



Information Technology Project – IT2080

Batch 04

Group No – TP_WD_B04_G01

Project Proposal

Tourism and Travel Management System

Contents

Company Background	3
Problem and Motivation	4
Aim and Objectives.....	8
System Overview	10
Literature review	12
Methodology	12
Work Breakdown Structure	13
Gantt Chart.....	14
Evaluation Method.....	15
System Functions	16
1.User Management.....	16
2.Tour packages Management	17
3.Residence Reservation Management.....	18
4.Finance and Inquiry management.....	19
5.Vehicle Reservation Management	20
6.Flight and Train Booking.....	21
7.Restaurant management.....	22
8.Special activity (sports/indoor/outdoor) management	22
References	24

Company Background

Innovative startup Traveley has created a thorough travel and tourist management system that is intended to make booking and managing travel simple, convenient, and hassle-free. Travellers may easily organize their excursions with the use of a system called Traveley, which provides a wealth of features and services. Any traveler needs to be able to book hotels, rental cars, restaurants, events, tour packages, and customized tours, which are all included in Traveley's travel and tourism management system. Travelers may quickly organize their trip without having to traverse through several websites or interact with multiple service providers thanks to the availability of these features on a single platform.

The Traveley system also features a one-stop shop website where travelers may arrange their whole journey. With the help of this tool, travelers may choose the places they wish to go, make trip plans, and reserve all the services they'll need in one spot. Also, the system offers comprehensive details about every location, including nearby eateries, activities, and events. Each tourist will have a customized experience thanks to Traveley's travel and tourism management system. Travelers can easily identify what they need and swiftly and easily book their services because of the system's ease of use and user friendliness. The system is also built to give travelers access to the most recent information while making travel arrangements by giving real-time availability and pricing information.

In summary, Traveley's travel and tourism management system offers an all-inclusive and cutting-edge approach to planning and managing travel. It's the ideal platform for travelers who wish to properly plan their trip and take pleasure in a stress-free travel experience thanks to its all-in-one services web page and personalized approach.

Problem and Motivation

Tourism is a significant industry in Sri Lanka, with many visitors coming to explore the country's rich culture, breath-taking natural beauty, and historical sites. However, one of the challenges that tourists face when planning their trip to Sri Lanka is the lack of a centralized platform to book everything in one place. Unlike some other destinations, Sri Lanka does not have a single website that provides a comprehensive booking service for accommodation, transport, activities, and tours.

Instead, visitors must surf numerous websites or get in touch with numerous service providers directly, which can be difficult and time-consuming. This could make vacation planning to Sri Lanka more difficult and ineffective than it needs to be. Also, without a centralized platform, travellers might not be able to compare costs and offers from various providers, making it more difficult to find the greatest offers or the most appropriate choices.

Some firms and groups have been attempting to develop online platforms that offer a variety of travel services in one location in an effort to address this difficulty in recent years. To build a completely integrated platform that addresses all part of a visitor's journey in Sri Lanka, there is still some work to be done. Further attempts to address this issue are probably going to develop as Sri Lanka's tourism sector continues to expand, making it simpler for visitors to plan their vacation and take advantage of all the nation has to offer. [1]

When it comes to market opportunity in tourism , Tourism is one of the important sectors in terms of foreign exchange earnings to the country. Currently the island nation experiencing a huge deficit in foreign exchange trades. Government of Sri Lanka keen on promoting the country as Best Tourist Destination in the world and earn more foreign exchange. There was an adverse impact on tourism sector in 2020 and 2021 due to the outbreak of Corona Virus. Hence the records and statistics of tourism industry shows that those two years were not promising. But in 2019 Sri Lanka was recorded excellent number of tourist arrivals. Total earning in 2019 from tourism sector was USD3,606Mn and it was 4.3% direct contribution to the Gross Domestic Production of the country. The following table shows the tourists arrivals during past five years. [2]

Tourists Arrivals during past five years

Year	Number of Tourists
2018	2,350,000
2019	1,913,702
2020	66,500
2021	194,495
2022	628,017

Source: Annual Statistical Report – Sri Lanka Tourism Development Authority

The total number of worldwide tourist arrivals in 2019 was 1.5Billion and the following table shows the major source markets and market shares.

