A PROJECT REPORT

ON

(Web Based Spa Management System for Let's Relax Spa)

By

(11f8393, Khlood Naseer AL-yaqoobi)

Guided by

(Mr. Puttaswamy)

A Project report submitted in partial fulfillment of the requirements for the award of

(Project Planning) in (Database Management System)



MIDDLE EAST COLLEGE Knowledge Oasis Muscat,

Muscat, Oman January, 2017

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Table of contents

Title	page number
Chapter 1: Introduction	13
1.1 Overview of Project case/Business case	13
1.1.1 Project Background	13
1.1.2 Rationale of Project.	13
1.2 Problem Definition	13-14
1.3 Project Scope	14
1.3.1 Objective of the Project	15
1.3.2 Aim of the Project.	15
1.3.3 Goals of the project	15
Chapter 2: Literature Review and Feasibility Analysis	16
2.1 Literature Review	16-18
2.1.1 Book	18
2.1.2 E-book	18
2.1.3 Internet.	19
2.1.4 Website	19-20
2.2 Feasibility Analysis	20

2.2.1 SWOT Analysis	20-21
2.2.2 Business Objective	21
2.2.3 Processing.	22
2.2.4 Technical Feasibility	23
2.2.5 Cost Benefit Analysis	23-25
2.2.6 Operational Feasibility	26
2.2.7 Ethical Feasibility	26
Chapter 3: Methodology	27
3.1 Methodology	27
3.1.1 DSDM Methodology	27-28
3.1.2 Spiral Model	28-29
3.1.3 Critical Path Method.	29-30
3.1.4 Waterfall model	30
3.1.5 Prototype Model	31
3.1.6 Comparison between waterfall and prototype Model	31
Project Plan	31
3.2.1 Work Breakdown Structure	32-34
3.2.2 Gantt Chart	35-36
3.2.3 Network Diagram	37-39

3.2.4 Communication Plan	40
3.2.5 Acceptance Plan	41
3.2.6 Resource Plan	41-42
3.2.7 Risk Management Plan.	42-44
3.3 Requirements Analysis	45
3.3.1 Data collection Methods.	45
3.3.2 Data Analysis	45
3.3.2.1 Interview.	45-46
3.3.2.2 Observation	46
3.3.2.3 Survey	46-48
3.3.3 External Interface Requirements	49
3.3.4 Functional Requirements	49
3.3.5 User Characteristics	50
3.3.6 Performance Requirements	50
3.3.7 Design Constraints.	50
3.3.8 Database Requirements	51
3.3.9 Security Requirements	
3.3.10 Maintainability Requirements	52
3.3.11 Usability Requirements	

3.4 Logical Design	53
3.4.1 Entity Relationship Diagram (ERD)	53
3.4.2 Flow Chart Diagram	54-56
3.4.3 Use Case Diagram	57
3.4.4 Context Diagram	58
3.4.5 DFD Level 0	58
Appendixes	60
1.0 Interview	60-61
2.0 Project Initiation Report	62
References	63-64

List of Tables

Table NO.	Page NO.
Table 2.2.5.1: Overhead Cost	23
Table 2.2.5.2Specific Cost.	24
Table 2.2.5.3: Resource Cost	24
Table 2.2.5.4Assets Cost	25
Table: 3.1.5.1 Prototype Model	31
Table: 3.1.6.1: Comparison between waterfall and prototype mode	el31
Table 3.2.1.1: Work breakdown structure	32-34
Table 3.2.3.1: Communication Plan.	40
Table 3.2.4.1: Acceptance Plan	41
Table 3.2.5.1: Resource Plan	41-42
Table 3.2.6.1: Risk Management Plan.	42-44
Table 3.3.3.1: External Interface Requirements	49
Table 3.3.4.1: Functional Requirements	49
Table 3.3.5.1: User Characteristics	50
Table 3.3.8.1: Database Requirements	51
Table 3.3.9.1: Security Requirements	51
Table 3.3.10.1: Maintainability Requirements	52
Table 3.3.11: Usability Requirements.	52

