Design and Development of an Information System for the Tourist Promotion of the City of Korça

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Abstract

This paper explores the design and development of an innovative information system aimed at boosting tourism in the city of Korça. The problem addressed is the need for a user-centred platform that provides potential visitors the essential information while promoting the city's unique attractions. The study begins by examining relevant literature on information systems and their role in tourism, destination decision-making factors, and case studies of similar systems. It also analyzes Korça's tourism landscape and visitor preferences, identifying gaps and opportunities for innovation.

A hybrid research method combining qualitative and quantitative approaches was employed. Insights from scholarly literature informed the system's design, with a focus on engaging visitors in tourism promotion through sharing experiences and recommendations. Technologically, the system was built using HTML, CSS, and JavaScript for the front end, and MySQL, and Python (Flask Framework) for the back end, following the Model-View-Controller (MVC) architecture for ease of management and scalability.

The results demonstrate that the system effectively showcases Korça's attractions and fosters interaction between visitors and local businesses. The research concludes that this information system not only provides valuable tourism information but also enhances community engagement. Future recommendations include additional features for further improving user experience and expanding the system's reach.

1.Introduction

1.1 Field and Context of the Study

Tourism has experienced significant growth, with a 34% increase in 2023 compared to 2022, recovering to 88% of pre-pandemic levels, generating $1.286 billion in revenue (Root, 2024). It is a crucial driver of global economic development, contributing an estimated $3.3 trillion or 3% of global GDP in 2023 (UNWTO, 2024). Technological advancements, particularly in Information Technology (IT), have transformed the tourism sector, making travel safer and more accessible (Wahab, 2017). Korça, a city known for its year-round tourism potential (Zaimi, 2017), needs an effective information system to promote itself to both local and foreign visitors. Understanding consumer decision-making in tourism (Qirici, 2011) is critical for developing such a system. This study explores the role of information systems in enhancing tourism promotion and security, focusing on the design of a system tailored to Korça's visitors.

1.2 Research Question and Objectives

The primary aim of this paper is to develop an information system for promoting Korça's tourism. The research question guiding this study is:

Research Question:
How can we build an information system that provides a pleasant experience for users and includes the necessary information for potential visitors?

Objectives:

1. To understand the needs and preferences of potential visitors to Korça regarding tourist information and services.
2. To design and build an information system that meets the needs of tourists and local tourism businesses while promoting the city effectively.

1.3 Importance and Contribution of the Study

The study contributes to:

1. Tourism Promotion: By developing a user-friendly information system, it enhances Korça's tourism promotion efforts, attracting more visitors and boosting the local economy.
2. User Experience Improvement: The system focuses on delivering a pleasant experience by addressing the specific needs of potential visitors, aiming to increase satisfaction and repeat visits.
3. Academic Contribution: It enriches academic literature by examining the design and implementation of a tourism promotion information system in a specific city context.

Overall, this research is essential for promoting Korça's tourism, improving user engagement, and contributing to knowledge in the field of information systems for tourism.

1.4 Tourism in Korça

Korça, located at the foot of the Morava Mountain, is a culturally rich and important tourist destination in Albania. It is one of the country's most visited cities, attracting tourists with its medieval art museums, historical homes, churches, and natural beauty. The city also offers local cuisine and traditional drinks like "Korça" beer and vodka, with events such as the annual beer festival drawing both local and international visitors (INSTAT Albania: 2020-2022; Partners Albania, 2015).

Korça's socio-economic growth is closely tied to its natural and cultural resources, with foreign tourists drawn to its cultural heritage, including traditions and spiritual elements (Dino, 2018). Tourism in Korça is a year-round activity, with both winter and summer attractions. In the first half of 2021, the city saw over 30,000 visitors, primarily foreigners, leading to an expansion in accommodation, including modern hotels and traditional guesthouses (Xhajanka, 2021).

In a study conducted by Qirici (2011), about the reasons why tourists choose Korça as destination, it turns out that most of them (about 65.3%) were interested in natural and cultural heritage. For more, tourists mentioned obtaining information from previous visits, accommodation brochures, friends, and some of them from travel agents. The dominance of information obtained from friends or previous visits suggests that current methods of information dissemination may lack effectiveness and professionalism. The heavy reliance on informal sources, such as friends, may limit the potential for growth in the tourism market, keeping it as a casual market.

The development of a personalized information system could further enhance the tourist experience, promote local businesses, and help manage tourism sustainably.

1.5 Existing systems for promoting the city of Korça.

A thorough analysis of existing systems' functionalities is crucial before building our system. This helps identify strengths, limitations, and opportunities for innovation, allowing us to strategically enhance our system with new features that meet evolving user needs. Some of the existing systems for promoting the city of Korça are presented below.

1.Visit Korça (https://www.visit-korca.com)
This platform serves as a comprehensive information centre for Korça and surrounding areas, offering details on local attractions, monuments, cultural sites, and points of interest. It features an interactive map with historical and cultural information and provides listings of accommodations, tours, and activities in the region. Bilingual support (Albanian and English) allows access for both local and foreign tourists. However, the system has some drawbacks:

- Information is outdated (last updated in 2017).
- Incomplete map locations for hotels and attractions, making navigation difficult.

2.Discover Korça (https://discoverkorca.al/)
Discover Korça offers detailed information on hotels, restaurants, activities, art, and history, with an integrated Google Maps feature for navigation. It also provides event listings, transportation options, and the ability for users to contribute promotions. Despite being user-friendly and providing up-to-date information, it has some weaknesses:

- Issues with registration, including confusion with email-only login and failure to update new emails.
- Lack of multilingual support for tourist categories.

3.Tourist in Korça (https://turistnekorce.wordpress.com/)
This platform provides a wide range of information, from city activities to cultural centers and tourist attractions. Users can explore different categories, leave comments, and access a photo gallery for a visual tour. However, the platform has some limitations:

- Information is not always up-to-date, especially for hotels and tourist spots.
- Contact details for hotels are missing.
- Available only in Albanian, limiting its usability for foreign tourists.

