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

Date	16 October 2022
Team ID	PNT2022TMID31596
Project Name	Project - Customer Care Registry
Maximum Marks	4 Marks

Technical Architecture:

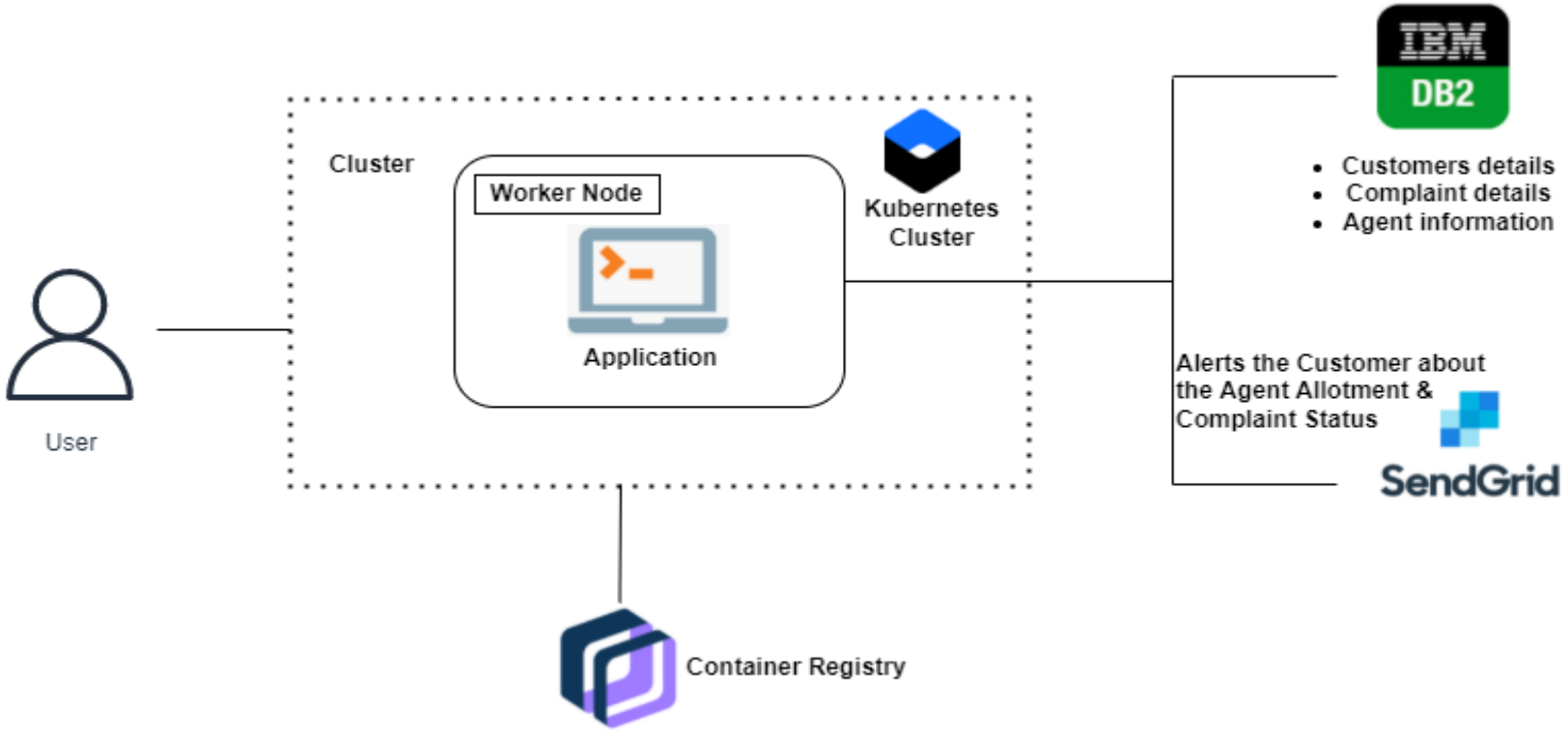

Table-1: Components & Technologies:

S No	Component	Description	Technology
1.	User Interface	The user engages with chatbots, the web user interface (login form, sign up form, dashboard, ticket status, and forget password page) (IBM Watson Assistant)	HTML, CSS, JavaScript
2.	Login Logic	The customer or agent clicks the Login button after entering their email address, password, and corresponding roles. The entered information is gathered, examined, and confirmed in order to find the relevant entry in the IBM DB2 database. Customer or agent logs in if everything is in agreement with the data in the IBM DB2..	HTML forms, Python, SQL, IBM DB2
3.	Register Logic	Customers enter their name, email, mobile number, and password to register on the app. The IBM DB2 database gathers and stores the entered data. The customer is then taken to the Login page once it is finished.	HTML forms, Python, SQL, IBM DB2
4.	Agent Creation Logic	Admin creates an agent with the following credentials. Name, email, mobile, gender, username, password. The data is collected and stored in the database.	HTML forms, Python, SQL, IBM DB2
5.	Ticket Creation Logic	Customer creates a new ticket in his dashboard, with the detailed description of his/her query (max of 150 characters). This ticket is then stored in the database with a unique ID and a foreign key as the customer ID.	HTML forms, Python, SQL, IBM DB2
6.	Agent Assigning Logic	Agent sees all the newly created tickets in his/her dashboard. Agent then goes on to assign an agent for each ticket. The ticket status is updated in the IBM DB2 and then the customer who raised that ticket is notified through mail that as agent has been assigned.	HTML forms, Python, SQL, IBM DB2, SendGrid

7.	Cloud Database	Stores all the details. Customer details, Agent details, Admin details, Ticket details.	IBM DB2 database
8.	Object Storage	Stores some images in buckets. Used to display static images in the application.	IBM Cloud Object Storage
9.	Chatbot (External API)	Used to guide customers, agents while logging in. Also, helps the customers while raising a ticket. Agents / Customers can interact with the chatbot and act right.	IBM Watson Assistant API
10.	SendGrid (External API)	used to inform clients that a ticket they have raised has been allocated to an agent. Additionally, for the agents and clients when they reset their passwords.	SendGrid API, Python

Table-2: Application Characteristics:

S No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Flask micro-web framework	Python, Jinja, WSGI
2.	Security Implementations	• All passwords are encrypted • Access control is implemented using Login Manager in Flask • Roles are defined in the SQL to prevent data manipulation and access	SHA-256 encryption, Flask, SQL