List of Figures

Figure NO.	Page NO.
Figure 2.2.1.1SWOT Analysis	21
Figure 2.2.3.1: wbsite process	22
Figure 3.1.1.1: DSDM methodology	28
Figure 3.1.3.1: The critical path method	30
Figure 3.1.4.1: Waterfall model diagram	30
Figure 3.2.1.1: Work breakdown structure	34
Figure 3.2.1.1.1: Gantt chart	35-36
Figure 3.2.1.2.1: Network Diagram	37-39
Figure 3.3.2.3.1: Survey	46-48
Figure 3.4.1: ER Diagram.	53
Figure 3.4.2.1 Manager Flow Chart Diagram	54
Figure 3.4.2.2 Staff Flow Chart Diagram	55
Figure 3.4.2.2 Customer Flow Chart Diagram	56
Figure 3.4.3: Star UML	57
Figure 3.4.4.1: Context Diagram.	58
Figure 3.4.5.1 DFD Level 0.	59

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Abstract

Many organizations offer their products and services electronically, and this so-called ecommerce. And e-commerce means buying and selling online operations without the use of any paper documents are also manage a business online or electronically through the devices, computers and communication networks so that companies are promoting their products and sell it. Administration be responsible on transactions made electronically on the professional trade managers in the field of technology and business management. Electronic commerce is considered important to promote and support entrepreneurs. Let's Relax Spa company used manually system to complete their transaction. This company faced many problems in the daily process and this can affect the achievements of their goals and objectives, so the owner of the Spa decide to find out a solution that can solve or reduce the number of problems faced. The proposed system will improve the current system used in the Spa and it will solve the company problems. The information will be kept in one place and the employees can ensure the availability and security of information. In addition to that each users employee, customer, manager will assign different privilege to access the new system. The employee can search, book, delete and add different items. The customers can search, buy, book and request different items and the manager can add, search and update the items. The project is started after the agreement of the company management and then the necessary information is collected. After that the information required are analyzed using different feasibility analysis and specifying different projecting requirements. Moreover the project covers most of the plans such as gantt chart, communication plan and risk management plan etc.

Chapter 1: Introduction

1.1 Overview of Project Case / Business case

We already know every small or big businesses in society need computerized systems for completing its work, objectives and goals and also to finish all transactions online. By using computerized system there is no need for papers or doing it manually. "Let's Relax Spa" was established on 22-April-2009. It is located in Muscat in AL-hail region. There is only one branch for this Spa. The owner of this business is Intisar AL kindey .This Spa provide many services and products. These services are: Face Treatments, Body Treatments, Waxing and Hair Treatments and the products are: Hair Care Products such as: L'OREAL Brand and Nashi Brand and Skin Care Products .This project is about designing a "Web Based Spa Management System for Let's Relax Spa". Let's Relax Spa uses an old system to complete its activeities and they face many problems to accomplish their objectives. For this reason it was decided to design this system because it will help this company to dispose of the old system and achieve their goals by using the new system which is "Web Based Spa Management System for Let's Relax Spa".

1.1.1 Rationale of Project

This project was selected after understanding the problems that Let's Relax Spa faced during the working hours and that affect the completion of the business objectives. Let's Relax Spa does not use any comprehensive computerized system or does not have any website that supports it is business. Therefore these reasons it was decided to develop the manual system that is based on paper to a computer system. In addition to that the website will present different types of services and various types of products with their information. The, other reasons as follows:

- The new system will help the staff to organize their work and communicate with other staff.
- The customers can access Let's Relax Spa website and register and view all
 the services and products with the details available which are provided by the
 Spa.
- The staff faces difficulties in organizing their work in the old system.
- The new system will make the Spa known not just locally but also internationally.

1.2 Problem definition

Nowadays most of the companies and organizations try to transform their system from manual system to computerized system because the manual system has many disadvantages such as it is less productive in the transaction process, processing is

slower specially if the organization deals with high volume of data, more possibility of mistakes occurring and less accessibility because the information is not available for all at the same time. Only one user can use the file or the papers that contain the information. This project is developed for administration, reception staff and customer. The system can be used to book an appointment and view or select the products for the customer. The customer can access the system and they can see which services are available, time of services, with who they want to take the services and the price .This system provides the time and effort of staff and customers at the same time.In this project a website will be designed which is "Web Based Spa Management System For Let's Relax Spa"

Problems that Let's Relax Spa manager and staff faced:

- 1- The difficulty of accessing information.
- 2- Completing their work manually or by using papers.
- 3- Lose more time to achieve their work.
- 4- Difficult to organize their work or activities and order it.
- 5- Difficult to communicate.
- 6- Increase of use of paper.
- 7- Knowing products and services used.
- 8- No monthly and yearly reports.

