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# **MAKERERE UNIVERSITY BUSINESS SCHOOL**

## **BACHELOR OF BUSINESS COMPUTING**

### **DEVELOPING A SMART TRAVEL PLANNER APPLICATION FOR NAMAGO TOURS AND TRAVEL IN JINJA, UGANDA.**

**By**

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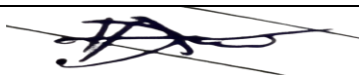

**Supervised by**

**Department of Applied Computing & IT**

**A Research Proposal Submitted to Makerere University Business School in Partial  
fulfilment for the Award of the Degree of Bachelor of Business Computing of Makerere  
University**

## DECLARATION

We declare that this proposal about “**DEVELOPING A SMART TRAVEL PLANNER APPLICATION FOR NAMAGO TOURS AND TRAVEL IN JINJA, UGANDA**” is of our own and has not been submitted for any other purpose.

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## APPROVAL

This proposal has been submitted with my approval as supervisor and my signature is here appended:

Signed

Date :22th/11/2025



Francis Byabazaire

Makerere University Business School

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## SECTION ONE

### 1.0 INTRODUCTION

#### 1.1 Proposal Background

Uganda's tourism industry is rapidly growing at fast rate in recent years with the country's unique natural attractions, cultural heritage, and friendly people drawing visitors from around the world that is **Bukirwa, H. (2014). Sustainable tourism innovations in Uganda. AV Akademikerverlag ()** though the process of planning and booking travel arrangements in Uganda remains fragmented, manual and often inefficient.

The travel industry has undergone a significant surge in recent years with millions of people traveling domestically and internationally for business and leisure since planning and navigating travel can be a complex and frustrating experience, involving multiple websites, apps, and documents.

A Smart Travel Planner App can address these pain points by providing a seamless, integrated and personalized travel experience. By leveraging advanced technologies such as:

Personalized travel recommendations

Real-time flight and accommodation updates

Automated itinerary planning

Integrated booking and payment systems

Location-based navigation and guidance

Stability of Uganda as a country is a major factor, Uganda for a long time has been a very secure country and hence travelers security is guaranteed. Although in the past years the country has suffered a devastating time especially in the northern part because of the Lord's Resistance Army (LRA), there has been a great effort by the government that has seen this coming to an end. Of late, tourists and visitors have guaranteed security in all parts of the country while on their safaris. Because of the stability, all the neighboring countries have increased their relations with the country and this has triggered off arrangements of introducing a single tourist visa for tourist to explore all the East African counties freely including Uganda.



The unique diverse attractions, Uganda's tourist growth is also attributed to its abundant attractions, the unique mountain gorillas are one the main reasons why visitors all over the world flow into the country to take part in gorilla safaris in Bwindi and Mgahinga national parks , the country harbors almost half of the population of these creatures. They can only be found if one books a safari to Bwindi Impenetrable Forest National Park or the Mgahinga National Park.Uganda's national parks like the famous Murchison falls, Queen Elizabeth among others that are rich in wild game like the big five have become a prominent destination hubs for visitors coming into Uganda. Other rich attractions include sanctuaries like Ngamba Island known for chimpanzees, Ziwa Rhino sanctuary, and bird sports like the Bigodi sanctuary among others. Uganda's diverse culture and heritage is also a major factor in her tourism growth. Examples are cultural dances, songs among others.

Market and research in Uganda's tourism industry has also been a vital factor. For example the Uganda tourism board established a strategy to increase the country's tourist arrivals. The board recruited three public relation firms namely; PHG consulting for the North American market, Kamageo in the UK and Ireland and KPRN for the German market in Europe. UTB did this to ensure advanced public relations and marketing in its major markets. This has also helped in reducing foreign critics who have always seen Uganda in a negative perspective.

This has raised Uganda's profile as a preferred destination and has promoted investment opportunities in Uganda's tourism, sector. Currently visitors arriving into Uganda have increased to 1.7million as of the 2024 records compared to the 1.3 the country received in 2023.

On a local basis, the Uganda Tourism Board has also managed to create awareness amongst the nationals and East Africa at large. Exhibitions and programs for example miss tourism in different regions of the country have increased awareness about the country's tourism and its potentials.Good government policy; this ranges from infrastructures like road networks, accommodation facilities and conservation policies. The government has tried to establish a good road networks that connect to different destinations from the city center, a live example can be the road network that connects to Bwindi and Mgahinga National Parks, homes to the mountain gorillas that has facilitated movement of large numbers of tourists to these parks.

