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Enrichment of Web Development using UI/UX Tour Ease: A Case Study

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ABSTRACT

Presently, the assiduity of tourism is meeting numerous challenges; one of the crucial challenges is the insufficiency of having smart tourism systems which take advantage of the recent progresses in communication and information technology. Another problem is the design of a smart tourism systems while espousing diversified sustainable values of experience of the excursionists (emotional values, social values, functional values, and epistemic values). The Kingdom of Saudi Arabia is characterized by the presence of numerous places of tourism, whether religious tourism or eco- tourism. The end of this work is designing and enforcing a web operation named" trip key" that will help the excursionists to get accurate and applicable information about the tourism places similar as position, caffs and events. The proposed operation was designed and enforced by the Unified Modelling Language (UM), Microsoft Access 2010, andASP.net, HTML, CSS, Visual introductory programming languages. The proposed tourism system will be suitable to give th e excursionists with recommendations for places to visit grounded on their preferences.

Keywords: Tourism, Information Systems, Unified Modelling Language.

1. Introduction

In recent times, the widespread expansion of the Web has prompted organizations and companies to utilize it for various applications. Among these, tourism has emerged as a prominent domain within e-commerce. Many established tourism companies and newcomers, particularly information technology firms, have established a robust online presence, attracting thousands of daily visitors, which opens up opportunities for business-to-customer (tourist) and business-to-business transactions .

One of the most significant tourism applications on the Web is Destination Management Systems (DMS) or Destination Information Systems (DIS) These systems typically provide information about tourism offerings at a given destination and may even encourage e-commerce activities for potential tourists Tourism is recognized as a driver for new economic activities, fostering regional development and positively impacting factors such as balance of payments, gross income, production, and employment. The proliferation of information has given rise to the development of intelligent systems and mechanisms that facilitate quick access to relevant content on the internet and aid in the decision-making process .

The technological revolution has left no aspect untouched, including efforts to enhance the tourism industry by introducing free electronic applications aimed at promoting tourism. Today, Artificial Intelligence (AI) algorithms play a significant role in addressing complex challenges, such as image segmentation , information retrieval , and healthcare monitoring systems .Consequently, many technologists have harnessed AI as an effective tool for developing new systems to boost the tourism industry .

The Kingdom of Saudi Arabia boasts a multitude of tourist destinations, encompassing religious and eco-tourism. Religious tourism is a crucial source of income and a major economic pillar in the Kingdom, while environmental tourism contributes significantly to its tourist attractions. For countries like Saudi Arabia, tourism (beyond religious tourism) represents an underexplored but potentially lucrative income generator .The Kingdom is home to over 150 tourist destinations across its 13 regions, some naturally occurring, and others man-made .

II. Related Work

The Saudi Commission for Tourism and National Heritage (SCTH) launched the "Tourism Navigator" application, providing spatial information about tourism in Saudi Arabia. This application features a geographic information system (GIS) compatible with iPhone and iPad, allowing tourists to explore nearby attractions, access services, take virtual tours, and obtain driving directions on the map. The application offers a bilingual interface in Arabic and English .

• TravelDiv

The TravelDiv application is the largest Arab application dedicated to European tourism, particularly in Austria and Switzerland. It provides tourist maps for various European countries, along with a wealth of information, advice, and instructions to assist travelers in making trip decisions. Through the app, tourists can coordinate and plan their trips .

• TripAdvisor

Founded in 2000 by Langley Steinert and Stephen Kaufer, TripAdvisor is a travel website offering information and customer reviews about destinations worldwide. It also includes reviews of restaurants, hotels, accommodation booking, and interactive tourism forums. Additionally, TripAdvisor allows travelers to compare prices from over 200 hotel reservation sites, helping them find the best hotel deals. TripAdvisor has a significant global presence, with an average of 390 million unique visitors per month .

• TravelerPedia

TravelerPedia is the first Arabic website dedicated to travel and tourism news, offering quick access to information through various communication channels, including email and social networks. The site provides comprehensive reports on hotels worldwide, complete with real pictures and important information. TravelerPedia has received awards for its excellence in tourism media and is frequented by thousands of daily visitors, along with a substantial social media following .

• Tourist guide in Azerbaijan

This website offers an overview of Azerbaijan, its cities, and major tourist attractions. It features rich visuals to give visitors a vivid impression of places they wish to visit. The site provides information and images of renowned hotels, links to hotel reservation booking sites, details on popular restaurants, historical landmarks, health resorts, fitness centers, shopping centers, parks, gardens, museums, and a tourist program .

