and coherence of the argument made, the strength of the evidence and examples, and the overall effectiveness of the writing.Seek feedback from peers or instructors to help you refine your project, if needed.
7. Proofread the final draft carefully to ensure that it is free of errors and meets the requirements of the assignment. Be sure to include any necessary citations or references to sources consulted, and format the project according to the specific guidelines provided by the instructor or institution.

Architecture:

The Olympic Games are one of the most well-known and famous international sporting occasions in the world, drawing thousands of competitors from all over the world to compete in a range of disciplines. The introduction of the Winter Olympics, Paralympic Games, Youth Olympics, as well as other national and international sporting competitions, are just a few of the alterations that have been made to the Olympic Games over time. A plethora of information on the Olympic Games has been produced as a result of the evolution of the Olympic Movement and developments in technology, economics, and politics. With the help of IBM Cognos Analytics and IBM Db2, we hope to use this project to study and analyse the data, find insights into the Olympic Games, and communicate those insights in a useful and usable manner.

The Architecture consists of 5 levels:

- IBM DB2:

By offering a dependable and secure database management system for storing the data relevant to the Olympic Games, IBM Db2 plays a significant part in the project's architecture. It enables the effective gathering and archiving of massive amounts of data, which can then be processed and translated into a structured format that IBM Cognos Analytics can use. The project can guarantee the data's correctness and integrity by utilising IBM Db2, which is essential for producing trustworthy reports and visualisations. Furthermore, IBM Db2 offers cutting-edge security tools that can shield the data from unauthorised access, guaranteeing that it is kept private and secure. In general, IBM Db2 is a crucial part of the project because it allows for effective and safe data administration.

- IBM Cognos:

IBM Cognos Analytics is essential to this project because it offers strong business intelligence and data visualisation features that let us glean insightful information from the Olympic Games data. We may build specialised reports and interactive dashboards with IBM Cognos Analytics that let us filter, sort, and dig down into certain data points, among other ways to study the data. In addition, IBM Cognos Analytics offers sophisticated analytics tools that let us spot patterns and trends in the data as well as predictive analytics tools that let us predict what will happen in the future. Overall, IBM Cognos Analytics offers a rich set of tools that let us get the most out of the information linked to the Olympic Games.

- The dataset:

This project's base is the Olympics dataset, which provides the raw data that will be analysed and visualised by IBM Cognos Analytics and IBM Db2. The dataset includes data on athletes, nations, events, and performance indicators in addition to a variety of other information regarding the Olympic Games. By utilising this dataset, we may learn more about a variety of subjects, including which nations and athletes have historically excelled in particular sports, how the Olympics have changed over time and so on. The collection also makes it possible to perform in-depth assessments of particular features of the Olympic Games, such as how various variables affect athlete performance or how the Olympics'impact has evolved through time.Ultimately, the Olympics dataset is the key to unlocking the insights that will enable us to better understand and analyze this iconic global event.

- The dashboard:

By offering a visually appealing and dynamic means to communicate the insights and conclusions obtained from the study of the Olympic Games dataset, the dashboard plays a significant role in this project. Key performance indicators (KPIs), charts, graphs, and other visualisations that offer a thorough and understandable overview of the data are displayed on the dashboard. Stakeholders may quickly and easily access the most pertinent data via the dashboard, such as which nations have won the most medals or which sports have seen the fastest rate of growth. Additionally, the dashboard enables stakeholders to interact with the data by changing filters to examine various facets of the data or diving down into particular data points.The dashboard, in general, is a crucial part of this project since it offers a useful approach to communicate the insights and conclusions obtained from the study of the Olympic Games dataset in a way that is both educational and simple to comprehend.

- Users:

The user is an essential part of our project because they will be the final recipients of the insights and conclusions drawn from the examination of the dataset related to the Olympic Games. The user may be a stakeholder, such as an executive, analyst, or coach, looking for insights to inform decision-making, or they may be a fan curious about the development of the Olympic Games. We can make sure that the analysis and visualisation of the Olympic Games data is personalised to the user's needs and offers the most value by comprehending the user's goals, preferences, and requirements. Further research and study of the data, which results in new insights and discoveries, might be sparked by the user's interaction with the dashboard and the insights provided.

Solution Architecture Diagram: