**REASONS DIGITAL MARKETING AGENCY PROJECT**

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A website project submitted in partial fulfillment for the requirement of the award of Diploma of  **Information Technology**. Diploma of  **Laikipia University Nakuru Campus**.

May,2021

**DECLARATION**

This software project is my original work, except where otherwise stated and has not been presented for a degree in any other University or any other award.

……………………………………………………. ………………………

(Evans Terer) Date

(N11/3/0561/018)

**CERTIFICATION**

The undersigned certify that he has read and hereby recommend for acceptance f Laikipia University a software project entitled: “Reasons Digital Marketing Agency”

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Dr. Kirori Mindo Date

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**DEDICATION**

God saw me through the entire course. I therefore dedicate this work of my hands to my lovely mum and dad for the encouragement, support and inspiration they gave me during the study. The boundaries love for you cannot be estimated. May God bless you as you grow to witness what he has kept in store for you.

I also dedicate to all my classmates who gave me support and inspiration to work with them even in the future.

**ACKNOWLEDGEMENT**

First and foremost, I would like to acknowledge the blessing of my heavenly father who provided guidance and avenues of getting funds, time and knowledge to enable me accomplish this project. I am greatly indebted to all people who lent a hand in the preparation of this project.

In particular I want to thank Dr. Kirori Mindo for having availed himself consultation and thorough criticism while undertaking the research and during the time of project development. I wish also to pay tribute to my beloved family, my sister Winnie for their special prayers they always offered while pursuing the course.

I can’t forget my course mates, Friends and colleagues who encouraged me all through the course.

**ABSTRACT**

The rapidly emerging digital economy is challeging the relevance of existing marketing practices and a radical redesign of the marketing curriculum cinsistent with the business needs of the 21st century is required. To reach maximum customers in the globe it is necessary to market by using technology or electronically .Digital marketing is an ubrella term for marketing using digital technologies i.e internet,display advertising and any other digital digital medium. Marketing in todays environment perform a carriculum audit of existing digital marketing initiatives and then details a new carricullum refletive of dmarketing in the digital age and an approach to implement it.The specific challenges associated with the new age of marketing and suggestion to overcome it. This system provides a user-friendly interface that helps the user to better understand guidelines to use. This system has been developed using PHP as the programming language, Apache as the server and MySQL as the database.

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**CHAPTER ONE**

**INTRODUCTION**

**1.1 Background information**

* It is now around 2 years since everyone flipped when the covid 19 pandemic essentialy took over kenya and sent everything into lockdown and quarantined in themselves.The impact on businesses and especially small businesses has been nothing short of tragic as many have been forced to temporarily or permanetly close down and many employees have lost their jobs or had a major paycuts under already challeging times.In the recent past i.e before covid 19 many businesses have been using traditional method of advertising its product . Which includes reaching out your audience using various offline methods of advertising and promotion.
* Using digital platform many of the businness reach it clients using the following ways
* As people entertain themselves in the social media a business can take advantage since it is much easier and inexpensive to get noticed online.
* Advertise their business using cheaper packages upto even $5.

SInce people are not generally consuming traditional media channels as many used to in the pre-corona virus and as such, this means that there is a massive opportunity for moving your businness on social media since many of the people have access to phones.

**1.2 Problem definition**

Reasons marketing agency is a business that have been using traditional medhod of advertersing and promotion. Traditional method of advertising is a form of advertising which includes offline medhod of advertising and promotion to reach your semi targeted audience. Many of the common and most tried offline marketing tactics comes under the following major categories.

(i)Print (Magazines , newspaper e.t.c)

(ii)Broadcast (TV , radio ,e.t.c)

(iii) Direct mail (catalogues, postcards e.t.c)

(iv) Telepones (telemarketing,sms marketing)

(v)Outdoor (billboards, fliers ,e.t.c)

* Using this traditional techniques right now it is inefficient and expensive in the following ways.
* Cannot be easily updated. Imagine your print ads having the wrong percentage discount how can you correct and it is already printed out.
* Poor campaign measurements
* Inability to discole full pricing details
* Higher cost . That is there is a recurring cost in traditional marketing can prove to be a huge investiment that may or not give a good return.e.g printing your ads or publishing in a news in a newspaper.
* Limited customization option.

**1.3 Description of the Current System**

Right now most of the businesses are using the traditional method of advertisement and promotion to reach their ytargeted audience in the following ways.

(i)Print (Magazines , newspaper e.t.c)

(ii)Broadcast (TV , radio ,e.t.c)

(iii) Direct mail (catalogues, postcards e.t.c)

(iv) Telepones (telemarketing,sms marketing)

(v)Outdoor (billboards, fliers ,e.t.c)

**1.3.1 How the current system works**

The current system work in printing the ads and putting poster e,g on the kenya power posts , on the walls and bill boards in order for the business to reach its audience.