2.Literature Review

2.1 The Role of Information Systems in Tourism

Over the past five decades, the travel and tourism industry has evolved into a significant component of the global economy, becoming one of the largest and fastest-growing sectors. This multifaceted industry comprises a variety of activities driven by travellers seeking unique experiences and destinations aiming to attract visitors. As a result, tourism has become a complex ecosystem, influencing cultural, social, and financial aspects of society (Sanju, 2023).

Regarding the role of tourism in economic growth, Sanju (2023), emphasizes that this sector is a vital source of employment and economic growth, offering numerous benefits, including environmental, social, and economic advantages. Collaboration among hotels, restaurants, transport providers, and travel agencies enhances the overall efficiency of tourism supply chains and stimulates continuous innovation. Also, the author adds the role of the internet as a transformative communication and marketing tool in the tourism industry, because it enables the creation of platforms such as e-commerce, social media, and mobile applications, reshaping decision-making and traveller behaviour. For more, tourism companies are increasingly investing in digital tools to ensure sustainable success. Information technology (IT) facilitates sustainable practices using social media, chatbots, and digital assistants, promoting best practices and advancing sustainable development goals. These technology-driven strategies play an essential role in meeting tourists' expectations and influencing their decision-making processes. Understanding demographic and cultural factors is also crucial in shaping tourists' perceptions of value (Sanju, 2023).

Information and Communication Technology (ICT) plays a significant role in improving customer experience, enhancing operational efficiency, and supporting strategic decision-making. Key applications of IT/ICT in travel and tourism include:

E-Tourism: Digitalization of processes in tourism, travel, hospitality, and related industries, covering areas such as e-commerce, e-marketing, e-financing, e-accounting, e-HRM, e-procurement, e-strategy, and e-planning.

Specific E-Tourism Applications:

- Flight Tracking System: Monitors and manages global travel activities using aviation software.
- Dynamic Tour Packages: Allows customers to create personalized travel packages in real time.
- Computer Reservation System (CRS): Stores and retrieves information on hotel reservations, airline tickets, and rental cars.
- Global Distribution System (GDS): Facilitates automated transactions between travel service providers.
- Customer Relationship Management (CRM): Manages customer interactions and analyzes data to understand needs.
- Audio Tours: Provides pre-recorded commentary for tourist destinations, used at historical sites and museums.
- GPS Tours: Delivers pre-recorded audio commentary based on visitor location through satellite technology. (Wahab, 2017)

In the tourism industry, IT has become an integral part of business operations, facilitating interaction between companies of all sizes. The adoption of IT requires the redesign of business processes to enhance operational efficiency and adaptability to changing environments. Tourism businesses rely on external information systems for data collection and analysis to gain deeper insights into market dynamics (Labunska, Zyma, & Sushchenko, 2022).

Global distribution and electronic information systems play a vital role in improving the quality and safety of travel services. They provide benefits such as:

- reliability
- adaptability
- communication
- enhancement
- service improvement
- efficient information transfer
- personalized customer experiences

These systems also create effective feedback mechanisms, contributing to the development of the tourism industry (Labunska, Zyma, & Sushchenko, 2022).

IT is essential in the strategic management of tourism businesses, enabling market expansion, cost reduction, employee empowerment, and distribution enhancement. Additionally, the tourism industry is shifting toward cultural and event tourism, utilizing unique attractions to increase regional exposure (Wahab, 2017; Qirici, 2011).

Several European countries have implemented successful tourism information systems, such as the Austria Tyrol and Switzerland Rhodes systems, showcasing

how IT can drive growth and improve service quality in the tourism sector (Li, 2010).

2.2 Factors Influencing the Decision-Making Process to Visit a Destination

Numerous studies have explored the factors shaping tourist behaviour and decision-making, highlighting the importance of understanding travel motivations and the elements influencing these decisions. This understanding enables the development of effective promotional systems, helping destinations respond to demand and facilitate the tourism decision-making process.

Climate as a Factor: Hamilton and Lau (2004) emphasized the role of climate, identifying three stages where tourists consider weather conditions: during planning, shortly before the trip, and a week before departure. While seasonal climate remains stable, daily weather variations influence tourists' decisions, leading to a need for weather-based and climate-based information searches (Dahiya & Batra, 2016).

Tourism Decision-Making Variables: Dunne et al. (2011) identified four types of variables:

1. Internal variables: Motivation, attitude, and lifestyle.
2. External variables: Destination attractiveness and social influences.
3. Nature of the trip: Travel time and planned activities.
4. Situational factors: Related to short city break decisions (Dahiya & Batra, 2016).

New Decision-Making Dimensions: Moore et al. (2012) introduced four additional dimensions influencing tourism decisions:

1. Flexibility: Adjusting decisions during the process.
2. Travel location and time: Preferences based on timing and destination.
3. Social composition: Influence from group members like family or friends.
4. Travel stage: Decision-making evolving throughout the journey (Dahiya & Batra, 2016).

Influence of Word of Mouth and social media: In the digital age, online reviews, social media discussions, and recommendations significantly shape tourists' perceptions and decisions. Word of mouth and shared experiences are powerful tools for guiding tourists toward their desired destinations (Dahiya & Batra, 2016).

A study conducted among 861 Romanian tourists identified four key factors influencing destination choice: Destination image (safety, climate, accessibility),

Attractions and entertainment (cultural experiences), Service quality (accommodation, price, food), Travel organization (less influential compared to other factors).Together, these factors explained 60.89% of the variance in tourists' decision-making, with destination image emerging as the most critical element (Mihai et al., 2023).

On the other hand, understanding factors for developing an effective information system to promote tourism in Korça is very crucial. By addressing tourists' needs and preferences, this system can streamline decision-making and enhance the travel experience. Below are presented some successful examples.

Czestochowa Tourism Information System (Poland): The Municipal Tourism Information System (MSIT), launched in 2009, illustrates how modern IT can enhance tourism. This system offers comprehensive information about the city's culture, monuments, tourist attractions, and current events, contributing to the city's promotion. The system also provides additional services, including access to local news, employment opportunities, social surveys, and banking transactions. By integrating technology, the system enhances the visitor experience and helps in shaping the city's tourism policies (Biadacz & Biadacz, 2015).

New York Tourism Apps (I Love NY & NYCGO): These digital platforms help attract and manage tourists by curating experiences around iconic landmarks such as Times Square and the Statue of Liberty. They make the city's cultural offerings accessible, while also enhancing tourist experiences by providing information and guiding visitors through the city's attractions. These apps have made New York more competitive in the global tourism market by offering organized, easy-to-navigate itineraries (Dottle, 2016).