1.3 Project Scope

The scope of this project is to focus on designing a website or "Web Based Spa Management System for Let's Relax Spa" for booking an appointment online and viewing the products. The website will contain a lot of services and products with their details of information in which that all the information related to the services and products will be stored in separate tables inside the database. The database will be created to store all the information related to the services and products and the overall business and also the customer information in case any customer register. The implementation of this project needs to be supported by software and hardware requirements. The software requirements such as: SQL. The hardware requirements such as: operating system (Windows 7), Personal Computer, Flash, CD, Laptop and printer. There are many stockholders that are involved in this project such as suppliers, project manager, receptionist, owner, internet service provider and customer. The internal stakeholders are customers, employees and project manager. External stakeholders are competitors, suppliers and marketing. In this system the customer can book and access the system and they can see which services are available, time of services, with whom they want to take the services and the price. The staff and the administration can login, view diaries, make appointments and

manage the system by adding or cancelling appointments. The project will begin on 23/10/2016 and it will be completed on 20/02/2017. The budget of the project is 3520RO.

1.3.1 Objective of the Project

- Reduce using paper because the work will be through computers or laptops and also through phone without any need for papers. This will benefit the environment and society so as to reduce pollution.
- Transform the old manual system into computerized system.
- Reducing the staff member's effort.
- Ss all the information of data will be stored the database system; it will be safe and prevented from getting lost and not easy to take.
- The staff can search, add the services and products.

1.3.2 Aim of the project

The aim of the project is to design a website and justify. This system will help to reduce the staff members' effort. This website which is connected directly into SQL server database will enable the customer to check availability of the services and products online through the website and then book or request the services or products without any intervention from the staff members. The system can save data from being lost and it will facilitate work for staff. It will also prevent the time and money consumed with high quality services by controlling the budget of the Let's Relax Spa by reducing the number of papers, pens and other tools that are used in the previous system.

1.3.3 Goals of the project:

Let's Relax Spa wants to improve their system for better customer service. The website created and designed for "Let's Relax Spa" will increase accessibility and availability with new services and features to use the system. The system will add new values into staff services and new benefits for customers' such as:

- Save the time of the users which are Manager, Staff, and Customers).
- Speed up the work at the organization.
- The Manager can generate the weekly and monthly report of the business growth and the profit.
- Keeping the information safe from getting lost because all of the information will be stored in the database.

Chapter 2: Literature Review and Feasibility Analysis

2.1 Literature Review:

It can be defined as the process of reading, analyzing, evaluating and summarizing materials related to specific topic. The result will be organized as a report or they may serve as part of a research article, thesis or proposal.

2.1.1. Ayana Spa:

This spa is located in Oman and its Oman's first Organic Green Spa, inspired by nature, using only premium organic products that are completely safe for the body and the environment. They have carefully selected luxurious treatments from around the world to rejuvenate and beautify your skin and hair.

This system has many features like the services offered by the spa .In this system you can see many features such as: Ayana Handmade Soaps, Ayana Gift Cards, Ayana Specials, Ayana Soap (exclusively made in Oman with all natural ingredients), Ayana Specials and spa treatments. Also in the system they cared for display and spa etiquette. http://www.ayanaspa.com/> [Accessed 11/December/2016].

Evaluation:

The Ayana Spa system does not provide the system to buy products, electronic payment and working hours at the spa. From this system some ideas can be taken for add it to the present system which is about "Let's Relax Spa Management System". The idea is spa etiquette. From this idea I will provide the information about Let's Relax Spa etiquette so that everyone will know the role of my spa from this feature.

2.1.2. SEOID SPA:

Seoid spa system. Through the website of it you can view the: Gallery Treatments, the most common questions from the customer, Membership, Spa Blog, Gift Cards and the Offers. Gift Cards which the spa provides means: Treat your loved one or friend to a gift card, which may be redeemed against any spa treatment or retail product. Gift cards are non-refundable and must be presented at time of treatment and it valid for 1 year from time of purchase. http://www.dunboynecastlehotel.com/seoid-spa-gallery.html [Accessed 11/December/2016].

The membership service which the spa provides is membership benefits include the following:

• 10% reduction on individual private spa treatments in one of our 18 treatment rooms and spa retail items (pre-booking essential).

- Acc.ess to our relaxation room with complimentary refreshments.
- 10% discount on rooms at best available rates at spa and dylan (based on availability, promotions not included).

Evaluation:

In Seoid Spa system we can not do any electronic payment because they do not have this feature in their system. Also, this system does not provide products, prices for each services and location of spa. From Seoid Spa system I will take some idea like: The membership service, Gift Cards and the Offers and photo Gallery Spa. From photo gallery spa I will provide the pictures of my Spa and through that the customers will see the services, products and sections of Spa.