Conservation policies have also been established through putting stringent policies on poaching in national parks like Queen Elizabeth, Murchison falls among others, a live example are the

park regulations in the Bwindi National Park where a visitor is expected to stay 4 metres away from the gorillas to prevent them from being infected with various infections like colds among others. The Uganda tourist board has also gone ahead to fund community based projects for example the Buhoma community based initiative around Bwindi Impenetrable forest in south western Uganda.

These initiatives have helped to empower the livelihoods around these parks which has made them see the need for conserving these parks, the fees and revenues got from the parks are also used to construct schools, health centers among other facilities. On the accommodation side, there has been establishment of stringent requirements by Uganda Tourism board quality assurance department to help eradicate construction of poor accommodation facilities that don't suit the required standards by the clients.

In summary, Uganda's tourism industry growth is majorly attributed to the above factors, however more effort is expected especially in the marketing area because the tourism industry is a people industry and they have always to be aware of what is there to offer in all aspects.

Tourism Trends and Statistics play a critical role in shaping the Uganda's Tourism Development Programme, including: informing policy and planning; guiding investment and business development; marketing and promotion; performance monitoring; and stakeholder engagement. Meanwhile, domestic tourism remained strong, a sign that more Ugandans are exploring and valuing the unique beauty of their country. Tourism statistics in 2020, Uganda's tourism receipts declined to \$518 million, a 63% drop from 2019. In 2019, it was \$1.4 billion, an 8.02% decline from 2018. And in 2018, these surged to \$1.522 billion, a 59.54% increase from 2017. The top seven visitor markets in Uganda are the United States, Kenya, the United Kingdom, Tanzania, the Democratic Republic of Congo, Rwanda and Germany Accounting for 70% of all visitors. In 2013, the majority of visitors to Uganda came from Kenya (380,614), Rwanda (28,431) and Tanzania (74,485). Tourism Trends and Statistics play a critical role in shaping the Uganda's Tourism Development Programme, including: informing policy and planning; guiding investment and business development; marketing and promotion; performance monitoring; and stakeholder engagement. In 2023, Uganda saw a significant recovery in tourism, with international visitor arrivals reaching an estimated 1,262,734, a 55% growth from the previous year. Tourism revenue grew to \$1.025 billion in 2023, up from \$1

billion in 2022, with a direct contribution of \$6.06 trillion to the national GDP. The sector supported over 803,000 jobs, representing 7.2% of total employment. The 2024 edition of the publication presents the Tourism performance statistics including among others Tourist Arrivals, Accommodation Statistics, Visitation to Attraction Sites and Foreign exchange earnings for the year 2024. The findings reveal that International tourist arrivals rose by 7.7%, reaching 1.37 million, while tourism earnings grew by 26% to USD1.28 billion. Uganda witnessed longer stays, higher per capita expenditure, and a notable shift toward leisure and premium tourism experiences. Meanwhile, domestic tourism remained strong, a sign that more Ugandans are exploring and valuing the unique beauty of their country.

## 1.2 Problem Statement

Inefficient travel itineraries are resulting in wasted time, increased costs, and decreased traveler satisfaction. The current process of planning and booking travel arrangements is often manual, fragmented and lacking in personalization.

There are key challenges which build up inefficient travel itineraries that is Information overload, lack of personalization, inefficient routing, insufficient real-time information, limited transparency and flexibility.

These lead to decreased traveler satisfaction through frustration, stress and disappointment among travelers, increased costs where travelers incur additional expenses due to inefficient routing, flight delays and accommodation changes and lost productivity since business travelers may experience decreased productivity and efficiency due to wasted time and disrupted plans.

Therefore, we have a significant opportunity to address the challenges associated with inefficient travel itineraries by leveraging technology in developing a Smart Travel Planner App with artificial intelligence, machine learning and data analytics.