Tourism Systems in Hong Kong, Shanghai, and Taipei: Among these three cities, Hong Kong's system stands out for its user-friendliness and comprehensive nature. It offers detailed information on accommodations, attractions, transportation, and customizable itineraries. A digital map highlights key tourist spots, while the system provides audio guides and detailed descriptions of attractions. Shanghai and Taipei also offer valuable tourism information, though Hong Kong's system is noted for its personalized options for diverse traveller needs (Bastida & Huan, 2014).

Austrian Tourism Information System (TIScover): This system emphasizes accessibility through e-commerce and multi-platform access, allowing users to interact via the web, mobile devices, and information kiosks. It integrates high-quality content, enabling local providers to manage their offerings. This personalized approach has proven effective in enhancing Austria's tourism sector (Pröll & Retschitzegger, 2000).

Tourism Information Systems in Morocco: A study of Morocco's tourism systems shows that tourists rely heavily on official tourism websites for information on transportation, accommodation, and attractions. High-quality, detailed content plays a crucial role in shaping tourists' perceptions and decisions, with

well-maintained systems positively impacting the country's tourism image (El Maazouzi, 2020).

These case studies highlight the importance of integrating modern information systems in tourism promotion. By offering detailed, accessible information and personalized experiences, cities can attract more tourists and improve their overall visitor experience.

3. Methodology

The research methodology outlined in this thesis adopts a mixed method approach, combining both qualitative and quantitative techniques to develop an information system that enhances user experience and provides essential information to potential visitors of Korça.

The research explores the role of information systems in tourism, examining how technology impacts tourist behaviour, decision-making, and preferences for visiting Korça. The qualitative phase involves reviewing secondary sources such as articles, books, and case studies to analyse the economic importance of tourism, information system components, and the role of technology in tourism promotion. Quantitative research follows, using surveys of 100, 200, and 27 tourists to identify key factors influencing tourist choices, information sources, and desired system features. The results highlight the importance of cultural attractions, recommendations from friends, and the use of websites and social media by tourists.

The research findings guide the development of an information system for Korça's tourism industry, featuring secure data storage and effective information dissemination. Data were collected via secondary sources and online questionnaires, and purposive sampling was used to target tourists who had visited Korça. The analysis combines thematic and content analysis of qualitative data with statistical analysis of quantitative data to identify tourism preferences and inform system design. Ethical considerations were maintained throughout the research, with a focus on integrity and accurate citation of sources.

3.1 Methods and Analysis

To answer the research question and to build an effective system, initially a study with 27 tourists (19 local visitors and 8 foreign tourists) using a questionnaire to assess their experiences, is conducted. The questionnaire focused on identifying their information sources, decision-making factors, desired features in the tourism system, and main issues encountered during their visit. This insight into visitor

preferences will guide the development of a promotional system tailored to the needs and desires of tourists in Korça.

Below are presented the results of the study.

1. *What sources of information do you typically use to plan your trips?*

What sources of information do you typically use to plan your trips?

27 responses

- Online Travel Agencies
- Social Media
- Travel Apps
- Official Tourism Websites
- Recommendations from friends or family
- guides and brochures

33.3%
18.5%
11.1%
29.6%
7.4%

From the answers result that most respondents relied on recommendations from friends and family for trip planning, with social networks emerging as a key source of information. Some used official tourism websites, while fewer relied on travel apps and online travel agencies.

2. *What type of information do you find most helpful when planning your visit to a city?*

What type of information do you find most helpful when planning your visit to a city?

27 responses

- Attractions and landmarks
- Historical and cultural information
- Accommodation options
- Dining and restaurant recommendations
- Local events and festivals
- Shopping and souvenirs
- Tour guides and itineraries

29.6%
40.7%
14.8%

The study reveals that the history and culture of the city had the greatest influence on destination choice, with 40.7% of respondents citing it as a key factor. City tours followed with 29.6%, and attractions and monuments were noted by 14.8%. Local festivals, shopping, and restaurants had minimal impact, with only 3.7% each for festivals and shopping, and 7.4% for restaurants.

3. How do you prefer to access information while traveling?

How do you prefer to access information while traveling?

26 responses
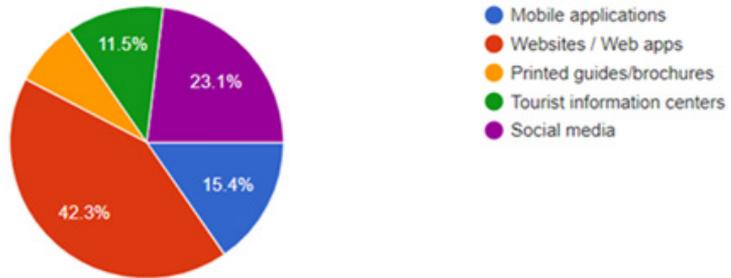
From the 26 participants, the majority preferred accessing information through websites or web applications (11 participants). Six preferred social networks, four used mobile applications, three relied on tourist information centres, and two opted for guides and printed brochures.

4. What features would you like to see in an information system for Korça?

What features would you like to see in an information system for Korce?

26 responses

Most tourists (69.2%) preferred adding social interactivity to the tourism system, allowing them to share experiences and promote the city. This reflects the importance of recommendations and social networks. Other features, such as detailed advice, online booking, and interactive maps, were favoured by 7.7% each, addressing issues with outdated information and location finding. A small percentage (3.8%) showed interest in augmented reality.

3.2 System's design

The system's design is centred on creating an information system that promotes the natural and cultural attractions, local activities and businesses in Korça. The system targets three user roles: administrators, business owners, and visitors.

- Administrator: Registers business owners and provides them with login credentials via email.
- Business owners: After registration, they can add their businesses to the system for a fee of $10 per listing.
- Visitors: Can explore attractions, activities, and businesses without logging in. However, to post experiences, engage with content, or interact with others, they need to log in and create a profile.

The main goal of the platform is to create a social tourism environment where visitors not only gain valuable insights but also actively participate in promoting the city. By sharing their experiences and engaging with others, visitors become advocates for Korça's tourism, contributing to its growth through social interaction.

