



## بِشِي مِٱللَّهِٱلرَّحْمَزِٱلرَّحِيمِ

## **Nile University**

## **Department of Computer Information system**

# Design of Tourism Website in Sudan

(As case study at Ministry of Tourism, Antiquities & Wildlife)

Research submitted as partial fulfillment for degree of bachelors (honors) in computer information systems

## **Submitted by:**

Tasneem Idris

Mohammed Mahmoud **Supervisor**: Hala abdulaziz

Eissa Sayed

February: 2021

﴿ وَ قُلُ رَبِّ زِدْنِي عِلْماً }

### **Dedication**

We dedicate this project to everyone who stood next to us until we reach this stage, including family and friends.

And thanks to the professors who have illuminated the path of knowledge and knowledge who led us despite the difficulties.

And special thanks to the father who supported our path of success and to the mother who raised and fulfilled.

#### **Abstract**

This research is based on creating a website that helps the tourist to know tourism areas in Sudan and facilitate access to them and the possibility to benefit from the services provided by the website, when entering it, such as booking airline tickets and providing him with an express reservation service according to the economy class he wants, as well as booking hotels near the Tourist area, according to what is needed from the rooms, the number of people, the type of hotel service, and the confirmation of the reservation date of entry

To the hotel has to book the date of departure from it and also on the site finds a car rental service according to the type of car, number of people and the number of days that he wants to rent. We also provided him with a service to change the currency in an easy and safe way and finally the main service of the site is the service of tourists within the tourist areas where he chooses the area he wants to visit where we offer The tourist has a guide to introduce the tourist areas, such as Mount Barkal, which is considered a symbol of tourism in Sudan and other tourist areas, to provide experts and specialists on Sudanese antiquities and tourism, to review many cultures of the tourist area, and to review Sudanese customs and traditions.

#### المستخلص

يستند هذا البحث إلى إنشاء موقع إلكتروني يساعد السائح في التعرف على المناطق السياحية في السودان وتسهيل الوصول إليها وإمكانية الاستفادة من الخدمات التي يقدمها الموقع عند الدخول إليه مثل حجز تذاكر الطيران وتزويده برقم. خدمة الحجز السريع حسب الدرجة الاقتصادية التي يريدها وكذلك حجز الفنادق القريبة من المنطقة السياحية حسب ما هو مطلوب من الغرف وعدد الاشخاص ونوع الخدمة الفندقية وتأكيد الحجز تاريخ الدخول

إلى الفندق يجب عليه حجز تاريخ المغادرة منه وأيضًا في الموقع يجد خدمة تأجير السيارات حسب نوع السيارة و عدد الأشخاص و عدد الأيام التي يريد استئجارها. كما قدمنا له خدمة تغيير العملة بطريقة سهلة و آمنة و أخيرًا الخدمة الرئيسية للموقع هي خدمة السائح داخل المناطق السياحية حيث يختار المنطقة التي يريد زيارتها حيث نقدم السائح لديه دليل للتعريف بالمناطق السياحية مثل جبل البركل الذي يعتبر رمزا سياحيا في السودان والمناطق السياحية الأخرى ، لتوفير الخبراء والمتخصصين في الآثار والسياحة السودانية ، لاستعراض العديد من ثقافات المنطقة السياحية ، والاستعراض السوداني العادات والتقاليديستند هذا البحث إلى إنشاء موقع الكتروني يساعد السائح في التعرف على المناطق السياحية في السودان وتسهيل الوصول اليها وإمكانية الاستفادة من الخدمات التي يقدمها الموقع عند الدخول إليه مثل حجز تذاكر الطيران وتزويده برقم. خدمة الحجز السريع حسب الدرجة الاقتصادية التي يريدها وكذلك حجز الفنادق القريبة من المنطقة السياحية حسب ما هو مطلوب من الغرف و عدد الاشخاص ونوع الخدمة الفندقية وتأكيد الحجز تاريخ الدخول

إلى الفندق يجب عليه حجز تاريخ المغادرة منه وأيضًا في الموقع يجد خدمة تأجير السيارات حسب نوع السيارة وعدد الأشخاص وعدد الأيام التي يريد استئجارها. كما قدمنا له خدمة تغيير العملة بطريقة سهلة وآمنة وأخيرًا الخدمة الرئيسية للموقع هي خدمة السائح داخل المناطق السياحية حيث يختار المنطقة التي يريد زيارتها حيث نقدم السائح لديه دليل للتعريف بالمناطق السياحية مثل جبل البركل الذي يعتبر رمزا سياحيا في السودان والمناطق السياحية الأخرى ، لتوفير الخبراء والمتخصصين في الآثار والسياحة السودانية ، لاستعراض العديد من ثقافات المنطقة السياحية.

## Index

## Contents

Chapter one: Introduction	1
1.1 Introduction.	2
1.2 Background of the Sstudy	3
1.3 Problem statement	3
1.4 Research Questions	4
1.5 Objectives of the Study	4
1.6 Scope of Research	4
1.7 Limitation of Study	4
1.8 Significance of the Study	5
1.9 Thesis Structure	5
Chapter two: Literature review	6
2.1 Tourism electronic application	7
2.2 Related works	7
2.2.1 I.T.C Sudan.com	7
2.2.2Real Sudan.com	8
2.2.3DGL Travel.com	8
2.2.4Saaih.com.	9
2.2.5 Tripadvisor.com	9
2.2.6 Priceline.com	9
2.2.7 Rome2rio.com.	10
2.2.8 Airbnb.com	10
Chapter Three Methodology	12
3.1 Overview	13

3.2 Research methodology	13
3.3. Requirements Management	13
3.4 Functional Requirements	
3.4.1 Nonfunctional requirements	14
3.4.2 Current system description	14
3.5 description of the proposed system	15
3.6 Feasibility Study	15
3.6.1 Economic Feasibility	16
3.6.2 Technical Feasibility	16
3.6.3 Operational Feasibility	17
3.7 Design phases	17
3.7.1 Use case diagram.	18
3.7.2 Sequence diagram	19
3.7.2.1 Admin login	19
3.7.2.2 Select what service you want	19
3.7.2.3 Booking a flight	20
3.7.2.4 Hotel booking	20
3.7.2.5 Car rent	21
3.7.2.6 Exchange of currency	21
3.7.2.7 Activity diagram	22
3.7.2.8 Class diagram	23
Chapter four: Implementation	24
4.1 Screens the main pages	25
4.1.1 Home screen	25
4.1.1.1 The first section	25
4.1.1.2 The second section search	25
4 1 1 3 The third section	26

4.1.1.4 Fourth Section	26
4.1.1.5 Section Five	27
4.1.1.6 Section Six	27
4.1.2 Flight ticket	27
4.1.2.1 The first section search	28
4.1.2.2 The second section search:	28
4.1.2.3 The third section	29
4.1.3 Coin	29
4.1.3.1 The first section search	29
4.1.3.2 The second section	30
4.1.3.3 The third section	30
4.1.4 Hotel	31
4.1.4.1 The first section	31
4.1.4.2 The second section	31
4.1.4.2 The thrid section	32
4.1.4.4 Fourth Section.	32
4.1.5 Taxi	33
4.1.5.1 The first section	33
4.1.5.2 The second section	33
4.1.5.3 The third section	34
4.1.5.4 Fourth Section:	34
4.2 Screens the sub-main pages	35
4.2.1 Port Sudan	35
4.2.1.1 The first section	35

4.2.1.2 The second section	36
4.2.1.3 The third section	36
4.2.2Al Salam Hotel	37
4.2.1.1 The first section	37
4.2.1.2 The second section	37
4.2.1.3 The third section	38
4.2.3 Toyota double chaps 2017	38
4.2.1.1 The first section	38
4.2.1.2 The second section	39
4.2.1.3 The third section	39
4.3 Screens Admin	40
4.3.1 Login screen	40
4.3.2 Tourist Areas screen	40
4.3.3 Port Sudan screen	41
4.3.4 Other services screen	41
4.3.5 Flight Tickets screen	42
4.3.6 Coin screen	42
4.3.7 Hotel screen	43
4.3.8 Acropole Hotel screen	43
4.3. 9Taxi screen	44
4.3.10 Tucson 19/2018 screen	44
4.3.11 Subscribe screen	45
Chapter five: Conclusion and recommendations	46
5.1 Conclusion	47

5.2 Recommendation	47
5.3 References	48
5.4 Appendix	49
5.4.1 Related works	49
5.4.2 Tables in Database	53

## **Lists of Figures**

Figure1 I.T.C website	49
Figure 2 realsudan	49
Figure 3 DGLtravel	50
Figure 4 saaih	50
Figure 5 tripadvisor	51
Figure 6 priceline	51
Figure 7 rome2rio	52
Figure 8 airbnb	52
Figure 9 the current system	18
Figure 10 admin login	19
Figure 11 select what service you want	19
Figure 12 book a flight ticket	20
Figure 13 book a hotel	20
Figure 14 car rent	21
Figure 15 Exchange of currency	21
Figure 16 activity diagram	22
Figure 17 class diagram	23
Figure 18 home menu pages	25
Figure 19 search home page	26
Figure 20 tourist areas	26
Figure 21 offers of tourist area	27
Figure 22 the home page footer	27
Figure 23 search Flight Tickets page	28
Figure 24 form Flight Tickets page	28
Figure 25 footer Flight Tickets page	29
Figure 26 search coin page	29
Figure 27 form exchange coin page	30