Smart Travel Planner App will enable us to create personalized, efficient and flexible travel itineraries that meet the unique needs and preferences of individual travelers ( **Vinod, B. (2023). Artificial Intelligence and machine learning in the travel industry.**)

### 1.2.1 Research Goal:

The primary goal of this research is to deeply analyze the causes, impacts, and potential solutions related to inefficient travel itineraries with the aim of optimizing and developing

innovative, technology driven solutions that enhance the travel experience, reduce costs and increase traveler satisfaction through travel planning for enhanced efficiency and sustainability (Sylejmani, K. (2023). **Optimizing trip itinerary for tourist groups.**)

### 1.2.2 Research Objectives:

To identify root causes of inefficient travel itineraries in Namago tours and travel company.

To evaluate impacts of inefficient travel itineraries in Namago tours and travel company .

To assess potential solutions for inefficient travel planning in tour and travel company.

To develop a conceptual framework for efficient travel itineraries.

To consider diversity by addressing varying needs in tours and travel companies.

To design and evaluate a prototype solution of Smart Travel Planner App.

### 1.3 Project Scope Summary

The project will be undertaken in several stages starting with a preliminary examination of the existing management processes of Namago Tours and Travel. System requirements collection, system design, development, and testing will subsequently follow. The Smart Travel Planner App will integrate several important Namago tours and travel operations including flight bookings, payments, itinerary planning, and destination discovery. The project shall be completed in six months with major deliverables consisting of system prototypes, test reports, user training guidelines, and the final release of the Smart Travel PLanner Application.

### 1.4 Anticipated Significance of the Project

The project will enhance operational efficiency by automating itinerary planning, booking, payment, and destination discovery processes thereby reducing errors and improving service delivery.

The project will provide real-time data for informed decision-making, offering immediate access to data that will assist in resource allocation, booking management, and operational improvements.

The project will improve customer satisfaction by enabling quicker check-ins, ensuring accurate payments, and delivering an overall enhanced tour and travel experience.

The project will increase tourist retention and lead to more positive reviews, which will boost the Namago Tours and Travel reputation and contribute to long-term success.

The project will support academic and professional development for the development team by providing hands-on experience in software development, systems integration, and project management, thereby building critical skills for IT careers in the tourism industry.

## 1.5 Project Assumptions

The team assumes that the necessary resources, including software, hardware, and internet access, will be available throughout the project's duration.

The team assumes that all key stakeholders, including staff, and tours and travel management and testing phases.

The team assumes that the technology stack chosen for the development of Smart Travel Planner app, including programming languages, frameworks, and tools, will be compatible with Namago tours and travel existing infrastructure and operational needs.

The team assumes that hotel staff will be trained effectively to ensure proper utilization of the Smart Travel Planner app and that management will commit to using the system for day-to-day operations.

## 1.6 Study Scope

### 1.6.1 Subject / Conceptual Scope

This study will focus on the design and development of a Smart Travel Planner App for Namago Tours and Travel. The system will aim to improve how travel activities are planned, organized, and managed within the company. It will cover key areas such as itinerary planning, hotel and transport booking, customer communication, and payment management.

The study will not cover general tourism marketing systems or large-scale airline reservation platforms. Instead, it will focus on the specific needs of a medium-sized local tour company, ensuring that the proposed system will be practical, affordable, and suitable for the company's daily operations. The research will also focus on how the system will enhance efficiency, reduce manual errors, and improve customer satisfaction.

### 1.6.2 Geographical Scope

The study will be conducted at Namago Tours and Travel, a private tour company based in Kampala, Uganda. The company offers services such as safari bookings, hotel reservations, and tour package arrangements for both local and international clients.

The geographical scope is limited to this company because it provides a good representation of the challenges faced by many Ugandan tour operators, such as heavy reliance on manual systems, limited automation, and difficulty in managing multiple bookings at once. The findings and recommendations from this study will, however, be relevant to other similar tour and travel companies operating within Uganda.

### 1.6.3 Time Scope

The study will be carried out between August 2025 and November 2025, This period will cover all key stages of the research, including proposal writing, data collection, system design, development, testing, and report compilation.

The time scope is chosen to allow adequate time for understanding the company's current operations, collecting relevant information, and developing a working prototype of the Smart Travel Planner System. The completed system will later be tested and evaluated to determine how effectively it meets the needs of Namago Tours and Travel.

## SECTION TWO

### 2.0 INTRODUCTION

#### 2.1 Literature Review

This chapter will present ideas, findings, and discussions from other writers and researchers about travel planning, tourism management systems, and the use of technology to improve tour and travel operations. It will help to show what has already been done, what challenges still exist, and how this study will contribute to solving those problems. The review will focus on travel planning systems, problems with travel arrangements, their effects on companies and travelers, and the role of modern systems in improving tourism services.