FIGURE 1: Use Case Diagram

The technologies used for building the system

For building the described system, we utilized the following technologies:

- Front-End: HTML, CSS, JavaScript
- Back-End: MySQL, Python [Framework: Flask]

Our selection of these technologies was driven not only by personal familiarity and ease of use but also by several objective factors.

HTML	CSS	Javascript	Python	Flask	MySQL
Wide support	Flexibility and Adaptability	Interactivity	Readability	Modular and minimalist design	Open Source
SEO-friendly	Browser Compatibility	Enhanced User Experience	Libraries and community	Flexibility	Data Security
Enhanced user experience	SEO-friendly	Browser Compatibility	Scope	Extensibility and Integration	Scalability on Demand and higher efficiency
Integration with other technologies	Consistency	Third-Party Integration	Efficacy	Simplicity	Easy to Use
Device compatibility			Integration and Interoperability:		High Performance

How a basic flask application works (flask flow)?
In the image above, we can see how a basic flask application works.
Flow:

1. The HTTP request is made and hits the server.py file.
2. Based on the route we give, it gathers up any HTML, CSS, JS, and data.
3. Then it responds back to the browser with what we return. (Coding Dojo, n.d)

FIGURE 2: Flask Flow (Coding Dojo, n.d)
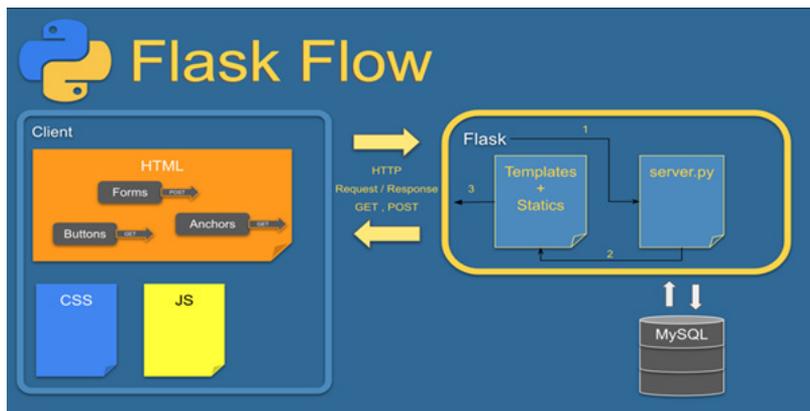
Database design

The database design for the social-tourism information system focuses on organizing data efficiently to manage user interactions and content. It was developed using MySQL Workbench to facilitate database structuring, including the creation of an Entity Relationship Diagram (ERD) that supports normalized data.

User Roles and Tables:

Administrator: Registers business owners, adds attractions and activities. The Admin table stores essential details (name, email, password, role).

Visitors: Can explore, post, and like content about attractions, activities and businesses. The Visitors table holds their data (name, email, profile picture, etc.).

Business Owners: Add businesses to the system for promotion. The Owners table stores business owner information (name, email, contact details).

Core Functionalities:

Attractions and Activities:

- The Attractions table stores details (name, location, description, etc.).
- The Activities table contains activity data (name, date, time, price, etc.).

Business and Payments:

- The Businesses table includes business-related information (type, description, services, etc.).
- The Payments table tracks payment transactions (amount, date, status).

Social Interactions:

- Visitors can create posts and like content related to attractions, activities, and businesses. Separate tables (PostBusinesses, PostAttractions, PostActivities) store post details, and Likes tables track interactions.
- Testimonials table records user feedback.

Relationships:

- Owners have a one-to-many relationship with businesses and payments, as each owner can promote multiple businesses and make several payments.
- A visitor can create multiple posts for a specific business, while a business can receive posts from multiple visitors. This establishes a many-to-many relationship between the Visitors and Businesses tables, with the intermediate table PostBusinesses facilitating the connection. The same

structure applies to the relationships between Visitors and Attractions, as well as Visitors and Activities, forming additional many-to-many relationships through PostAttractions and PostActivities tables.Similarly, visitors can like numerous posts, and each post can receive likes from multiple visitors. This creates many-to-many relationships between Visitors and posts related to businesses, attractions, and activities, with the intermediate tables LikesBusiness, LikesAttraction, and LikesActivity managing these interactions.

- Testimonials follow a one-to-many relationship, with each visitor able to leave multiple testimonials.

This structured approach ensures a seamless experience for all users, with each table designed to support the system's functionality efficiently, following best practices in database normalization and relationship management (Letkowski, 2015; Inan & Juita, 2011).

FIGURE 3: ERD diagram
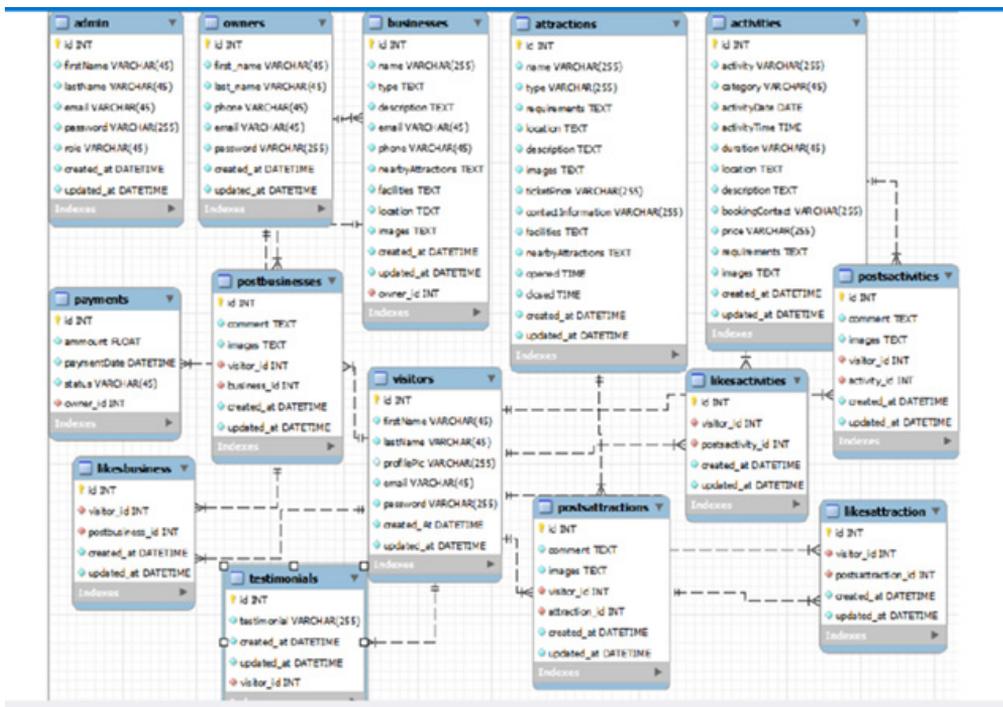
Code structure

MVC stands for Model, View, and Controller, and is a design pattern used to organize code in a modular way that enhances development, maintainability, and scalability. It is not tied to any specific language or framework.

