

Project Planning Phase

Project Planning Template (Technology Stalk)

Team ID: NM2023TMID07142

Project Name Project - "Analytics Tool For Placements"

Technical Architecture:

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

Table-1 : Components & Technologies:

S.No	Components	Description	Technology
1	User Interface	How user interacts with application e.g. Web UI, Mobile App, Chatbot etc	HTML, CSS, JavaScript / Angular Js / React Js etc.
2	Application Logic-1	Logic for a process in the application	Java / Python
3	Application Logic-2	Logic for a process in the application	IBM Watson STT service
4	Application Logic-3	Logic for a process in the application	IBM Watson Assistant
5	Database	Data Type, Configurations etc.	MySQL, NoSQL, etc
6	Cloud Database	Database Service on Cloud	IBM DB2, IBM Cloudant etc.
7	File Storage	File storage requirements	IBM Block Storage or Other Storage Service or Local Filesystem
8	External API-1	External API used in the application for REPORT	IBM API, etc
9	External API-2	External API used in the application for STORY	IBM API, etc
10	Machine Learning Model	Machine Learning Model for Training & Predictions	Numpy and DS
11	Infrastructure (Server / Cloud)	Application Deployment on Local System / Cloud Local Server Configuration: app.py Cloud Server Configuration : github pages	Local, Cloud Foundry, Kubernetes, etc.

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1	Open-Source Frameworks	open-source frameworks used	Dijango, Express.js
2	Security Implementations	security / access controls	Encryptions, IAM Controls, OWASP etc.
3	Scalable Architecture	3 – tier, Micro-services	Presentation, Application & data
4	Availability	use of load balancers, distributed servers etc	IBM default
5	Performance	umber of requests per sec, use of Cache, use of CDN's	Github default

1.1 Technical Architecture

The technical architecture of the "Analytics Tool For Placements" is designed to ensure the efficient and secure operation of the system. It consists of the following components:

1.1.1 Web Interface

The web interface is built using modern web development technologies and frameworks. It provides users with a user-friendly platform to access placement data, interact with visualizations, and navigate the system.

1.1.2 IBM Cognos Analytics

IBM Cognos Analytics serves as the core analytics and visualization platform. It hosts the Placement Data Repository and provides tools for data analysis, dashboard creation, and storytelling with data. The integration with the web interface allows users to access and interact with data visualizations and insights.

1.1.3 Database

The database stores user account information, including authentication data for the website. It ensures user data is securely managed and accessed as needed.

1.1.4 Web Integration

The web integration component uses iframe technology to seamlessly embed dashboards, stories, and reports from IBM Cognos Analytics into the website. This integration enables users to access placement insights without the need for separate logins.

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Technical Architecture:

Web Interface (Flask Web App) <--- User Interaction
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|--- IBM Cognos Analytics Integration
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|--- Security Measures (Data Encryption, Access Controls)
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|--- User Training and Support

Database (RDBMS/NoSQL) <--- Data Storage

Server/Cloud Hosting <--- Deployment
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Figure 1: Architecture of Project Model