#### 2.2 Overview of Travel Planning Systems

Travel planning systems are tools that help people organize their trips by bringing together booking, transport, and accommodation services in one place.

According to **Vinod(2023)**, the growth of travel industry has pushed many companies to create systems that make it trip planning easier for both travelers and tour operators. Examples include Triplt, Expedia, and Booking.com, which allow users to plan their trips through mobile or web applications.

However, most of these systems were designed for developed countries where internet access is stable and people are familiar with using technology for booking and payments. **Chaudhary and Paul (2021)** explained that in many developing countries, travel companies still use manual or partly computerized systems which makes it hard to provide fast and accurate services to customers.

Many tour companies, including Namago Tours and Travel, still use manual processes when planning itineraries, booking hotels, and managing payments. This makes work slow and prone to mistakes. Therefore, this study will develop a Smart Travel Planner System that will combine these activities in one place to reduce errors, save time, and improve customer satisfaction.

#### 2.3 Inefficiencies in Travel Itinerary Planning

Planning travel itineraries involves organizing activities, transport, and accommodation for a trip. When this process is not well-managed, it causes inefficiencies. **Sylejmani (2023)** found that poorly planned itineraries waste time and resources and reduce customer satisfaction. Travelers may spend more money, face delays, or miss out on experiences they expected to enjoy.

According to **Gretzel et al. (2020)** stated that many travelers suffer from “information overload,” where they have to visit different websites and compare prices on several platforms before making decisions. This makes planning confusing and time-consuming.

In Uganda, **Namakula (2022)** noted that most tour companies rely on manual coordination between hotels, airlines, and customers, leading to double bookings and missing travel information. These inefficiencies result in unnecessary costs and poor customer experiences.

To solve this problem, this study will design and implement a system that will allow smooth communication between tour companies and travelers, combine all travel services, and provide automatic updates about bookings and itineraries. The Smart Travel Planner System for Namago Tours and Travel will be developed to address this need.

## 2.4 Impacts of Inefficient Travel Itineraries

Many studies have discussed how inefficient travel arrangements affect both travelers and companies. **Buhalis and Amaranggana (2015)** explained that when trips are not well organized, customers lose confidence in tour companies and may not use their services again. This leads to loss of income and damages the company's image.

According to **Vinod (2023)** added that inefficiencies increase operational costs because staff spend more time correcting booking mistakes or handling customer complaints. In Uganda, **Bukirwa (2014)** observed that although tourism is growing fast, poor service coordination among local tour operators is one of the main challenges limiting the country's full potential in tourism.

For companies like Namago Tours and Travel, this means that a lot of time and effort are wasted on manual processes that could easily be handled by an automated system. This study will therefore develop the Smart Travel Planner App to help reduce these problems by organizing bookings, storing records properly, and improving communication between staff and travelers.

## 2.5 Technology in Tourism Management

Technology has changed how tourism works around the world. **Gretzel et al. (2015)** described how modern systems have helped in sharing travel information, promoting destinations, and allowing travelers to book services directly from their phones.

In East Africa, countries such as Kenya and Tanzania have started using online travel platforms like Tembea Kenya and Safari Bookings, which make it easier for tourists to plan their safaris. However, these systems still depend mostly on internet connections and are not designed to handle local conditions such as limited access, currency differences, and local payment methods.

In developing countries, most systems are still at a basic level, focusing only on hotel bookings and not on full travel planning. This study will therefore develop a Smart Travel Planner App for Namago Tours and Travel that will allow local and international tourists to book, pay, and plan their trips through one platform that will be simple and accessible.

## 2.6 Conceptual Frameworks for Efficient Travel Planning



Different researchers have come up with models to explain how travel planning can be improved. **Sylejmani (2023)** suggested that an efficient travel planning system should have the following features:

Clear customer information and preferences

Organized route and time management

Combined booking and payment options

Good communication between the company and travelers

In most existing studies, these frameworks were created for large travel companies in developed countries. **Okello and Nansubuga (2022)** explained that many small and medium tour companies in Uganda cannot use such systems because they are expensive and require strong technical skills.

This study will therefore adopt a simple but effective framework where services such as itinerary planning, booking, and payment will be connected. The goal will be to make work easier for Namago Tours and Travel while improving customer experience.

