VOCO

Advanced Vocational Training Application

Presented by: TEAM VISION

Research Proposal

VoCo

PS ID : RK774

PS Title : Software for Vocational Training for persons with visual impairment

PS Description :

Background: A web/app based solution required for vocational training for persons with visual impairment. It would have greater accessibility support and a better user interface.

Summary: Currently no such software is available for persons with visual impairment. Further because of their mobility, it is difficult for them to get offline vocational training. Such software will enable them to get suitable vocational training in the area of their interest and will enable them to become self dependent.

Objective: A web/app based platform such as PWAs, offline first applications which helps visually impaired persons accessibility to vocational training smoothly."

Research Proposal

Team Vision

Background Study

In India there are a total of 80 Lakh people who have Complete blindness including 2,70,000 blind children.

https://www.thehindu.com › News › Cities › Chennai

'62 million in India visually impaired' - The Hindu

09-Jun-2019 — Citing WHO data, he said the estimated number of visually impaired in India was **62 million**, of which eight million are blind.

Most of these people lack basic education due to unavailability of proper educational institutes. So far India has a total of 21 active CRC including NIEPVD, AYJNISHD, NIEPID, etc.
But these numbers are very small compared to the number of visually impaired people.

SOCIAL EXPERIMENT

Gurgaon lacks facilities for visually impaired

Abhishek Behl

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GURGAON: A group of young MBAs, as part of a social experiment, turned blind for a day to experience the problems faced by those who are visually impaired in the city. The experiment highlighted the sorry state of infrastructure in the Millenium City that was unable to accommodate the needs of visually impaired and the differently-abled.

Ten students from the School of Inspired Learning (SOIL), Gurgaon, conducted a Blind Walk in the Leisure Valley Park in collaboration with ESHA, an NGO which works to empower the blind.

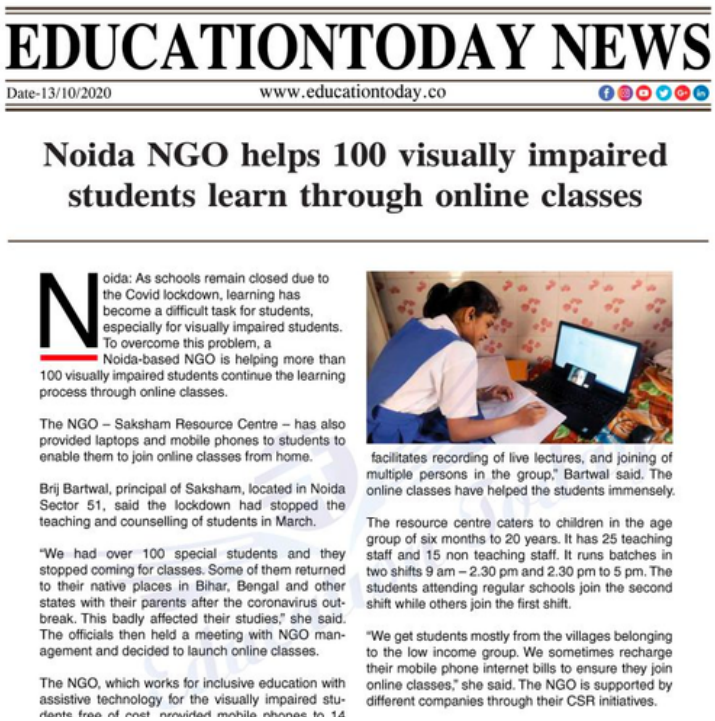
The exercise began with a volunteer group along with a navigator entering the Leisure Valley Park and walking with eyes shut. The volunteers used canes to maneuver their way forward and walked in the park for around 10 minutes.

TEN STUDENTS FROM THE SCHOOL OF INSPIRED LEARNING (SOIL) CONDUCTED A BLIND WALK IN THE LEISURE VALLEY PARK

Saranya, a volunteer with ESHA, said that variations in the height of pavements and no proper tools made it very difficult to feel the surface. "It is difficult for a visually impaired person to walk in this park as the facilities are not available," she said.

Cauvery Jalan, another business student, said that except the Delhi Metro there are only a few buildings in Gurgaon that are equipped to handle the needs of the differently-abled.

A few of the volunteers said that initially they were a bit hesitant about the reactions they would receive on the street but were surprised the way people empathized with them.



EDUCATIONTODAY NEWS

Date-13/10/2020 www.educationtoday.co

Noida NGO helps 100 visually impaired students learn through online classes

Noida: As schools remain closed due to the Covid lockdown, learning has become a difficult task for students, especially for visually impaired students. To overcome this problem, a Noida-based NGO is helping more than 100 visually impaired students continue the learning process through online classes.

