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

Date	27 October 2023
Team ID	NM2023TMID08824
Project Name	Project – Creating Blog using WordPress Platform (Digital Marketing)

Technical Architecture:

The Deliverable shall include the architectural diagram as below and the information as per the table1 & table 2

Example: Technology Stack

Reference: https://developer.ibm.com/patterns/ai-powered-backend-system-for-order-processing-during-pandemics/

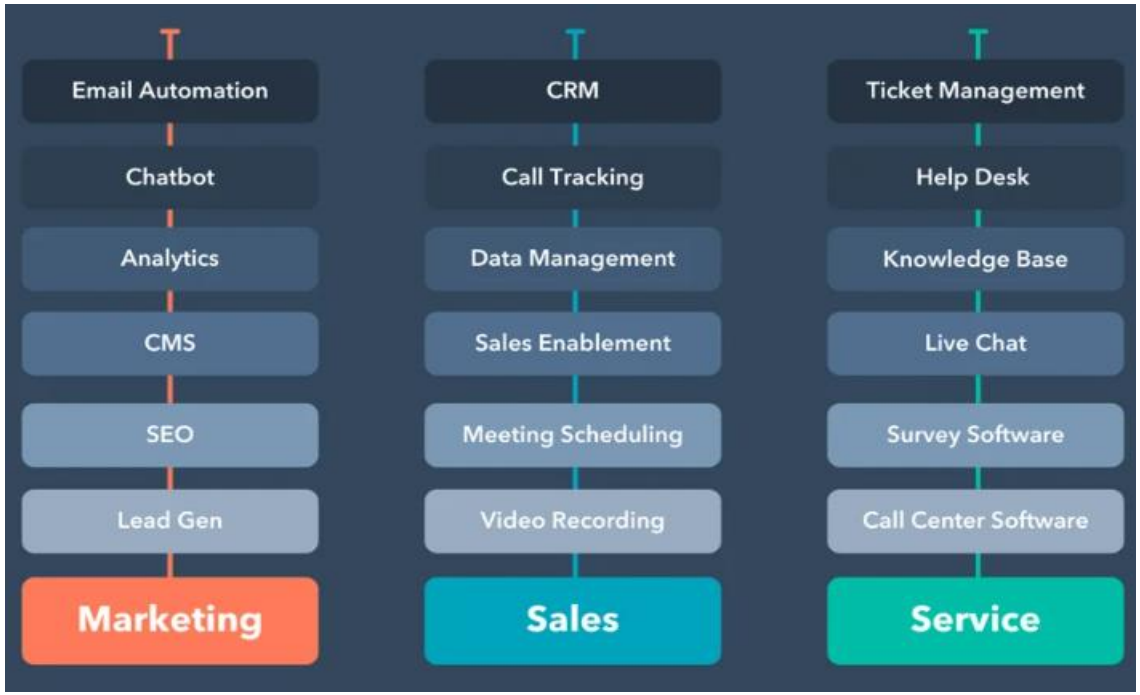

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	The user interface (UI) provides an intuitive and user-friendly platform for users to interact with the technology knowledge center.	HTML, CSS, JavaScript, and front-end frameworks like React or Angular.
2.	Application Logic-1	Application logic-1 encompasses core functionalities like content management and user interactions in the technology knowledge center.	Backend technologies like Ruby on Rails, Django, or Node.js.
3.	Application Logic-2	Application logic-2 includes user management and personalized content recommendations for enhanced user experiences.	Custom algorithms, APIs, and server-side scripting.
4.	Application Logic-3	Application logic-3 manages collaborative tools and user-generated content, enabling discussions and project management.	Frameworks for discussion forums (e.g., Discourse) and project management tools.
5.	Database	The database stores and manages knowledge resources, user data, and system configurations.	Relational databases (e.g., MySQL, PostgreSQL) or NoSQL databases (e.g., MongoDB) for flexibility.
6.	Cloud Database	Cloud-based databases provide scalable, distributed data storage for high availability and performance.	Cloud database services like Amazon RDS or Azure Cosmos DB.
7.	File Storage	File storage manages attachments, multimedia, and content assets within the knowledge center.	Cloud storage solutions (e.g., Amazon S3) or on-premises file storage.
8.	External API-1	External API-1 integrates third-party data or services, enriching content and features in the knowledge center.	RESTful or GraphQL APIs for data retrieval and integration.
9.	External API-2	External API-2 connects to external services for authentication, payment processing, or other essential functions.	OAuth for authentication, payment gateways, and various RESTful APIs.
10.	Machine Learning Model	Machine learning models power content recommendations, personalization, and data analysis to enhance user experiences.	Python with machine learning frameworks such as TensorFlow, scikit-learn, or PyTorch.
11.	Infrastructure (Server / Cloud)	Infrastructure comprises the server or cloud environment where the knowledge center is hosted, ensuring system stability and scalability.	Cloud providers like AWS, Azure, or Google Cloud for scalable and reliable hosting infrastructure.

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Open-source frameworks enable cost-effective development and customization.	Ruby on Rails and WordPress.
2.	Security Implementations	Security measures protect user data and prevent cyber threats.	SSL/TLS, firewalls, and role-based access control.
3.	Scalable Architecture	Scalable architecture supports growth without performance degradation.	Cloud services (e.g., AWS, Azure) and containerization (e.g., Docker).
4.	Availability	High availability ensures uninterrupted access for users.	Load balancers, database clustering, and CDNs.
5.	Performance	Performance optimization provides a responsive user experience.	Caching (Redis, Memcached), CDNs, and monitoring tools (New Relic).

References:

https://c4model.com/

https://developer.ibm.com/patterns/online-order-processing-system-during-pandemic/

https://www.ibm.com/cloud/architecture

https://aws.amazon.com/architecture

https://medium.com/the-internal-startup/how-to-draw-useful-technical-architecture-diagrams-2d20c9fda90d