## 2.7 The Role of Information Systems in Improving Tourism

Information systems help tour companies keep track of bookings, manage customer data, and plan operations more effectively. **Buhalis (2019)** mentioned that when companies use technology properly, they can make faster decisions, reduce costs, and respond quickly to customer needs.

In Uganda, the use of technology in tourism is still growing. Some companies have started using websites and mobile apps to promote their services, but most still depend on social media or phone calls for bookings. **Uganda Tourism Board (2023)** encouraged tour companies to adopt digital tools to manage clients and improve transparency.

This study will contribute to this digital growth by introducing a Smart Travel Planner App that will be easy to use, affordable, and designed for local conditions. The system will help staff at Namago Tours and Travel handle customer information, bookings, and communication more efficiently.

## 2.8 Conclusion

In conclusion, the reviewed literature has shown that while technology has greatly improved travel management in other countries, Uganda still faces challenges such as manual processes, poor coordination, and lack of integrated systems. Many of the existing travel apps do not meet the specific needs of local tour companies.

This study will therefore develop a Smart Travel Planner App to address these issues by providing a single, easy-to-use system that will connect all key services — from itinerary planning and booking to payments and customer feedback. This will not only make Namago

Tours and Travel more efficient but will also contribute to improving the quality of tourism services in Uganda as a whole.

## SECTION THREE

### 3. RESEARCH METHODOLOGY

#### 3.1 Introduction

A project methodology outlines the approach and procedures for managing and executing the Smart Travel Planner App.

This typically includes project scope, research design, data collection methods, data analysis procedures and project timeline for guiding project execution, ensuring validity and facilitating communication to properly gather system requirements and design specifications of Smart Travel Planner App.

#### Agile System Development Life Cycle

The Agile SDLC approach will involve iterative development, continuous improvement and flexibility in responding to changing requirements. The phases include planning, sprint planning, development and review evident in Itinerary planning, Booking integration and Real-time updates.

#### 3.1 Steps in the System development life cycle.

- i. Initiation: The research team will gather initial requirements through interviews with Namago tours and travel management, define system objectives like user registration and profile management.
- ii. Planning: The research team will break down system requirements into smaller manageable tasks and define project vision, determine scope and establish cross-functional team.
- iii. Design: The research team will define the system architecture, user interface design, database, Application Programming Interfaces (APIs), security and technology designs.
- iv. Development: The research team will develop the actual coding of the Smart Travel Planner App based on design specifications including the code and integrating the different modules.
- v. Testing: The research team will perform systematic evaluation of the Smart Travel Planner App to ensure it meets the required specifications and functions correctly. It will include unit, integration, system and user acceptance testing.

## DEVELOPING A SMART TRVEL PLANNER APPLICATION FOR NAMAGO TOURS AND TRAVEL IN JINJA, UGANDA USING DESIGN SCIENCE RESEARCH APPROACH.

### 3.2 Research Design

This research will take the design science approach. It focuses on creating new tools and methods to tackle real-world problems during system development.

The goal of this approach is to keep improving and adapting the tools based on real user experiences and their feedback, which helps them to make work better. Design science research encourages new and practical solutions to specific issues. It also makes sure that the system meets both theoretical and user needs through careful assessment. The design process consists of six steps; identifying the problem, defining the goals for a solution, designing and developing it, demonstrating it, evaluating it, and sharing the results.

### 3.4 THE DESIGN SCIENCE PROCESS

**Identifying the Problem;** The research team will conduct interviews, surveys, and observations with Namago Tours and Travel management to gather insights into travelers' needs, pain points and expectations when planning and managing trips. We found out that making trip planning, destination discovery, booking management were causing problems. This resulted in a frustrating experience for users and made the organization run inefficiently.

**Setting Goals for Solutions;** The goal of Namago tours and travel management system was to simplify and enhance the travel planning experience for users. This includes providing personalized recommendations, streamlining booking processes, offering real-time updates, and managing all aspects of a trip in one place. A big issue was the lack of a good user experience, so the research team will on usability studies and surveys to address real-world needs.

**Designing and Building the System;** The smart travel planner application includes software for frontend like user interface, backend like server-side logic , Application

Programming Interface and databases. They will use a design approach that allows revisions based on feedback to ensure the main features were effectively represented.