The NGO – Saksham Resource Centre – has also provided laptops and mobile phones to students to enable them to join online classes from home.

Brij Bartwal, principal of Saksham, located in Noida Sector 51, said the lockdown had stopped the teaching and counselling of students in March.

"We had over 100 special students and they stopped coming for classes. Some of them returned to their native places in Bihar, Bengal and other states with their parents after the coronavirus outbreak. This badly affected their studies," she said. The officials then held a meeting with NGO management and decided to launch online classes.

The NGO, which works for inclusive education with assistive technology for the visually impaired students free of cost, provided mobile phones to 14

facilitates recording of live lectures, and joining of multiple persons in the group," Bartwal said. The online classes have helped the students immensely.

The resource centre caters to children in the age group of six months to 20 years. It has 25 teaching staff and 15 non teaching staff. It runs batches in two shifts 9 am – 2.30 pm and 2.30 pm to 5 pm. The students attending regular schools join the second shift while others join the first shift.

"We get students mostly from the villages belonging to the low income group. We sometimes recharge their mobile phone internet bills to ensure they join online classes," she said. The NGO is supported by different companies through their CSR initiatives.

These centres are costly to run and increase the locomotion of visually impaired people. But a mobile based education system can give relief to many by reducing the locomotion of such people.
As the internet and mobile technology has boomed in India, the reach for mobile application to such people will definitely be a boon for them.

Solution

Aim :

- To Break Linguistic Barrier Between People With And Without Vision & Provide a Better Community Support.

- To Reach a specific Audience to Improve their Vocational Skills And Help Them to Get Better Jobs and Societal acceptance.

Summary:

The mobile app will have features such as to improve the vocal speech of the user, enhance subject knowledge, interactive live session with expert or bot and fun interactive games to train their mind. The app has very easy to use layout setup with voice powered in-app navigation support.

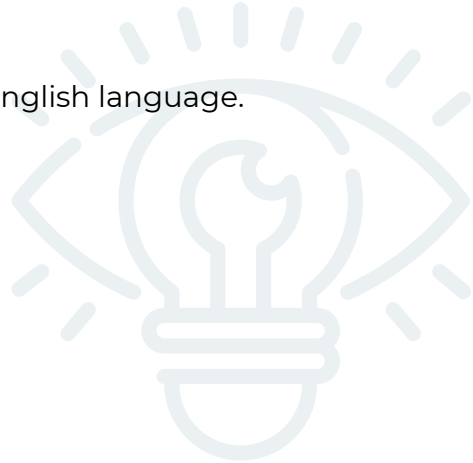
Objectives:

1. Train the user to improve their linguistic skills or learn new language.
2. The app will also provide study material and courses in audio format to be accessed easily.
3. Regular tests for our users to understand their improvement.
4. A proper feedback system for us to understand whether the user liked our course content or not.
5. Interactive chat bot feature in case the user wants someone to talk with when no one is around.
6. A feature to connect all the users together at real-time and they can have a conversation among themselves. This will improve their communication skills and can provide them recreational time with some new friends.
7. An option to even connect with a VoCo Expert to clear course related doubts and any queries they might have.
8. Fun and interactive games section to improve their mental ability and train their mind.
9. To improve the UI for more easy usability for the visually impaired people.

Status:

We have implemented these features:

- User Login through Firebase
- Pronunciation Guide available with support in English language.
- In app navigation supported.
- In app voice based guide available.



Tech Stacks Used :

FrontEnd : Flutter, Dart
BackEnd : NodeJS, ExpressJS, TypeScript
Server : Google Cloud
Database : Firebase

Expected outcome

Development
Phase :1 (Research)

The first phase will be mostly contributed towards understanding the problem and solutions currently being used in India from the very root. This can be achieved by visiting different Vocational Training centres pan India for Visually Impaired people. This will give us an in-depth understanding of the type of features actually needed for our end users on our application.

Development
Phase :2 (Development)

Our second phase will mainly focus on building the application/ software with all its features in working state. Reduction of bugs and creating user friendly Ui will be our first priority.

Development
Phase :3 (VoCo Gloves)

In the third phase of our development we will try to build a smart gloves which can easily be connected with our application and will help the user to navigate to different sections of our app. This gloves can be also used for performing various tasks on our app at later stages. This glove will be an optional tool which will help our users to use our application with ease. So this can even provide some sales after the implementation if properly marketed.

Development
Phase :4 (Testing)

This will be our final stage where we will reach to some training centres in India and will let the Trainees to test our mobile app with the smart gloves. This is very crucial step as testing may involve software/hardware update.

