

Project Design Phase-II

Technology Architecture

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| Date | 03 November 2022 |
| Team ID | PNT2022TMID00862 |
| Project Name | Skill/Job Recommender Application |
| Maximum Marks | 4 Marks |

Technical Architecture:

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

Guidelines:

1. Every process must be included as a part of application logic or technology block
2. Establish infrastructure boundaries (local / cloud)
3. Identify external interfaces (such as third-party APIs).
4. List the components and services for data storage.
5. Describe the machine learning model interface (if applicable)

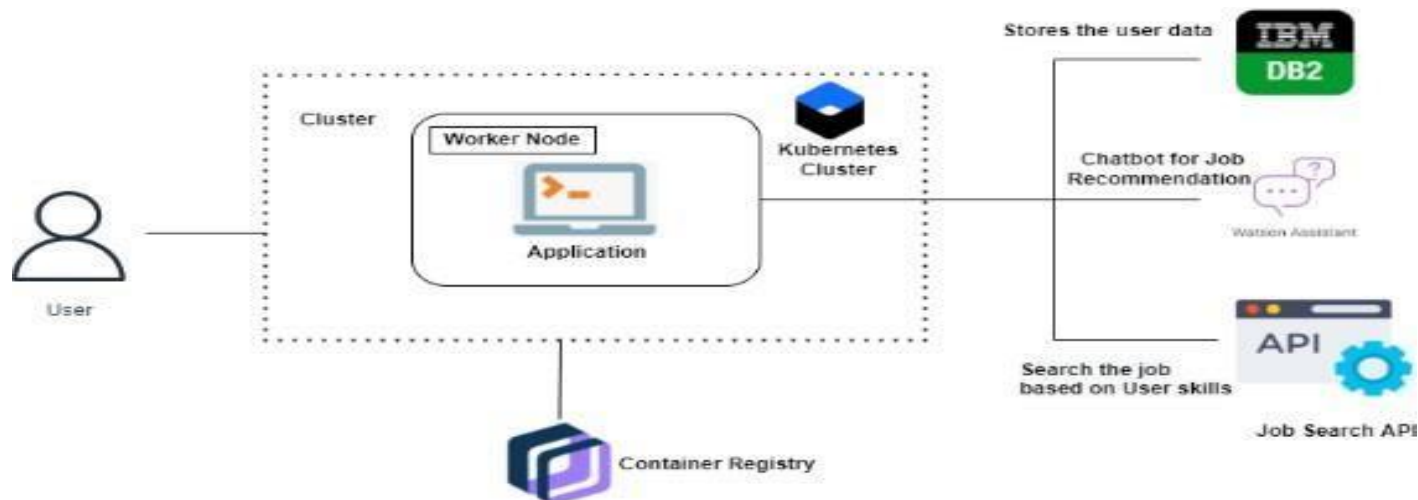


Table-1: Components & Technologies:

| S.No | Component | Description | Technology |
|------|------------------------|---|---|
| 1. | Registration | How user interacts with application by entering email, password and confirming password. | HTML, CSS, JavaScript |
| 2. | Login | A user can log into the application by entering email & password. | HTML, CSS, JavaScript |
| 3. | User Details | A User can fill personal details like Mobile number, Blood group, Gender ,Address ,etc. | HTML, CSS, JavaScript |
| 4. | User Experience | Interaction between user and application | HTML, CSS, JavaScript/Angular JS/React JS |
| 5. | Creating an Interface | Making an application for the job searching | Java/Python |
| 6. | Voice Support | Using voice commands for searching rather than typing | IBM Watson STT service |
| 7. | Chat bot Support | Interface for interaction with user | IBM Watson Assistant |
| 8. | Database | Data type, configurations ,etc. | MySQL ,NoSQL ,etc. |
| 9. | Online Database | Database Service on Cloud | IBM DB2, IBM Cloudant etc. |
| 10. | Keeping Files | File storage requirements | IBM Block Storage or Other Storage Service or Local File system |
| 11. | Machine Learning Model | Usage of Machine Learning Model | Object Recognition Model, etc. |
| 12. | Infrastructure | Application Deployment on Local System / Cloud : Local Server Configuration Cloud Server Configuration | Local, Cloud Foundry, Kubernetes ,etc. |

Table-2: Application Characteristics:

| S.No | Characteristics | Description | Technology |
|------|--------------------------|--|---|
| 1. | Open-Source Frameworks | Describe the utilized open-source frameworks | Technology of Open source framework |
| 2. | Security Implementations | List all the security / access controls implemented, use of firewalls etc. | e.g. SHA-256, Encryptions, IAM Controls, OWASP etc. |

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|----|-----------------------|--|--|
| 3. | Scalable Architecture | Justify the scalability of architecture (3 – tier, Micro-services) | Artificial intelligence(AI) |
| 4. | Availability | Justify the application's availability | RAID(redundant array of independent disks) |
| 5. | Performance | Application performance (number of requests per second, use of Cache, use of CDNs, etc.) was taken into account during design. | DRAM or flash memory |

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-2d20c9fda>