Tourist and Hospitality Management using Blockchain Technology

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Abstract:
In this era of Industry, customer friendly cost-effective alternative of hotel searching and booking is required. In this research paper, we are proposing a framework through which, we tried to add a new method of hotel searching through a decentralized manner, using blockchain concept we simulate the hotel searching the customers removing online travel agents connecting customer and hotel directly. In this further we can add payment system using crypto servers.

I. INTRODUCTION
Tourism can be defined as a social, cultural and economic phenomenon which is defined by the movement of people to country or places outside their regular environment for personal or business or professional purposes. Over recent decades, tourism has increasingly become an information-intense business which relies heavily on information and communication technologies. Consequently, each new wave of technological progress has led to profound changes in areas like bookings and hospitality operations. From the 1990s, the web has exerted a robust impact on the tourism sector as entire and created new reservation systems also as latest sorts of direct interaction with prospective and existing customers. This has led to the e-tourism, defined because the digitization of all the processes and value chains within the tourism, travel, hospitality and cater industries that enable organizations to maximize their efficiency and effectiveness. A fairly latest development is that the shift from e-tourism toward smart tourism, which helps the move from the digital sphere into a combined digital and physical sphere. This move is characterized by the gradual replacement of internet sites by sensors and smartphones, the shift from information to big data, the central paradigm of interactivity being replaced by technology mediated co-creation, and main exchanges no longer being B2B and C2C, but rather public-private-consumer partnership. The blockchain is but another step during this gradual process of technical progress and not only offers new opportunities but may additionally pose a significant threat for varied incumbent stakeholders.

II. IDENTIFY, RESEARCH AND COLLECT IDEA
In this new era of Industry, e-tourism uses huge number of digital payments through applications supported by different sorts of payment gateways. These different payment options opens the door for the attackers to execute malicious activities such as hacking of wallet accounts, identity theft, attacks on payment clearance. In e-tourism, payment data is maintained in a centralized cloud server, which often leads to payment failure during peak traffic hour. The previous mentioned issues can be addressed by the usage of a decentralized mechanism such as blockchain, which enables trust and decorated management among various stakeholders such as Banking, travel agencies, airports management, railways, cruises, hotels, restaurants, and local taxis. We propose a framework named as Blockchain, which allows tourists to interact with various stakeholders through one wallet identifier linked with a cryptocurrency server to initiate payments. Blockchain has the ability to decrease the level of intermediation in tourism represents this technology’s most effective influence on the industry. The increasing presence of online travel agencies has changed tourism market structure by transferring power from suppliers to consumers. This review paper aims to develop a blockchain based framework for the hotel booking by employing a efficient method that uses the semi structured research to determine how domain experts conceive the longer term of intermediaries within the tourism industry to adopt blockchain technology. This result show that when we took blockchain under consideration it’s influence on businesses, blockchain is taken into account that most probable technology for eliminating mediators from the tourism industry booking hotels and also for stopping new mediators from gaining access to the present industry, thereby removing intermediary layer from the tourism market. Blockchain technology has the potential to significant transformation the tourism industry. It has characteristics such as immutability, transparency, programmability, and decentralization allow for innovative ways to design customer relationships, enable novel organizational structures and processes, and facilitate new forms of inter-operability organizational collaboration. In this I first elaborate on the basic functioning of the blockchain and highlight those characteristics which are crucial for understanding the rest of the implementation. Understanding how to apply it in the context of the tourism industry but also highlight shortcomings. How blockchain characteristic might shape the future of the tourism industry, which the main beneficiaries will be.

III. STUDIES AND FINDINGS
Now it is the time to articulate the research work with ideas gathered by adopting following suitable approaches:

A. Bits and Pieces together
In this approach we have combine all our researched information
in form of a research paper. In this paper we have taken the reference of already accomplished work as a starting building block of this paper.

Jump Start
This approach works for us best in guidance of fellow researchers. In this we have continuously receives or asks inputs from the work already done. It enriches the information pool of our paper with expert comments and up gradations. And we have felt confidence about our work and take a jump to start the paper writing.

B. Use of Simulation software
There are numbers of software available which can give the process involved in our research work and can generate the may review the main points of the paper; we have not replicate the abstract as the conclusion. Our conclusion is elaborated on the importance of the work or suggested applications and extensions.

![Sequence diagram](image1)

**Figure.1. Sequence diagram**

![Proposed System](image2)

**Figure.2. Proposed System**

Department of data Technology, School of pc and knowledge Sciences, Muhammadan Muhammad Ibn Saud monotheism University, Al Riyadh, Asian country. Blockchain has ability to extend the amount of dis-intermediation in business enterprise represents this technology’s only influence on the business. The increasing presence of on-line travel agencies has modified business enterprise market structure by transferring power from suppliers to shoppers. This literature survey aims to develop a blockchain primarily based framework for the commerce business by using an economical technique that uses the semi structured analysis to figure out but domain consultants conceive the long run of intermediaries inside the commerce to adopt blockchain technology. The results show that once taking under consideration blockchain influence on businesses, blockchain is taken into account Associate in Nursing acceptable technology for eliminating mediators from the business trade looking hotels and conjointly for stopping new mediators from gaining access to the present trade, thereby removing negotiate layer from the business market. The main analysis objective was to develop framework for the business trade which will cause Associate in Nursing multiplied level of dis-intermediation through the Blockchain potential positive impact offers a decent chance for different businesses to incur similar advantages from adopting this technology. This analysis can facilitate practitioners within the travel trade become at home with blockchain characteristics and advantages. Researchers can acknowledge its utility and the way it will become a necessary a part of the technology they use. Looking forward to intermediaries has become of nice concern for many folks for several reasons. Every analysis of the potential impact of blockchain technology has to take under
consideration three necessary aspects. First, the blockchain is simply a collective term for variety of technologies. Additional specifically, varied blockchain protocols exist and yield even additional implementations thence. Public and permission less blockchain offer totally completely different solutions and face different challenges like non-public and public ones. Second, blockchain technology or, additional specifically, its main building blocks square measure in a very state of constant modification. On a coffee level, this pertains to the various protocols that square measure perpetually being refined, whereas on the next level, this includes new applications that depend upon these foundations. for instance, new accord mechanism square measure below development so as to form completely different the energy-intensive algorithmic rule oftentimes utilized in public and permission less networks. in addition, new ascendable solutions square measure presently being tested so as to hurry up the complicated method of adding blocks in network. Several of those issues pertain particularly to public and permission less blockchain instead of to systems within which the participants recognize one another, as is that the case in camera blockchain. Third, varied contingency factors exist that complicate the prediction of future developments. most significantly, blockchain could be a extremely controversial technology.

IV. CONCLUSION

This review paper discusses useful insights of the implementation about the importance of blockchain technology in tourism and hospitality management, where security remains a important factor. In this paper , we proposed a framework named as Blockchain Enabled Hotel Booking Systemising ethereum smart contract of the tourist user through a unified cryptocurrency enabled application Ganache and metamask wallet. Then, the tourism stakeholders also register themselves on the metamask wallet for payment purposes. Truffle environment run the application and executes smart contracts for interoperability. Project used smart contracts those are applicable in the smart contract layer. Finally, three case studies are presented to predict the suitability of the proposed framework in tourism sector. In further development of this work we will try to implement a complete blockchain-based infrastructure for tourism and hospitality, which is able to provide end-to-end security to all stakeholders. The final motive of this paper to remove the intermediary layer in Tourism and Hospitality industry by the use of Blockchain Technology.

V. REFERENCES

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