Project Design Phase-II
Technology Stack (Architecture & Stack)

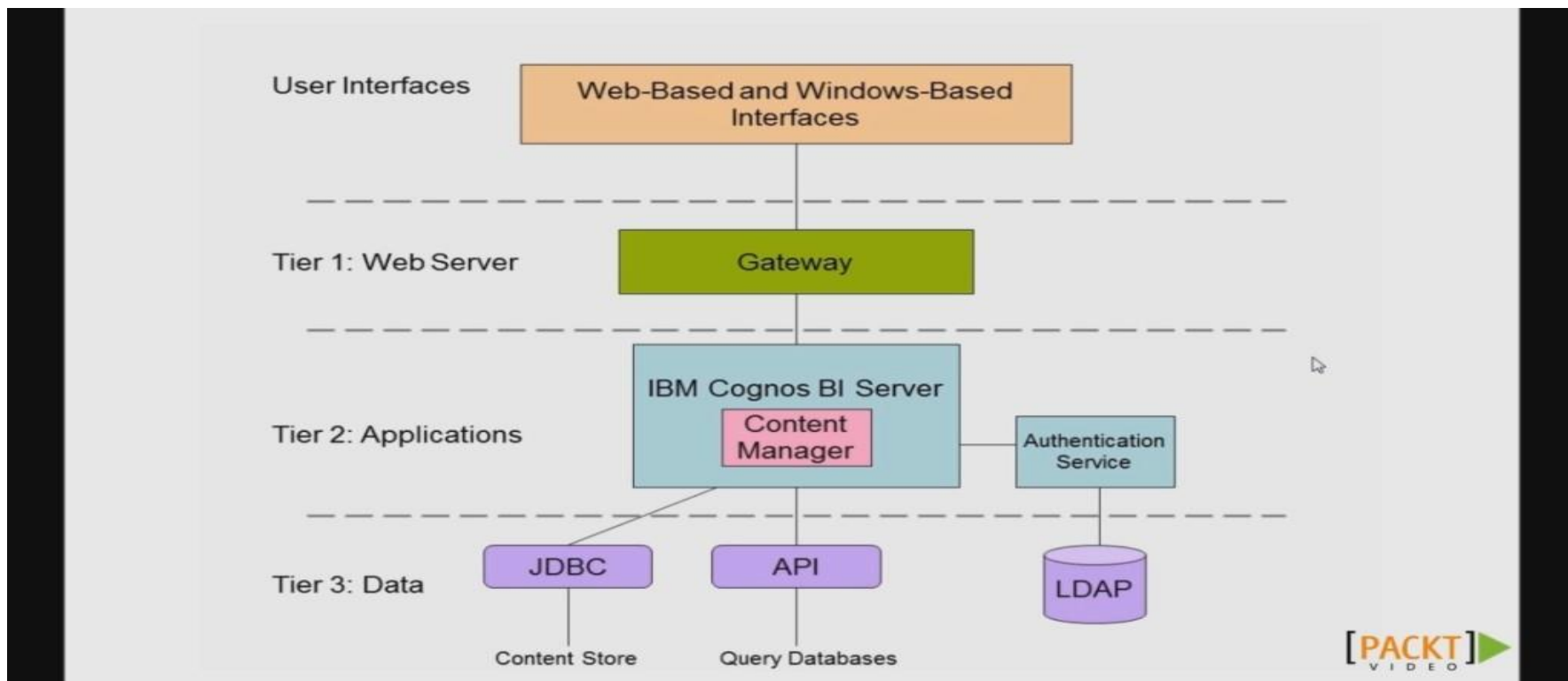| Date	13 May 2023
Team ID	NM2023TMID00064
Project Name	Project - **Global Wealth Divide: A Comprehensive Study of Income Inequality Across the World**
Maximum Marks	4 Marks

Technical Architecture:

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	The interface by which the user can interact.	HTML, CSS, Python
2.	Application Logic-1	The backend API provide the template and flow of the application.	Python, Flask
3.	Application Logic-2	The BI tool provide the live dashboard in the web page.	IBM Cognos
4.	Cloud Database	Database Service on Cloud provided the live data by the connection with the BI tool.	IBM DB2
5.	File Storage	The storage which stores the file required for the project.	Local Filesystem
6.	Infrastructure (Server / Cloud)	Application Deployment on Local System / Cloud Local Server Configuration: Localhost	Local

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Flask web framework.	Flask
2.	Security Implementations	Cognos security is a component of the IBM Cognos framework that manages user access to data. Cognos security manages authorization and authentication through third-party security providers, such as LDAP or Active Directory.	LDAP, Active Directory.
3.	Scalable Architecture	3-tier architecture.	Data : JDBC,LDAP,API Applications : IBM Cognos BI server User Interface : Flask

S.No	Characteristics	Description	Technology
4.	Availability	To allow fast retrieval, Content Manager builds an in-memory cache to service many requests. This ensures optimal performance and enhances scalability by limiting the number of database reads required to meet user requests. In the single Content Manager process, multiple threads can concurrently service requests for content. Content Manager creates one or more threads for each user request. Performance depends on the power of the CPU of the computer on which Content Manager is installed.	Content Manager on Cognos
5.	Performance	• The correct queries are generated, and they run fast. • The correct indexes have been created. • The physical properties of the database are optimized. • Concurrent query execution that uses HTTP/2	Cognos Analytics 11.1 R5