Figure 28 footer of coin page	30
Figure 29 check available hotel page	31
Figure 30 explanation of the services hotel page	31
Figure 31 hotel tourism services and offers hotel page	32
Figure 32 footer of hotel	32
Figure 33 taxi webpage	33
Figure 34 explanations of car services	33
Figure 35 select of car	34
Figure 36 is footer for taxi	34
Figure 37 Display all the information about the tourist area	35
Figure 38 Form the tourist fills in the data required to reserve the hotel	36
Figure 39 footer taxi	36
Figure 40 Details of hotels Al Salam Hotel	37
Figure 41 form Al Salam Hotel	37
Figure42 footer Al Salam Hotel	38
Figure 43 the car reservation type	38
Figure 44 the car reservation form	39
Figure 45 car reservations	39
Figure 46 admin login	40
Figure 47 tourism area admin	40
Figure 48 portsudan view admin	41
Figure 49 View other services	41
Figure 50 Show tourists who have booking	42
Figure 51 Display the currencies	42

Figure 52 select the hotel that was booked by choosing the hotel name	43
Figure 53 View inquiries about hotels available in the area	43
Figure 54 select the car retaing	44
Figure 55 View inquiries	44
Figure 56 Displaying the names and e-mails of tourists who want to follow	45
Figure 57 table name alsbloukh	53
Figure 58 table name currency	53
Figure 59 table name dindernational	53
Figure 60 table name flighttickets	54
Figure 61 table name hotel	54
Figure 62 table name jebelbarkal	54
Figure 63 table name marrahmountains	54
Figure 64 table name nubianpyramids	55
Figure 65 table name portsudan	55
Figure 66 table name subs	55
Figure 67 table name taxi	55
Figure 68 table name travell	56
Figure 69 table name users info	56

## List of tables

Table 1 different between studies	11
Table 2 Economic feasibility	16
Table 3 Technical feasibility hardware requirement	16
Table 4 Technical feasibility software requirement	17

**Chapter one** 

Introduction

## Chapter one

#### Introduction

#### 1.1 Introduction.

The chapter is talking about the tourism services in Sudan, There is no doubt that the scientific developments achieved by human in the twentieth century has an effective impact on the way of life in all contemporary societies, technology has contributed to this modern development by speeding data processing and storage, called and used in all calculations, statistical and analytical requirements to cope with life which also led to the speed completion of the tasks and the speed of business and achieving goals., so this sense of information technology has become a real weapon in all its forms to address the many challenges that we face as individuals and as

a nation, and thus the national economy, Where he became a national goal of technological development and the real need for the growth of society and the development of the capacities of its members and good use of resources and protection. At the time it was developing these techniques had to be used in the nation benefit from the speed of completion of the work and save time and exploited at all useful.

There are many tourism and travel sites in the internet that offer those who want to travel information about the tourist areas, and the cost of: trips, hotels restaurants, and recreational place that tourists can visit, and some also provide information about universities, cities, and cost of living for those wishing to move to a new place come to mention the most prominent of these sites (Numbeo.com, Tripadvisor.com, booking.com, Expedia.com, Airbnb.com, Go today.com, Trover.com, Honestay.com, Wego.com, Pricline.com).

Hence, the traditional booking methods for tourist trips in Sudan are no longer the first choice for users, as electronic methods have become more preferred for them because of the flexibility and wide options they provide at a lower cost as well as providing integrated reservation services (Airport taxi, Transportation between cities, car with driver, renting cars our tourism programs, airline tickets, book hotels and apartments, train tickets, book for the most beautiful cruises, limousine

for business, translation for tourists and businessmen, health therapy and recreation). Discounts, offers and price comparison gave these the methods are a clear increase in the number of internet users and Smartphone's. In this research we have implemented (website for tourism services in Sudan) to help the user to get to know the tourist areas in Sudan and their services, if the tourist does not know the country sites that he came to once you provide this application can Easily Chooses the service he wants and this helps him to save time.

Services that are provided by the tourism website are:

- Fights tickets booking.
- Hotel booking.
- Taxi rent.
- Currency exchange.
- Organize daily tourism programs.

### 1.2 Background of the Study

The e-tourism is the services provided by information and communication technology for the purpose of accomplishing and promoting tourism and hotel services through various open and closed networks, based on the principles and foundations of electronic commerce, and in fact go beyond their concept to beyond that, they are used for mobile electronic devices such as mobile phones and electronic notices even including mobile tourism / Mobile phones and others, and thus, information and communication technology is used by all partners of the tourism sector, including institutions, bodies and individuals, and this technology may be used in the construction and establishment of tourism entities that require operation also Dara of technological knowledge among the pioneers, such as smart hotels based in the construction, operation and management of modern technologies

#### 1.3 Problem statement

This study aims to solve some of the problems that tourists faces when wanting to visit Sudan

### These problems are:

• There are some situations in which you may face reasons related to it in the procedures or requests to reach the area that connects them together.

- Some areas of tourism in Sudan are unknown to non-Sudanese visitors due to the lack of publicity for tourist areas in the country
- Weak government interest in tourism and scarcity of government funding.
- The weak role the private sector plays in investing in tourism

### 1.4 Research Questions

- What is role of tourism systems or applications in the sustainability of tourism in Sudan?
- What is role of tourism systems or applications in learning tourist about Sudan?
- How can research solve the problems of the tourist in booking flights tickets?
- How does this research solve the problem of the tourist in booking of hotels?
- How can the research help tourist in the process of renting a car?
- How can the research help tourist in the process of currency change?

### 1.5 Objectives of the Study

- Develop a website that can help tourists to know tourism developments in Sudan.
- To develop a website that can help tourists to know tourist places in Sudan.
- To facilitate the process of booking a flight for the tourist.
- To facilitate the process of booking a hotel for the tourist.
- To facilitate the process of renting a car for tourist.

## **1.6 Scope of Research**

This website developed to be used by travelers who are vesting Sudan for the purpose of tourism only.

The study serves tourist and the entire Sudan community, at Ministry of Tourism, Antiquities & Wildlife and the whole society.

The study has been carried out in Nile University Computer Studies & Information Technology College during the period of 10<sup>th</sup> February of 2020 to February 2021.

## 1.7 Limitation of Study

The acute lack of information and the difficulty of collecting it due to the vast area of the country, lack of expertise and lack of resources

### 1.8 Significance of the Study

In this section, we will talk about the importance of this project for the parts included in it (students, college, travel agency, foreign tourists, and Sudanese, and for Sudan as a country).

To the faculty: here we mean the academic institute.

It will increase the number of scientific research that the university has.

To the students: here we mean us the graduates.

The project will help us obtaining a bachelor's degree

**To tourists**: The project will help the foreign tourist to get acquainted with the Sudanese culture and tourism in Sudan, such as the Nubian culture and the Dinka culture.

**To Sudan**: It helps in the development and spread of Sudanese culture and tourism around the world and the influx of tourists from all countries of the world.

### 1.9 Thesis Structure

Chapter one: introduction
Chapter two: litreure review
Chapter Three: methodology
Chapter four: Implementation

**Chapter five:** Conclusion and Recommendation and Refrances

Chapter two
Literature review

## Chapter two

#### Literature review

This chapter discusses literature review for some tourism website ideas.

Online tourism is about the tourist service and information that tourist gets, but from their countries they can book the services, we will talk about multiple options for people.

Take the idea from the discussion table to the real world, so in this chapter also we will get to know the literary reviews of many online tourist services that have been since the 1960s until now.

## 2.1 Tourism electronic application

In the past few years, the technology industry is continuously evolving. The technology has brought major revolution in the traveling and tourism industry too. We have witnessed that the travel and tourism industry has gone through a complete overhaul. Apps makes it effortless for everyone to book an unforgettable holiday with a few simple steps with the help of mobile apps as these mobile apps become a one-stop solution for its users. Travel agencies and physical bookings are now almost outdated because there are many mobile applications available in the internet market from where you can easily plan your trips. Currently, around 80% of travellers use mobile apps to plan their holiday trips. With the advancement in technology, we can easily book our vacations sitting back at our homes. Due to this transformation, many travel companies are looking to get their mobile app developed to engage more potential customers. There are many mobile app development companies available in the market which can assist you in developing and launching your application as per your requirements.

#### 2.2 Related works

There are many existing applications for tourism .almost every application is focusing on tourism approach and in their applications they provide flight booking, hotel, car rent and exchange currency and services for tourist.

#### 2.2.1 I.T.C Sudan.com:

Is the leading tour operator based in Khartoum .Offer great itineraries and own the exclusive accommodations of the Nubian Rest House in Karima and Meroe Camp and guarantee the best services in the unknown Susan.Specialized in cultural, archaeological, adventure, business and luxury tours. Have own cars with professional drivers, excellent desert cooks and cultural multilingual – English, Italian, French, Spanish and German –guides. [Figure 1][1]

### Cons:

- No local contact number for Sudan.
- No Arabic language on the site.
- Difficult to use.
- Inconsistent color.
- No direct flight booking from the site

#### 2.2.2 Real Sudan.com:

Real Sudan for tailor made tour programs provides advice and customer service to ensure get the most out of holiday in Sudan. Offer Tailor-Made Tour programs tailored to your needs and interests. Guide you to the "must-see" locations and beyond the usual tourist destinations, into a world that only the local people know. It committed to the UN Sustainable Development Goals 2030. It has embedded those goals into its core state. [Figure 2][2]

#### Cons:

- No Arabic and any language other just English on the site.
- Inconsistent color.

#### 2.2.3 DGL Travel.com:

First trip was in October 2013, in an attempt to discover our country, Sudan, the land of history, geography and culture with a small group of adventurers and traveling enthusiasts, and we were surprised that this country has a history and civilization that dates back to ancient times and a dazzling ethnic and cultural diversity that most of the people don't know, even us Sudanese, and that was the beginning to Sudan – the amazing Sudan. These years were enough to make us believe that travel and beauty lovers all around the world need to visit Sudan to see the otherworldly and bedazzling historical and cultural diversity in the country – they need to live the experience of the real and fantastic Sudan [Figure 3] [3]

#### Cons:

- No Arabic and any language other just English on the site.
- Inconsistent color.
- Difficult to use.

#### 2.2.2 Saaih.com:

This website about tourism all over the world, he talks about news of countries and continents and brings together important tourist areas in one place. [Figure 4] [4]

#### Cons:

- Unmatched.
- Full of ads
- No English and any language other just Arabic on the site.
- Not easily to access.
- Full of news.

### 2.2.5 Tripadvisor.com:

TripAdvisor is the world's largest travel platform \*, and it helps 463 million passengers every month make all their flights the best trips. Travelers around the world use TripAdvisor and its app to browse more than 859 million reviews and opinions on 8.6 million accommodations, restaurants, experience, airline and cruise. Whether it is planning or making use of it during their travels, travelers turn to TripAdvisor to compare low prices for hotels, flights and cruises, book popular destinations and attractions, as well as book tables at great restaurants. TripAdvisor is the perfect travel companion, available in 49 markets and 28 languages.

It owns subsidiaries and subsidiaries of TripAdvisor, (listed on the NASDAQ under the symbol: TRIP). It operates a group of websites and businesses.[Figure 5 ] [5]

#### 2.2.6 Priceline.com:

Priceline was founded in 1997 on the back of a brilliant original idea. Airlines regularly flew only two-thirds full, with millions of seats empty. A million hotel rooms might go unused every night. We thought what if we harnessed the Internet to drive demand, filling those planes and hotels? And what if customers could make an offer – name their own price - rather than pay the full fare?

The airlines were skeptical. One seasoned executive straightforwardly told our founder Jay Walker that they'd be better off if Jay was "hit by a bus." Jay conceded that a bus might get him, but the Internet wasn't going away. The airlines needed it, even if they were wary of it One reason for airline skepticism was their desire to not disrupt pricing. In fact, that's what "Priceline" means. The "price line" is a

point airlines didn't want to sell below; if they sold seats at full price in one place. [Figure 6] [6]

#### 2.2.7 Rome2rio.com:

Rome2rio makes travel planning easy. We are door-to-door travel information and booking engine, helping you get to and from any location in the world.

Enter any address, landmark, or city as your destination and we will instantly display all your travel and booking options, along with information about accommodation and things to do, in one convenient spot.

Whether you're after flight, train, bus, ferry, rideshare or rental car info, we've got estimated prices, journey durations and booking details from over 5000 companies in more than 160 countries — making us one of the top online travel resources used globally.[Figure 7 ] [7]

#### 2.2.8 Airbnb.com:

Airbnb is one of the world's largest marketplaces for unique, authentic places to stay and things to do, offering over 7 million accommodations and 50,000 handcrafted activities, all powered by local hosts. An economic empowerment engine, Airbnb has helped millions of hospitality entrepreneurs monetize their spaces and their passions while keeping the financial benefits of tourism in their own communities. With more than three quarters of a billion guest arrivals to date, and accessible in 62 languages across 220+ countries and regions, Airbnb promotes people-to-people connection, community and trust around the world. [Figure 8][8]

Table 1 different between studies

Former researches	Tools	Fragment
1- I.T.C Sudan.com	Html,php,javascript	website that allows user to discover more about Sudan culture made by an international company
2- Real Sudan.com	Html,php,javascript,bootstrap	Real Sudan for tailor made tour programs provides advice and customer service to ensure get the most out of holiday in Sudan
3- DGL Travel.com	Html,php,javascript,bootstrap	Website that was developed to add services that are not available on TripAdvisor
4- Saaih.com	Html,php,javascript,bootstrap	This website about tourism all over the world, he talks about news of countries and continents and brings together important tourist areas in one place.
5- Tripadvisor.com	Html,php,javascript,bootstrap	The world's largest travel platform, helps hundreds of millions of travelers each month make every trip their best.
6- Priceline.com	Html,php,javascript,bootstrap	Is an online travel agency for finding discount rates for travel-related purchases such as airline tickets and hotel stays It was founded at 1997
7- rome2rio.com	Html,php,javascript,bootstrap	Rome2rio is an online multimodal transport search engine helping travelers

**Chapter Three** 

Methodology

**Chapter Three** 

Methodology

3.1 Overview

This chapter explains the methodologies that were used to complete this

research.

This chapter also explains tools and techniques that will be used to develop this

website.

Also explains the current system and the proposed system.

Which is a: website

3.2 Research methodology

The methodology is: steps that must be followed in the process of developing this

website. The methodology used in developing this research and data were collected

By following up the work progress from the moment the tourist enters Sudan until

he leaves. Registration and individual follow-up and the Problems facing tourist

The data was analyzed using Enterprise Architecture (UML)

The tools that were used are:

Html, Css, JavaScript, Xampp, Bootstrap, Php

3.3. Requirements Management:

This website provides tourist with guidance about Sudan most popular areas

for tourist, also provides tourist with a very specific services.

This involves explicit documentation of the user's requirement and keeping track

of changes with respect to the requirement. It also analyses the system and the

impact those changes will make on the system before taking them into

consideration.

13

### 3.4 Functional Requirement

- The website enables user to access different services like (hotel booking, flight booking, etc.)
- The admin of the website is the only one who can add or remove users, services, tasks.
- The customer can view the information of tourism attraction places in Sudan.
- Customers will get detailed information about the trip.
- The customer can book a tourism trip.
- The customer can determine wither is he alone or going in group.
- The system will calculate the cost of the customer choices and save his transaction to the database.
- The customers can review another friends and people reviews.
- The customers can subscribe to the site by e-mail to receive all new updates.

## 3.4.1 Nonfunctional requirements

- Compatibility: the website should be able to run in different types of devices and platforms like (laptops, smartphones)
- Usability: the website should provide systematic and simple interfaces.
- Maintainability: The website must be easy to maintain if there are changes to functionalities in the future.
- Security

## 3.4.2 Current system description

In the current system:

Generally: people who want to come to Sudan for tourism must have an idea about tourism areas in Sudan.

For example: Sudan most visited places by tourists, hotel rating and prices, where to get transportation from, and the exchange of currency.

The standard procedure is tourist will have to go all the way to ministry of tourism to get manual about tourism in Sudan, and then the tourist will also have to look for the suitable hotel by himself.

### 3.5 description of the proposed system

We have built an electronic website that helps tourists do basic things. In this website you'll find the following:

The new system purposes to make all of the tourist procedures to be done electronically, that means that tourist will be able to book the flights tickets and book a hotel room and rent a car and exchange money all through the website.

By using the website user or tourist will be able to know more about Sudan, via the screens or pages he can use.

Every page is divided into three sections to make it easier for user to access the website features.

### The main services are provided in the website are:

Booking a flight tickets, Booking a hotel rooms, Renting cars, Exchange money

## 3.6 Feasibility Study

The feasibility study is the most important thing in the preliminary study, as the feasibility study aims to rationalize the investment decision that the economic project must be based on the foundations of economic and technical viability. In other words, this study is concerned with the feasibility of establishing the proposed project before its practical implementation on the ground. Failure to carry out feasibility studies before establishing new projects or making replacement, renewal or expansion decisions in existing projects, whether out of ignorance or intentionally is a fatal mistake that leads to waste of resources, misuse of them and the loss of many times the money that could have been spent on feasibility studies. There are three stages in the feasibility process:

### 3.6.1 Economic Feasibility

It is the second part of resource determination. The basic resources to consider are: your time and that of the systems analysis team; the cost of doing a full systems study (including time of employees you will be working with); cost of the business employee time, estimated cost of hardware, and estimated cost of software and/or software development. The concerned business must be able to see the value of investments it is pondering before committing to an entire system study.

Economic **feasibility**: all HW/SW

**Table 2 Economic feasibility** 

Item	Specification	Qty	Unit
			coast
Pc	-	1	35000
Network	Server	700	45000

## 3.6.2 Technical Feasibility

A large part of determining resources has to do with assessing technical feasibility. The analysis must find out whether current technical resources can be upgraded or added to in a manner that fulfills the request under consideration. However, sometimes; add-ones to exiting systems are costly and not worthwhile simply because they meet needs inefficiently.

Table 3 Technical feasibility hardware requirement

Item	Specification	Qty
Pc	-	1
Mobile	Smartphone	1

Table 4 Technical feasibility software requirement

.

Item	Version
Xampp	2.3.1
Bootstrap	4
Notepad++	5.1.2

### 3.6.3 Operational Feasibility

Suppose that the technical and economic resources are both adequate, the system analysis must still consider the operational feasibility of the requested project. Operational feasibility is dependent on human resource available for the project and involved projecting whether the system will operate and be used once it is installed. If users are virtually wed to the present system, see no problems with it, and generally are not involved in requesting a new system, resistance to implementing the new system will be strong. Chances for it ever becoming operational for it are low. A summary of the proposed alternative information system, this should include a short, clear and precise statement of the objectives of the proposed system.

