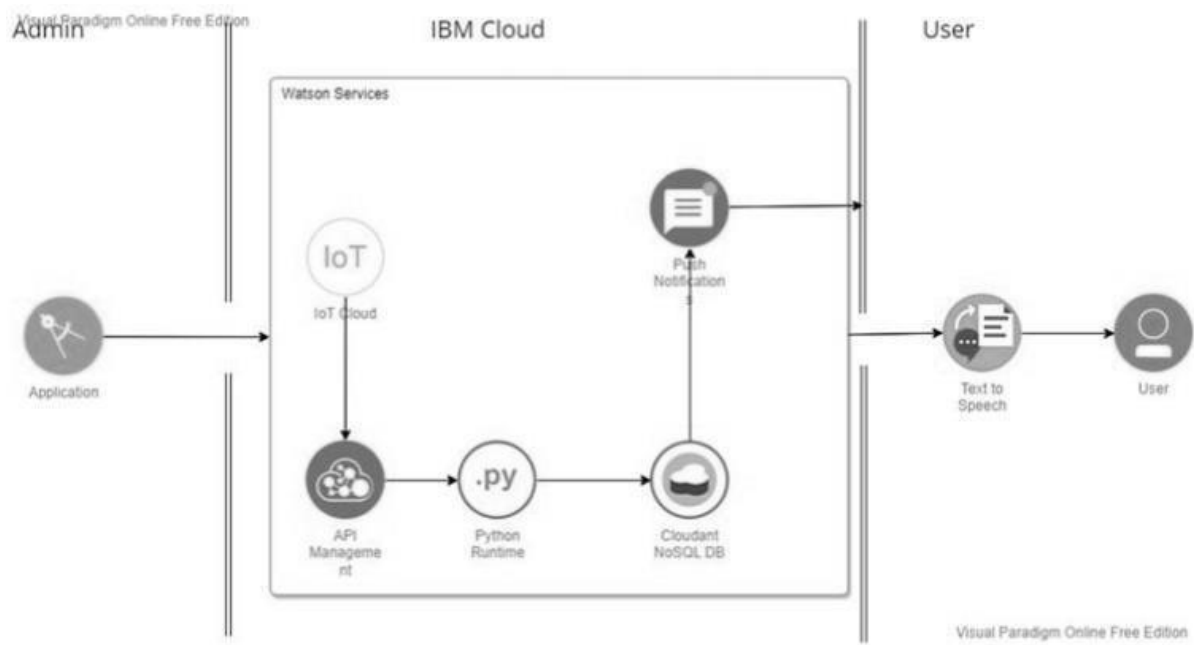


## PROJECT DESIGN PHASE - II

### TECHNOLOGY STACK ( ARCHITECTURE & STACK)

|               |  |
|---------------|--|
| Date          | 20-10-2022   |
| Team ID       | PNT2022TMID15955                                     |
| Project Name  | Personal Assistance for Seniors Who Are Self-Reliant |
| Maximum Marks | 4 Marks  |

#### Technical Architecture :



**Table-1: Components & Technologies:**

| S.No | Component                       | Description  | Technology                   |
|------|---------------------------------|--|------------------------------|
| 1.   | User Interface                  | Mobile App   | HTML, CSS, JavaScript        |
| 2.   | Application Logic-1             | Mobile App to enter the Medicine Details weekly                      | Python                       |
| 3.   | Application Logic-2             | Gets the medication data from database                               | IBM Watson IoT API Call data |
| 4.   | Application Logic-3             | Converts the text to speech to pronunciation for the user            | IBM Watson Assistant         |
| 5.   | Database                        | Medication time and tablets name on daily and                        | MySQL                        |
| 6.   | Cloud Database                  | Call the data IBM Cloudant is used and user login credentials        | IBM DB2, IBM Cloudant        |
| 7.   | File Storage                    | App code and IoT credentials are stored and API keys                 | IBM Block Storage            |
| 8.   | External API-1                  | To get the medicine box status Open or not                           | IBM box status API           |
| 9.   | External API-2                  | To get the login credentials in IBM DB2                              | Username and Password API    |
| 10.  | Machine Learning Model          | To convert the text into speech for voice command the tablet details | Text to speech               |
| 11.  | Infrastructure (Server / Cloud) | To host the server and application                                   | Cloud Foundry, Node Red      |

**Table-2: Application Characteristics:**

| S.N | Characteristicso         | Description  | Technology                     |
|-----|--------------------------|--|--------------------------------|
| 1.  | Open-Source Frameworks   | To develop the application interface, we use<br><b>MIT App Inventor</b>                  | <b>MIT APP INVENTOR</b>        |
| 2.  | Security Implementations | To secure the users logincredentials and personal information                            | <b>SHA-256, OWASP</b>          |
| 3.  | Scalable Architecture    | To scale the application database  | <b>IBM Auto scaling</b>        |
| 4.  | Availability             | To make use the application and dataare available 24/7                                   | <b>IBM Cloud load balancer</b> |
| 5.  | Performance              | To increase the performance the application<br>In hosted in thehigh-performance instance | <b>IBM instance</b>            |