There is also publishing of ads to either the local news papers or magazines and when someone read through the news paperbthey may meet their ads.e.g dialy nation , the standard ,e.t.c

Right now businneses also print fliers and distribute them manualy to the people.

A businnes can also collaborate with the internet service provider e.g safaricom to reach it audience through sms marketing. Which make a businness advertise it product by sending sms to people about their product.

**1.3.2 Weaknesses of the current system**

* Cannot be easily updated. Imagine your print ads having the wrong percentage discount how can you correct and it is already printed out.
* Poor campaign measurements
* Inability to discole full pricing details
* Higher cost . That is there is a recurring cost in traditional marketing can prove to be a huge investiment that may or not give a good return.e.g printing your ads or publishing in a news in a newspaper.
* Limited customization option.
* Posters can be eaisily removed.
* Not effective during rainy season as posters made on newspaper can be dameged

**1.4 Proposed solution**

|  |  |  |
| --- | --- | --- |
| S. No. | SOLUTIONS | DESCRIPTION |
| 1 | Search engine optimization | The basic problem of existing system was that the system was not computerized. In the newly made system we have removed this problem and we are providing a fully automated system in which the users will be having lots of advantages.   * Trackable results. with SEO one will be able to see how much traffic yoru site is getting, what key word you rank on and how much time visitors are spending on your site. * Genearted target traffic.People often search for a specific solutionTo gather leads and business, you want to be among the first results when people search for service you provide. * Sustainable clicks * Grow your small business |
| p |  | The computerized system will accessible from anywhere and at any time since it’s a web based system. So the customers can reach the system very easily. |
| 3 | Social media marketing | This is the use of social media platforms and website to promote a product or service.Advantages;  Increased brand awareness  Improved search engine ranking  Improved brand loyalty |
| 4 | Content marketing | This is a form of marketing focusedon creating, publishing and distributing content for a targeted audience. |
| 5 | Google and youtube ads | . |
| 6 | Email marketing | stomer the act of sending a commercial message, typically to a group of people, using email.In its broadcast sense, every email sent to a potential or current customer could be considered email marketing. |

**1.4.1 Justification**

Constant technological anvances give business owners new ways to digitally connect with their existing and potential customers. Since now many people uses internet tools.The proposed digital marketing covers a wide range of opportunities business can explore, including email campaigns, banner advertisments, video marketing, blogging, mobile marketing, social media marketing and television and radio.

In addition to that, business will connect to prospects and customers in the best possible ways, so thet there is an actual returns on the investment.

Given the fact that a large majority of people (especially the millenials ) are spending their time on the internet, it makes sense since the businness can connect to the on it.

Using digital advertisements tactics it will be cheaper compared to the current(traditional)medhods.Since advertisement of ads e.g on facebook can cost atleast $5 unlike printing poster or publishing ads on newspaper which may not reach many people.

**1.4.2 Objectives:**

**1.4.2.1General objectives**

* Reach a large audience
* 24/7 online
* Reduce the cost of advertisement and promotion
* Offer a wide range of digital solution
* Improve Customer Service

**1.4.2.2 Specific objectives**

* **24/7 online**
* **Reduce the cost of advertisement and promotion**
* **Offer a wide range of digital solution**
* **Improve Customer Service**
* The intuitive web interface eliminates any need to train users.
* Enables immediate response to user inquiries
* Provides online, interactive access via the web 24/7.

**1.5 Project schedule**

|  |  |  |  |
| --- | --- | --- | --- |
| **ACTIVITY** | **STARTING DATE** | **ENDING DATE** | **DURATION (Days)** |
| Problem identification and Approval | 20/12/2020 | 27/12/2020 | 7 |
| Feasibility Study | 30/12/2020 | 4/1/2021 | 5 |
| Requirement Analysis and Literature Review | 04/01/2021 | 11/01/2021 | 7 |
| System Analysis/Design/Methodology | 11/01/2021 | 26/01/2021 | 15 |
| System coding and Implementation | 26/01/2021 | 01/03/2021 | 33 |
| System Testing | 01/03/2021 | 16/01/2021 | 15 |

**1.6 Project budget**

|  |  |
| --- | --- |
| **Budget Item** | **Amount in $.** |
| **1. EQUIPMENT** | |
| System Development | 900 |
| Hardware Installation | 600 |
| System Software | 400 |
| Licensing | 200 |
| Training | 450 |
| Services | 900 |
| **Sub-Total** | **3,450** |
|  | |

Is a part of a system budgeting and accounting practices which helps the system analyst to determine the approximate cost and savings for an organization.