## 3.7 Design phases

The Design Phase seeks to develop detailed specifications that emphasize the physical solution to the user's information technology needs. The system requirements and logical description of the entities, relationships, and attributes of the data that were documented during the Requirements Analysis Phase are further refined and allocated into system and database design specifications that are organized in a way suitable for implementation within the constraints of a physical environment.

- 1. **Planning**: The planning phase is the fundamental process of understanding why an information system should be built and determining how the project team will go about building it.
- 2. **Analysis**: The analysis phase answers the questions of who will use the system, what the system will do, and where and when it will be used.
- 3. **Requirement**: statement of what the system must do or what characteristics it needs to have.
- 4. **Design**: The design phase decides how the system will operate, in terms of the hardware, software, and network infrastructure; the user interface, forms and reports; and the specific programs, databases, and files that will be needed.
- 5. **Implementation**: we start building the system in this phase.
- 6. **Verification**: check if the built system functions as we planned.

### 3.7.1 Use case diagram

Describes what dose the system consist of.

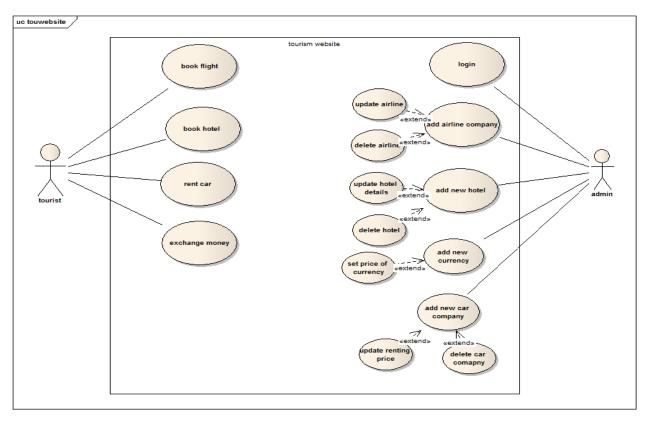


Figure 9 propsed systems.

## 3.7.2 Sequence diagram

Describes use cases scenarios

## **3.7.2.1 Admin login**

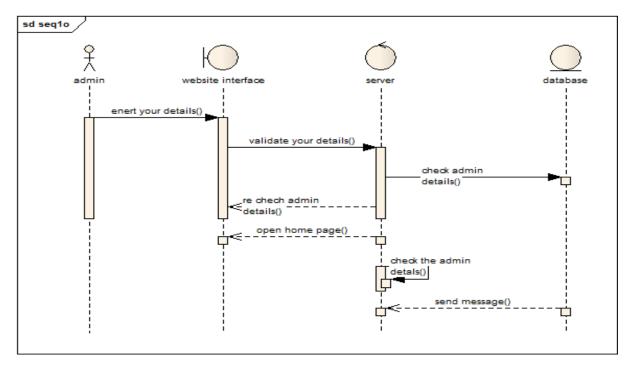


Figure 10 admin login

## 3.7.2.2 Select what service you want

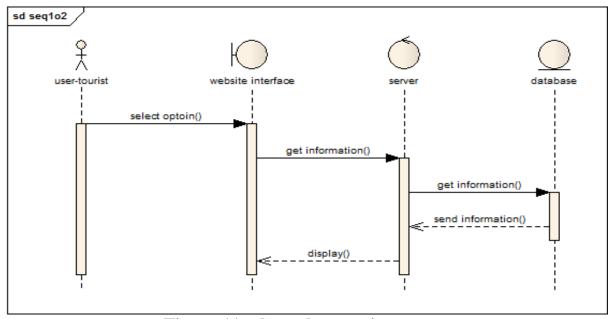


Figure 11 select what service you want.

## 3.7.2.3 Booking a flight

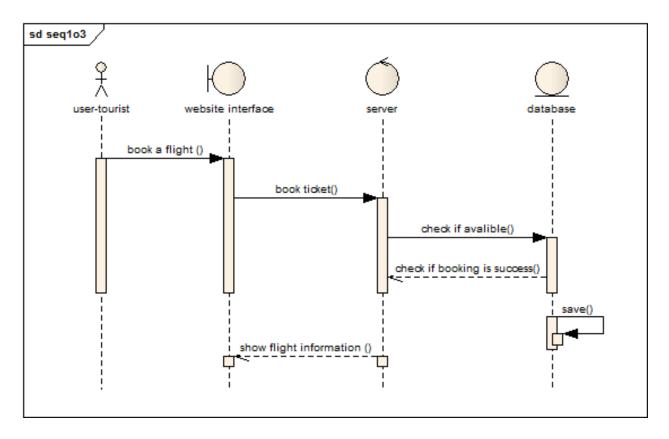


Figure 12 book a flight ticket.

## 3.7.2.4 Hotel booking

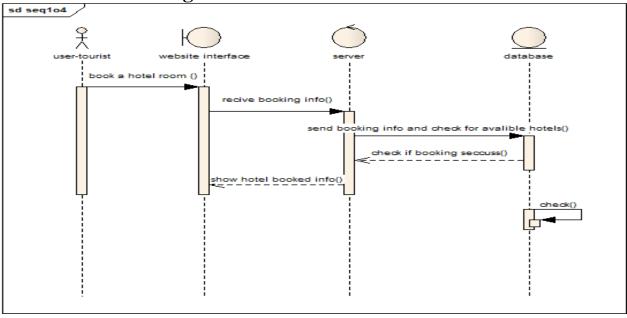


Figure 13 book a hotel.

### 3.7.2.5 Car rent

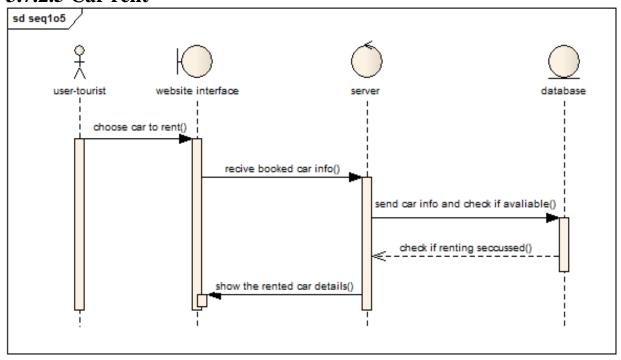


Figure 14 car rent

## **3.7.2.6** Exchange of currency

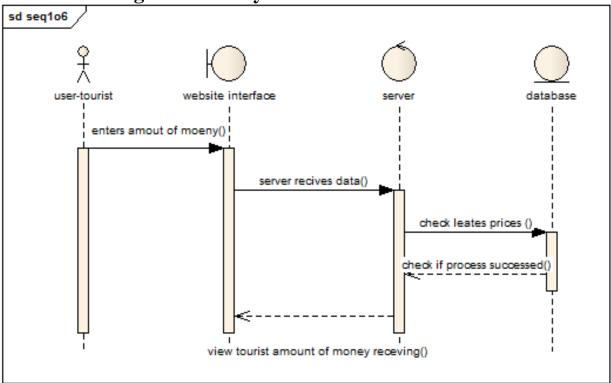


Figure 15 Exchange of currency

3.7.2.7 Activity diagram

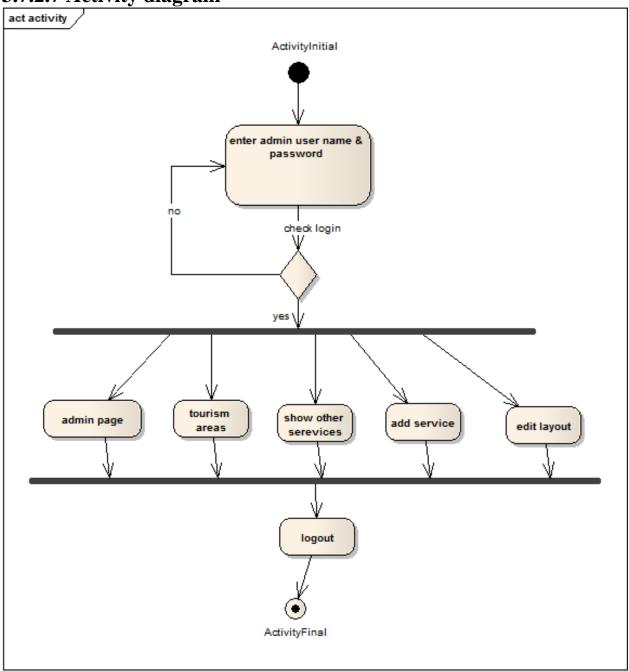


Figure 16 activity diagram

.7.2.8 Class diagram

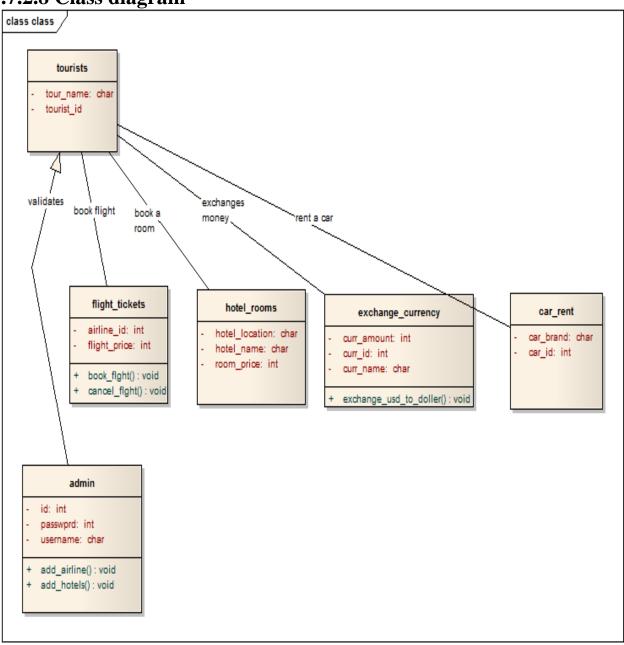


Figure 17 class diagram

**Chapter four** 

Implementation

# Chapter four

# Implementation

# 4.1 Screens the main pages:

This chapter display the system functionalities and interfaces, also The interface of the system uses to insert the data into the system to process it, the system provide friendly interface can uses by all the user even users with poor skills with technology.

