Project Design Phase-II

Data Flow Diagram & User Stories

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| --- | --- |
| Date | 02 November 2022 |
| Team ID | PNT2022TMID45254 |
| Project Name | Real-Time Communication System Powered by AI for Specially Abled |
| 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.

**Start**

**Data**

**Base**

**Audio**

**Dynamic**

**Time Wrapping Algorithm**

**Testing**

**Voice Response**

**Sign language**

**Training**

**Application**

**Camera sensor**

**Enter Sign Image**

**Device Initialization**

**Start**

Device Initialization

Initialization for speech recognition

Operation mode?

Initialization for speech recognition

Speech recognition

estimation

Sign recognition

estimation

**NO**

**NO**

Speech Detected

**NO**

**YES**

Hand Sign Detected

**YES**

**NO**

Record the Speech

Do hand segment

Save the Audio

**YES**

Initialization for training

Save the hand sign image

**YES**

Initialization for training

Do speech normalization

Do hand normalization

Speech database

sign database

Classify the speech

Classify hand gesture



Text Display Voice response

**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** |
| Customer (Desktop user) | Registration | USN-1 | As a user, I can register for the application by entering my email, password, and confirming my password. | I can access my account / dashboard | low | Sprint-1 |
|  | Login | USN-2 | As a user, I will receive confirmation email once I  have registered for the application | I can receive confirmation email & click confirm | low | Sprint-1 |
|  | Dashboard | USN-3 | As a user, I can select options in dashboard | I can select options in  dashboard. | Low | Sprint-1 |
|  | Main page | USN-4 | As a User, I can enter the web page once clicked,  which provides be the Guidelines to use the app | I can enter the web page once clicked. | Medium | Sprint-1 |
|  | Guidelines | USN-5 | As a User, I can give a read through the guidelines to understand the functioning  of the app. | I can give a read through the guidelines. | medium | Sprint-1 |
|  | Convert Sign | USN-6 | As a User, I can click the button Convert sign, which directs me towards the Main screen | I can click the button Convert sign and it direct me to main  screen. | Med ium | Sprint-2 |
|  | Camera (Hand movement detection) | USN-7 | I can point my hand signs at the camera as a User, and the camera will translate them into text. | I can show my hand sign towards the camera  accurately. | high | Sprint-2 |
|  | Voice mode | USN-8 | Once the text has been received, I, as the user, can select the voice option to hear the text spoken. | I can click on the voice mode which provides the text  in | high | Sprint-3 |
|  | Provide the necessary functionalities required to use the app. | USN-9 | I can supply the necessary camera specifications and other details as an executive to ensure the app runs smoothly. | I can offer the necessary camera specifications as  well as additional information. | hign | Sprint-1 |
|  | Check the performance of the app | USN-10 | I can examine use and enquiries that were received  from end users in my capacity as an executive. | I may examine usage and results from queries. | medium | Sprint-1 |
|  | Receive queries based on usage | USN-11 | As an administrator, I may accept inquiries from customer service and rerun the testing step while putting additional signs into the  dataset to enable users of the app to do so efficiently. | I am able to respond to customer service inquiries and repeat the appropriate steps. | high | Sprint-3 |