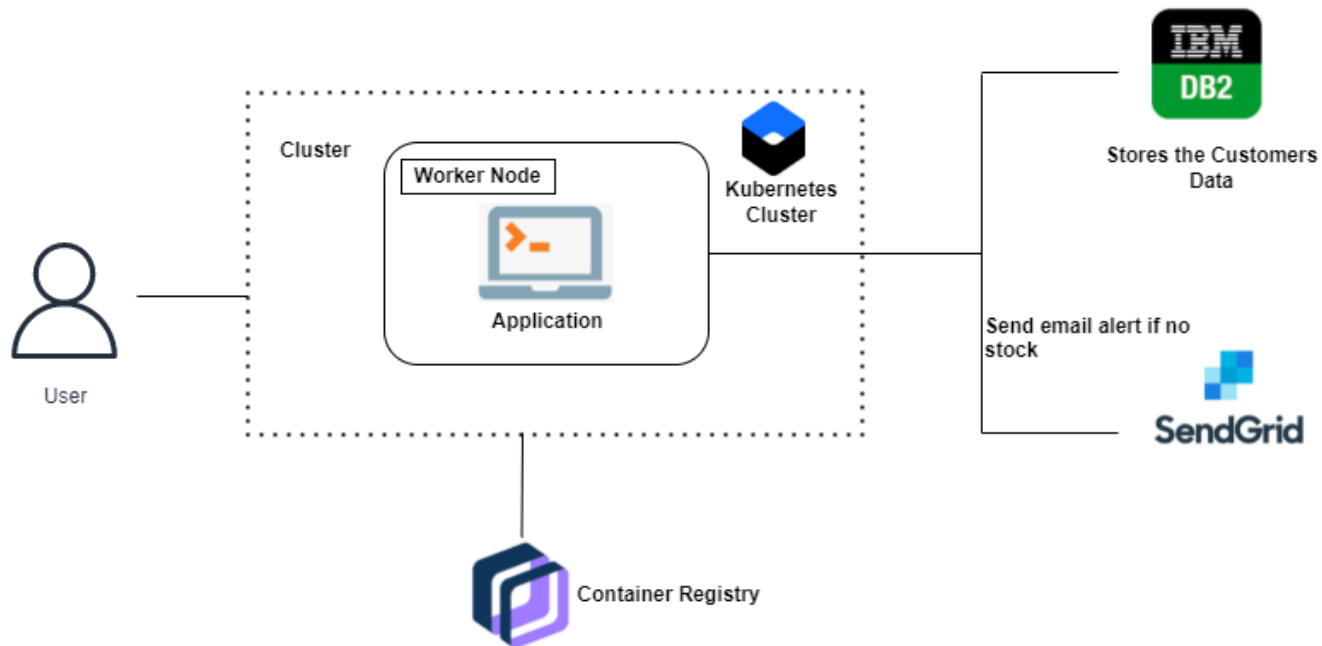


## Project Design Phase-II Technology Stack (Architecture & Stack)

|               |  |
|---------------|--|
| Date          | 03 October 2022                              |
| Team ID       | PNT2022TMID51359                             |
| Project Name  | Project – Inventory Management for Retailers |
| Maximum Marks | 4 Marks                                      |

### Technical Architecture:

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



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

| S.No | Component           | Description  | Technology                    |
|------|---------------------|--|-------------------------------|
| 1.   | User Interface      | Through web application, the information processed will be sent to the user via mail.                  | HTML, CSS, JavaScript, Python |
| 2.   | Application Logic-1 | User registration through form and confirmation will be sent to the user via email.                    | Python Flask                  |
| 3.   | Application Logic-2 | Dashboard is used by which the system will Maintain tracking of sales of product and inventory levels  | Flask                         |
| 4.   | Application Logic-3 | User will get notified about the stock status  | IBM Watson Assistant          |
| 5.   | Database            | The data can be stored in database and user can retrieve or manipulate the data whenever required.     | Sqlite                        |
| 6.   | Cloud Database      | Information of the stocks will be stored and hosted on the cloud.                                      | IBM DB2                       |
| 7.   | File Storage        | Required to store files like images  | IBM Cloud Object Storage      |
| 8.   | External API-1      | SendGrid used in application will send the email alert if there is less number or no stock to the user | SendGrid.                     |

|     |                        |  |                                |
|-----|------------------------|--|--------------------------------|
| 9.  | External API-2         | IBM container Registry enables you to store and distribute Docker images in a managed private registry | IBM container registry         |
| 10. | Machine Learning Model | Purpose of Machine Learning Model  | Object Recognition Model, etc. |

**Table-2: Application Characteristics:**

| S.No | Characteristics          | Description  | Technology                      |
|------|--------------------------|--|---------------------------------|
| 1.   | Open-Source Frameworks   | The web technologies listed are open source  | HTML, CSS, JS, Bootstrap, Flask |
| 2.   | Security Implementations | User login and authentication are done to provide secure access. The latest updated versions of the tool are used.   | . IBM Cloud Security, cookies.  |
| 3.   | Scalable Architecture    | The system availability is high, we make sure the unwanted DB access is minimized through SQL and code optimization. | IBM DB2, IBM Container registry |
| 4.   | Availability             | Scalable cloud architecture is made possible through virtualization.   | Docker, Kubernetes              |
| 5.   | Performance              | We provide fast access times and response times. Deployment is easy and fast by containerization                     | Flask, Docker, DB2              |

