



U N I V E R S I D A D
Panamericana

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Introduccion

The internet is a big source of information, where you can find whatever you want, in fact the web page marketing4ecommerce.net mentions that in 2021 the weight of the internet was approximately of 79.000.000.000.000 GB, this information is distributed in social media, images, videos, websites, fórums, etc..

The web pages are used as a very important media for share information with everyone that had access to the internet, having this in mind there are a crucial tool for the web to work, the es.statista.com web page mentions that at 2021 there were 1,880 million of web pages and the number of these ones is increasing



exponentially as it is illustrated in the image below.

But even though there is a lot of information not everyone can have access to it, this can happen due to different factors: who do not have access to the internet, the website restricts access, is not available on their domain or who have a disability.

Problem

These kinds of factors many times difficult the navigation or even deny it for these people, but although there is no easy way for solve this problem for the ones without access to the internet, but we can do something to facilitate the navigation and to obtain information for these people.

That's why there are several resources for blind people in the web like AllAccesible, inSuitn, UserWay, etc...These technologies are mostly talkbacks and screen readers, which help these people to get knowledge about the information that is displayed on the screen by repeating it on audio.

Rationale

The United Nations established the SDGs in 2015 as a universal call to action to end poverty, protect the planet, and ensure that all people enjoy peace and prosperity by 2030. There are 17 goals in total, each addressing different global challenges, such as poverty, inequality, climate change, environmental degradation, peace, and justice.



Image 2 Sustainable development goals

That's why in order to achieve the goals of the United Nations and the previous information of the resources for the visually impaired people, we were struck by the 4th goal that aims to ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.

We think that there are several ways to improve the experience of the blind people that use the internet, that's why our principal mission is working to make life much easier for people with partial or total visual disabilities, so that they can fully enjoy themselves, work more easily, have the desire to get ahead, to give them reasons to never give up, and to have a lot of technological advancement to one day solve all their problems.

Our goal is to create a fully inclusive web platform for all people, targeting people with visual disabilities, and using technology to provide a digital tool that expands the horizons of education in general. This can be a good solution for the lack of digital resources available for people with visual disabilities online.

Idea

Our main idea is based on the development of a website focused on the distribution of courses for people to learn and develop skills that can be useful for daily life, school, work, etc.

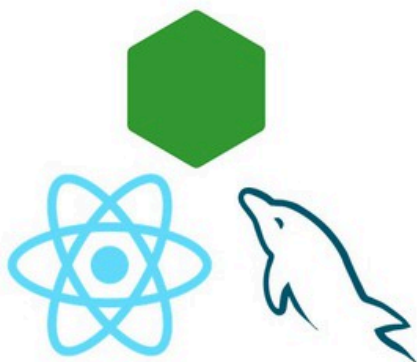


Image 3 Logos of Node.js, React, MySQL from Udemy.com

The main ideas to achieve this goal are the implementation of a screen reading system so that you can navigate through the page using the tab key, in addition to different keyboard commands that are planned to be integrated to improve accessibility within the page. In addition to this, it is planned to implement a voice assistant that makes navigation a simpler and more pleasant task.

The structure of the page will adhere to the rules established in the WCAG, as it establishes how to improve the accessibility of the page for people with disabilities, including people with visual disabilities.

It is planned to use a joint work environment with Github for the development of the website. In addition, a database with mySql is planned for data storage, as well as a connection to the backend through Node.js. The frontend of the page will be made with React, javascript and css.

For the organization of the courses, the functionality of 2 different types of educational platforms is intended to be combined, which are the language learning application called Duolingo, since it has a wide variety of interactive exercises that really work to teach topics, in addition to this, its incentive management is very good so that users do not get bored and on the contrary are motivated to continue learning. This structure is intended to be merged with the course structure of the Udemy platform, since its wide variety of courses make it a very good tool for learning in different areas, both basic and disciplinary.

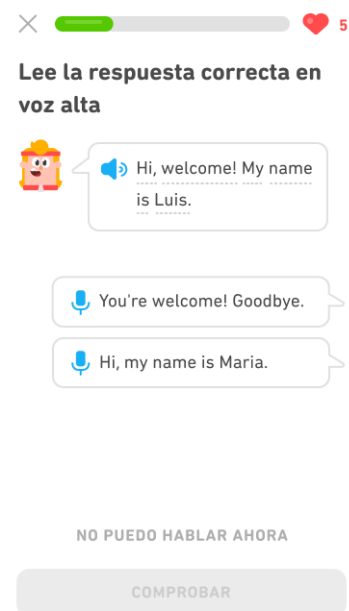


Image 4 Exercise from Duolingo App

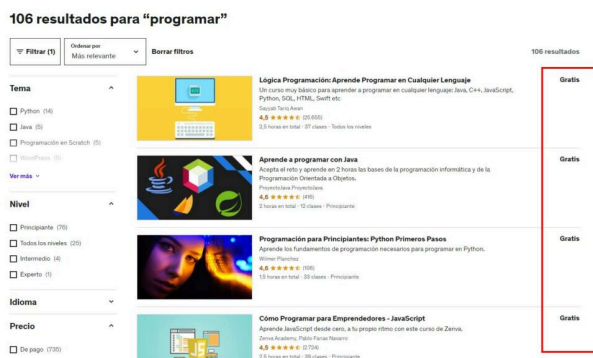


Image 5 Image of the udemy content from udemy.com

There is also a plan to create a business model through the adaptation of an educational platform but that also has the distinctive accessibility of the page, in addition to improved attention from the AI that is planned to be implemented in the future of the project, in addition to being able to implement its own courses with tasks.