Controller: The controller manages the initial client request, coordinating between the Model and the View to process and retrieve the necessary data. It acts as a mediator, directing the flow of data between the Model and the View before delivering the final response to the client. It contains the application's core logic.

Model: The model handles data interactions and represents the data entities within the application. It is responsible for reading from and writing to the database. When data is needed, the Model retrieves it and passes it to the Controller, which then forwards it to the View.

View: The view is responsible for generating the user interface. It takes the data provided by the Controller, integrates it dynamically, and prepares the response in a client-ready format such as HTML. Once the view is rendered, the response is sent back to the Controller, which delivers it to the client. (Coding Dojo, n.d.)
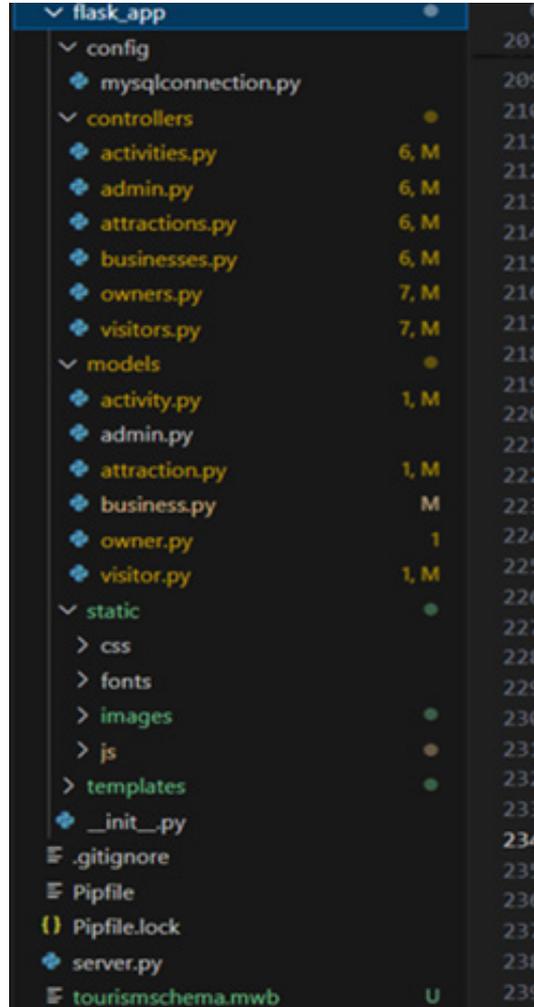
FIGURE 4: MVC design pattern (Coding Dojo, n.d.)
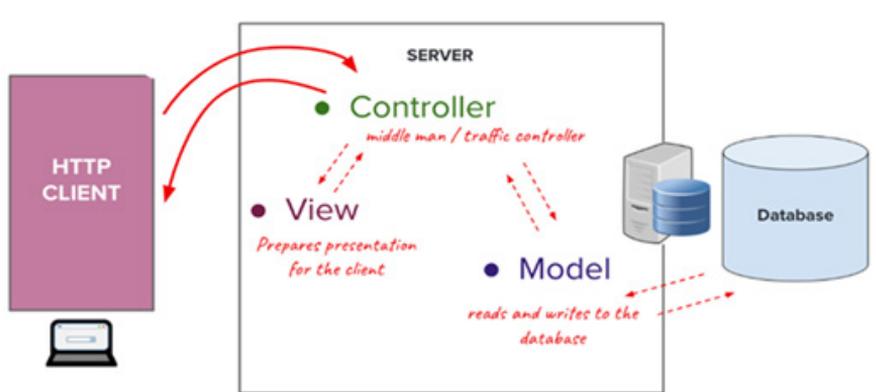
Application modularization

The modular structure of our application is illustrated in the figure below:

FIGURE 5: Application modularization

The modularization approach shown in the figure above organizes our Flask application into distinct components, simplifying management and maintenance.

server.py: This is the primary file of our Flask application, responsible for initializing the app, importing routes, and running the server. Its main role is to configure and execute the Flask application.

The flask_app directory contains:

config folder: Houses configuration files for the application. It includes mysqlconnection.py, which manages the connection to the MySQL database.

controller's folder: Contains functions or routes that handle HTTP requests and return responses.