**1.7 Feasibility Study**

A feasibility study was carried out to determine the benefits of the current manual system and the proposed digital system. The digital system is indeed viable:

**1.7.1 Economic feasibility.**

The estimated costs of the system will indeed outweigh the estimated costs of development of the system. The estimated profits and benefits are as follows:

|  |  |  |  |
| --- | --- | --- | --- |
| Item | Previous monthly  Expenditure | Proposed monthly  Expenditure | Amount cut  down monthly |
| Paper printing | 40,000 | 20,000 | 20,000 |
| Publishing on newspaper | 100,000 | 70,000 | 30,000 |
| Sms marketing | 50,000 | 10,000 | 40,000 |
| Grand total | 190,000 | 100,000 | 90,000 |

The following shows the monthly net profits of the current manual and proposed computerized system:

|  |  |  |
| --- | --- | --- |
|  | Traditional medhod | Digital medhod |
| Grosprofit | 200,000 | 300,000 |
| Expenditure | 135,000 | 120,000 |
| Net profit | 65,000 | 180,000 |

**1.7.2 Technical feasibility study**

This digital marketing strategies will make it easy for a business to meet a large people of the targeted audience. This audiencesital medhod of oromotion and advertisement will also help in increasing awareness of your business product on the internet hence increasing your customers.

**CHAPTER TWO**

**LITERATURE REVIEW**

**2.1 Introduction**

Literature reiews are part of the planning phase for Digital marketing Agency project. The objective of literature reviews is to collect relevant and required information from reliable sources such as journals and online articles to come up with the most suitable solution for the implementation of Digital marketing agency. In this chapter, several case studies that involve Adverticementns, Promotions, Google ads,social media marketing that are relevant to Digital marketing are studied. In addition to that, approach to web applications that could be used to enhance user friendliness is also looked into.

This chapter presents the different researches and other literatures from both foreign and local researchers, which have a significant bearing on the variables included in the research. It is based on the general objectives of this study. This study is generally concentrating on the feasibility of an e-commerce framework. The literatures of this study come from books, journals, articles, electronic materials and other online sources.

**2.2 Fact and Finding**

Several case studies that involve Advertisements and Promotions were that are relevant to Digital marketing are looked into. These case studies include;

* Online digital marketing Agency.

The advantage and disadvantage of using the digital approach of promotion and advertisement will also be explored.

**2.2.1 Case Study 1: Online digital marketing Agency**

This case study is based on the research paper written by worldwide agency dated 1/jan/2021.This research paper describes the requirements and implementations of an integrated Online digital marketing agency . Since Digital marketing agency is a web-based application, studies on system implementation using wired computers is given the emphasis.

Next, the research paper gives good reasoning to every tool used in the development of WBSCS. Below are the list of tools and its reasoning:

* **PHP as the server side scripting language.**

Digital marketing agency must be easily portable to all major operating system. PHP is the best choice as it has libraries for Windows, Mac OSX, Linux and various versions of UNIX.

In addition to that website developed with PHP are very flexible since they allow the incorporation of diverse actions and element that can the site very dynamic and flexible.In addition they are usually very light and with good loading speed, which will help improve user experience.

* **MySQL as the database.**

The database used in MYSQL since it is arelation database management system.It runs as server and allows mutiples users to manage and create numerous database. Furthermore, since MySQL is often used alongside with PHP, it is the best choice for the system.

* **Microsoft Internet Information Services (11s) as the web server.**

The IIS is chosen because Windows computer is used.

* **JavaScript as the client side scripting language.**

Since Javascript is a logic based programming language that can be used to modify website content and make it behave in different ways in rensponse to user actions. Common uses for javascript include confirmation boxes, call-to-action and adding new entities to existing information.

User interface has to be taken into consideration when developing a web based system because different user will use different browser to access the system. To ensure standardization, JavaScript is chosen because it is the only common language that is supported by all web browsers.

* **Cascading Style Sheet (CSS).**

A web-based system that is similar in look will help improve user interaction. To achieve that, CSS is used to handle the design and formatting aspect of the Hypertext Markup Language (HTML) code.Using css you can modify colors, spaces between element, fonts ,e.t.c All with the intention of separating the structure of the representation.This separation between the structure and the presentation are very important,since it allow that only changing the CSS aspect of the page is changed completely modified.

This provides alot of flexibility and speed as user can use custom style sheet.Through the style sheets we improve web accessibility and the way in whichwe structure of content which help in improving user experience

* **CompuServe Graphics Interchange Format (GIF) and Joint Photographic Experts Group (JPEG) as the image format for icons and thumbnail.**

While the latter keep thinking the web page had not been downloaded completely. Therefore, in view of the problems, the standard image format *i.e.* GIF and JPEG is used.