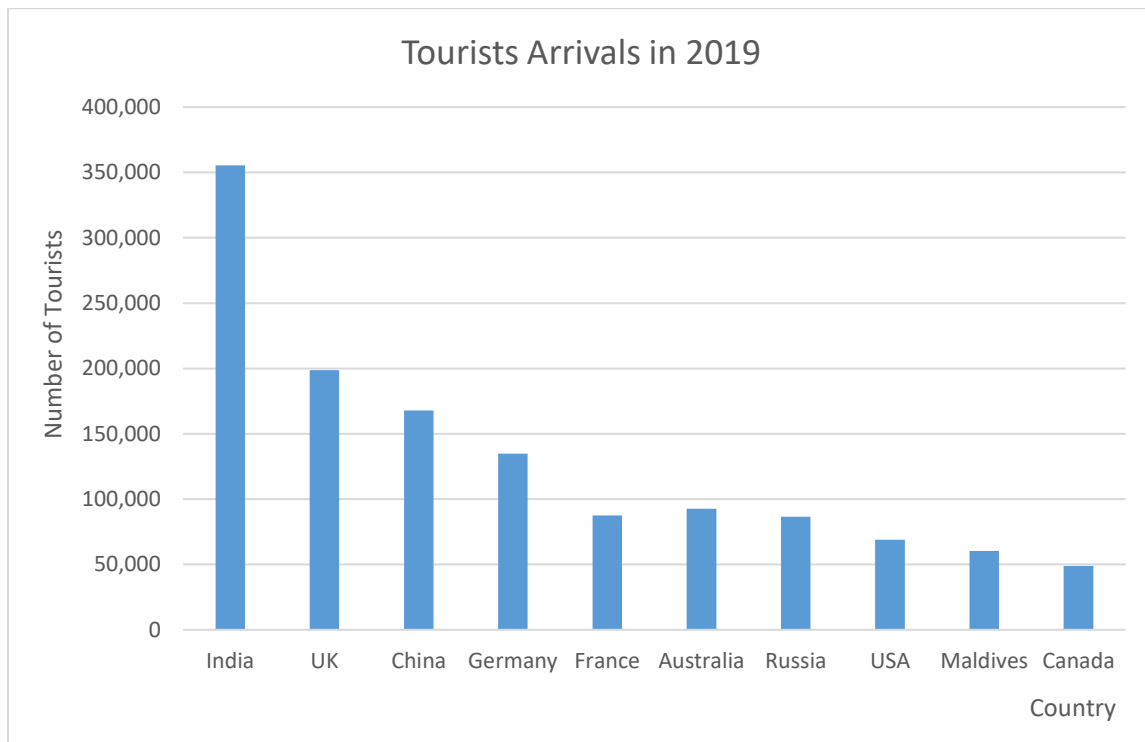
Major Source markets

Geographical area	Number of tourists	Market share
America	220Mn	15%
Europe	742Mn	51%
Africa	71Mn	5%
Middle East	64Mn	4%
Asia & The Pacific	364Mn	25%

Source: Annual Statistical Report – Sri Lanka Tourism Development Authority

The following table shows the top ten source markets of tourist in 2019. The analysis shows the India represented the largest number of international arrivals. United Kingdom recorded the second largest tourist arrivals with a share of 10.4% during 2019. [2]

Top ten Tourist Source Markets

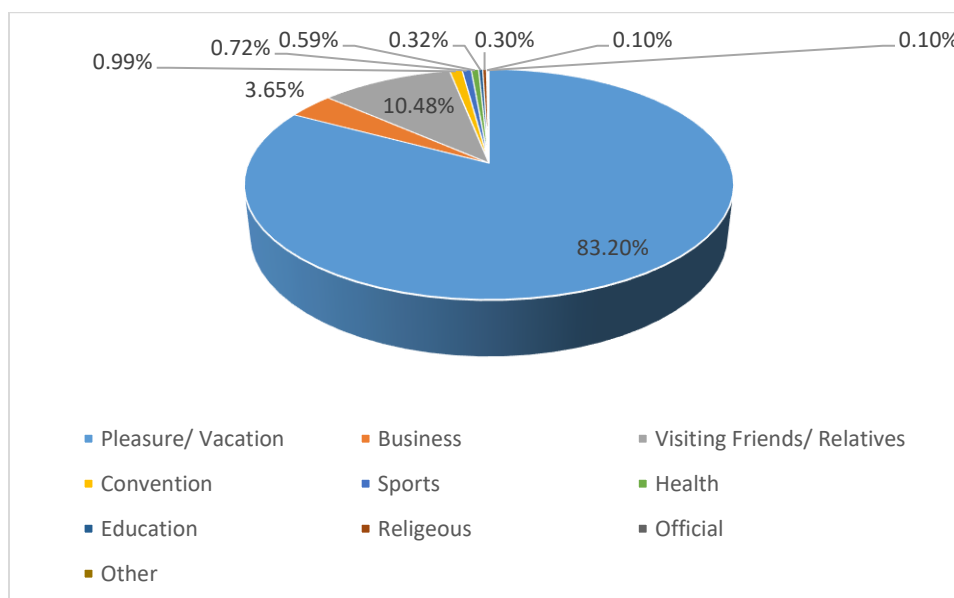


Source: Annual Statistical Report – Sri Lanka Tourism Development Authority

India recorded the highest number of tourists to the country while United Kingdom and China recorded second and third places. Asian and European regions represent the major component of tourists visited Sri Lanka during the under review. [2]

Tourists arrive to the country varies from month to month and peak months are January, February, March, April, November and December. All the other months can be considered as off-peak months. According to the statistics of 2019 we can identified that 83.2% tourists visited the country for leisure activities such as holiday, recreation while 10.48% of tourists had come for visiting friends and relatives. All the other came for sports, health and education purposes. [3]

Purposes of Visiting Sri Lanka



And also, statistics shows that the age wise analysis of the tourists arrived to the country in 2019.