model's folder: Stores the models representing our application's data structure and facilitating interaction with the database.
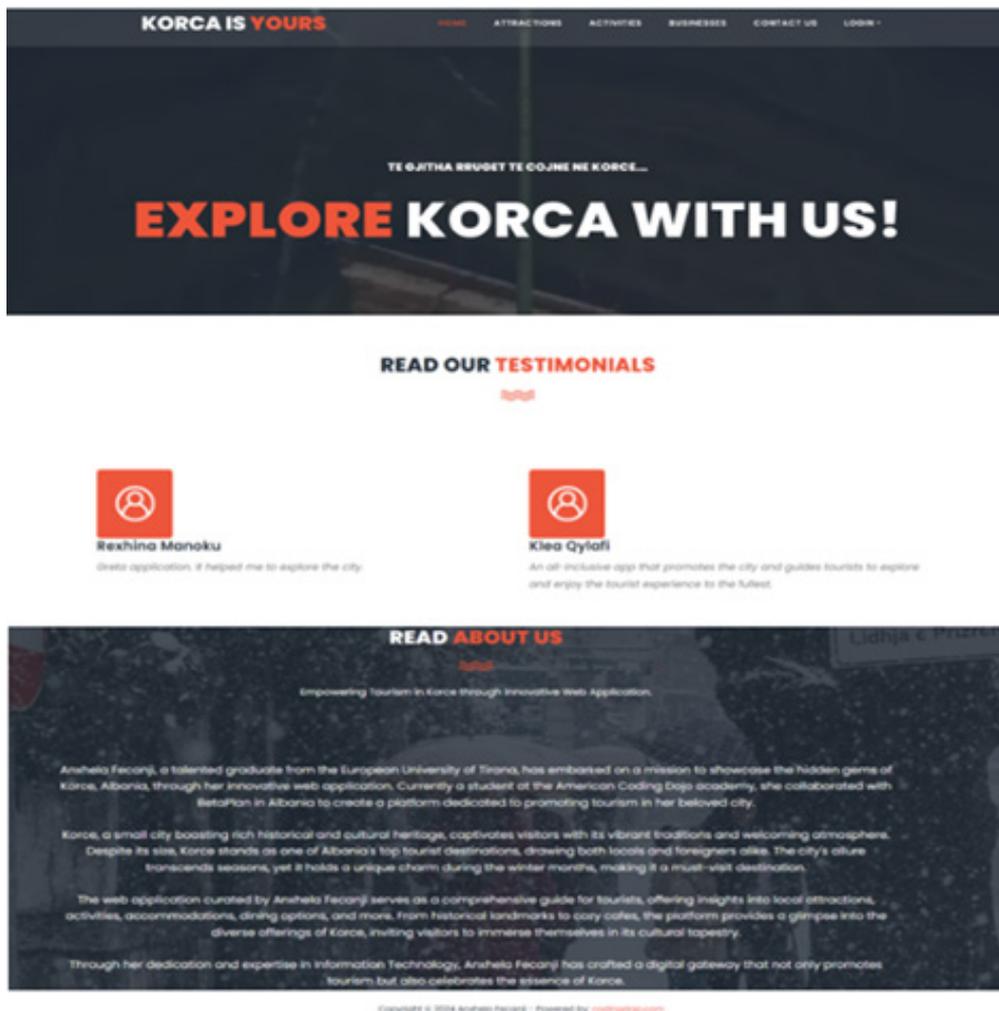
static folder: Holds static resources such as CSS, JavaScript files, and images.

templates folder: Where our HTML pages are stored.

System presentation
Below you can find the presentation of the system.

FIGURE 6: Main Page

Upon entering the main page, visitors will immediately understand its purpose as a promoter of the city of Korça. The page includes information about the developer and the motivation behind the system, along with testimonials from past users, highlighting positive feedback and suggestions for improvements. Visitors can access information about the city's tourist attractions, local businesses such as hotels, restaurants, car rentals, and various cultural activities.

By clicking on "Attractions" in the navigation bar, visitors are directed to a page displaying all the tourist attractions in the city. This page includes a search feature, making it easy to find specific attractions of interest. As shown in the image, each attraction has a "+view more" button. Clicking this button provides additional details, such as the address, description, map location, and photos of the attraction.

FIGURE 7: Attractions presentation
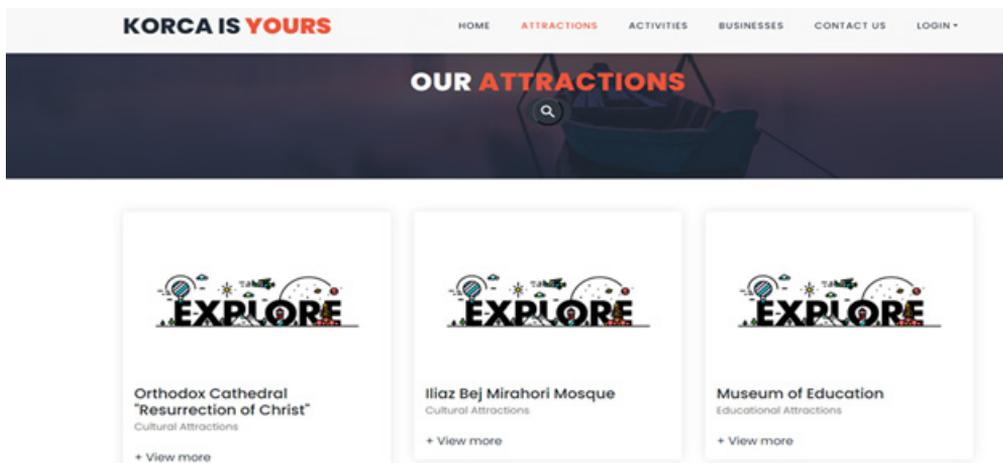
Similarly, clicking on "Activities" in the navbar displays all cultural events in the city, and selecting "Businesses" shows local businesses, each with detailed information.

Clicking "Login" in the navbar opens a dropdown menu with options to log in as either a visitor or an owner.

To log in as an administrator, we will navigate to the route '/loginPage/admin'.

After logging in as an administrator, you are taken to the dashboard, where key functions are accessible via the navigation bar. The administrator can register new business owners, expand the platform's network, and add tourist attractions and city activities. The administrator can add new business owners to the system.

Business owners can contact the site admin via the contact form on the "Contact Us" page. When the admin creates an owner's account, an automated email is sent to the owner with their login credentials.

The administrator can add attractions and cultural activities happening in the city, enhancing the platform's cultural content.

Business Owner

The administrator registers business owners, who can log in on the next page.

The owner dashboard displays all businesses associated with the logged-in owner. Identified owner hasn't added any businesses yet. To register a new business, go to the navbar and click "Add business." You'll be directed to a page to make a standard initial payment set by the administrator before proceeding with the business registration.

Once the payment is completed, a form will appear, allowing us to proceed with the business registration.