### 4.1.1 Home screen

The main page is divided into six sections:

# 4.1.1.1 The first section, the main menu, is to choose the type of any services:

Reservations of an airline tickets change of currency hotel reservation car rental.

# 4.1.1.2 The second section search:

Displaying the names and e-mails of tourists who want to follow all new developments

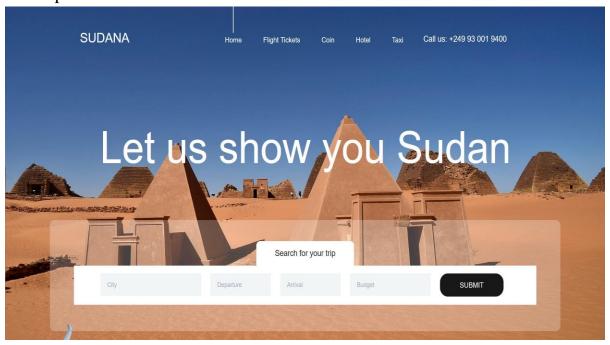


Figure 18 home menu page

# 4.1.1.3 The third section:

a detailed explanation of the services we provide to the tourists.

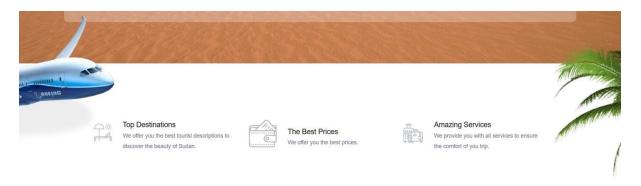


Figure 19 search home page

# 4.1.1.4 Fourth Section:

Our site offers tourist areas, which are six tourist areas.

# Popular Destinations

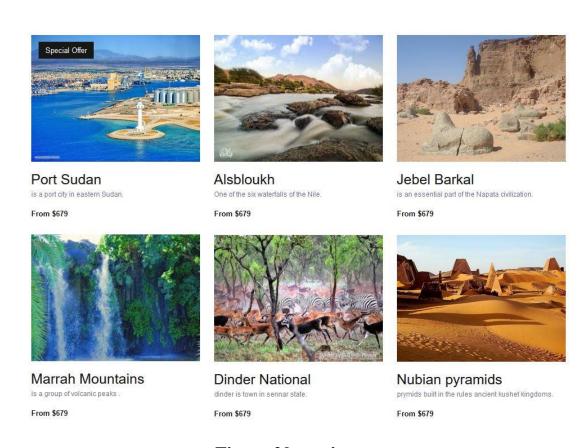


Figure 20 tourist areas

# **4.1.1.5 Section Five:**

Offers and dates of the nearest flights and the existence of offers of discounts.

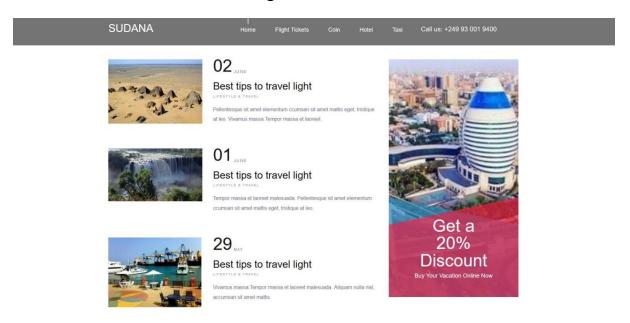


Figure 21 offers of tourist area

# **4.1.1.6 Section Six:**

Page footer, copyright and form to follow, allow the tourist to write his name and e-mail to send him all the new offers.



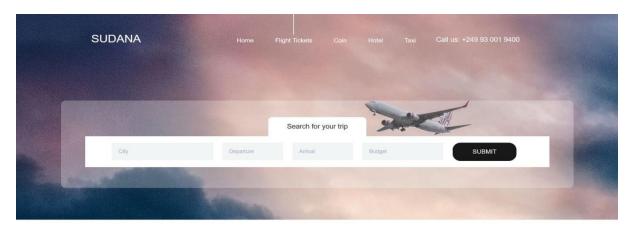
Figure 22 footer home page

# 4.1.2 Flight ticket:

The page is one of five services divided into three sections:

# 4.1.2.1 The first section search:

the tourist can search for trips in the near future.



Flight Tickets:

Figure 23 search Flight Tickets page

# 4.1.2.2 The second section search:

The website addresses booking airline tickets. The tourist will fill in his full name, phone number, address, from which country he wants to travel, to which country, type of flight, date of reservation, if he wants to send any comment.

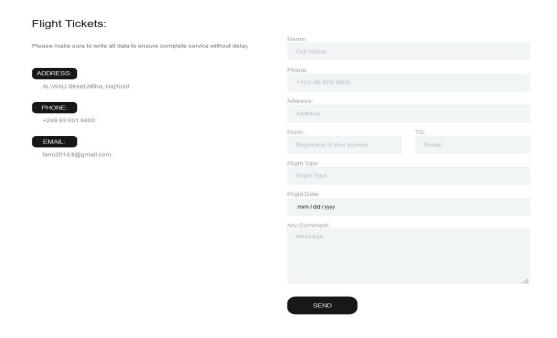


Figure 24 form Flight Tickets page

# 4.1.2.3 The third section:

Page footer, copyright and form to follow, allows the tourist to write his name and e-mail to send him all the new offers.



Figure 25 footer Flight Tickets page

# 4.1.3 Coin:

The page is one of five services divided into three sections:

# 4.1.3.1 The first section search:

The tourist is looking for currencies, their dependency for any country

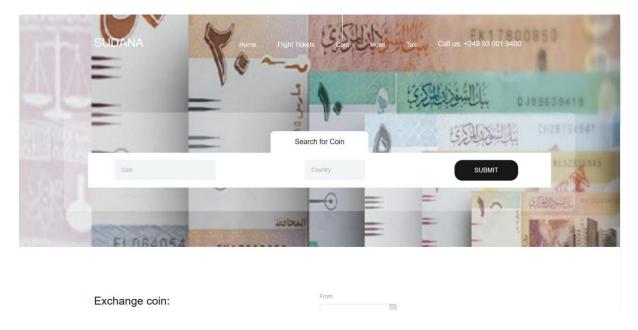


Figure 26 search coin page

# 4.1.3.2 The second section:

The form of converting currencies from the currency to the Sudanese currency, the currencies are constantly updated by the admin

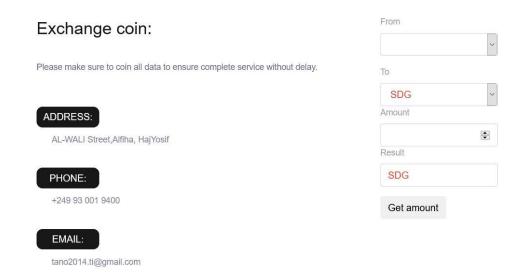


Figure 27 form exchange coin page

# 4.1.3.3 The third section:

Page footer, copyright and form to follow, allows the tourist to write his name and e-mail to send him all the new offers.



Figure 28 footer of coin page

### 4.1.4 Hotel:

The page is one of five services divided into four sections:

# 4.1.4.1 The first section:

Form for hotels available in the region enter the details: area, booking date and end date of booking, the number of adults, number of children, and the number of rooms

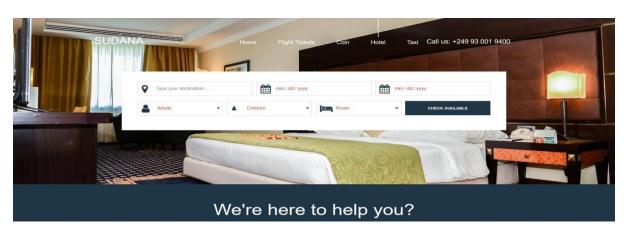


Figure 29 check available hotel page

# 4.1.4.2 The second section:

a detailed explanation of the services we provide to the tourists.



Figure 30 explanation of the services hotel page

# 4.1.4.3 The third section:

Offer hotels tourism services.

