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### Title: Design and implementation of a mobile application to disseminate tourist places: case study Santa Rita Tlahuapan

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# Introduction



Figure 1. Mobile App Design

Source: <https://www.comunicare.es/que-es-el-diseno-de-aplicaciones-moviles/>

Mexico has great tourist attractions that present several areas of opportunity to improve the dissemination of their services.

Improving their dissemination and quality would allow businesses around them to prosper, thus increasing the economic level of the population in the region.

There is a large niche of opportunities to develop projects related to tourism, through the use of technological tools aimed at the creation of systems and applications that allow the promotion of places.

# State of the art

- The use of apps as a promotional tool in tourism companies', Torres et al., (2020), highlight the relevance of these applications in the user experience prior to their visit, as well as the increase in the number of visitors that can be generated thanks to these dissemination tools.
- Palacio (2021), in his work entitled 'Mobile application of tourist information for the promotion of tourist destinations and activities in the Antioquia - Chocó corridor', focused on an area designated for tourism in Argentina, he highlights the interest of people in using the Internet together with tools that facilitate the knowledge of destinations, providing a large amount of classified information.

# State of the art

- The work of Montecé et al., (2018), entitled ‘Mobile application to encourage urban tourism - case study City of Babahoyo’, which focuses on the promotion of urban tourism, the need for a technological tool by managers and owners of tourist spaces is highlighted.

# Application design

- For the development of a software project, it is necessary to elaborate its design. The design of the database and the application screens is presented.

# Database design

- The database was designed and developed with the XAMPP tool, a free and easy to install Apache distribution that contains MariaDB. The XAMPP installation package has been designed to be incredibly easy to install and use.

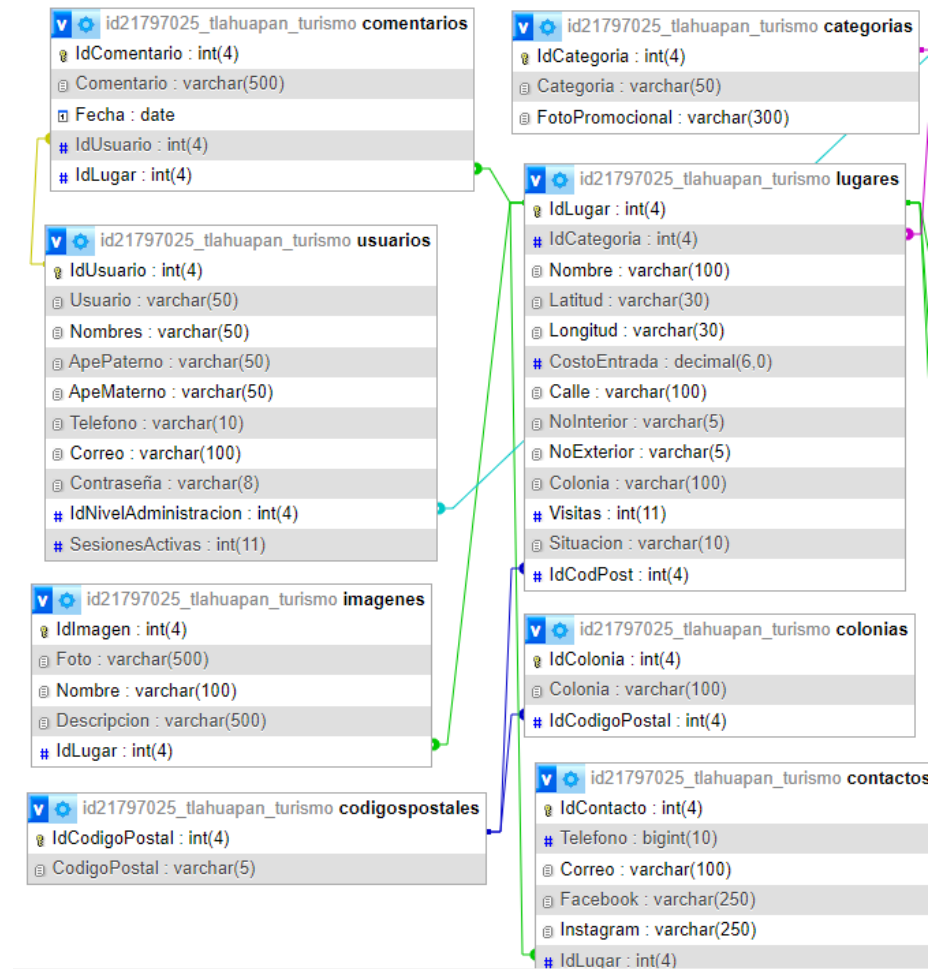


Figure 2. Relational database model  
Source: Own elaboration

# Screen Design

- The design of the displays was done in Figma, a leading collaborative design tool for creating valuable products. It seamlessly designs, prototypes, develops and collects feedback, and is a cloud-based collaborative design application that allows teams to create, collaborate and prototype designs in real time (Douran, 2024).

