**Project Design Phase**

**Phase 4**

Technology Stack

|  |  |
| --- | --- |
| Date | 27 October 2023 |
| Team ID | SI-GuidedProject-587558-1696963149 |
| Project Name | A Sleep Tracking App For A Better Night's Rest |
| 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. 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)

Datasest of Alarms and Music

Algo of Sleep Stage + Sleep Timer

Saving the Preferences of User

Creating the Interface for the User

User Integration

Import the Saved preferences

START

Passes input to app

Take input from user

Deployment of App

User Interface

User puts their preferences in alarms, music,etc.

Back End

Integration

User Interface

Table-1 : Components & Technologies:

|  |  |  |  |
| --- | --- | --- | --- |
| **S.No** | **Component** | **Description** | **Technology** |
| 1. | User Interface | How user interacts with application e.g. Web UI, Mobile App, Chatbot etc. | (Mobile) Android App |
| 2. | Application Logic-1 | Logic for a process in the application (Sleep Tracking) | Kotlin / JetpackCompose |
| 3. | Application Logic-2 | Logic for a process in the application (Sleep Stage Tracker) | JavaScript |
| 4. | Application Logic-3 | Logic for a process in the application (Smart Alarm) | JavaScript |
| 5. | Database | Data Type, Configurations etc. (For Alarms and Music) | NoSQL |
| 6. | Cloud Database | Database Service on Cloud | For future iterations |
| 7. | File Storage | File storage requirements | Local Filesystem |

Table-2: Application Characteristics:

|  |  |  |  |
| --- | --- | --- | --- |
| **S.No** | **Characteristics** | **Description** | **Technology** |
| 1. | Open-Source Frameworks | List the open-source frameworks used | Technology of Opensource framework |
| 2. | Security Implementations | List all the security / access controls implemented, use of firewalls etc. | e.g. SHA-256, Encryptions, IAM Controls, OWASP etc. |
| 3. | Scalable Architecture | Justify the scalability of architecture (3 – tier, Micro-services) | Technology used |
| 4. | Availability | Justify the availability of application (e.g. use of load balancers, distributed servers etc.) | Technology used |
| 5. | Performance | Design consideration for the performance of the application (number of requests per sec, use of  Cache, use of CDN’s) etc. | Technology used |