



The Gateway for the People with Special Needs: Connecting People to Information and Services through Web Portal

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ABSTRACT

This paper describes a research project which developed a Web Portal for the peoples with disabilities or people with special needs and their family members (if any of them are disabled). In India 2.21% of total population in India has disability. In them 2.41% of male population in India is disabled and 2.01% of female population are disabled [7] according to stats of 2021. A web portal has been developed as part of a research project undertaken as a part of minor project. The project objective is to engage service-users with disabilities in the management of services. Service-users play a pivotal role in guiding the process through construction of content, trialling and evaluation of a web 'portal' for the disabled.

KEYWORDS: Web, Disabilities, Accessibility, Information retrieval

Introduction

One of the main conditions of being in a modern world is; providing equal standards for the individuals who are bigger than the underestimated quantities in society and preparing them for better conditions in life. In the modern world all of us want to join the society life as an independent and equal individual. Everybody has the right to access and use the public spaces independently and equally. [1] But accessing is a difficult task for the disabled people as they do not have the technology in hand to access the information about those places. The project deals with providing the information through a web portal which could be accessed by the disabled at the time of their need.

In particular, it would be beneficial for the blind and the deaf as they can automatically analyze the contents through audio and video. The content of the audio and video determines the information in most of the potential uses. One important aspect of audio content is that anybody can surf the information upon hearing the instruction in the audio text that are provided. [3]

The project is based on providing information as the user will select the type of service he wants from the selected ones. The service could be accessed by the blind and the deaf through audio and video introduced in the web portal.

Related work

Assistive technologies for the disabled has been in studies for more than decades now and significant efforts have been paid to develop representation schemes and algorithms aiming at recognizing generic devices that ease the life of those peoples. Expert opinions abound in the area of usability of web technology and content for individuals with disabilities. One such contribution has been made by the Indian Government by launching the Sugamya Bharat Abhiyan under the department of Empowerment of Persons with Disabilities (DEPwD) as a nation-wide Campaign for achieving universal accessibility for Persons with Disabilities (PwDs). [6].

The Current System for fulfilling the need is to have a single dedicated person who search all the informations regarding the places manually or with the help of any connections they might have within the system because there is scarcity of such infos within the public front. [1]

The presence of just a few sources unsynchronized platforms cannot solve the problem efficiently. [2]

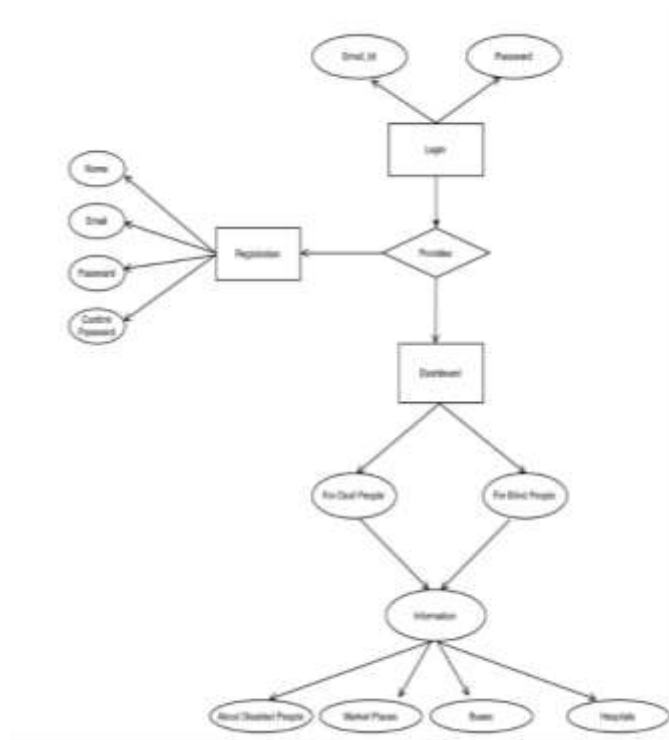
The limitations of these are as follows :

