# Project Design Phase-II
# Data Flow Diagram & User Stories

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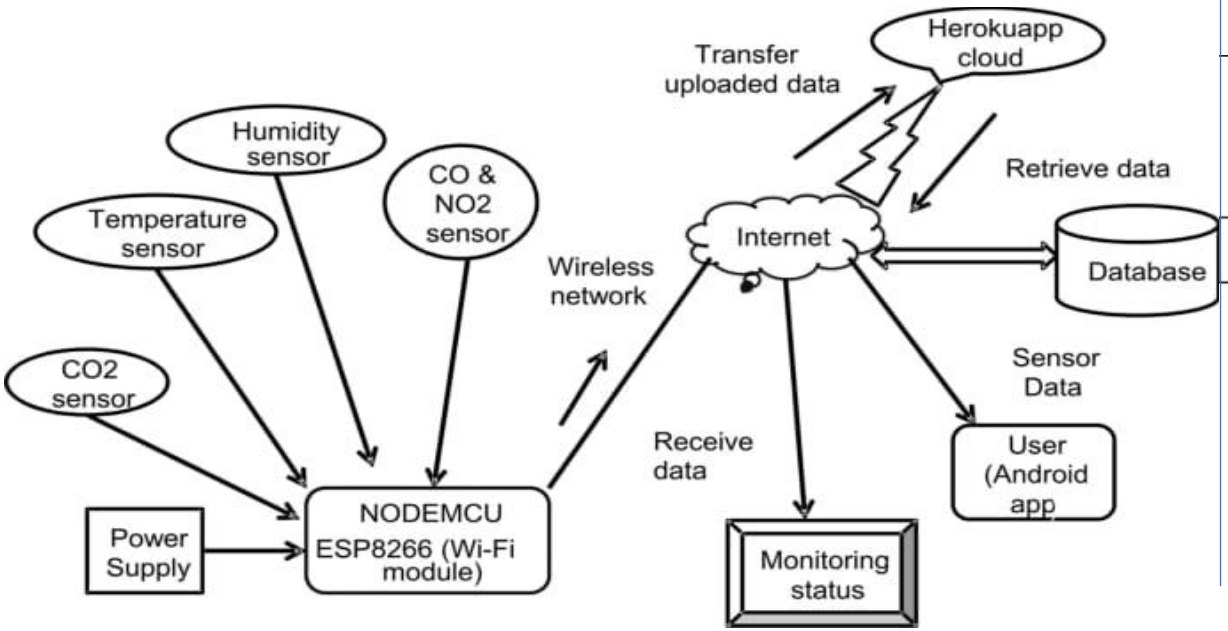
| Date | 22 October 2022 |
| Team ID | PNT2022TMID01115 |
| Project Name | Project – Hazardous Area Monitoring for Industrial Plant powered by IoT. |
| Maximum Marks | 4 Marks |

## Data Flow Diagrams:

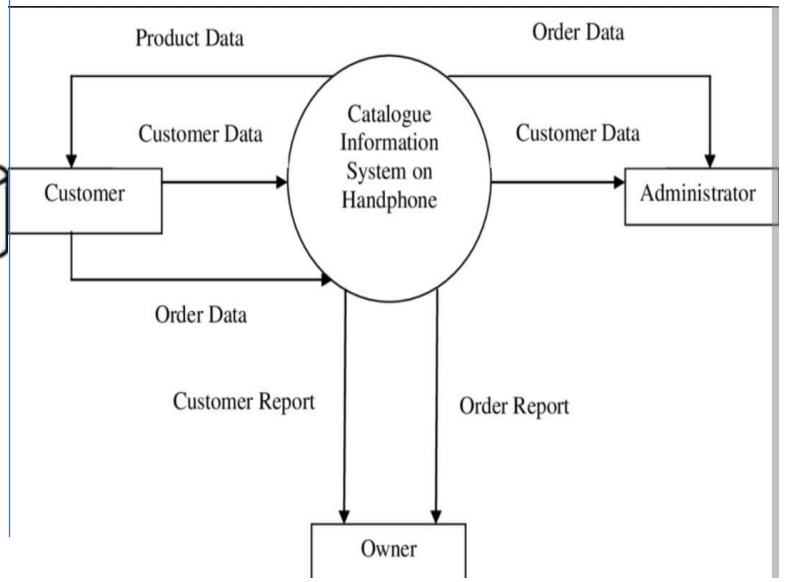
A Data Flow Diagram (DFD) is a traditional visual representation of the information flows within a system. A neat and clear DFD can depict the right amount of the system requirement graphically. It shows how data enters and leaves the system, what changes the information, and where data is stored.

**FLOW:**

1. Necessary Python code for collecting temp. details from IoT device is written.
2. IoT device is connected with the IBM Watson IoT platform for gathering data.
3. Next step uses Node-Red services after IoT platform is all set.
4. Cloudant DB is used for storing and retrieving data.
5. Node-Red services are used to create Web application and UI designs.
6. (6,7,8,9,10,11) The user uses Smartwatch, Web and mobile app to receive various information and alerts.




DFD Level 0 (Industry Standard)



**User Stories**

Use the below template to list all the user stories for the product.

| User Type | Functional Requirement (Epic) | User Story Number | User Story / Task | Acceptance criteria | Priority | Release |
|---|---|---|---|---|---|---|
| Technician | Installation | USN-1 | The technician must install the thermistor at points to ensure the entire area of the plant is covered. | A sensor can be found in every area of the plant. | High | Sprint-1 |
| | Data Gathering | USN-2 | The thermistor and thermocouple obtain the temperature of theirrespective area using sensors. | The temperature of areas within the plant is obtained. | High | Sprint-1 |
| | Data Sync | USN-3 | The sensors send their data to the cloud in the real time which is in turn sent to nearby wearable devices and the administrators dashboard. | Data is sent to the cloud successfully and synced with other devices. | High | Sprint-1 |
| Worker | Wearable device display | USN-4 | The wearable devices should display the data sent by thermistor within the area. | The user can see the Temperature , pressure of the area on their device. | High | Sprint-1 |
| | Wearable device adjustments | USN-5 | The user can vary the length and shape of id card | The user can make adjustments to the device according to there comfort | Low | Sprint-2 |
| | Wearable display customization | USN-6 | The user can adjust software setup to suit there needs in mobile app itself | The user can modify the display of the app to increase readability. | Medium | Sprint-2 |
| | SMS Notifications | USN-7 | The user is sent a notification to their phone from the wearable device through an API when the area they are in reaches dangerous temperatures. | The user is informed of potential danger via SMS as soon as it is detected by The sensor | High | Sprint-1 |
| Administrator | Admin Dashboard | USN-8 | send the data through the cloud toa dashboard which is run by the administrator. | The data of all the sensor can be viewed by the administrator of the plant. | High | Sprint-1 |
| | Dashboard Customization | USN-9 | The dashboard can be customized by the admin to suit their personal requirements and priorities. | The admin can customize the UI for their dashboard. | Medium | Sprint-2 |