• Google Trips

The Google Trips application streamlines access to essential travel information for users. The app automatically extracts travel-related information from the user's Gmail account, including hotel reservations, bus tickets, and airline tickets, and displays it intuitively. Google Trips presents all the attractions at the destination in an organized and elegant manner. It also provides essential details, such as opening hours and fees, for each activity or location. The app includes a "things you need to know" section offering information about hospitals, emergencies, money, shopping, and more .
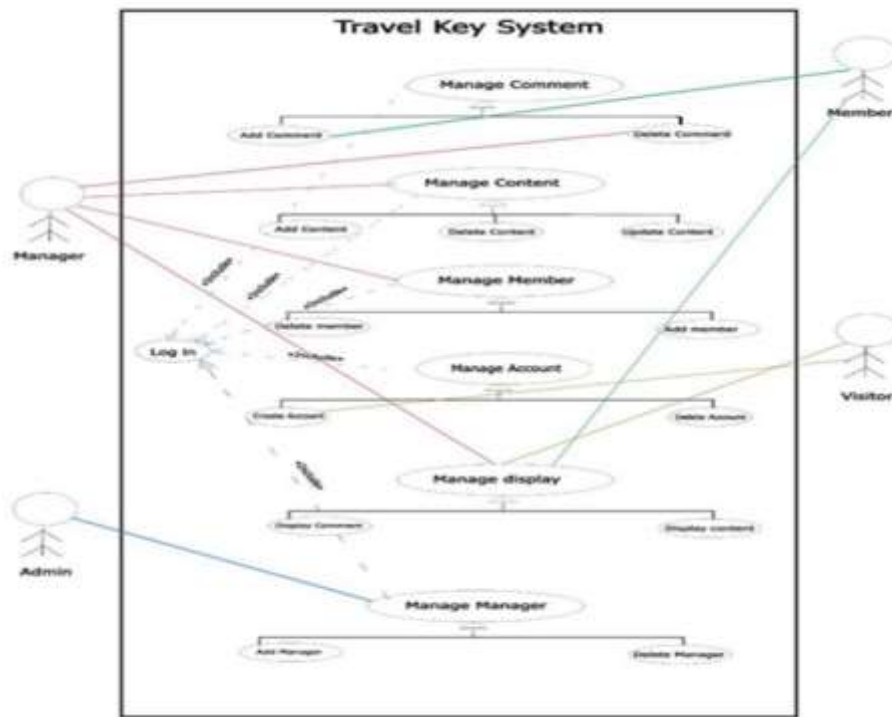
III. Methodology

System analysis is a crucial technique for gaining a comprehensive and systematic understanding of a system to achieve specific objectives. The analysis helps determine whether the system is open or closed, probabilistic or deterministic, which is essential before designing the system to ensure the required architectural design. The Unified Modeling Language (UML) is used to visualize, specify, construct, and document software-intensive system artifacts, making it the primary tool for designing the proposed system .

2.1 Use Case Diagram

A Use Case illustration shows dispatches between deals of the system(Use Cases) and external druggies(Actors) in the system boundary environment. The ideal of Use Case plates is furnishing a high- quality view of the system and convey the conditions of the system for all stakeholders, including design directors, guests, masterminds and engineers.In the proposed system, the actors are the director, Visitor, Member and Admin. Figure 4 shows the use case illustration for the proposed system.
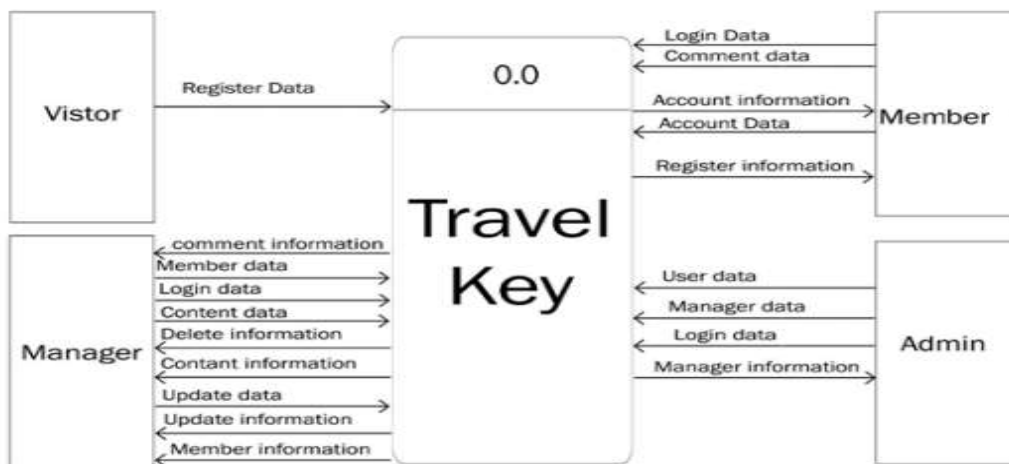
Figure Use case diagram for given system.