2.1.3. Luxury Spa:

Spa and wellness they have 1,500-square-metre relaxation and fitness haven, the largest spa in Muscat, offers the personalized, discreet service of the region's finest wellness professionals. Balinese therapies, Indian Ayurveda and indigenous rituals are amongst the highlights on the spa's comprehensive menu, delivered in 13 meditative spa suites that combine dramatic Omani architecture with calming Asian interiors. Luxury Spa system include: Spa treatments, Spa packages and promotions, Spa etiquette, Recreational facilities such as: swimming pool and Tennis courts.

http://www.luxuryspaawards.com/ > [Accessed 18/December/2016].

Evaluation:

Luxury Spa system does not provide working hours at the spa likes Ayana Spa. Also, it does not have any products and they do not mention every service of the spa. From this Spa I will take the idea of Recreational facilities and try to add it to my project or system.

2.1.4. BAMBOO SPA:

BAMBOO SPA located in Muscat in madinat sultan qaboos. At Bamboo Spa, you can select the finest botanical treatments for the face and body in an environment conducive to relaxation and tranquility. Using naturally inspired architecture, and with care and wisdom from the finest spa professionals from around the world, let the Bamboo Spa experience soothe the mind and nourish the body. In BAMBOO spa website you can find many things like: Their location, services, products, Gift Vouchers (Gift vouchers are available for all the treatments including bridal packages. To brighten someone's day or to simply treat that special someone and you can call into one of their branches to get the services and book for appointment. In addition to that from the website you can apply for a carrier by submit your CV through the BAMBOO Spa Website.

http://www.bamboodayspa.ca/> [Accessed 15/December/2016].

Evaluation:

In BAMBOO SPA system we can find many things but they do not provide prices of products and services, the time for each service and eelectronic payment system. From BAMBOO SPA system I like to apply to my system one idea which is submitting the CV through the website if anyone wants a job there. This feature is very important for those looking for a job in the spa.

2.1.5 Book:

- ♣ In book 'Project Management' by Mantel and Meredith (2010) most of the information needed for planning and implementation of a project. This book helps me a lot in planning for the project. In addition helps in identifying the sections that should be included to plan for the project (Meredith and Mantel, 2010).
- ♣ In book 'Security in computing' by Pfleeger (2007) is a book that talks about the security related to the computer and it specify the different issues of security and various mechanisms that can be used to overcome these issues. This book helps me a lot to know more about the security in IT and the different problems one could face and the solutions to overcome these problems (Pfleeger, 2007).

2.1.6 E-Book:

It is a book that electronically published and that consists of text, image or both and that produced and published through computers or using any electronic devices.

- ♣ Project Management is e-book that handles in details about the managing the project and the different stages that involve in the project also it includes the different risks faced during the project. This e-book helps me to have clear idea about project planning and its stages (Passenheim, 2009).
- ♣ This e-book handles some details about using PHP and MYSQL and how we can develop an application program using PHP and MYSQL. This book helps me a lot to have more information about developing an application program and the more clarifycation about the program that I'm going to use in my projects which are PHP and MYSQL (Sarkar, 2010).
- → This e-book is generally describing the steps for the project planing and the different designing tools that can be used with some details. This e-book helps me a lot to identify the different plans used during the project planning such as risk plan, resource plan, communication plan etc. (Project Manager.com, 2011).

2.1.7 Internet:

It is a global system of interconnected computer network that use internet protocol to serve many number of users over the world. Let's Relax Spa Management System is one of the e commerce websites. There are several types of the electronic shopping websites which are business to customer, business to business and customer to customer. I made some review on the following websites with respect to website design, content, database and usage.

Amazonc.om is one of the popular online shopping websites. It offers a lot of products. The user can easily search and for the product needs. It is customer to b.usin.ess wh.ere i.t i.s p.rovi.de s.ever.al ty.pe.s o.f p.rodu.cts wi.th d.etail.s o.f information for each one. The users can find a lot of things that can meet their requirements and satisfy their need. www.amazon.com [06/November/2016]

A book million is one of the website that has many attractive materials to buy and useful information about each product. This website is an example of the customer to business where the customer can search and order for the products based on their requirements. www.booksamillion.com [06/November/2016]

2.1.8 Website:

It is a set of related web pages that contains text, image, video, audio etc. The website is hosted at least one web server that accessible via network like internet through internet address.

