PROJECT - DATA WAREHOUSING WITH IBM CLOUD APPLICATION DEVELOPMENT – PHASE 1

PROBLEM DEFINITION: The project involves designing and setting up a robust data warehouse using IBM Cloud Db2 Warehouse. The objective is to bring together data from various sources, perform advanced data integration and transformation, and provide data architects with the tools to explore, analyze, and deliver actionable data for informed decision-making. This project encompasses defining the data warehouse structure, integrating data sources, performing ETL (Extract, Transform, Load) processes, and enabling data analysis

PROJECT OBJECTIVES :

These objectives aim to enhance data management, analysis, and decision-making capabilities within the IBM Cloud Application Development environment

1.Establish a robust data warehousing architecture on IBM Cloud.

2.Ingest, transform, and load (ETL) data from various sources into the data warehouse.

3.Develop data analysis and reporting capabilities for applications using IBM Cloud analytics services.

4.Ensure data security and compliance with relevant regulations.

5.Implement scalability and performance optimization measures.

6.Integrate the data warehouse seamlessly with existing and new applications.

7.Implement data governance practices to maintain data quality and access control.

8.Establish backup and disaster recovery procedures.

PROJECT PHASES:

1. PLANNING AND REQUIREMENTS GATHERING:

* Define project scope, goals, and stakeholders.
* Identify data sources and data types.
* Determine the specific IBM Cloud data warehousing services to be used.
* Create a project timeline and budget.

2. DATA WAREHOUSE DESIGN AND SETUP:

* Configure and provision the IBM Cloud data warehouse environment.
* Design the database schema and data models.
* Set up data integration pipelines for ETL processes.

3. DATA INGESTION AND TRANSFORMATION:

* Develop data ingestion processes to pull data from source systems.
* Implement transformation routines to clean and structure incoming data.
* Schedule and automate ETL jobs.

4. ANALYTICS AND REPORTING INTEGRATION:

* Integrate analytics and reporting tools with the data warehouse.
* Develop dashboards and reporting features for applications.
* Implement data analysis and visualization components.

5. SECURITY AND COMPLIANCE:

6. SCALABILITY AND PERFORMANCE OPTIMIZATION:

7. APPLICATION INTEGRATION:

8. DATA GOVERNANCE AND QUALITY ASSURANCE:

9. BACKUP AND DISASTER RECOVERY:.

10. TESTING, DEPLOYMENT, AND MAINTENANCE.

11. DOCUMENTATION AND KNOWLEDGE TRANSFER:

* Create documentation for system architecture, ETL processes, and data governance.
* Provide training and knowledge transfer to relevant teams.

12. PROJECT CONCLUSION AND EVALUATION:

* Review project objectives and deliverables.
* Conduct a post-implementation review to assess project success.
* Document lessons learned and recommendations for future projects.