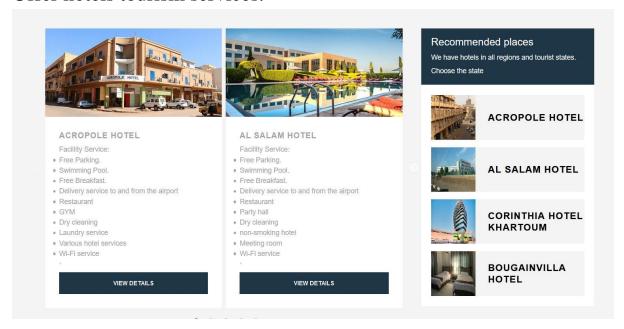


Figure 31 hotel tourism services and offers hotel page

# 4.1.4.4 Fourth Section:

Page footer, copyright and form to follow, allows the tourist to write his name and e-mail to send him all the new offers.

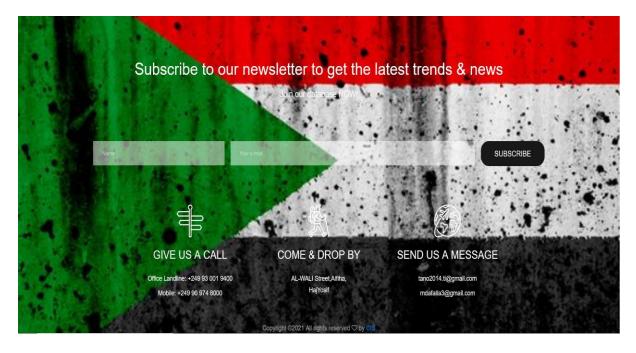


Figure 32 footer of hotel

# 4.1.5 Taxi:

The page is one of five services divided into four sections:

# 4.1.5.1 The first section:

The form of inquiring about a car is available by filling in the following data and sending it to us: the region, the date of the rental, the date of return, the type of the car, the number of people, and the number of days

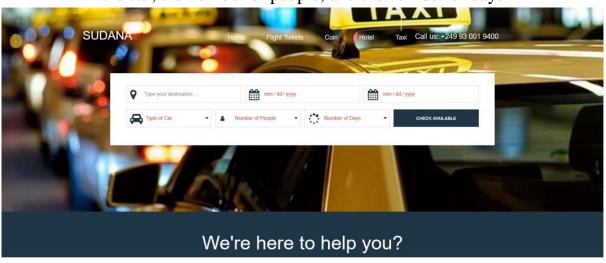


Figure 33 taxi webpage

# 4.1.5.2 The second section:

Detailed explanation of the services we provide to the tourists.



We're here to help you?

Figure 34 examples of car services

# 4.1.5.3 The third section:

Offer cars retaing services.

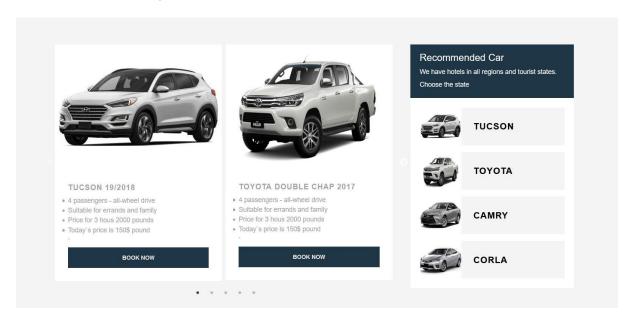


Figure 35 select of car

# 4.1.5.4 Fourth Section:

Page footer, copyright and form to follow, allows the tourist to write his name and e-mail to send him all the new offers.

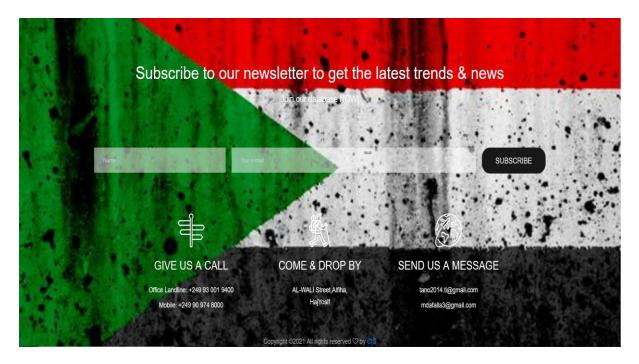


Figure 36 footer of taxi page

# 4.2 Screens are sub-main pages:

### 4.2.1 Port Sudan:

This page when we choose one of the tourist areas from the taxi page divided into three sections:

# 4.2.1.1 The first section:

Display all the information about the tourist area and its details and display animated pictures related to the area



### port Sudan

Port Sudan (Arabic: ور سودان Būr Sūdān) is a port city in eastern Sudan, and the capital of the state of Red Sea. As of 2007, it has 489,725 residents. Located on the Red Sea, it is the Republic of Sudan's main port city.

### Economy

The city has an oil refinery and handles the majority of the country's international trade. Major exports include oilseed, senna, and hides and skins. Imports include construction materials, heavy machinery, and vehicles.

### Transport

The city has a modern container-port to handle imports and exports. The main airport is Port Sudan New International Airport. There is now a tarred road linking Port Sudan to Khartoum via Atbara. Port Sudan also has a rail link with Khartoum. There is also an international ferry from Jeddah.

### Places of worship

Places of worship are predominantly Muslim mosques, but there are also Christian churches and temples including the Roman Catholic Archdiocese of Khartoum (Catholic Church), Sudan Interior Church (Baptist World Alliance), and Presbyterian Church in Sudan (World Communion of Reformed Churches).

### Climate

Port Sudan has a hot desert climate (Köppen: BWh) with extremely hot summers and moderately hot winters, requiring the acquisition of fresh water from Wadi Arba'at in the Red Sea Hills and from salt-evaporating pans. Temperatures can easily exceed 30 °C (86 °F) in winter and 45 °C (113 °F) in summer. Over 90% of the annual rainfall falls between October and January, mostly in November, with the wettest month on record being November 1947 with 182 millimetres (7.2 in), whilst the wettest year was from July 1923 to June 1924 with 231 millimetres (9.1 in). Average annual rainfall is 76 millimetres (3.0 in), and no rainfall occurred between January 1983 and June 1984. The mean temperature year round (the average of all daily highs and nighttime lows) is 28.4 °C (83.1 °F).

Figure 37 Display all the information about the tourist area

# **4.2.1.2** The second section:

Form the tourist fills in the data required to reserve the hotel, the data that he must send are: full name, country, phone number, email, number of people, if he wants to send any comment

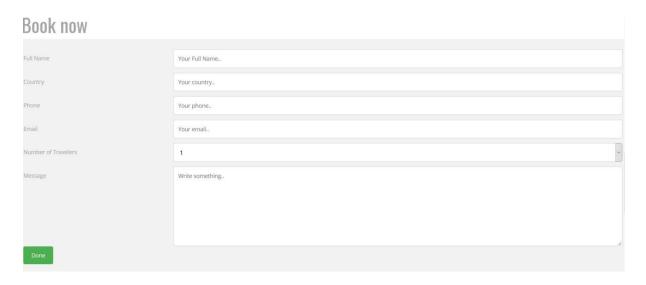


Figure 38 Form the tourist fills in the data required to reserve the hotel

# 4.2.1.3 The third section:

Page footer, copyright and form to follow, allows the tourist to write his name and e-mail to send all the new offers.



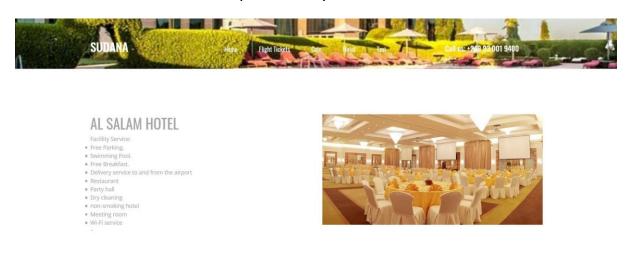
Figure 39 footer taxi

### 4.2.2Al Salam Hotel:

This page when we choose one of the hotel areas from the hotel page divided into three sections:

# 4.2.1.1 The first section:

Details of hotels and services provided by the tourist



Book now

Figure 40 Details of hotels Al Salam Hotel

# 4.2.1.2 The second section:

Form the tourist fills in the data required to reserve the hotel the data that he must Send are: full name, country, phone number, email, number of people, if he figure



Figure 41 form Al Salam Hotel

# 4.2.1.3 The third section:

Page footer, copyright and form to follow, allows the tourist to write his name and e-mail to send him all the new offers.



Figure 42 footer Al Salam Hotel

# 4.2.3 Toyota double chap 2017:

This page when we choose one of the cars rating from the main page divided into three sections:

# 4.2.1.1 The first section:

Details of the car and pictures



Book now

Figure 43 the car reservation type

# **4.2.1.2** The second section:

Book now

The car reservation form and the existing form filled out with the following deta: full name, location, rental date, retrieval date, number of people, and if he wants to send any comment

# Full Name Your Full Name... Your Destination... Your Booking Date... Your Retrieval Date... Number of People Message Write something...

Figure 44 the car reservation form

### 4.2.1.3 The third section:

Page footer, copyright and form to follow, allows the tourist to write his name and e-mail to send him all the new offers.

