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### Title: Implementation of a mobile application for the dissemination of tourism in México

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### Introduction



**Figure 1:** Fly for México Travel **Source:** https://flyformexico.travel/



**Figure 2:** App móvil for travel **Source:** https://lilacinfotech.com/blog/151/how-to-build-a-travel-app

By 2023, Mexico will be in the top 10 of the countries most visited by tourists.

There is a national challenge for research and digitalization of tourism, which aims to: "support entrepreneurs and new startups that contribute to the development of local tourism and support recovery."

It was decided to implement a mobile application that can disseminate tourist sites, they may be archaeological zones, ecotourism or Magical Towns.

# State of the art

- Rivera Caro (2019), developed a mobile application for Android devices that allows showing the different tourist attractions of the Lachay National Reserve (RNL), within the attractions there are natural spaces, landscapes, culture and adventure and nature activities; The application will allow tourists to show the tourist attractions of the RNL.
- Aguirre Yaure (2020), developed a mobile application using augmented reality to spread tourism in Ecuador, the application provides tourists with the useful and necessary tools when getting to know the most emblematic and representative sites of five cities in Ecuador. Augmented reality is used so that the user can learn about and observe the history of the site they are visiting.

# State of the art

• Finally, the study of user experiences (UX) must be present, which is why another of the works studied is that carried out by Vega et al. (2021) whose main objective was UX design guides that are applicable to mobile applications for Cultural Tourism with AR

# Sprint planning

- A review of the Product Backlog was carried out, having a total of 6 activities organized as follows:
- a) Design of low fidelity screens.
- b) Design of high fidelity screens using XML.
- c) Adding functionality to the screens using Java.
- d) Back-end development using php.
- e) Functional testing of the mobile application and
- f) Improvements to the mobile application.

Actividad	Tarea
Diseño de pantallas de baja fidelidad	Diseñar pantalla de baja fidelidad para el módulo Registro de Usuarios Nuevos
	Diseñar pantalla de baja fidelidad para la Sección Lugares
Creación de las pantallas de alta fidelidad haciendo uso de XML	Crear pantalla de alta fidelidad para el Catálogo Empleados
	Crear pantalla de alta fidelidad para el módulo Categorías
Añadiendo funcionalidad a las pantallas usando Java	Crear clase para el módulo Imágenes de Difusión
	Crear clase para el módulo Eventos
Desarrollo del back-end usando php	Crear Script para el módulo Autentificación
	Crear Script para el módulo Categorías
Pruebas funcionales de la aplicación móvil	Prueba permisos para tipos de usuarios
	Prueba módulo de generación de reportes
Mejoras a la aplicación móvil	Tiempo de sesión activa
	Mensajes de advertencia y confirmación

# Summary of the activities carried out in sprint 2

• The third sprint is related to the task: "Adding functionality to screens using Java"; In order to allow the user to interact fluidly with the application, this should not depend only on its design, but also on the coding of each screen, this coding is found in .java files classified as classes, these relate directly to the XML file.

• In order for them to establish the relationship, it is necessary to identify the components that will serve as objects and to which some specific functionality will be added.



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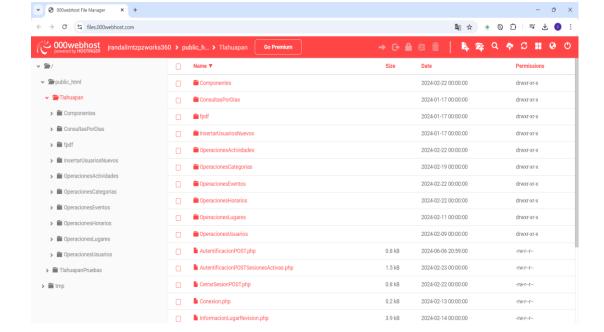
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# Implementation of the functionalities and database on the server.

• After having coded the screens locally, it was uploaded to a host service so the application could be accessed from anywhere. The folder was uploaded with all the content of the project, including the database connection files, authentications and operations for the

different modules



# Tests carried out on the application

• A test plan was carried out with the following activities: creation of test cases, selection of test data, execution of test cases recording of results. The test case format contains the test case number, description, input data, expected output, passed (YES/NO) and observations. If it has not been approved, a second cycle must be carried out to be able to solve the test.

Caso de Prueba CP007: Registro de lugares turísticos

Descripción	Registro de lugar turístico a una categoría
Datos de entrada	Selección de la categoría a la que pertenecerá, un nombre para el sitio, costo de entrada, domicilio en que se encuentra aceptando caracteres de tipo cadena, Numero exterior (obligatorio), Numero interior (opcional), teléfono y redes sociales
Salida esperada	Agregar el sitio turístico a una categoría que se seleccionó
Aprobado	Si
Observaciones	La sección de lugares recupera la información y

la modifica de manera correcta

### Results

• The implementation of the functionalities and database on the server allowed the application to be uploaded to a hosting so that tourists and place owners could interact with the application in a real way, although it has not yet been published in the Playstore, place owners. They can now upload their information to the server and the tourist can see it in real time.

# Conclusions

• The development of the application will allow tourists to disseminate information about sites in the municipality of Tlahuapan, in addition to events that can be carried out throughout the year such as firefly sightings, Christmas pine sales, among others.

# References

### **Background**

- Aguirre Yaure, J. V. y Caiza García, G.A. (2020). <u>Aplicación móvil con realidad aumentada para el turismo en el Ecuador.</u> [Tesis de licenciatura, Universidad de las Américas]. Repositorio Digital Universidad De Las Américas
- Rivera Caro, E. H. (2019). <u>Implementación de una aplicación móvil en Android para mostrar los atractivos turísticos de la reserva nacional de lachay, aplicando la metodología scrum yherramientas devops</u>. [Tesis de licenciatura, Universidad Nacional Tecnológica de Lima Sur]. Repositorio Institucional de la Universidad Nacional Tecnológica de Lima Sur.
- Vega Alanis, L. M., Gaetan, G., & Martin, A. E. (2021). <u>Guías de experiencia de usuario para aplicaciones de turismo cultural basadas en realidad aumentada</u>. Informes Científicos Técnicos UNPA, 13(2), 26–43.

# References

### **Basics**

- Castro Ricalde, D., Peñaloza Suárez, L., & Tamayo Salcedo, A. L. (2018). Tecnologías en línea populares para viajar: ¿cuáles utilizan los jóvenes universitarios para hacer turismo? Actualidades investigativas en educación, 18(2), 202-232.
- Objetivos de Desarrollo Sostenible. [s.f.]. Objetivo 8: Promover el crecimiento económico inclusivo y sostenible, el empleo y el trabajo decente para todos
- ONU Turismo. [s.f.]. México: Turismo hacia el Futuro



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