2.1.8.1 Develop database system

As mentioned in in the article titled 'develop database' by Berg (2012), Oracle database operates in two different modes to support online services these are performed through the application database and retrieved through mechanisms in the web service. Operations of database and data recovery is completed through web services when integrated with oracle application server. Web services framework and oracle database give consistent web services development. Database as web services consumer external

web services are included as side of SQL database. (Berg, 2012)

2.1.8.2 How to connect between database and website pages

On the website www.killersites.com gives the information from the article on how to connect between database and website pages. I benefited from this website that is similar with the objective or the new system I have that networking pages on the Internet mean the seizure of information from the database (connected to the database through programming) if the data are stored in the database has undergone some changes, the web page also changes automatically without the intervention of users. So that registration login via user name and password, as well as verification and disclosure of balance and the account where it is connected to a Web page with the programmed data base, which provides users with a vision of their own banking information continuously. (Portugal, 1996)

2.2 Feasibility Analysis:

The purpose of feasibility study is to find out if the new system can be developed, to suggest different possible solutions, to provide he management with enough information about whether the project can be accomplished and whether the final project will satisfy the needs of the users. After the feasibility study the management can make the proper decision whether to go or not for the solution. The purpose of this project is to make the booking and shopping online easier for the customers. For that purpose an online spa booking and shopping website is being developed called Spa Management System for Let's Relax Spa. Through this system the customers can view all the products and services provided by the Spa. In addition it provides details of information for each product and service so that the customers can choice the product or and service according to their requirements.

2.2.1 SWOT A.nalysis:

It is a tool that used to audit a particular organization and its environment. It is stand for Strength, Weakness, Opportunities and Thread. (SWOT Analysis, 2012).

- Strength: The organization resources that used as basis for developing competitive advantages.
- Weakness: The absence of strength that may a view as weakness.
- Opportunities: The external environmental factors that provides certain opportunities for profit and growth.
- Thread: The changes in external environment may present some threats to organization.



Strength:

- Provide complete information about product.
- Offers new services such as booking online.
- Competitive organization.

Weakness:

- Traditional system using paper based form.
- Lack of marketing.
- Lack of skilled people.

Opportunities:

- Online booking.
- Using new Technologies.
- Developing market through online.

Thread:

- Cost of technologies.
- Budget.
- Local and international competitors.

Figure 2.2.1.1SWOT Analysis

2.2.2 B.usiness Objective

The project is about developing an online Spa shopping for Let's Relax Spa. The main reason for selecting this project is to provide an easy way for the Spa for booking and selling their products. In a view of the importance to expand the work and considering the advantages of the online Spa booking and shopping, the website will allow the customers for free timing of booking and shopping such as: view products details and book it, so the customers can visit the website any time and enjoy the shopping by booking products. In addition the customers will have complete idea about all the possible services and products with their information details such as the name, type and price etc. Moreover the customer is required to register their details in order to get whatever they need like offers and the order based on their requirement and need. Alternatively the Let's Relax Spa will take all the customer details and orders details to complete the delivery process for each customer if possible. The proposed project will help Let's Relax Spa to grow their business not just locally and it could be internationally, also this will benefits both the manager as well as the customers.

2.2.3 Processing:

In the proposed project there will be three users those are staff, customers and Manger. The users can interact with new developed system using their login information that includes username and password and it will be only for the staff and manager. The customers can not directly make any orders or even see the details for each product or service if they are not registered to the website, so it will make the ordering process easier for them. The figure below shows the website process.

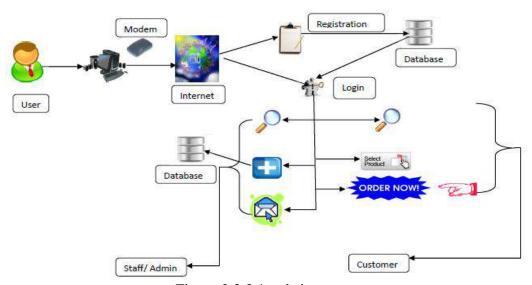


Figure 2.2.3.1: wbsite process

The above diagram shows how the users can interact with website, so that first the users (customers, staff and manager) need to login to the website using user name and password. The interaction to be done they are required to use some medium such as laptop, PCs etc. Moreover they need internet connection, so it is require having server modem and a firewall for protection. The customers need to register by their own through writing of filling a form that includes their details but in case of the manager and the staff they are already register, so they need to login directly. The staff and manager can add, drop and search for the products as well as they can interact with customers through receiving and sending emails. In the other hand the customers after registering their details in the website they can search for the services and products need and they will have the privileges to view the details for each product also order the products based on their requirements. In addition the customers can send or add some recommendation based on the products available in the spa and they can also share their suggestions.