In regards to the system layout, the design mirrors that of Microsoft Outlook.

The purpose of designing a layout based on an interface that is familiar with users is to enhance user usability.

**2.2.2 Case Study 2: effectiveness**

Huge return on investment- On the research that was conduted it was observed that Digital marketing offers a substantial return on small investment.Email marketing or running advertisement campaign on socialmedia platform cost little compared to traditional medhod.

Easy to measure- The success of digital marketing campaign can be easily assertained compared to traditional methods ehere you have to wait for weeks to evaluate the veracity of a campaign.

Precise targeting- The traditional method means of marketing uses spray and pray method where an ad runs over a platform with substantial reach with hope that a few peoplewho love what they see,hear or read will make a positive approach.During the research it was observed that allow for targeted campaigning e.g one can customize age for their ads.

Greater engagement- In addition to the research conducted it was also observed that digital marketing offers a wide range of engagemnt e.g an ad can ad can run to the whole world using social media platform unlike a poster placed on a post whoich only limited to the passersby.

**2.2.3 Case Study 3: 24/7 reliability**

**CHAPTER THREE**

**METHODOLOGY**

**3.1 Introduction**

A system development methodology refers to the framework that is used to structure, plan, and control the process of developing an information system. A wide variety of such frameworks have evolved over the years, each with its own recognized strengths and weaknesses. One system development methodology is not necessarily suitable for use by all projects. Each of the available methodologies is best suited to specific kinds of projects, based on various technical, organizational, project and team considerations.

The systems development methodology is used to describe the process for building systems, intended to develop systems in a very deliberate, structured and methodical way.

Extreme programming is the methodology of my choice in developing Conference Facility Management system

**3.2 Software process model adopted**

**3.2.1 Extreme Programming (XP)**

Extreme programming is a software development methodology which is intended to improve software quality and responsiveness to changing customer requirements. As a type of agile software development, it advocates frequent "releases" in short development cycles. This is intended to improve productivity and introduce checkpoints where new customer requirements can be adopted. The main goal of XP is to lower the cost of change in software requirements.

Extreme programming is carried out in the following manner; the phases are carried out in extremely small steps. First, one writes automated tests, to provide concrete goals for development. Next is coding (by a pair of programmers). Design and architecture emerge out of refactoring, and come after coding. Design is done by the same people who do the coding. The incomplete but functional system is deployed or demonstrated for the users. At this point, the practitioners start again on writing tests for the next most important part of the system.

**3.2.2 Extreme programming Features**

Extreme programming has the following features/ core practices

* Fine scale feedback which involves**,** Test driven development, Planning game, Whole team and Pair programming
* Continuous process rather than batch. This also involves, Continuous Integration, Design Improvement ,and Small Releases
* Shared understanding including Simple design, System metaphor, Collective code ownership and Coding standards or coding conventions
* And Programmer welfare that involves Sustainable pace that is forty hour week.

**3.3.3 Illustration of Extreme Programming System Development Process**



**3.2.4 System Development Lifecycle**

In developing the Digital marketing Agency, the following steps were taken;

**i. Planning**

A project plan was developed as well as other planning documents. It provided the basis for acquiring the resources needed to achieve a solution. This phase ensured that the problem solved was the one that needed to be solved and that the initial description was complete and consistent.

Under the planning phase of the project, a project timeline, work plan and Budget were developed. (Please refer to appendices). Under this phase;

* The system flowcharts were prepared
* The characteristics of the proposed system were defined and identified

**ii. Analysis**

At this point, the system in place was analyzed to determine where the problem was in an attempt to fix the system. This step involved breaking down the system in different pieces to analyze the situation, analyzing project goals, breaking down what needed to be created and attempting to engage users so that definite requirements could be defined.

Under the analysis, Requirement gathering is the most crucial aspect as many times communication gaps arise in this phase and this leads to validation errors and bugs in the software program. Therefore, the following techniques were used to gather information

Under analysis, the following data collection techniques were used.

* **Semi-structured interviews**

Semi-structured interviews are conducted with a fairly open framework which allow for focused, conversational, two-way communication. They can be used both to give and receive information.

This tool was used as a data collection methodology of choice because it is; less intrusive to those being interviewed as the semi-structured interview encourages two-way communication.

* **Direct Observation**

Direct Observation is a method in which a researcher observes and records behavior / events / activities / tasks / duties while something is happening. This was used in correspondence to interviewing in order to gain a more holistic view of the Digital marketing Agency. Observations give additional, more accurate information on behavior of people than interviews . They can also check on the information collected through interviews especially on sensitive topics.