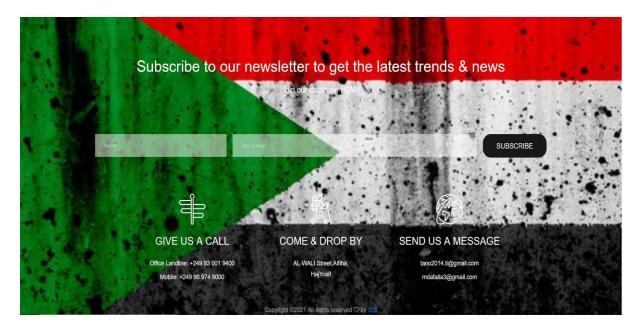


Figure 45 car reservation

# 4.3 Admin Screens:

The admin page is the page where the admin receives the tourist requests from within the website

# 4.3.1 Login screen



Figure 46 admin login

# 4.3.2 Tourist Areas screen

And it contains the names of a the tourist areas available to me on the site



Figure 47 tourism area admin

### 4.3.3 Port Sudan screen

It contains the details of the tourists that he entered to book a trip to the region



Figure 48 portsudan view admin

# 4.3.4 Other services screen

View other services provided by the site



Figure 49 View other services

# 4.3.5 Flight Tickets screen

Show tourists who have booked flights from the site



Figure 50 Show tourists who have booked flights from the site

### 4.3.6 Coin screen

Display the currencies available to me on the site

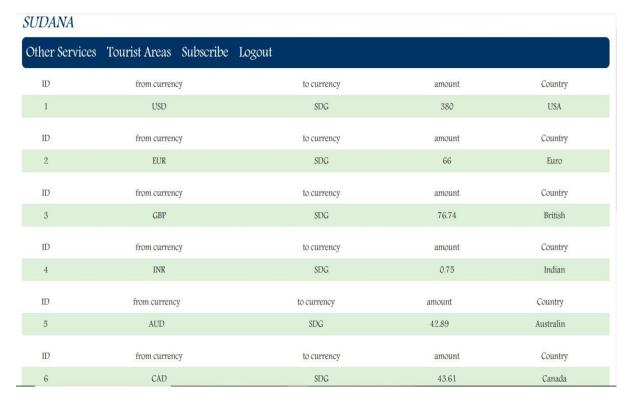


Figure 51 Display the currencies available to me on the site

### 4.3.7 Hotel screen

Select the hotel that was booked by choosing the hotel name

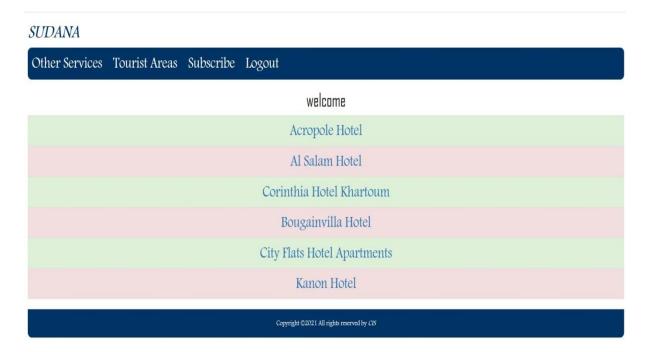


Figure 52 select the hotel that was booked by choosing the hotel name

# 4.3.8 Acropole Hotel screen

View inquiries about hotels available in the area

### SUDANA Other Services Tourist Areas Subscribe Logout welcome ID Phone Number of Travels Country Message tasneem idris adballah tano2014.ti@gmail.com KSA 2147483647 maxyy ID Full Name Country Phone Email Number of Travels Message 2 mohamed mahomd fadol KSA 2147483647 mdafalla3@gmail.com welcom Number of Travels ID Full Name Phone Email Country Message esa@gmail.com eisa said gamal welcome Egypt Full Name Number of Travels ID Country Phone Email Message omer ali 20 omer123@gmail.com welcome Egypt Copyright ©2021 All rights reserved by CIS

Figure 53 View inquiries about hotels available in the area

# 4.3. 9Taxi screen

Select the car that was booked by choosing the hotel name

### **SUDANA**



Figure 54 select the car that was booked by choosing the hotel name

# 4.3.10 Tucson 19/2018 screen

View inquiries about care retain available in the area

### **SUDANA**

			welcome			
ID	Full Name	Detestation	Booking Date	Retrial Date	Number Of People	Message
1	tasneem idris adballah	khartum	1/1/2021	1/2/2021	2	7 day
ID	Full Name	Detestation	Booking Date	Retrial Date	Number Of People	Message
2	mohamed mahomd fadol	khartum	1/9/2021	1/12/2021	2	day
ID	Full Name	Detestation	Booking Date	Retrial Date	Number Of People	Message
3	eisa said gamal	Bahri	1/9/2021	1/11/2021	2	hi

Figure 55 View inquiries about care retain available in the area

# 4.3.11 Subscribe screen

Displaying the names and e-mails of tourists who want to follow all new developments

### SUDANA

Other Services	Tourist Areas Subscribe	Logout				
ID	Name	Email				
1	tasneem	tano2014.ti@gmail.com				
ID	Name	Email				
2	mohammed	mdafalla3@gmail.com				
ID	Name	Email				
3	eysa	eissajml@gmail.com				
ID	Name	Email				
4	omer	omer123@gmail.com				
ID	Name	Email				
5	kamal	kemo123@gmail.com				
		Copyright ©2021 All rights reserved by CIS				

Figure 56 Displaying the names and e-mails of tourists who want to follow all new developments

# **Chapter five**

Conclusion and recommendations

# Chapter five

# Conclusion and recommendations

### 5.1 Conclusion

We have built an electronic website that helps tourists do basic things.

In this website you'll find the following:

The new system purposes to make all of the tourist procedures to be done electronically.

### 5.2 Recommendation

This search can be developed later to enable the user:

- To register using national data such as passport and credit cards.
- This website can also be turned into an application that works on mobile phones.
- The admin page can be developed so that he can perform the operations of removing services, adding them, modifying them, or modifying and adding a tourist area and adjusting currency rates continuously.
- We wish that this website will be used by the government.

### **5.3 References**

- 1. Italian Tourism Co.Sudan. 2020. ITC Italian Tourism. [online] Available at: <a href="https://www.italtoursudan.com/test-pagina/">https://www.italtoursudan.com/test-pagina/</a> [Accessed 17 April 2020].
- 2. Real Sudan. 2020. About Us Real Sudan. [online] Available at: <a href="https://www.realsudan.com/about-us/">https://www.realsudan.com/about-us/</a> [Accessed 17 April 2020].
- 3. DGL Travel. 2020. About Us DGL Travel. [online] Available at: <a href="https://www.dgltravel.tours/about-us/">https://www.dgltravel.tours/about-us/</a>> [Accessed 17 April 2020].
- 4. Saaih 2020.saaih. [online] Available at: <a href="https://www.saaih.com/">https://www.saaih.com/> [Accessed 17 April 2020].
- 5. MediaRoom. 2020. Mediaroom About Us [online] Available at: <a href="https://www.tripadvisors.mediaroom.com/al-about-us">https://www.tripadvisors.mediaroom.com/al-about-us</a> [Accessed 19 April 2020].
- 6. Ltd., 2020. Rome2rio: Discover How To Get Anywhere [online] Rome2rio Available at: <a href="https://www.Rome2rio.com">https://www.Rome2rio.com</a> [Accessed 19 April 2020].
- 7. Aribnb. 2020. Holiday Lets Homes, Experiences & Places Aribnb [online] Available at: <a href="https://www.aribnb.com">https://www.aribnb.com</a> [Accessed 19 April 2020].

priceline. 2020. [online] Available at: <a href="https://www.priceline.com/">https://www.priceline.com/</a> [Accessed 19 April2020].