Age Group Analysis

Age group	Percentage
3-19	10.23%
20-29	17%
30-39	22.57%
40-49	16.83%
50-59	15.81%
60 & above	17.50%

Source: Annual Statistical Report – Sri Lanka Tourism Development Authority

At times of economic crisis, it is more crucial than ever for young people to actively participate in fostering the economic growth and development of their nation. as Youth we can play a critical role in assisting small enterprises, generating employment opportunities, and stimulating innovation and entrepreneurship as responsible members of society.

Starting our own enterprises is one way for young people to support the economy. Young entrepreneurs can create new employment, produce revenue, and stimulate economic growth by discovering market gaps and coming up with creative solutions to suit consumer wants. Additionally, young business owners may support the growth of a more inclusive and fair economy by implementing sustainable and socially responsible business practices.

In addition to entrepreneurship, young people can help neighborhood companies and communities to boost the local economy. Youth may contribute to boosting local economies and building a more sustainable and resilient future by making the decision to use local goods and services and by getting involved in community-based projects and activities.

In conclusion, it's critical for us as responsible youth to understand how we can contribute to the economic growth of our nation, especially.

Our live interview with a tourist:



Video link :

https://drive.google.com/file/d/1twTBC4sqGZyYS6njS4YZBshah_xXZu78/view?usp=sharing

Aim and Objectives

Aims

Several aims of an online travel and tourist management system are essential to the project's success. One of the main goals is to offer tourists a practical and user-friendly platform for trip planning and reservation. This entails creating a thorough and simple-to-use system that enables travelers to look up and compare various travel alternatives, including flights, hotels, and activities, and make reservations quickly and securely.

The online travel and tourism management system's promotion of sustainability in the travel and tourism sector is another key goal. This entails integrating environmentally friendly tourism practices into the system, such as marketing eco-friendly lodging and transportation options and educating tourists on how to have as little of an impact on the environment as possible while visiting.

In addition to these objectives, the online travel and tourism management system seeks to offer top-notch customer service to tourists in order to win their loyalty. This entails creating efficient customer service standards, such as offering round-the-clock assistance, as well as incorporating feedback tools to let people share their experiences and provide comments.

The online travel and tourist management system's ability to produce income and support the expansion of the tourism sector is another goal. This entails creating efficient marketing and promotion plans that boost platform visibility and draw in new users. The system also intends to work with other tourism sector participants, such travel agents and regional tourism boards, to develop and market the destination and the range of travel alternatives.

In general, the goals of an online travel and tourist management system are to offer travelers a practical, environmentally friendly, and customer-focused platform while supporting the expansion and improvement of the tourism industry. By attaining these goals, the online travel and tourism management system can contribute to making travel more affordable, environmentally friendly, and pleasurable for everyone.

Objectives

- Develop a secure and reliable online platform.

The creation of a safe and dependable online platform that enables users to look for, evaluate, and book travel and tourist services is the primary goal of the suggested system. This platform must be simple to use, available on all platforms, and integrated with a variety of partner stakeholders, including transportation companies, lodging establishments, vacation destinations, and attractions. [4]

- Establish partnerships with transportation providers, hotels, resorts, and attractions.

The second goal is to form alliances with lodging establishments, resorts, hotels, and tourist destinations to give visitors a variety of choices. All partners must be trustworthy and provide high-quality services, and the system must negotiate reasonable commissions and pricing that are advantageous to both the traveler and the partner. [5]

- Implement an integrated system.

Implementing a comprehensive system that offers real-time availability and pricing data, as well as automatic booking confirmation and payment processing, is the third goal. Users should be able to use this system to complete the entire booking process from searching to paying without ever leaving the website.

- Analyze user data and behavior.