**c) Using available information**

This is a data collection method that involves the process of examining and evaluating already existent literature material to obtain facts and data regarding a specific subject. Locating these sources and retrieving the information can help in data collection.

In the development of Digital marketing Agency, this methodology was mainly used in the analysis and design phases of the system development process. This is because it permitted the researcher(s) to analyze changes in trends due to rapid changes in technology.

**iii. Design**

In systems design the design functions and operations is described in detail, including screen layouts, business rules, process diagrams and other documentation. The output of this stage described the new system as a collection of modules or subsystems. The design stage took as its initial input the requirements identified in the approved requirements document. For each requirement, a set of one or more design elements was produced as a result of interviews, workshops or prototype efforts.

Design elements described the desired system features in detail, and generally included functional hierarchy diagrams, screen layout diagrams, tables of business rules, business process diagrams, pseudo code, and a complete entity-relationship diagram with a full data dictionary.

**iv. Implementation phase**

Here all the iterations were brought together and integrated to make one working system. Modular and subsystem programming code was accomplished during this stage. Unit testing and module testing was done in this stage.

**3.2.5 Strengths**

* Clients focus increase the chance that the system produced will actually meet the needs of the user.
* The focus on small, incremental release decreases the risk on your project:
* By showing that your approach works
* Also Putting functionality in the hands of your users, enabling them to provide timely feedback regarding your work.
* Continuous testing and integration helps to increase the quality of your work.
* XP is attractive to programmers who normally are unwilling to adopt a software process, enabling your organization to manage its software efforts better.

**3.2.6 Weaknesses**

* XP is geared toward a single project, developed and maintained by a single team.
* XP is particularly vulnerable to "bad apple" developers who:
* Don't work well with others
* Who think they know it all.
* Who are not willing to share their code
* XP will not work in an environment where a customer or manager insists on a complete specification or design before they begin programming.
* XP will not work in an environment where programmers are separated geographically.
* XP has not been proven to work with systems that have scalability issues (new applications must integrate into existing systems).

**3 3 Requirement Gathering Tools**

**3.3.1. Observation method.**

The team closely observed the business activities as the business organisation printed posters and fliers for them to distribute to their targeted audience. The team also found out that the business published ads on newspaper and magazines which was a bit expensive and could not reach a large audience since most people do not purchase newspaper this day. They get their news on internet beacause it is easier and reliable. During the observation it was observed that the businesses spend alot in advertising their products manually .This is as a result of ; they have to employ people to distribute posters or fliers. The team found out that the businesses indeed was in a dire need for automation of its activities to realize its maximum potential.

**3.3.2. Interview method.**

This was the most exhaustible method of data collection. The team used their data superior collection skills to extract data out of the businesses management team, the employees and the clients at the moment of data collection. The interviewers created a conducive environment in which the interviewees could feel free to let out the best they could that helped the team come up with the most effective system to fulfill their needs. Among the data collected the following was highlighted to be of a great consideration: The guests’ feelings about the current advertisement of the business, the employees’ comfortability with the proposal of introducing a new digital marketing technique. Many employees had fears of replaced by the digital marketing technique but they were assured of their survival should they be ready to prove their competence in their activities. The management’s dire need for digital advertisement was put into consideration by the system developers.

**3.4 System requirement**

These are both hardware and software require for the smooth running of the proposed system. These are:

**3.4.1 Hardware Requirements**

* Atleast 4gb secondary storage
* RAM 2GB
* Intel processor speed of 2.0GHz
* Input devices: Keyboards, Mouse

**3.4.2 Software requirements**

* **MYSQL DBMS-**it allows combination, extraction, manipulation and organization of data in the user database. It is platform independent and therefore can be implemented and used across several such as Windows, Linux server and is compatible with various hardware mainframes. It is fast in performance, stable and provides business value at a low cost.
* **HTML -Hypertext Markup Language-**This is currently the core of the web world, it is a language used to makeup web page. It is the glue that holds everything together. HTML made to handle data and is also portable between different browsers and platforms with little or no alterations in code. Vscode and sublime text is the prefered tools for designing HTML pages and those are the tool used in coming up with this Digital marketing project .­­
* **PHP coding-**This is for advanced user who find PHP codes easy to work with.
* **Testing** is done via local Servers e.g Apache server.
* **Web browsers**: Mozilla Firefox, Google chrome, Opera and Internet Explorer
* **Reporting Tool** i.e. through Contact us.