**Testing the System;** Before fully rolling it out, the research team will role-play tour and travel scenarios to demonstrate how the system worked for check-ins and changing prices. They will run a pilot program at Namago tours and travel for a month to gather real feedback.

**Evaluating the System;** The research team will collect user feedback and expert reviews for qualitative analysis. For quantitative data, they will look at customer satisfaction scores and error rates. The results showed that while some users found the system confusing, other areas like ease of use and itinerary planning got positive responses, evidenced by quicker check-ins and better booking accuracy.

**Ongoing Communication;** The research team will focus on developing the prototype, laying out essential requirements, and building features. Regular communication with everyone involved in Namago tours and travel management ensured that the system kept up with changing needs and tech advancements.

**A table showing a Design Research process for a Smart Travel Planner App of Namago Tours and Travel in Jinja, Uganda.**

| DRS stage                | Research objective to be addressed  | Proposed methods   | Expected Results   |
|--------------------------|---|--|--|
| Problem identification   | To understand the current issues in tour operations and find ways to improve. | Chatting with Namago tours and travel staff and watching, how things work. | Let's look at the strong points and drawbacks of the system used by Namago tours and travel. |
| Definition of objectives | To collect specific needs from everyone involved, both what the system        | Surveys and focus groups from users.                                       | A clear and detailed requirements document.  |

|                        |   |  |   |
|------------------------|---|--|---|
|                        | should do and how it should perform.  |  |   |
| Design and development | Create a web-based tour management system for Namago Tours and Travel.  | Agile coding and system design.              | Design documents and a working piece of software.                 |
| Demonstration          | We are going to test the tour and travel management system we have created and start using it at Namago Tours and Travel. | Role-playing scenarios and pilot programs.   | Report or video showing how something works.                      |
| Evaluation             | Showing the system and project reports to the supervisors and faculty.  | Numbers, user feedback, and expert opinions. | Successfully defending the system to the supervisors and faculty. |

|               |  |  |  |
|---------------|--|--|--|
| Communication | Finish the project report, upload it to e-learning, and present the system to the faculty. | Presentations with videos and screen sharing, plus team members showing their work online. | Finish the project report, get it approved by the supervisor, upload it to the e-learning system, and then defend the system to the supervisors and faculty. |
|---------------|--|--|--|

### 3.5 Data Collection Methods

#### 3.5.1 Collecting Primary Data

When it comes to primary data collection methods like interviews, surveys, and observation to gather information straight from users and stakeholders.

**Interviews;** The research team will hold semi-structured interviews with Namago tours and travel management and key staff to dig into the challenges they face and what they need from

the system. This approach is great for getting into the details of complex issues that might not come up in surveys alone.

**Surveys;** The research team send out surveys to the staff to gather numbers on how they deal with tours and travel management tasks. Surveys give us organized data that we can easily analyze to spot common needs and preferences. We will use a standard questionnaire with Likert-scale questions to measure user satisfaction, how easy the system is to use, and what features people want.

**Observation;** Watching things happen at Namago Travel and Tours will let the research team see the workflows and processes in action. This helps us identify any problems or inefficiencies that a management system could fix. Observations work well with interviews by providing a more objective view of Namago day-to-day operations.

### 3.5.2 Collecting Secondary Data

We gather secondary data from useful like tours and travel company records, industry reports, and academic articles about Tours and Travel Management Systems. Looking at these documents helps us figure out what features the system needs to meet industry standards, providing good insight for system requirements. This data also lets us compare our system with what's commonly found in Tours and Travel management tech.

## 3.6 Design Techniques

For building the system, we will use PHP for the backend, relying on the Laravel framework because it's secure and works well for web apps. On the front end, we'll incorporate JavaScript frameworks like Vue.js to make the interface more interactive and user-friendly.

## 3.7 Database and Storage

We will chose MySQL as our database management system because it performs well, scales easily, and keeps data secure, which is vital for handling alot of tours and travel management information. As it works smoothly with PHP and Laravel making development easier.



### 3.8 Study Limitations

We will expect some limitations, like possible biases in qualitative data, not enough participants, and challenges such as resistance to change and language barriers. These factors might affect how broadly our findings can be applied to other tour and travel agents settings. We will work on reducing these issues by getting a range of perspectives from different stakeholders.