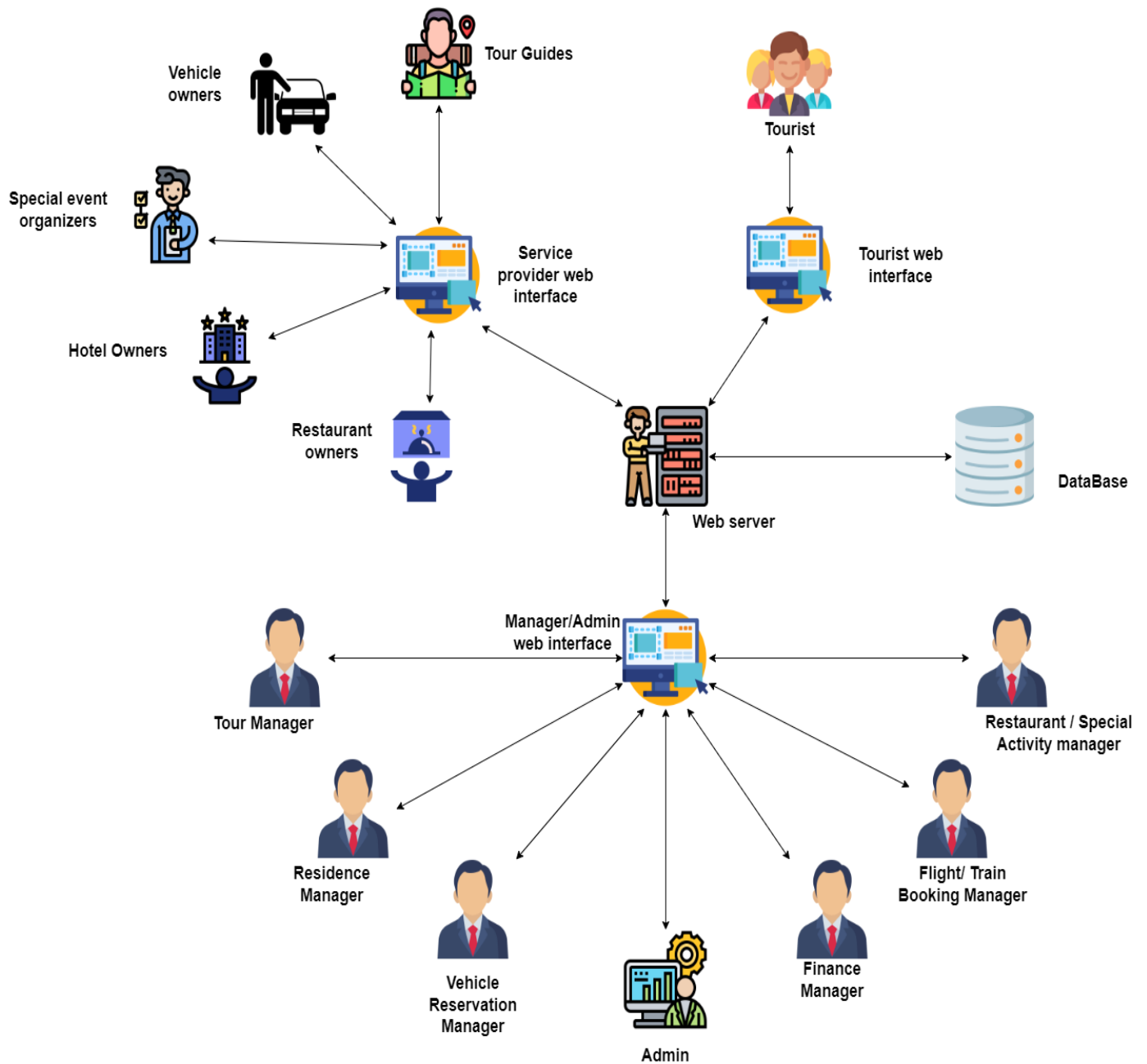
The fourth goal is to examine user information and behavior to offer specialized suggestions and vacation packages based on unique interests and preferences. To process user data and provide personalized recommendations, such as activities and attractions that are comparable to those already booked, the system must apply machine learning algorithms.

- Continuously monitor and evaluate the system's performance.

The goal is to strategies the system's performance, receive user feedback, and make improvements to its features and functioning. The system must gather information on user preferences and behavior, as well as measure how it affects the travel and tourism sector. These comments will assist the system in finding areas for development and implementing changes that improve user experience and profit the sector as a whole.

The proposed travel and tourist management system will provide travelers with a thorough and user-friendly platform to search, plan, and book their travel and tourism activities by meeting these objectives. By offering a centralized, automated system that gives sustainable tourism practices and responsible travel priority, it will also improve the industry's effectiveness and efficiency.

System Overview



Functional Requirements

- Booking and reserving a tour (Browse tours, book a tour)
- Tour guide management (assign tours, track schedules)
- Special activity management
- Hotel management(check availability, book a room)
- Restaurant management (manage menus, table reservation)
- Vehicle reservation management (check vehicle availability, book a vehicle)
- User management
- Content management
- Finance management
- Flight and train booking management.

Non-Functional Requirements

- Security
- Performance
- Usability
- Reliability
- Scalability
- Compatibility
- Accessibility
- Data backup and recovery
- Compliance
- Support and maintenance

Technical Requirements

- Front-end development – ReactJS library
- Back-end Development – Node.js, Express.js
- Database – MongoDB
- APIs
- Authentication and Authorization – JWT (JSON Web Tokens)
- Front-end hosting – Netlify
- Back-end hosting – Heroku

Literature review

A starting business today has a distinct advantage if it is customer-focused, all-inclusive, and environmentally friendly. This startup may provide tailored solutions that address each client's unique needs by prioritizing their needs and preferences, which will boost client happiness and loyalty. Travelers can set themselves apart from rivals and give customers a smooth, hassle-free experience by offering all-in-one services that cover the whole trip experience, from booking to accommodation to activities. Finally, travelers can attract the growing number of environmentally conscious tourists and show their dedication to sustainable tourism practices by making eco-friendliness a top priority in their operations. Altogether, these advantages can make the traveler a leader in the travel sector, drawing clients who appreciate individualized attention, practicality, and sustainability.

Methodology

There are a variety of techniques for designing a Tourism and Travel Management System. For our project, we employ Agile methodology. Agile is an iterative and incremental software development methodology that stresses collaboration and adaptability.

A Tourism and travel management system is a type of system that is extremely interactive with the client, requiring us to efficiently collect our needs. We will utilize the following methodologies for requirements engineering interviews, surveys, prototyping, use case, user stories, and onion diagrams.

We will utilize both High level and Low-level design techniques to create our web application. So as to boost our efficiency and decrease our errors. We will employ MVC architecture for high-level design and ER architecture for low-level design.