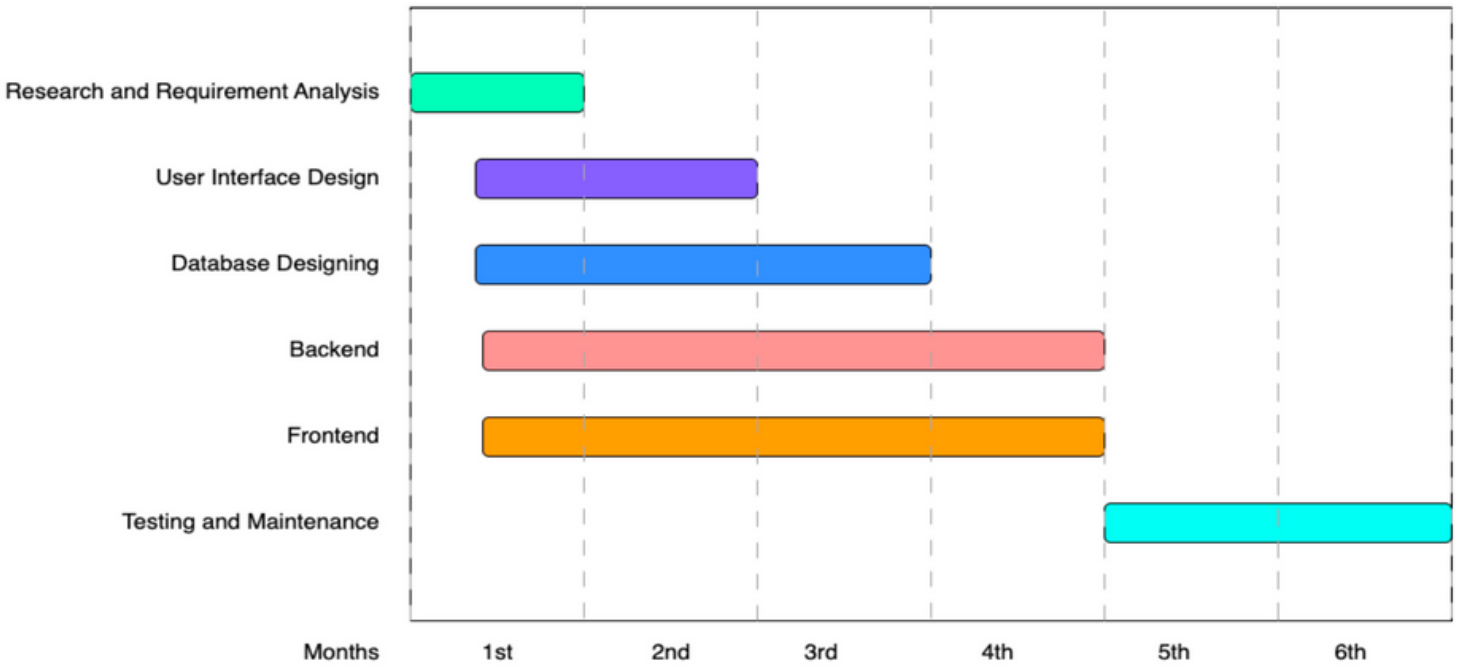
Financial Implication

S.No	Particulars	Quantity	Required Quantity	Amount / Module	Total amount
1.	Consumable cost	Firebase + Google cloud Google Asst + Alan AI Computer components	6 months --- ---	15000 20000 ---	90000 20000 56000
2.	Manufacturing and Overhead charges (Non consumables)				50000
3.	Clinical trials (if any for validation)				Not men tioned
4	Miscellaneous charges	Travel and Stay			As needed
5	Manpower (wages)	3 2 2	6 months 6 months 6 months	4285	179970
Total					D3.96 Lac+

Time Duration

A time period of 6 months will be required to develop the application.

Work Plan



Summary

The most ignored section of people usually consist of people with some physical disabilities. Seeing this as an major problem, we **TEAM VISION** took this challenge of providing vocational training to visually handicapped that is blind people. Through this "**VoCo**" application we aim to provide educational cum recreational tools to assist the overall personality and linguistic development for blind people with an easy to use voice based AI system this software will enable them to get suitable training for themselves within the comfort of the home itself. For further development the scope of the application can be extended to all backgrounds of people.

Team Declaration

We, the Team Vision comprising of 7 people declare that we will be available to work on the assigned project "VoCo" for a duration of 6 months and all the informations stated above are true and correct to the best of our knowledge.

Team Vision				
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Thank You