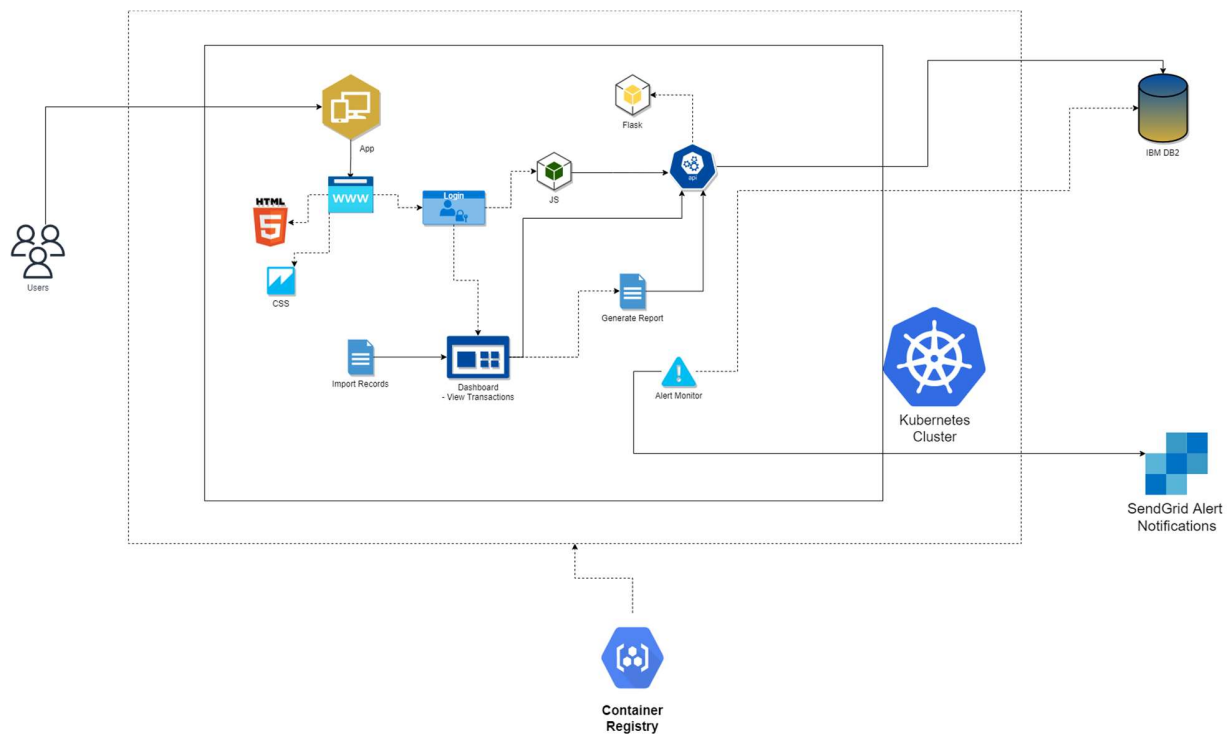


## PROJECT DESIGN PHASE - II

### TECHNOLOGY STACK (Architecture & Stack)

|               |                                      |
|---------------|--------------------------------------|
| Date          | 04 October 2022                      |
| Team ID       | PNT2022TMID47331                     |
| Project Name  | Personal Expense Tracker Application |
| Maximum Marks | 4 Marks                              |



**Table – 1: Components & Technologies**

| S.No | Components                      | Description   | Technology   |
|------|---------------------------------|---|--|
| 1.   | User Interface                  | How user interacts with application e.g. Web UI, Mobile App, Chat Bot, etc. | HTML, CSS, JavaScript / Bootstrap 5  |
| 2.   | Application Logic – 1           | Logic for a process in the application                                      | Python – Flask   |
| 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                        | Datatype, Configurations, etc.  | MySQL  |
| 6.   | Cloud Database                  | Database Service on Cloud   | IBM DB2  |
| 7.   | File Storage                    | File Storage Requirements   | Local File System  |
| 8.   | External API – 1                | Purpose of External API used in the app                                     | SendGrid API   |
| 9.   | External API – 1                | Purpose of External API used in the app                                     | Economic News API  |
| 10.  | Container Registry              | Container Images Storage  | Local Registry: DockerHub<br>Cloud Registry: Container Registry                |
| 11.  | Infrastructure (Server / Cloud) | Application Deployment on Local System / Cloud                              | Local Server Configuration: Minikube<br>Cloud Server Configuration: Kubernetes |

**Table – 2: Application Characteristics**

| S.No | Characteristics          | Description   | Technology                        |
|------|--------------------------|---|-----------------------------------|
| 1.   | Open source frameworks   | Open-source frameworks used                                 | Docsify, Elasticsearch            |
| 2.   | Security Implementations | Security & access controls implemented                      | Sha256 Hashing, IAM, OTP          |
| 3.   | Scalable Architecture    | Justify the scalability of architecture                     | Micro services architecture       |
| 4.   | Availability             | Justify the availability of application                     | Load Balancer                     |
| 5.   | Performance              | Design consideration for the performance of the application | Content Delivery Network, Caching |