The selection of development tools and technology for a tourism and travel management system can vary based on the project's particular requirements and objectives. Nonetheless, we will use JavaScript as our programming language and the MERN stack framework. In our project, we will construct an online map using the Google Maps API, and we will use the Skyscanner API to book flights. GitHub will implement version control.

Testing is a crucial component of software development; to test our Backend, we'll utilize the postman API, and for security testing, we'll employ OWASP ZAP. With testing, we can assure that the web application will function properly.

Testing is an integral aspect of software development, and a tourism and travel management system can be tested using a variety of techniques.

Integration is necessary for developing coherent and effective systems that can fulfill the needs of various stakeholders and produce desired results. To integrate Google Maps into our web application, we will use the Google Maps API.

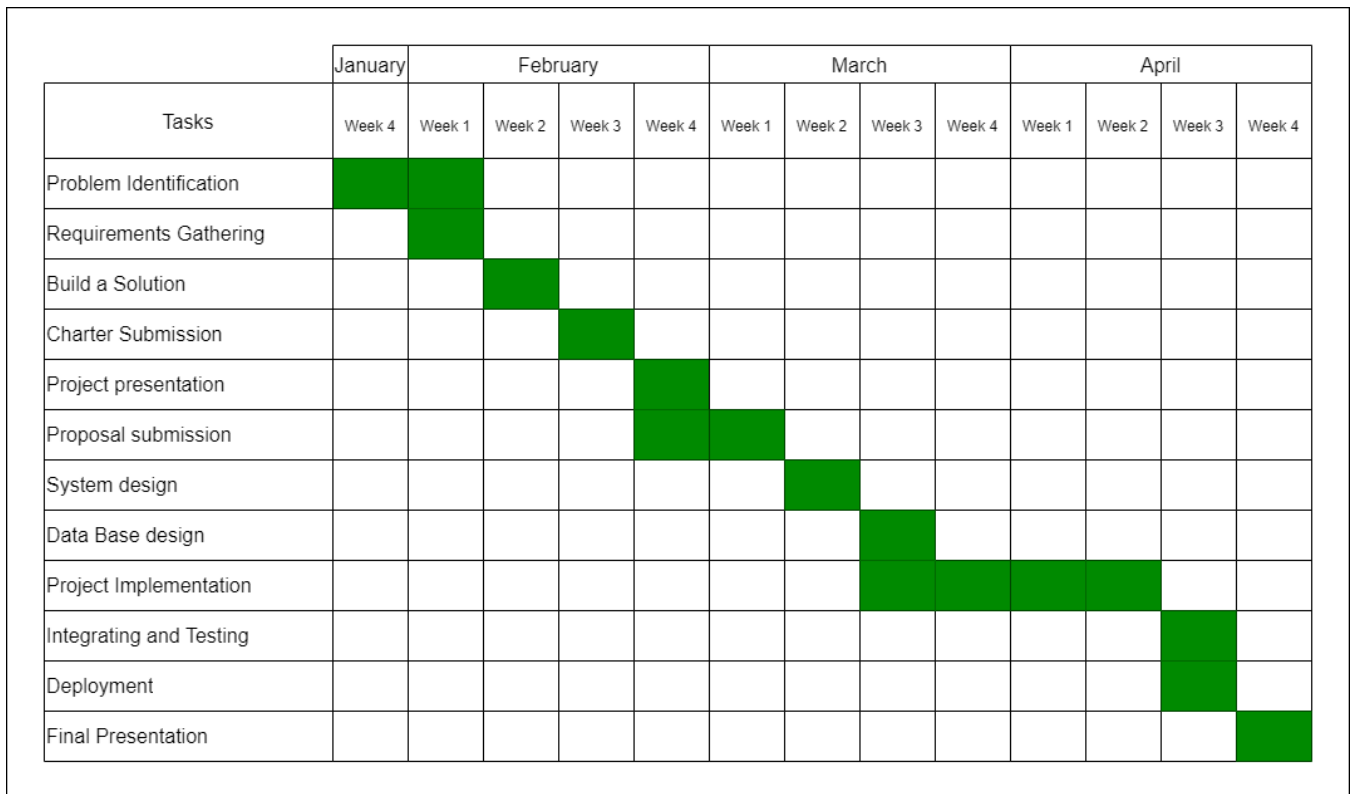
Work Breakdown Structure

The work breakdown structure shows the various tasks and activities that are necessary to develop a tourism and travel management system website with an eight key functions. They are user management, tour package management, residence reservation management, finance and inquiry management, vehicle reservation management, flight and train booking management, restaurant management and special activity management. This structure breaks down these functions into sub-tasks such as system testing, user registration and login, payment gateway integration, and more. The aim of this structure is to provide a clear roadmap for the development of the website, helping to ensure that all necessary tasks are completed on time and within budget.