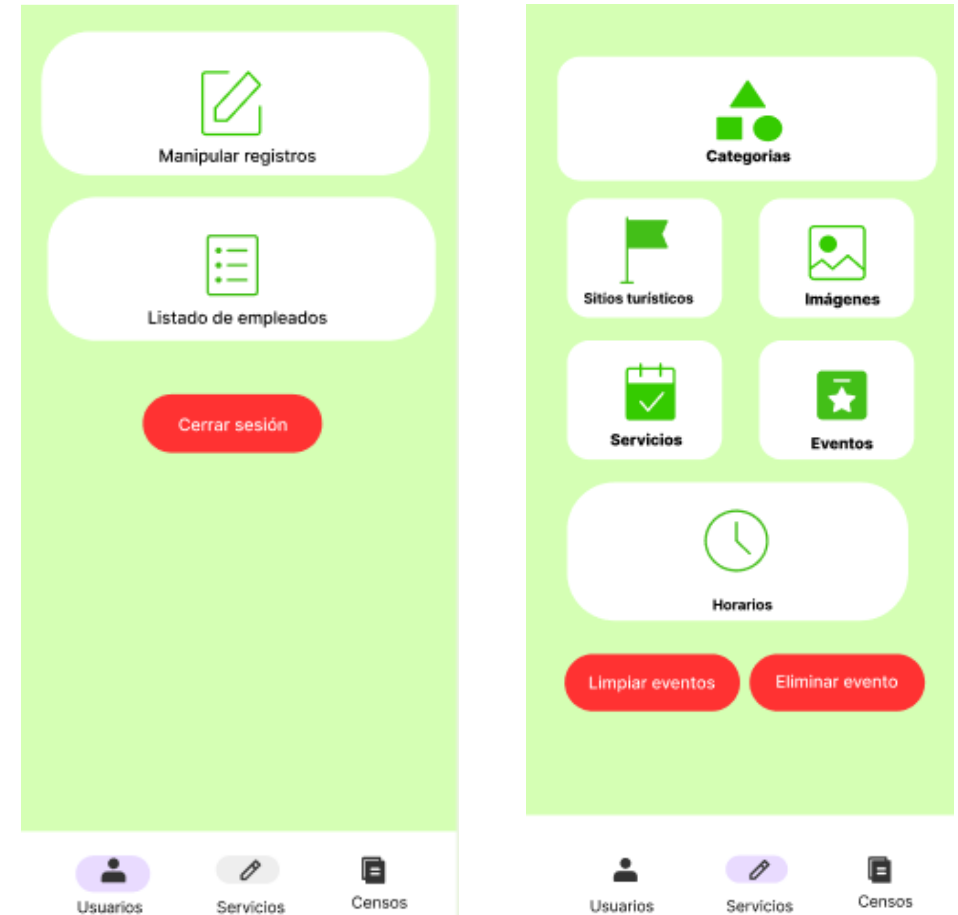


Figure 2. Users' Section and Services Section  
Source: Own elaboration



# Functionality of the application

- The application was developed in Android Studio, was implemented by performing tasks contemplated especially for the Back-End, for which php and java script was used previously loaded on the server in order to allow communication between the application and the hosted database

# Results

- With regard to the design of the database and screens of the application, its development made it possible to identify several aspects that had not been considered and that were relevant for the development and implementation of the application.
- The application has about 40 interfaces in total, it is necessary to remember that users have different privileges so they only interact with those that are allowed according to their role.
- For the functionality and implementation, several functionality tests were carried out for each module, with the objective of corroborating that there were no errors in its operation.

# Conclusions

- The design, development and implementation of a mobile application that facilitates the dissemination of information on location, opening hours, services, events, among others, will allow tourist sites to increase their communication channels and receive feedback on the experience of their customers.
- This will allow business owners or managers in the area to identify areas of opportunity to improve their services, which will result in economic benefits for them and, in turn, will benefit nearby businesses, boosting the development of the region.

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