- At the economic front, it is not feasible to have a person or some group of persons who only have information and advantage to it while the other still suffer from inconvenience. [2]
- A lot of man power and resources is wasted in doing the work. [4]

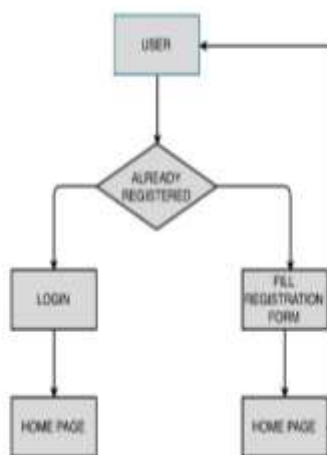
Research methodology:

This section describes in detail the methodology used to identify and provide the desired information about service to the user . The proposal of the project is deploy a website which could bring more friendly interaction for the disabled people with the outside world. This online website will provide users to access the service they want and store the information for their use. It will also maintain the information of the user and manage the data stores by the users.

3.1 E-R Diagram

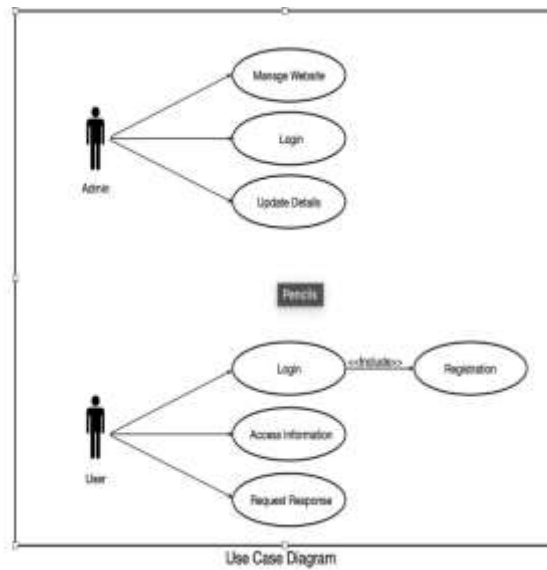


3.2. Process Flow Diagram



PROCESS FLOW DIAGRAM

3.3. Use Case Diagram



Web Development refers to the building , creating and maintain of websites.It includes aspects such as web design,web publishing,web programming and databases management. It is the creation of an application that works over the internet i.e. websites. The proposed web portal is implemented using HTML , CSS, JAVASCRIPT and PHP.

Screenshots of proposed website



Figure 1



Figure 2



Figure 3



Figure 4

4. Limitations of the current system

The limitations of the new proposed system are[4][5]

- This project is a web-based service, so an internet connection is compulsory
- This project mainly focuses on two type of disabilities which are blindness and deafness.
- The technology used in making this are limited. So it might not be effective and beneficial for all type of disable people.

5. Suggestion and Recommendations for Future Work

The suggestions and improvements which can be made in this project to enhance its working are-

- The model of this project could be structures and trained with the speech recognition mechnasims so that the disabled could be helped in more easier way.
- With proper more data the information could be more synchronized and usable.

6. Conclusions

The aim of this project is to provide services of buses ,marketplaces , hospitals to the disabled people so that they can access all these information at a single place without worrying of searching at numerous places. This project is built using the web tools like Html , Css and Javascript in the Frontend and Php at the backend.

The website reduces the work done by the users for the navigation for information from more than one place and ensures that the all the information can be required at one place .The Blind people can access by hearing the audio and the deaf people can read the information and hereby access it. But in some cases they might require extra help that is helper who ensures the work and help them to access the information.

Many of the barriers outlined in this paper may be overcome by :

- Greater Coordination , Knowledge and technology between the project team
- Offering a vision of what the project hopes to achieve. The idea is to provide with a dynamic hub for the sharing of knowledge for any future work

In conclusion it can be said that the barriers are far from insurmountable. With further attention, funding and effort directed towards this area of study, the outcome undoubtedly will benefit not only these individuals, but, ultimately, all users.

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