User Management	<ul style="list-style-type: none"> • User Registration and Login • User Profile Management • User Role Management
Tour Management	<ul style="list-style-type: none"> • Tour Package Creation • Tour Package Booking • Tour Package Cancellation • Tour Package Modification
Residence Reservation Management	<ul style="list-style-type: none"> • Residence Management System • Room Availability Check • Room Booking and Cancellation • Room Modification
Finance and Inquiry Management	<ul style="list-style-type: none"> • Payment Gateway Integration • Inquiry Management • Billing and Invoice Generation • Payment Refund Management
Vehicle Reservation Management	<ul style="list-style-type: none"> • Vehicle Management System • Vehicle Availability Check • Vehicle Booking and Cancellation • Vehicle Modification
Flight and Train Booking Management	<ul style="list-style-type: none"> • Flight and Train Management System • Flight and Train Availability Check • Flight and Train Booking and Cancellation • Flight and Train Modification
Restaurant Management	<ul style="list-style-type: none"> • Restaurant Management System • Menu Management • Reservation Management • Order Management
Special Activity Management	<ul style="list-style-type: none"> • Special Activity Management System • Sports Activity Management • Indoor Activity Management • Outdoor Activity Management

Database and Security	<ul style="list-style-type: none"> • Database Design • Database Management • Security and Data Protection
Testing and Deployment	<ul style="list-style-type: none"> • System Testing • User Acceptance Testing • Deployment • Post Deployment Support and Maintenance

Gantt Chart



Evaluation Method

While evaluating a web application for hotel and tourism management, the following criteria might be considered:

User Interface: The user interface of the online application should be simple and intuitive. Users should be able to execute tasks and traverse the system swiftly and easily.

Functionality: The web application should include all the required features for managing hotel and tourism operations, including reservation administration, room management, invoicing and payment, reporting, and customer relationship management.

Integration: The web application should be able to integrate with other systems, such as payment gateways, customer relationship management systems, and other third-party applications.

Scalability: The web application should be able to accommodate a growing number of users, data, and traffic. It should also be adaptable to changes and updates in the future.

Security: The online application should protect client data from illegal access, hacking, and data breaches.

Mobile compatibility: The online application should be responsive and accessible on mobile devices, as the majority of internet users access the web via smartphones and tablets.

Performance: The system should be dependable, stable, and able to process and handle large amounts of transactions and data.

Customization: The system should be modifiable to accommodate the unique needs and specifications of various hotels and tourism service providers.

By analyzing the web application based on these characteristics, it is possible to verify that the application is effective, efficient, and meets the requirements of hotel and tourism management.

System Functions

1. User Management

The management of user accounts and related activities is a significant aspect of the travel and tourism sector that requires effective and efficient solutions. A user management system plays a crucial role in the administration of travel and tourist services. The system provides users with access to functions such as trip booking and travel plan management. Let's analyze the functional, nonfunctional, and technological needs for a travel and tourist management system's user management system.

Functional Requirements

A user management system in a travel and tourist management system must meet several functional requirements to give users a customized and streamlined experience. Users must be able to register for an account and enter pertinent information, such as their names, email addresses, and passwords. It should also provide safe and reliable authentication methods to authenticate the user's identity, such as unique usernames and passwords. For user authentication in a user management system built using the MERN stack, JSON Web Tokens (JWTs) are required. A JWT is generated when a user registers in and provided to the client, which keeps it and sends it back to the server with each new request. The server validates the signature and decodes the data to identify the user's identity and privileges. This enables secure and efficient authentication of users within the system. In addition, the user management system should enable travel and tourism businesses to maintain their customers' accounts, including changing user information, resetting passwords, and deleting accounts as appropriate. The system should also allow role-based access control, in which access to specific features is determined by the user's assigned role or permissions. The system should also enable user search and filtering, allowing travel and tourism organizations to search for and filter user accounts based on certain criteria, such as account status or date of registration.

Nonfunctional Requirements

To provide users with a high-quality experience, a user management system within a travel and tourist management system must satisfy several nonfunctional requirements. The system must be able to handle many user accounts and transactions without poor response times or crashing. The system must also be scalable so that it can adapt to variations in user demand and support a growing number of users without compromising performance. In addition, the system must have an intuitive interface and clear instructions. The system must include dependable data protection measures, such as data encryption and two-factor authentication, as security is also essential. Lastly, the user management system must be accessible to people with disabilities. The system should give alternative text for images and provide support for assistive technology such as screen readers.

Technical Requirements

The technical requirements for a user management system in Travelly include a secure database with backup and recovery methods, a user-friendly interface, a suitable programming language and framework, API interaction, and

industry-standard security protocols. Complying with these specifications will provide a secure and dependable system capable of supporting a high number of users and transactions.

In conclusion, a user management system is a crucial component of a travel and tourist management system, allowing users to manage their accounts and have access to a variety of features and functions. The system's capabilities, including user registration, authentication, and management, and role-based access control, allow users to personalize their experience and provide varying degrees of access based on their roles and permissions. In addition, the nonfunctional requirements, such as performance, scalability, usability, security, and accessibility, guarantee that the system is quick, responsive, user-friendly, safe, and accessible to all users. Hence, a user management system is an indispensable component of any travel and tourist management system.

2.Tour packages Management

Tour package management refers to the process of planning, organizing, and coordination of travel and tourism-related activities and selling travel packages to individuals or groups. Goal of this package is providing an excellent experience for travelers and make tours profitable.

travel components are accommodation, tours, and transfers to create attractive and competitive tour packages. Generally, offer a variety of package tours to cater to the needs of various kinds of travelers. Some packages are Day tours, round tours, Tailor-made tours, etc. Customers can also check tours using filters along with their requirements. After checking the customer's feedback, packages will be updated or removed.