FIGURE 8: $10 payment made by owner via PayPal
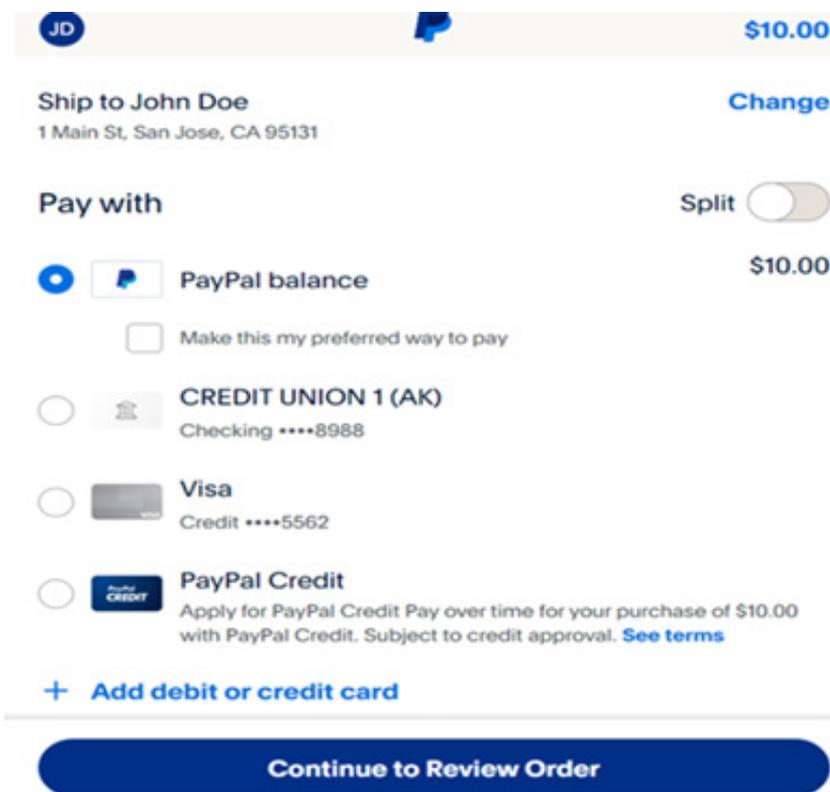
Visitor

Visitors can log in or register in the application to access detailed information about accommodations, restaurants, tourist attractions, and cultural activities in the city. By joining, they become part of a tourism-social network aimed at promoting the city through visitor-created posts. These posts, based on authentic

experiences, act as strong endorsements, highlighting the city's attractions to potential visitors.

After registration, visitors are taken to the dashboard, showing all city businesses, attractions, and activities. Clicking the visitor's profile picture in the navbar redirects to their profile page, which displays posts they've created about businesses, tourist attractions, or cultural activities.

FIGURE 9: Visitor profile page
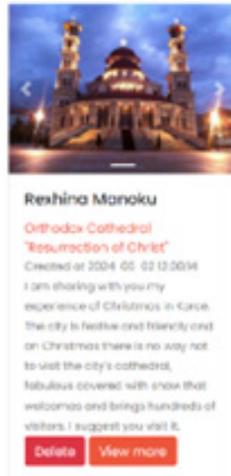
Clicking the "Delete" button removes the post, while the "View more" button lets registered visitors see users who have liked their post, fostering social interaction between users.

Clicking "All Posts" in the navigation bar opens a page showcasing posts from other visitors. Each post features the visitor's photo, description, creation date and time, and details about the promoted attraction, activity, or business. Clicking on the promoted site provides more detailed information. This highlights the visitor's promotional role. Users can also click "View more" to like the post and see who else has liked it.

3.3 Application security system

In our tourist system, several security measures have been implemented to ensure application security and protect user data:

Data Validation / Input Validation: This process ensures data validity and system integrity by thoroughly validating all user-entered data. This includes validating form submissions during user registration or login, as well as data used for adding new activities, businesses, or attractions.

Authentication and Authorization: These are crucial for verifying user identities and managing access rights to resources and functionality. Users must log in with their unique email addresses and passwords. We enforce strict password security measures, including minimum length requirements and encryption, to protect against unauthorized access (cybertalents, n.d.).

4.Results

This thesis was focused on designing and implementing an effective information system tailored to promoting tourism in Korça, explaining at first, the role of technology in enhancing safety, service quality, and the overall travel experience.

Through the analysis of successful case studies like the I Love NY and NYCGO apps, as well as systems in Hong Kong, Shanghai, Taipei, and Morocco, is shown how such systems can boost the tourism industry and improve visitor experiences. This study highlighted key factors influencing destination choices, such as accessibility, attractiveness, affordability, and amenities.

Focusing on Korça, are identified natural and cultural attractions as primary tourist draws, with online platforms and social interaction features being highly desired by tourists. Recognizing Korça's significance as a major Albanian tourist destination, was developed a system that provides detailed information on attractions, accommodations, and dining, while facilitating engagement between businesses and visitors.

This thesis provides a guide for developing an information system tailored to promote tourism in Korça. The system aims to create a relaxed, social, and engaging experience for tourists, stimulate economic growth, and support sustainable tourism practices. By bringing together stakeholders and visitors, the system seeks to highlight Korça's diverse offerings and enhance its status as a major tourist destination.

Future work
The future work aims:

- The transformation into a dynamic social-tourist network dedicated to Korça
- Organization of group city tours through the system
- Online booking option for accommodation and restaurants
- Multilingual support
- Personalized recommendations

References:

1. Bastida, U., & Huan, T. (2014). Performance evaluation of tourism websites' information quality of four global destination brands: Beijing, Hong Kong, Shanghai, and Taipei. Journal of Business Research,67(2), 167–170.

2. Biadacz, R., & Biadacz, M. (2015). The Use of Modern Information Technology in Tourist Information Systems on the Example of City of Czestochowa. Procedia Computer Science,65, 1105–1113.