**CHAPTER FOUR**

**SYSTEM ANALYSIS AND DESIGN**

**4.1 Introduction**

This chapter presents the system analysis and design process .This software design document provides a vivid description of the technical design for the Digital marketing Agency. The goal is to fully describe the technical view for how the system and business requirements will be realized. This document provides an architectural overview of the system to depict different aspects that the system covers. This document also functions as the fundamental reference point for developers involved with the system development.

**4.2 Architectural design:**

For this system we have chosen the client server model which is characterized by two distinct interacting processes; the client and the server which in general can run on different computers, exchanging data over the network using protocols such as HTTP, HTTPS and TCP/IP etc. The design of Digital marketing Agency system consists of a client who is a User, webserver and database server. An admin/user can connects to a webserver by using his/her login details. The client and web server communicate by internet using protocols. The relationship is illustrated in the diagram below

**Diagram**

User and servers exchange messages in request-response messaging pattern: The client sends a request and the server returns a response. This exchange of messages is an example of an inter-process communication. To communicate the computers must have a common language, and they must follow rules so that both the client and the server know what to expect. The language and rules of communication are defined in communication protocol.

**4.3 System Analysis**

**4.3.1 Context diagram**

**DIAGRAM**

**4.3.2 Domain analysis**

**Introduction-** Domain analysis is the process where information used to developing software is identified, structured and organized for further reuse.It describes background information that has been gathered about events in organizations and how they are handled.After looking at some popular Digital marketing agency sites, Reason digital marketing agency obviously needs some key features. It needs the ability for users to subscribe to news letter, within different categories. Visitors to the site obviously need to be able to send message, which leads to the need for an appointment basket to store products then visitor intends to purchase and a dashboard process to manage sent messages, appointments booked for administrators. Digital marketing agency is build upon these core features to build a basic feature .

This software application is designed as an object-oriented system for an Internet-based architecture using three–layer architecture by factoring application classes into the following layers:

* **The Presentation layer**- This is the layer where the physical window and widget objects live.
* **The Domain Mode**- . The objects in this layer can be application-independent. Generic objects may be used in this application to reap the benefits of Object Oriented programming.
* **The Data layer** - The data is managed by MySQL.

The following entities were identified for the system

* user
* administrator
* System database

The following use cases were identified:

* User case
* Administrator use case

**4.3.3 Use case model**

**4.4 System Design**

System design is how the systems looks like. It show how the system work and various sections and functions of the system.

**4.4.1 Entity relationship diagram**

**4.4.2 Sequence diagrams**

**4.5 Database design**

This how system database looks. It shows tables contained in the database as shown below.

**4.5.1 Logical design**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **USER** | |  | | |  | | |
| Name | | Varchar | | |  | | |
| Phone number | | Int | | | Primary key | | |
| Business Name | | Varchar | | |  | | |
| Business Web url | | Varchar | | | Unique | | |
| Issue | | Varchar | | |  | | |
| Email | | Varchar | | |  | | |
|  | |  | | |  | | |
| **ADMINISTRATOR** |  | | |  | | |
| Admin\_name | Varchar | | |  | | |
| Admin\_IDnumber | Int | | | Primary key | | |
| Admin\_password | Int | | |  | | |
| Admin\_profile | Varchar | | |  | | |
| Year | Int | | |  | | |
| Proffession | Varchar | | |  | | |
|  |  | | |  | | |
| Cand\_profile | Varchar | | |  | | |
|  |  | | |  | | |
| **BLOGS** | | |  | | |  | | |
| blogname | | | Varchar | | |  | | |
| Authorname | | | Varchar | | | Unique | | |
| Date/time s | | | Date/time | | | s | | |

**CHAPTER FIVE**

**SYSTEM IMPLEMENTATION AND TESTING**

**5.1 Introduction**

In this chapter we talk of how the system is going to be made into use after being developed. First the system has to go through several tests before it is fully functional so as to make sure the system will run smoothly and it will meet the requirements specified by the user. Below are the tools used to develop the system.

**PHP (Hypertext Pre-processor)**

PHP is probably the most popular scripting language on the web. It is used to enhance web pages. With PHP, you can do things like create username and password login pages, check details from a form, create forums, picture galleries, surveys, and a whole lot more.

**HTML**

HTML, or Hypertext Markup Language, is used to create web pages. Site authors use HTML to format text as titles and headings, to arrange graphics on a webpage, to link to different pages within a website, and to link to different websites. HTML is a set of codes that a website author inserts into a plain text file to format the content. The author inserts HTML tags, or commands, before and after words or phrases to indicate their format and location on the page. HTML tags are also used to add tables, lists, images, music, and other elements to a webpage.

**CSS**

Using css you can modify colors, spaces between element, fonts ,e.t.c All with the intention of separating the structure of the representation.This separation between the structure and the presentation are very important,since it allow that only changing the CSS aspect of the page is changed completely modified.