# 5.4 Appendix

# **5.4.1 Related works**



Figure 1I.T.C website

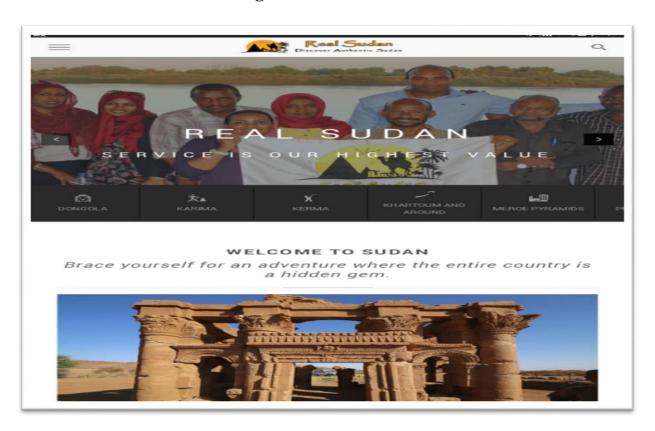


Figure 2 realsudan.com

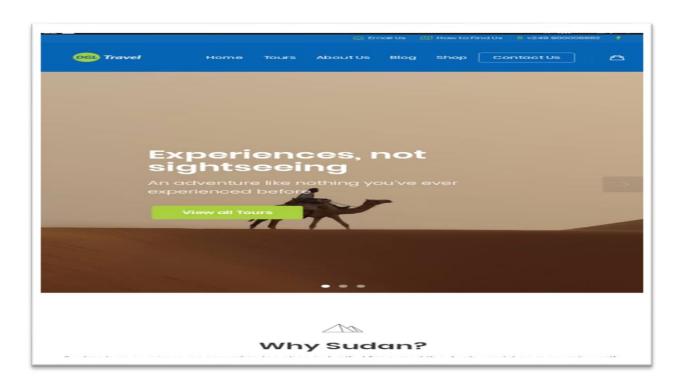


Figure 3 DGLtravel.com

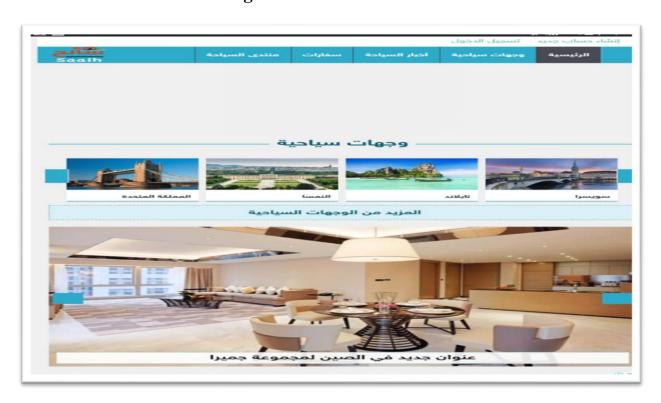


Figure 4 saaih.com

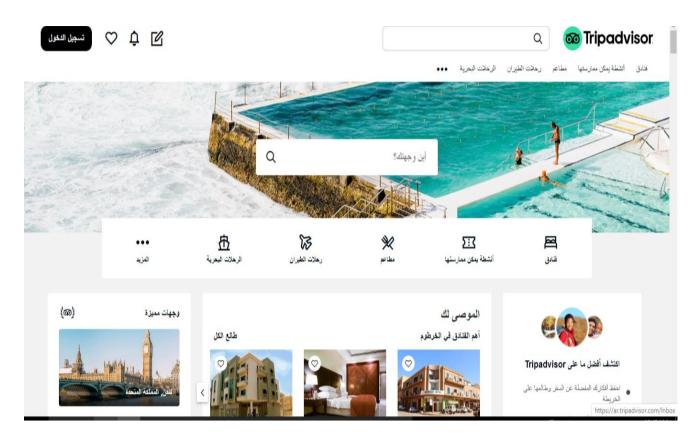


Figure 5 tripadvisor.com

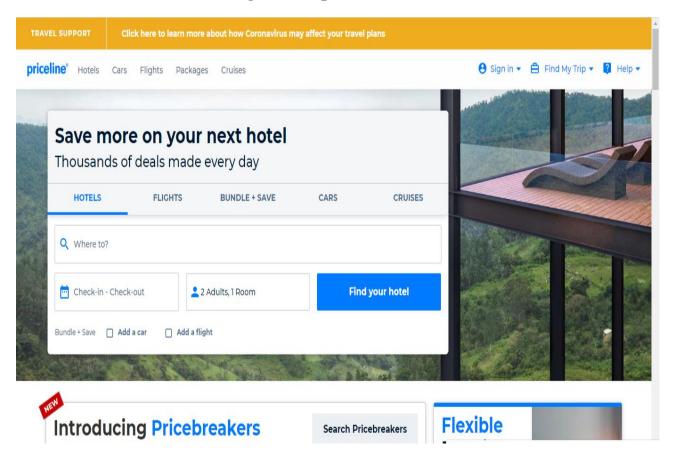


Figure 6 priceline.com

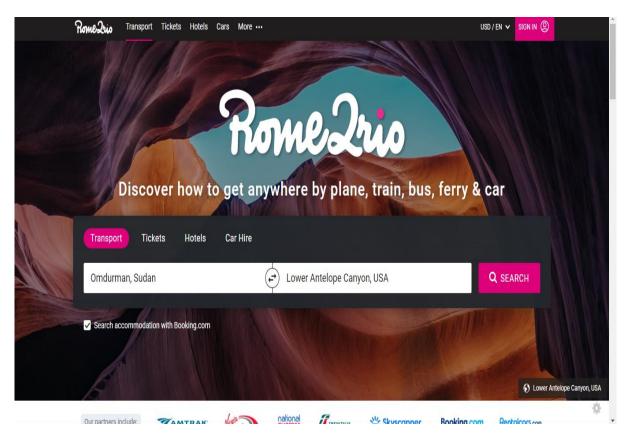


Figure 7 rome2rio.com



Figure 8 airbnb.com

### **5.4.2** Tables in Database

		id	fullname	country	phone	email	numberoftravels	message
1	X	1	tasneem idris adballah	KSA	2147483647	tano2014.ti@gmail.com	2	max
1	X	2	omer ali	USA	1879545521	omer123@gmail.com	1	koo
1	X	3	eisa said gamal	UAE	2147483647	eissajml@gmail.com	4	ppoo
1	X	4	mohamed mahomd fadol	Sudan	2147483647	tano2014.ti@gmail.com	1	Bahri

Figure 57 table name alsbloukh



Figure 58 table name currency

		id	fullname	country	phone	email	numberoftravels	message
1	X	1	tasneem idris adballah	KSA	2147483647	tano2014.ti@gmail.com	1	hiii!!!
1	X	2	eisa said gamal	KSA	2147483647	eissajml@gmail.com	4	p00000
1	X	3	mohamed mahomd fadol	USA	1879545521	mdafalla3@gmail.com	1	tdooo
1	X	4	omer ali	Egypt	20	omer@gmail.com	3	quuuu

Figure 59 table name dindernational

		id	fullname	phone	addresss	fromm	tto	floghttype	floghtdate	anycomment
1	X	1	tasneem idris	930019400	arkawit	USA	Sudan	Economy Class	2021-01-03	as soon as possible
1	X	2	mohammed mahmoud	127619483	Bahri	Sudan	KSA	Economy Class	2021-02-09	no comment
1	X	3	eysa said	902093983	khartuom	Sudan	Egypt	Economy Class	2021-02-15	
1	X	4	omer ali	202345678	algahira	eygpt	sudan	bussnes class	2021-02-25	work

# Figure 60 table name flighttickets

		id	destation	dateinter	dateout	adult	child	room
1	X	1	khartum	0000-00-00	0000-00-00	2	9	5
0	X	2	khartum	2021-01-01	2021-01-30	2	9	5
1	X	3	khartum	2021-02-01	2021-02-28	3	0	1

# Figure 61 table name hotel

		id	fullname	country	phone	email	numberoftravels	message
1	X	1	tasneem idris adballah	KSA	2147483647	tano2014.ti@gmail.com	2	hello world!!
1	X	2	eisa said gamal	Sudan	2147483647	eissajml@gmail.com	1	k000
1	X	3	mohamed mahomd fadol	Sudan	2147483647	mdafalla3@gmail.com	1	
1	X	4	omer ali	Egypt	20	omer123@gmail.com	1	

# Figure 62 table name jebelbarkal

		id	fullname	country	phone	email	numberoftravels	message
1	X	1	tasneem idris adballah	UAE	2147483647	tano2014.ti@gmail.com	1	no comment
1	X	2	omer ali	Egypt	20	omer123@gmail.com	2	hi hello
1	X	3	mohamed mahomd fadol	KSA	2147483647	mdafalla3@gmail.com	1	salamaaa
1	X	4	eisa said gamal	USA	1879545521	eissajml@gmail.com	1	hello!

Figure 63 table name marrahmountains

		id	fullname	country	phone	email	numberoftravels	message
1	X	1	omer ali	KSA	2147483647	omer123@gmail.com	2	
1	X	2	eisa said gamal	UAE	2147483647	eissajml@gmail.com	1	noo
1	X	3	mohamed mahomd fadol	KSA	2147483647	mdafalla3@gmail.com	1	tooo
1	X	4	tasneem idris adballah	Sudan	2147483647	tano2014.ti@gmail.com	2	khartuom

Figure 64 table name nubianpyramids

		id	fullname	country	phone	email	numberoftravels	message
1	X	1	tasneem idris adballah	UAE	+9712147483647	tano2014.ti@gmail.com	2	hi
1	X	2	mohamed mahomd fadol	KSA	+966509766435	mdafalla3@gmail.com	1	السلام عليكم متى مواعيد الرحله؟
1	X	3	eisa said gamal	USA	+1879545521	eissajml@gmail.com	3	please give me the answer as soon as possible!!
1	X	4	omer ali	Egypt	+20 1062980799	omer123@gmail.com	1	no comment

Figure 65 table name portsudan

		id	name	email
1	×	1	tasneem	tano2014.ti@gmail.com
1	×	2	mohammed	mdafalla3@gmail.com
1	×	3	eysa	eissajml@gmail.com
1	×	4	omer	omer123@gmail.com
1	×	5	kamal	kemo123@gmail.com

Figure 66 table name subs

		id	destation	bookingdate	retrivaldate	typeofcar	numberofpeople	numberofdays
1	X	1	khartum	2021-01-01	2021-01-30	Camry	5	2
1	X	2	khartum	2021-02-01	2021-02-28	Camry	5	5

Figure 67 table name taxi

		id	cityy	departmentt	arrivall	budgett
1	×	1	portsudan	First Class	11/12/2021	300\$
1	×	2	alsbloukh	Business Class	15/8/2021	400\$
1	×	4	Dinder National	Economy Class	7/7/2021	500\$
1	×	5	Jebel Barkal	Economy Class	1/1/2022	300\$
1	×	6	Marrah Mountains	Economy Class	6/6/2021	100\$
1	×	7	Nubian Pyramids	Economy Class	3/4/2021	200\$

Figure 68 table name travell

		id	user	pass
1	×	1	taso	123
1	×	2	eysa	123
1	×	3	mohammed	123
1	×	4	hala	123

Figure 69 table name users\_info