This model is very similar to that of Moodle since it is planned to sell to both schools and companies interested in having a digital resource that is friendly to all people, including those with a disability. This business model is planned with the objective of keeping most of the courses on the page free.

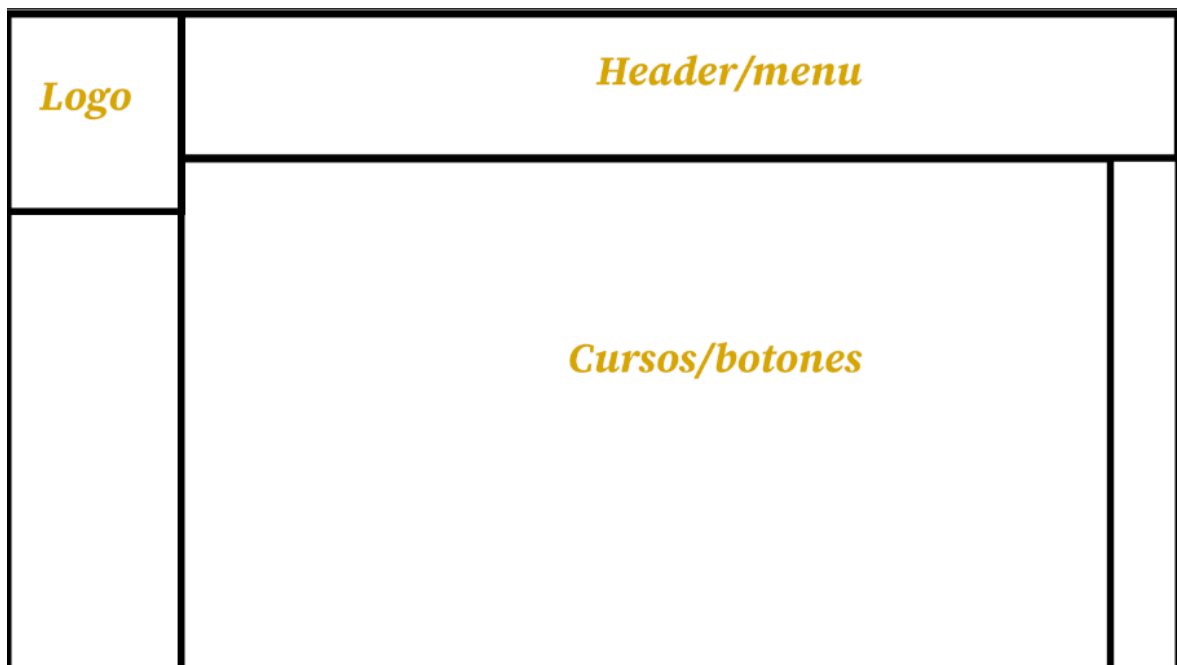


Image 6 Basic illustrative sketch of the courses view

Benefits

This solution proposed by the team will provide a digital tool so that all people can have a reliable means to learn different skills, we focus on supporting accessible navigation for people with any visual disability, since it may be difficult for them to have an online means to find courses on any subject that interests them, since we believe that anyone with the right means to learn can become successful.

Conclusion

In this day and age of digital everything, the Internet is an invaluable resource filled with information and opportunities. However, not everyone can access it, especially those with visual impairments. While numerous websites provide a wealth of information online, they are not intended for people with visual impairments, and the challenges faced by people without Internet access or those with disabilities remain significant. Recognizing these barriers, our project aims to create an inclusive, equitable, educational and training web platform that not only supports people with limited resources but also people with visual impairments. By implementing accessibility features such as screen readers, voice assistants, and adhering to WCAG guidelines, we aim to provide you with an equitable and user-friendly experience.

Our mission aligns with the United Nations Sustainable Development Goals, specifically the goal of ensuring inclusive and equitable quality education for all. By leveraging technology, we can give anyone the tools to learn, work, and thrive in a digital world. The proposal, inspired by the structures of Duolingo and Udemy, seeks to offer a wide range of courses with interactive, attractive, didactic and easy-to-understand content, ensuring that learning is effective. In addition, the planned business model, similar to Moodle, will allow for easy implementation by educational institutions and companies, ensuring that most of the courses remain free and accessible to all.

Through this proposal, we hope to create a reliable and accessible medium for everyone, regardless of their abilities, to develop new skills and reach their full potential.