Tour managers are responsible for ensuring that tours are well-planned, executed, and compliant with all relevant regulations and legal requirements. They may also be responsible for marketing and selling tours, managing customer relations and feedback, and identifying areas for improvement in future tours. Also creating and managing tour itineraries, arranging transportation, accommodations, and meals, coordinating with vendors and partners, and managing tour guides and other staff members are part of the manager duty.

Tour manager Functional requirements:

Tour managers are responsible for planning and organizing tours, including selecting destinations, creating itineraries, and arranging logistics such as transportation, accommodations, and meals. Tour managers should have good financial management skills and be able to create and manage budgets for tours, ensuring that they are profitable while still providing value to the travelers. Also may need to coordinate with various vendors and partners, such as hotels, transportation companies, and attractions, to ensure that everything is in place for the tour. Tour managers may need to manage other staff members such as tour guides, drivers, and administrative staff, ensuring that they are trained, motivated, and equipped to deliver high-quality tours. Managing feedbacks is also a part of the functional requirements of tour manager. [6]

Tour Guide functional requirements

Tour guide are the most knowledgeable people in their field. So tour guides provide travelers with information about the history, culture, and customs of the destinations they are visiting, as well as information about popular attractions and sites. Also lead groups of travelers on tours, managing logistics such as transportation, accommodations, and meals. Ensuring that everything runs smoothly and efficiently. Tour guides also can reply to customers inquires about tour packages.

Non-Functional requirements

- Communication skills
- Professionalism
- Reliability
- Flexibility
- Cultural sensitivity
- Safety consciousness

3.Residence Reservation Management

This is one of main function that use to manage hotels in the system. All functionalities regarding a hotel owner, Tourist and the residence manager are done by this function. When a new hotel owner needs to join our company, residence manager needs to review hotels before add hotels to the system.

Tourists can be able to search Hotels according to their preferences and view that hotel. They can filter search according to locations, budget they want. In addition, tourists can select eco-friendly hotel that is optional for tourists. When tourist selects a hotel system shows rooms availability. Then hotel owner must confirm to that request and inform the tourist about that confirmation. In that period , tourist should stay on a waiting list until a hotel owner confirm request. Guests can cancel or edit their request. When hotel owner confirms the request system shows not available that room until end the customer booked period and system generate reservation invoice for tourist. When booked period end tourists can give rates for hotels.

After hotel owner registered to the system , they can add their hotels and they have to wait verify the hotel by residence manager. For that hotel owner must provide

- basic information
- layout and pricing
- facilities and services
- images
- policies

Then that hotel adds to the request list. Then residence manager review hotel owner's request list and accept requests. When residence manager approves a hotel that hotel showing to the travelers. Also, if hotel owners need to change their hotel details they can update details with residence manager approval. Further, system can generate hotel list report for residence manager. This report includes customer's rate for each hotel.

An improved user experience, more productivity, additional profits, better security, and simplified management are just a few advantages of the suggested residence management function. The system gives travelers a simple-to-use hotel search and booking platform, which can help them save time and have a more convenient experience. The method can benefit hotel owners by easing their workload and assisting them in generating more reservations. Insights into guest preferences can also be provided by the system, which can assist hotel operators in optimizing their charges and offerings. The system assists in preventing fraud by providing secure booking and payment capabilities. The technology simplifies management duties and boosts overall effectiveness by offering a centralized platform for hotel administration. Overall, this function itself is apart from other travel industry websites with its personalized user experience, effective management tools, secure booking and payment capabilities, and accessibility.

4. Finance and Inquiry management

Finance Management

Finance management refers to the process of managing financial resources of an organization in a way that maximizes profitability and ensures long-term financial stability. In order to effectively manage finances, there are several functional requirements that need to be fulfilled.

Effective finance management requires a range of functional requirements to ensure accurate and efficient handling of financial processes. These include,

- Manage employee salary.
- Create balance sheet.
- Approve refund.
- Review user account payments
- Cash flow management
- Analyzing reports

Nonfunctional requirements are,

- Security
- Reliability
- Availability

Inquire Management

The practice of handling and addressing consumer questions, problems, and inquiries in an effective and timely manner is known as inquiry management. To ensure prompt and accurate handling of client queries, effective inquiry management necessitates a variety of functional requirements. They are,

- Inquiry tracking
- Response management
- Knowledge management
- Reporting and analytics.

Due to its capacity to offer clients real-time connection and help, live chat is becoming an increasingly significant channel for inquiry management. Customers can get rapid answers to their questions via live chat, which reduces wait times and improves the entire customer experience, in contrast to traditional contact methods like email or phone.

For those reasons, we are developing a live chat option with the help of WebSocket.

5.Vehicle Reservation Management

A vehicle reservation is a software program that enables users to reserve vehicles for transportation purposes. Typically, the system has a list of available vehicles, such as cars, vans, and cabs, together with their current availability and prices. Customers can peruse the various vehicles, select the one that best suits their needs, and reserve it for a particular date and time.