2.2 Context diagram

Context plates illustrates the relations among the system and the other external factors that the system interacts with. System environment plates are useful to understand the environment that the system is part of. They're employed in a design beforehand to a chieve agreement on the compass and can be involved in the document of conditions. A environment illustration displays the whole system as a single process. Figure 5 represents the environment illustration of the proposed system.
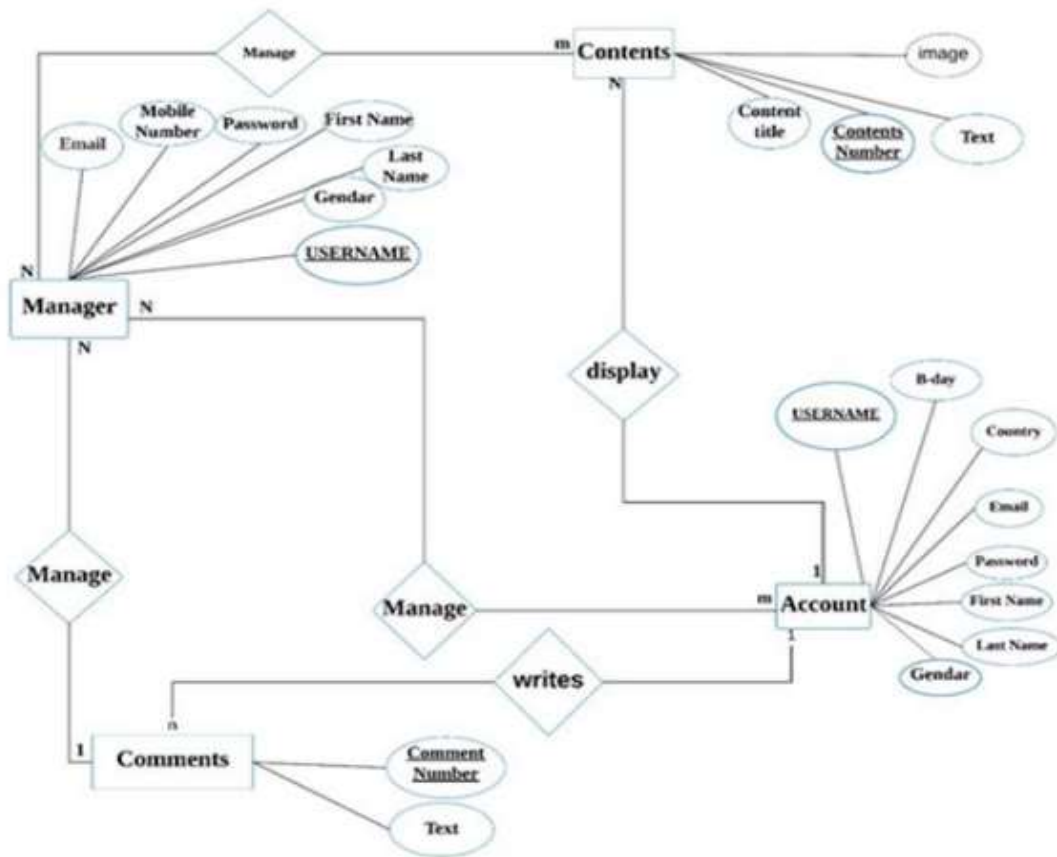
Figure: The context diagram of given system