3. Coding Dojo. (n.d.). Flask-Bcrypt. Retrieved from: https://login.codingdojo.com/m/506/12465/87444

4. Coding Dojo. (n.d.). MVC Design Pattern. Retrieved from: https://login.codingdojo.com/m/506/12464/110535

5. Coding Dojo. (n.d.). Overview. Retrieved from: https://login.codingdojo.com/m/506/12467/87456

6. Coding Dojo. (n.d.). Python Overview. Retrieved from: https://login.codingdojo.com/m/506/12456/87290

7. Dahiya, Kirti & Batra, Dr. (2016). Tourist decision making: Exploring the destination choice criteria. Asian Journal of Management Research. 7. 140-153. Retrieved from: https://www.researchgate.net/publication/325192595_Tourist_decision_making_Exploring_the_destination_choice_criteria

8. Dino, A. (2018). Turizmi kulturor si mundësi për një zhvillim të qëndrueshëm në rajonin e Korçës (punim doktorature, Universiteti Europian i Tiranës, Tiranë, Shqipëri). Retrieved from: https://uet.edu.al/wp-content/uploads/2019/07/Doktoratura-AVD-2018-1.pdf

9. Dottle, R. (2016, January 30). Geographies of the Tourism Economy, Space Way-finding, New York and Spectacle. Columbia. Retrieved from: https://www.academia.edu/21244696/Geographies_of_the_Tourism_Economy_Space_Way_finding_New_York_and_Spectacle

10. Dunne, G., Flanagan, S., & Buckley, J. (2011), Towards a decision-making model for city break travel. International Journal of Culture, Tourism and Hospitality Research, 5(2), pp 158-172.

11. El Maazouzi, A. (2020). The Impact of Official Tourism Websites on the Destination Image: The case of Morocco (Dissertation). Retrieved from: https://www.diva-portal.org/smash/get/diva2:1474902/FULLTEXT01.pdf

12. Flatirons. (2024, January 03). What is Flask? Overview of the Flask Python Framework. flatirons.com. Retrieved from: https://flatirons.com/blog/what-is-flask-overview-of-the-flask-python-framework-2024/

13. INSTAT Albania. (2020). Turizmi në shifra: Shqipëri 2020. Retrieved from: https://www.instat.gov.al/media/9545/turizmi-ne-shifra-shqiperi-2020__.pdf

14. INSTAT Albania. (2021). Turizmi në shifra: Shqipëri 2021. Marrë nga https://www.instat.gov.al/media/11106/turizmi-ne-shifra-shqiperi-2021.pdf

15. Korça, Qyteti im. Turist në Korçë. (2016). https://turistnekorce.wordpress.com/home/

16. Labunska, S., Zyma, O., & Sushchenko, S. (2022). The use of information systems as a way to ensure interaction between small and big tourism enterprises. Access Journal - Access to Science, Business, Innovation in the Digital Economy,3(1), 16–28. https://doi.org/10.46656/access.2022.3.1(2)

17. Lau, J. M. (2004), The role of climate information in tourist destination choice. Hamburg, Germany.

18. Li, H. (2010). Study on Tourism Planning and Management Information System Based on Component GIS Technology. Proceedings of Annual Conference of China Institute of Communications. Retrieved from: https://www.scirp.org/pdf/6-1.41.pdf

19. Mihai, V. C., Dumitras, D. E., Oroian, C., Chiciudean, G. O., Arion, F. H., & Mureşan, I. C. (2023). Exploring the Factors Involved in Tourists' Decision-Making and Determinants of Length of Stay Administrative Sciences, 13(10), 215.

https://doi.org/10.3390/admsci13100215

20. Ministria e Turizmit dhe Mjedisit e Shqipërisë. (2019). Strategjia Kombëtare e Turizmit 2019-2023.Retrieved from://turizmi.gov.al/wp-content/uploads/2019/06/Strategjia-Komb%C3%ABtare-e-Turizmit-2019-2023.pdf

21. MoldStud. (2024). The Importance of HTML, CSS, and Javascript in Web Development. Retrieved from: https://moldstud.com/articles/p-the-importance-of-html-css-and-javascript-in-web-development

22. Moore, K., Smallman, C., Wilson, J., & Simmons, D. (2012), Dynamic in-destination decision-making: An adjustment model. Tourism management, pp 635-645.

23. Partners Albania. (2015). Promovimi_i_turizmit_alternativ_Qarku_Korce. Partners Albania, Center for Change and Conflict Management. Retrieved from: http://partnersalbania.org/wp-content/uploads/2015/10/Broshure_Promovimi_i_turizmit_alternativ_Qarku_Korce.pdf

24. Pröll, B., & Retschitzegger, W. (2000). Discovering Next Generation Tourism Information Systems: A Tour on TIScover.Journal of Travel Research,39(2), 182-191. https://doi.org/10.1177/004728750003900208

25. Qirici, E. (2011). Analysis of Consumers Profile as an Important Tool for Tourism Development. Journal of Knowledge Management, Economics and Information Technology. Retrieved from: https://ideas.repec.org/a/spp/jkmeit/1222.html

26. Qirici, E. (2014). Events as a Source of Competitive Advantage for Destinations. European Scientific Journal, 18(0). Retrieved from:

https://eujournal.org/index.php/esj/article/view/4681/4473

27. Sanju, N. L. (2023). Trends of Information Systems in Tourism: A Review of Literature. International Journal of Research and Review,10(12), 229–241. https://doi.org/10.52403/ijrr.20231227

28. Talekar, S. (2024). 6 Reasons to Choose Python for Backend Development. Retrieved from: https://www.thinkitive.com/blog/6-reasons-to-choose-python-for-backend-develop

29. Vyas, K. (2023). 8 Big Advantages of Using MySQL | Datamation. Retrieved from: https://www.datamation.com/storage/8-major-advantages-of-using-mysql/

30. Wahab, I. (2017). Role of Information Technology in Tourism Industry: Impact and Growth. International Journal of Innovative Research in Computer and Communication Engineering (IJIRCCE). Retrieved from: https://www.researchgate.net/publication/363040658_Role_of_Information_Technology_inTourism_Industry_Impact_and_Growth

31. Xhajanka, E. (2021). Korça qyteti i preferuar i turistëve të huaj [Korça, the preferred city of foreign tourists]. Retrieved from: https://ata.gov.al/2021/08/01/korca-qyteti-i-preferuar-i-turisteve-te-huaj/

32. Zaimi, E. (2017). Korça, turizëm në katër stinët. Revista Monitor. Retrieved from: https://www.monitor.al/korca-turizem-ne-kater-stinet-3/

33. World Tourism Organization. (2024). World Tourism Barometer: January 2024. Retrieved from: https://en.unwto-ap.org/resources/worldtourismbarometer-january-2024/

34. UNWTO. (2024). International Tourism to Reach Pre-Pandemic Levels in 2024. Retrieved from: https://www.unwto.org/news/international-tourism-to-reach-pre-pandemic-levels-in-2024