Functional Requirements

Tourists and local visitors can reserve a vehicle with or without a driver by browsing the list of available vehicles. A car may also be reserved for a specific period of time. The ability to cancel a reservation is available to tourist. In addition, guests can leave feedback and review the car, as well as download a PDF of their reservation report.

As the vehicle owner, he can add, modify, and delete the vehicle from the system. Depending on the car's availability, the vehicle owner may accept or reject a reservation request. If the request is granted, the tourist will be notified. When adding a vehicle to the system, the vehicle administrator must ensure that each vehicle complies with all applicable standards. The vehicle owner can generate and download monthly PDF reports containing booking information.

Non-Functional Requirements

A well-designed vehicle booking system should be convenient to use and manage, providing a better user experience with clear instructions and simple interfaces. It should also be able to accommodate growing demand as the number of users without compromising performance or dependability. In addition, the system should operate consistently and accurately, without any unexpected mistakes or failures, so that users can rely on it to book their transportation needs without trouble.

Novelty

A specific category classifies eco-friendly vehicles separately and display ads to persuade tourists to reserve such vehicles.

6.Flight and Train Booking

This is a function manage all the airline ticket booking and train ticket booking . Tourists always book their airline ticket from another websites and other ways . But we are going to implement that functionality to our website , because of that tourists can full fill their requirements by using only one web site .

Functional requirements of airline ticket booking functions are flight search, flight selection , seat selection, passenger details , payment , confirmation, and cancellation of tickets.

Train booking function is implement because in our requirement gathering phase many tourists face many challenges and difficulties in train bookings . So that in our website we are going to add train ticket booking functionality . The functional requirements of train booking management is select and search trains ,seat selection , booking confirmation.

Nonfunctional requirements of airline and train ticket booking system are Reliability, security , increase response time , availability of 24 hours.

7. Restaurant management

All the system admins, restaurant owners and customers can log in to the system using their specific user credentials. Users cannot do any modification to their accounts without administration approval (delete account, update account). All the users are added to the system after passing the approval of user management. System admin can observe all the user activities and restaurant owners and customers can use only the features provided to them according to the user type. (ex: Restaurant owner cannot access customers' features or view that UI). When the restaurant owner is adding his/her restaurant, he/she must go through a certain inquiry. When the inquiry is done, after a procedure done according to several standards, that restaurant is added to the system after admin approval. Customers can search any kind of restaurant type and website will show all the restaurants near by the customer with the location. If the customer needs to have a reservation for a particular restaurant after searching results, this website provides reservation details according to the databases of that restaurant. If any reservation cancellation occurred, that data will be also deleted from the database automatically. All the restaurant databases are connected to this website to retrieve reservation details and others. All the adding, updating, retrieving, and deleting operations (CRUD operations) are occurred in this manage restaurant function. All the records about restaurant ratings, restaurant income, customer reaches are included when generating reports. In this website customer can give feedbacks about the restaurants according to the service they experienced. They can rate the restaurants as they prefer. According to the ratings and feedbacks, lasting of the restaurant in the website is decided by the system admin. If any restaurant is under-rated, that restaurant will be deleted from the site and database. This process is done to maintain the standard of the website and to avoid any disappointment that may happen for the tourists as our main target is them.

8. Special activity (sports/indoor/outdoor) management

Many tourists who hope to come to Sri Lanka show great interest in indoor and outdoor activities. Therefore , we decided to create a system to know all the information about it. Here we have separated special activities in two categories as one time and recurring. For all users can go to the special activity page and search keywords in the search bar. They can filter them using Location and price range. Logged users can add the special activity to his cart and they can book or reserve those special activities. If booking/reservation is successful, customer will receive an email. In addition, users can provide feedback and they can download a pdf about activity enrollment.

As special activity organizer, he can monitor the details of their special activity. As well as he can send inquiries to administrator. After getting information from the special activity organizer, the administrator adds special activities to the system. Administrator can update and delete special activities.

Functional requirements

- Ability to create and manage events, including indoor and outdoor activities.
- Ability to allow users to register for events and activities.
- Capability to accept and process payments for events and activities.
- Ability to view and manage event schedules and calendars.
- Ability to generate reports related to event attendance, revenue, and other relevant data.
- Ability to send notifications to event attendees via email, SMS, or other channels.
- Ability to allow users to provide feedback and reviews for events and activities.

Non-Functional requirements

- Performance
- Security
- Availability
- Usability
- Scalability
- Reliability

References

- [1 "http://www.slithm.edu.lk/journal/vol-10-2014/4%20-%20Challenges%20and%20Opportunities%20in%20the%20Tourism%20Industry%20of%20Sri%20Lanka.pdf"
]
- [2 [Online]. Available: <https://www.sltda.gov.lk/statistics>.
]
- [3 "http://www.sltda.gov.lk/y2019/stats/Annual%20Stat%20Summary%202019%20-%20English.pdf".
]
- [4 F. A. M. A. a. M. J. Khan, "A Comprehensive Review of Online Travel Booking Systems".
]
- [5 A. M. & W. S. S. Morrison, "Destination partnerships for sustainable tourism: Conceptualizing and
] measuring partnership quality," 2020.
- [6 [Online]. Available: <https://www.prospects.ac.uk/job-profiles/tour-manager..>
]