This provides alot of flexibility and speed as user can use custom style sheet.Through the style sheets we improve web accessibility and the way in whichwe structure of content which help in improving user experience

**Registry objects**

The objects that the registry that actually stores and manages access to include.

* Database handler
* Admin control pannel

**Database used.**

MySQL runs on virtually all platforms, including Linux, UNIX, and Windows. Although it can be used in a wide range of applications, MySQL is most often associated with web-based applications and online publishing and is an important component of an open source enterprise stack called XAMPP. MySQL is the relational database management system and PHP as the object-oriented scripting language.

The database has the funxtionality for ;

* Connecting to the database
* Returning query information such as rows affected
* Making queries easier e.g Insert ,Update by having queries preformated within certain method objects
* Managing multiple database connections

**Web server**

**Apache** is generally recognized as the world's most popular Web server (HTTP server). Originally designed for UNIX environments, the Apache Web server has been ported to Windows and other network operating systems. The Apache Web server provides a full range of Web server features, including CGI, SSL, and virtual domains. Apache also supports plug-in modules for extensibility. Apache is free software, distributed by the *Apache Software Foundation* that promotes various free and open source advanced Web technologies.

**5.2 Summary of the modules**

Systems modules are interfaces or the users of the system. Modules shows how the user is going to use the system and how is going to access the system.

**5.2.1 User Module**

The main functions of the member module will encompass:

**a) Contact us**

The user who visites the site will have a chance to contact the admin. This will help users inquire what they want to be helped with.This also give the user a chance to book an appointment which mean their inquiries will be solved online without wastage of any time.

**b) Subscribe to the news letter**

The user also have a chance to subscribe to the newletter through the Subscribe to the news letter mpodule using their email accounts and the sysytem will automatically update them when anything get published on the site.

**c) Send us a message**

The send us message module gives a platform to the user to channel their complains or complement regarding his/her experience with the system.This will help the admin to know what intimidate the user or what the user likes.

**d) Blogs**

The blogs modules will deal with the blogs that are published by the system admin for its user to learn something e.g What is latest in the technology or in the digital marketing age,How the technology has the impact on business e.t.c

**5.2.2 Admin Module**

The main functions of the admin module will encompass:

**a) Login**

The admin likewise has to be authenticated by providing the right email address and password before he / she is allowed to access the module.

**b) View who Contacted**

The admin will be able to access the messages that are sent through the website. He should be able to read and reply to the esteemed sender.

**c) Generate Report**

Reports that are generated can either be in a textual form or in a graphical form (such as bar chart or pie chart). Two (2) examples of reports are:

* Report on how many people have contacted.
* Report on the frequency of booking appointment.

The former example will be in a textual form while the latter will be presented using a bar chart.

**d)Record Tracking**

The admin module will keep all the information regarding the system and appointment i.e who contact, who wants an appointment at what time and at what venue. This can be generated in form of tables in a textual form.

**e) Managing the site**

The admin pannel will have the privilege access to blog he/she can add, post, delete or update the blogs update on the site. He/she can publish any article to the websites inline with the system activities.

**5.3 Summary of how the system works**

**5.3.1 Login Admin**

**(screenshot)**

**5.3.2 Administrator Control Panel**

**(screenshot)**

**5.3.3 contact us**

**(screenshot)**

**5.3.4 Subscribe to our news letter**

**(screenshot)**

**5.3.5 Read blogs**

**(screenshot)**

**5.3.6 Send us a message**

**(screenshot)**

**5.4.1 Screen shot of selected tests**

The following are screen shots of selected test to show how the systems work

**5.4.1.1 Login test**

**(screenshot)**

**5.4.1.2 Contact us test**

**(screenshot)**

Include a copy of test data as appendix 3

**5.5 conclusion**

From the result of this research, Our campany is convinced that Digital marketing Agency is essential and will play a major role in future professional practice.Our undestanding of the Digital marketing is clear, and we are better prepared and more confidence to

enter the practice of digital marketing.