2.3 Entity Relationship Diagram

An reality- relationship ERD illustration, is a graphical illustration of realities and their relations with each other. ERD Diagram is used generally in computing regarding the data association within information systems or databases. The ER Diagram purpose is to denote the frame Infrastructure of the reality. Figure 6 shows the ER illustration for the proposed system.
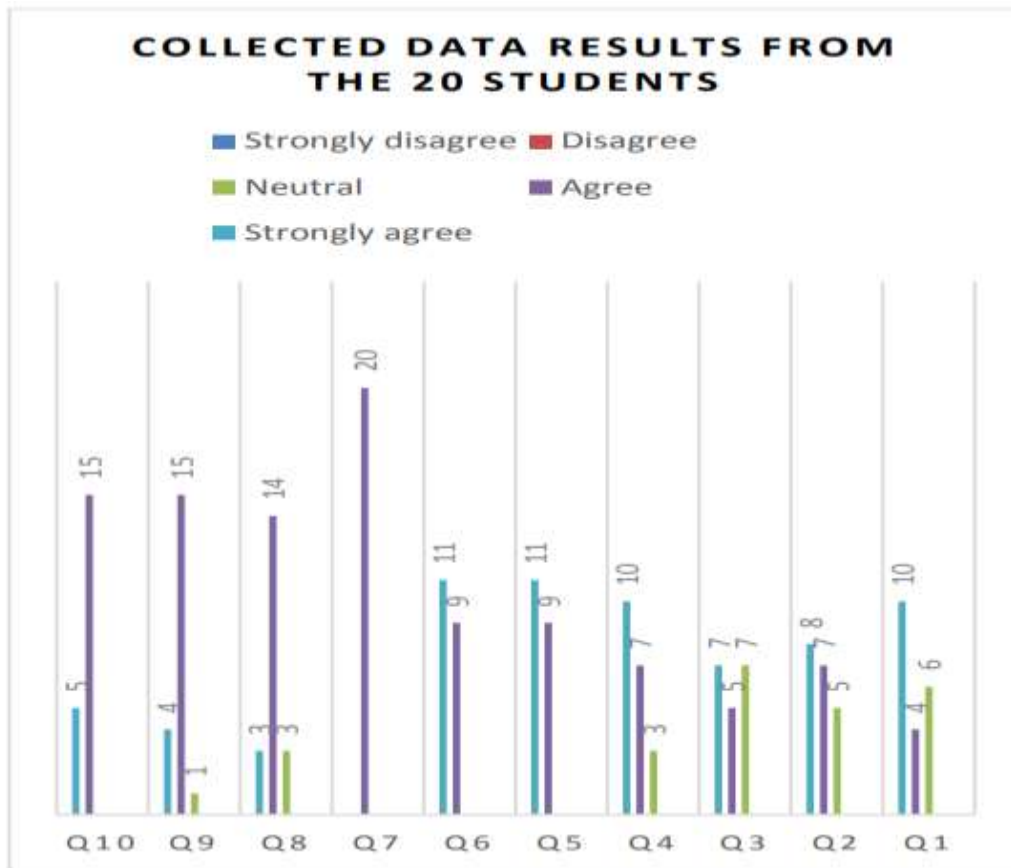
Figure: ER diagram for given system

2.4 Database Testing and Construction

Database testing is important to descry crimes that disturb the thickness, security, reliability, and performance of the system. Also, it helps in validating the system against the stoner's specified conditions.For enforcing the database of the proposed system Microsoft access was employed. Tables 1 and 2 are illustration of the created tables.

2.5 Interface Design

The design of visual interface is the process of designing physical representation of the stoner interface that the druggies see on the electronic device screen. The end visual interface design is to link meaning, which is fulfilled by creating suitable illustrations that represent the work of the operation and the way it operates. The numbers below are exemplifications of the enforced interfaces.

Figure: In the given diagram collection of data of 20 students.

IV. Result and Discussion

To estimate the system, we invited 20 scholars from the Imam Abdurrahman Bin Faisal University(IAU) at the College of Applied Studies and Community Service for using the proposed system. A brief description of the system interface and operation was illustrated to the scholars. after tested the system, the pupil answered a check which consists of 10 particulars to measure the stoner satisfaction position(as shows in figure 10). As can be interpreted from the result, the maturity of druggies agree that the system is easy to use, salutary and achieves the primary ideal of the design.

V. Conclusion

The assiduity of tourism is meeting   numerous challenges ; one of the crucial challenges is the insufficiency of having smart tourism systems which take advantage of the recent progresses in communication and information technology. This work designed and developed a web.

VI. References

[1] ER diagram is taken from UML Distilled by Martin Fowler

[2] Context diagram is taken from Context Diagram Software | Context Diagram Maker | Creately .

 [3] UI design is taken from figma .