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## APPENDICES

### APPENDIX A: Propsed Project Budget

| ITEM                | DESCRIPTION  | ESTIMATED COST(UGX) | REMARKS  |
|---------------------|--|---------------------|--|
| 1                   | Data Collection (printing questionnaires, transport, communication)              | 200000              | Will cover field visits for interviews and observations      |
| 2                   | Software Development Tools (hosting, domain registration, frameworks, utilities) | 300000              | Will cater for web hosting and development environment setup |
| 3                   | Hardware and Accessories (flash drives, testing devices)                         | 200000              | Will support testing and demonstration of the prototype      |
| 4                   | Stationery and Printing (proposal, reports, documentation)                       | 100000              | Will include printing drafts and final copies of the report  |
| 5                   | Internet and Communication   | 50000               | Will facilitate research communication and online resources  |
| 6                   | Unforeseen expenses  | 100000              | Will cater for minor unexpected costs                        |
| <b>TOTAL BUDGET</b> |  | <b>950,000</b>      |  |

### Appendix B: Survey Questionnaire for Namago Tours and Travel Staff

**Purpose:** To collect information on current travel planning challenges and staff expectations for the Smart Travel Planner System.

**Instructions:** Please answer all questions honestly. Your responses will remain confidential.

### Section 1: Personal Information

1. Name (optional): \_\_\_\_\_
2. Position/Role: \_\_\_\_\_
3. Years of experience in the company: \_\_\_\_\_

### Section 2: Current Travel Planning Process

4. How do you currently manage travel bookings and itineraries?

- ☐ Manual (paper-based)
- ☐ Partially computerized
- ☐ Fully computerized

How satisfied are you with the current travel planning process?

- ☐ Very satisfied
- ☐ Satisfied
- ☐ Neutral
- ☐ Dissatisfied
- ☐ Very dissatisfied

What are the main challenges you face in managing bookings and itineraries? (Check all that apply)

- ☐ Double bookings
- ☐ Delays in confirming reservations
- ☐ Communication problems with customers
- ☐ Errors in payment management
- ☐ Other: \_\_\_\_\_

### Section 3: System Requirements

7. Which features would you like to see in a Smart Travel Planner System? (Check all that apply)

- ☐ Automated itinerary planning
- ☐ Booking management (flights, hotels, transport)
- ☐ Payment integration
- ☐ Customer communication tools
- ☐ Reports and analytics

Any additional comments or suggestions:

### Appendix C: Interview Questions for Management

**Purpose:** To gain detailed insights from Namago Tours and Travel management regarding operational challenges and system expectations.

1. What are the main difficulties your staff faces in planning and managing trips?
2. How do these challenges affect customer satisfaction and company performance?
3. What features would you consider essential for a new travel planning system?
4. Are there any security or privacy concerns regarding customer data that should be considered?
5. How do you envision integrating a new system into your daily operations?

### Appendix D: Project Timeline

#### Project Activities and Planned Duration:

6. **Requirement Gathering:** August 2025
7. **System Design:** August 2025
8. **System Development:** September 2025
9. **Testing & Debugging:** September 2025
10. **User Training & Feedback:** October 2025
11. **Report Writing & Submission:** November 2025

### Appendix E: Ethical Considerations

12. Participation in surveys and interviews will be voluntary.
13. Staff responses will be kept confidential and used only for research purposes.

14. Data collected will be stored securely and shared only with the research team and supervisors.
15. Written consent forms will be obtained before conducting interviews or surveys.

### Consent Statement:

I, \_\_\_\_\_, agree to participate in this study. I understand that my responses will remain confidential and that I can withdraw at any time.

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

### APPENDIX E : Schedule of Activities

| ACTIVITY                    | DESCRIPTION   | DURATION | TIMELINE   |
|-----------------------------|---|----------|------------|
| Problem Identification      | Gathering information about challenges and reviewing previous studies | 2 Weeks  | Week 1–2   |
| Requirement Elicitation     | Conducting interviews, questionnaires, and observations               | 2 Weeks  | Week 3-4   |
| System Design               | Creating system models (DFDs, ERDs, and UI mockups)                   | 1 Weeks  | Week 5-6   |
| System Development          | Coding and implementing the prototype                                 | 2 Weeks  | Week 7-10  |
| System Testing & Evaluation | Conducting functionality, usability, and reliability testing          | 1 Weeks  | Week 11-12 |