**5.6 recommendations**

For the system to function to its best capability, the analyst recommends the following:

* There should be adoption of distributed encryption techniques for the purpose of secure data transmission.
* there should be adequate and proper user or public enlightenment on how to use the system.
* We also recommend that more research should be carried out on this area to realize more improvements.
* User should have an internet commection to enable data communication at the hotel.
* The system should be troubleshoot and updated to maintain the high competence standards of the system.
* The user should use the recommended browser e.g Chrome,operamini, Tor,e.t.c

**REFERENCES**

**APPENDICES**

**Appendix 1: system code**

**5.3.1 Login Admin**

<?php

include\_once('lib/Template.class.php');

// Auth included in Template.php

$auth = new Auth();

$t = new Template();

$msg = '';

$resume = (isset($\_POST['resume'])) ? $\_POST['resume'] : '';

// Logging user out

if (isset($\_GET['logout'])) {

$auth->doLogout();

}

else if ($\_SERVER['REQUEST\_METHOD'] === 'POST') {

$msg = $auth->doLogin($\_POST['email'], $\_POST['password'], (isset($\_POST['setCookie']) ? 'y' : null), false, $resume, $\_POST['language']);

}

else if (isset($\_COOKIE['ID'])) {

$msg = $auth->doLogin('', '', 'y', $\_COOKIE['ID'], $resume); // Check if user has cookies set up. If so, log them in automatically

}

$t->printHTMLHeader();

// Print out logoImage if it exists

echo (!empty($conf['ui']['logoImage']))

? '<div align="center"><img src="' . $conf['ui']['logoImage'] . '" alt="logo" vspace="5"/></div>'

: '';

$t->startMain();

if (isset($\_GET['auth'])) {

$auth->printLoginForm(translate('You are not logged in!'), $\_GET['resume']);

}

else {

$auth->printLoginForm($msg);

}

$t->endMain();

// Print HTML footer

$t->printHTMLFooter();

?>

**5.3.2 Administrator Control Panel**

<?php

include\_once('lib/Template.class.php');

include\_once('lib/Admin.class.php');

$admin = new Admin(trim($\_GET['tool']));

$admin->user = new User(Auth::getCurrentID());

if (!$admin->user->get\_isadmin()) { $admin->user->is\_admin = Auth::isAdmin(); }

$t = new Template(translate('System Administration'));

$t->printHTMLHeader();

// Make sure this is the admin

if (!$admin->isUserAllowed()) {

CmnFns::do\_error\_box(translate('This is only accessable to the administrator') . '<br />'

. '<a href="ctrlpnl.php">' . translate('Back to My Control Panel') . '</a>');

}

$t->printWelcome();

$t->startMain();

if (!$admin->is\_error()) {

$admin->execute();

}

else {

CmnFns::do\_error\_box($admin->get\_error\_msg());

}

$t->endMain();

$t->printHTMLFooter();

?>

**5.3.3 Contact us**

**Input Processing**

<?php

if(!empty($\_POST["send"])) {

$name = $\_POST["Name"];

$email = $\_POST["Email address"];

$phoneNo = $\_POST["Phone number"];

$CompanyName = $\_POST["Company name"];

$CompanyWebsite = $\_POST["Company Website"];

$Natureofyourbusiness = $\_POST["Nature of your businness"];

$toEmail = "admin@php.com";

$mailHeaders = "From: " . $name . "<". $email .">\r\n";

if(mail($toEmail, $subject, $content, $mailHeaders)) {

$message = "Your contact information is received successfully.";

$type = "success";

}

}

//SAVE DATA TO THE DATABASE

$conn = mysqli\_connect("localhost", "root", "test", "blog\_samples") or die("Connection Error: " . mysqli\_error($conn));

mysqli\_query($conn, "INSERT INTO tblcontactus (name, email,phoneno,companyName,CompanyWebsite,Natureofyourbusinness) VALUES ('" . $name. "', '" . $email. "','" . $PhoneNo. "','" . $CompanyName. "','" . $CompanyWebsite.''','" . $Natureofyourbusiness. "')'");

$insert\_id = mysqli\_insert\_id($conn);

if(!empty($insert\_id)) {

$message = "Your contact information is saved successfully";

require\_once "contact.php";

?>

**5.3.4 Subscribe to our news letter**

<?php

$recipient = "enter the lists email address here";

// SUBJECT (Subscribe/Remove)

$subject = "Subscribe";

// RESULT PAGE

$location = "enter the URL of the result page here";

// FORM VALUES

// SENDER - WE ALSO USE THE RECIPIENT AS SENDER IN THIS SAMPLE

// DON'T INCLUDE UNFILTERED USER INPUT IN THE MAIL HEADER!

$sender = $recipient;

# MAIL BODY

$body .= "Name: ".$\_REQUEST['Name']." \n";

$body .= "Email: ".$\_REQUEST['Email']." \n";

# add more fields here if required

//SEND MESSAGE

mail( $recipient, $subject, $body, "From: $sender" ) or die ("Mail could not be sent.");

//SHOW RESULT PAGE

header( "Location: $location" );

?>

**5.3.5 Send us a message**

**Appendix 2: Test data**

**Test data for Login**



**Test data for Contact Us**



**Test data for Resources**

