

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

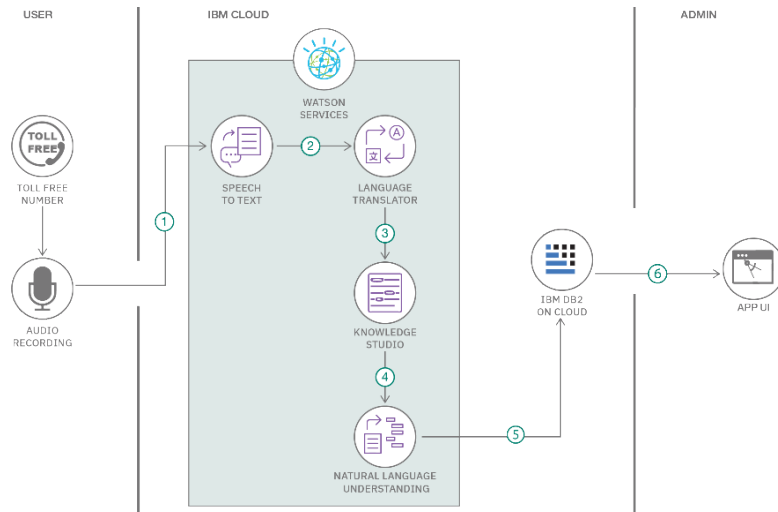
Date	03 October 2022
Team ID	Team-591233
Project Name	Dissecting the Digital Landscape: A Comprehensive Analysis of Social Media"
Maximum Marks	4 Marks

Technical Architecture:

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

Example: Order processing during pandemics for offline mode

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



Guidelines:

1. Include all the processes (As an application logic / Technology Block)
2. Provide infrastructural demarcation (Local / Cloud)
3. Indicate external interfaces (third party API's etc.)
4. Indicate Data Storage components / services
5. Indicate interface to machine learning models (if applicable)

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	How user interacts with application	HTML, CSS, JavaScript,Python,R
2.	Application Logic-1	Logic for a process in the application	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, Oracle
6.	Cloud Database	Database Service on Cloud	IBM DB2, IBM Cloudant, Cassandra
7.	File Storage	File storage requirements	Local Filesystem
8.	External API-1	Purpose of External API used in the application	Hootsuite, Graph API
9.	External API-2	Purpose of External API used in the application	Aadhar API, etc.
10.	Machine Learning Model	Purpose of Machine Learning Model	Natural Language Processing, Clustering, Naive Bayes
11.	Infrastructure (Server / Cloud)	Application Deployment on Local System / Cloud Local Server Configuration: Cloud Server Configuration :	Local cloud storage, amazon web services.

Table-2: Application Characteristics:

S.N o	Characteristics	Description	Technology
1.	Open-Source Frameworks	List the open-source frameworks used	Moodle, GNU Social
2.	Security Implementations	List all the security / access controls implemented,use of firewalls etc.	e.g. SHA-256, Encryptions, IAMControls, OWASP etc.
3.	Scalable Architecture	Justify the scalability of architecture (3 – tier, Micro-services)	Serverless Computing, Monitoring and Analytics Tools
S.N o	Characteristics	Description	Technology
4.	Availability	Justify the availability of application (e.g. use ofload balancers, distributed servers etc.)	Akamai, Cloudflare, or Amazon CloudFront
5.	Performance	Design consideration for the performance of theapplication (number of requests per sec, use of Cache, use of CDN's) etc.	CDNs, In-Memory Databases(Redis or Memcached)

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>

Project Planning Phase

Project Planning Template (Product Backlog, Sprint Planning, Stories, Story points)

Date	18 October 2022
Team ID	Team-591233
Project Name	Dissecting the Digital Landscape: A Comprehensive Analysis of Social Media"
Maximum Marks	8 Marks

Product Backlog, Sprint Schedule, and Estimation (4 Marks)

Use the below template to create product backlog and sprint schedule

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority	Team Members
Sprint-1	Registration	USN-1	As a user, I can register for the application by entering my email, password, and confirming my password.	2	High	Saiteja
Sprint-1		USN-2	As a user, I will receive confirmation email once I have registered for the application	1	High	Saiteja
Sprint-1		USN-3	As a user, I can register for the application through Facebook	2	Low	Saiteja
Sprint-1		USN-4	As a user, I can register for the application through Gmail	2	Medium	Saiteja
Sprint-2	Login	USN-5	As a user, I can log into the application by entering email & password	1	High	Varun
Sprint-2		6 USN	As a user I can log into the application using google account	2	High	Varun
Sprint-2		-7 USN	As a user I can log into the application using iCloud account	1	low	Varun

Sprint-2		8 USN	As a user I can log into the application using Outlook account	1	Medium	Varun
Sprint-2		-9 USN	As a user I can log into the application using your own username and password	2	Medium	Varun
Sprint-3	Advertisement	-10 USN	As a business ads can be seen on the dashboard	2	High	Arin
Sprint-3		11 USN	As a business ads can be seen on the short form video	2	High	Arin
Sprint-3		12 USN	As a small business ads can be seen on the Posts	2	High	Arin
Sprint-3		13 USN	As a small business ads can be seen as commercials	1	Low	Arin

Project Tracker, Velocity & Burn-down Chart: (4 Marks)

Sprint	Total Story Points	Duration	Sprint Start Date	Sprint End Date (Planned)	Story Points Completed (as on Planned End Date)	Sprint Release Date (Actual)
Sprint-1	10	6 Days	24 Oct 2022	27 Oct 2022	10	27 Oct 2022
Sprint-2	10	6 Days	31 Oct 2022	05 Nov 2022	10	05 Nov 2022
Sprint-3	10	6 Days	07 Nov 2022	12 Nov 2022	10	12 Nov 2022

Velocity:

Imagine we have a 10-day sprint duration, and the velocity of the team is 20 (points per sprint). Let's calculate the team's average velocity (AV) per iteration unit (story points per day)

$$AV = \frac{\text{sprint duration}}{\text{velocity}} = \frac{20}{10} = 2$$

Burndown Chart:

A burn down chart is a graphical representation of work left to do versus time. It is often used in agile software development methodologies such as Scrum. However, burn down charts can be applied to any project containing measurable progress over time.

<https://www.visual-paradigm.com/scrum/scrum-burndown-chart/>

<https://www.atlassian.com/agile/tutorials/burndown-charts>

Reference:

<https://www.atlassian.com/agile/project-management> <https://www.atlassian.com/agile/tutorials/how-to-do-scrum-with-jira-software> <https://www.atlassian.com/agile/tutorials/epics> <https://www.atlassian.com/agile/tutorials/sprints> <https://www.atlassian.com/agile/project-management/estimation> <https://www.atlassian.com/agile/tutorials/burndown-charts>