2.2.4Technical feasibility

After visiting the place of the Spa and knowledge to their problems that they suffer from it by doing the work by hand, that the idea of persuading the owner of the Spa was a little tricky by design site for the Spa, where it is believed that the new system will be difficult and needs to costs and budget above, and after finding out the requirements analysis and identify bug problems to be faced by the new system and that they do not have enough experience in this range, and to persuade the owner of the Spa that all problems can be solved and fear more than that, this will be the work of training sessions for users to work becomes much easier and gain the skills of these courses must be knowledge of the new tools that it needs for system .The new requirements, such as software, such as database programs, and programs set up sites across the internet, hardware and tools. At firsts, difficult adjustment will be a little bit with this new system, but after continuing it would be easy to deal with.

2.2.5 Cost Benefit Analysis:

Overhead Cost

Category	Item	Quantity	Actual Price	Budget
Office supplies	Stationery (Pens, Pencil, files etc).	-	20 OMR	50 OMR
Premises	Water, Electricity, Transportation and telephone bill.	-	250 OMR	350 OMR
Support Services	Neil, Hummer and Screw	-	20 OMR	30 OMR
Total	-	-	290 OMR	430 OMR

Table 2.2.5.1: Overhead Cost

• Project Specific Cost:

Category	Item	Quantity	Actual Price	Budget
Travel	Travel tickets	-	350 OMR	500 OMR
Food	Breakfast, Lunch and Dinner	-	100 OMR	200 OMR
Products	Skin Products and Hair Products	-	500 OMR	1050 OMR
Total	-	-	950 OMR	1700 OMR

Table 2.2.5.2Specific Cost

• Project Resource Cost:

Category	Quantity	Actual Price
Project manager	1	As per actual
Programmers	1	As per actual
Designers	1	As per actual
Overtime	As per actual	As per actual

Table 2.2.5.3: Resource Cost

• Assets cost:

Resources	Category	Quantities	Actual Price	Budget
Hardware Software	 Category Laptop Printer DVD USB Microsoft office Windows7 My Sql MS project Visual Studio ADSL Modem Router HTML 	1 1 2 2 2 2 1 1 1 1 1 1 1 1 Free Free	500 OMR 35 OMR 4 OMR 5 OMR 5 OMR 50 OMR 30 OMR 30 OMR 200 OMR 150 OMR	200 OMR 40 OMR 8 OMR 7 OMR 200 OMR 60 OMR 40 OMR 35 OMR 250 OMR 200 OMR
	• Smart Draw			
Total	-	-	1154 OR	1390 OMR

Table 2.2.5.4Assets Cost

♣ Total Cost Plan:

Accepted Budget= 3520 OMR

Total Actual Price= 2394 OMR

Total Variance= Total Accepted Budget-Total Actual Price=3520-2394 = 1126 OMR

Variance Percentage=Total Variance/Total Project Budget*10

= (1126/3520)*10

= 4.22% OMR

2.2.6 Operational Feasibility:

The operational aspects for the development of the proposed project are well within my capabilities to produce such product. Through the experience that I have in the technology that I am going to use to develop the old system and these technologies will be used such as World Wide Web and database program. The scope of this project is around using both the web and the database program. The web development will involves producing and marketing a web page and during the project I will designe web pages for the purpose of marketing and the purpose of using database program is to keep all the information need for products as well as to provide and support the web page with information need that related to each product provided. It is also will provide some reports related to the business growth. The website will be produced using PHP with support of Dream Weaver for interfacing and both of them will be connected to the database. The database program will be MY SOL that will include all different entities and related information. In addition there are little risks in the new proposed technology, so in order to avoid any risk it is required to have complete skills in using the software and hardware and be aware about the data protection and several mechanism used. Also, is important to consider the human risks as well as the financial risk.

2.2.7 Ethical Feasibility:

This Project will support and follow all rules and policies of system design. To achieve the project goals in correct way and from first stage of building this new system I will use the original versions of each program and software that will use to develop and design the system's database and website. The system that will create by my support of all rules and policies that approved by the Ministry of Industry and economic regarding to intellectual property and copyright for books. It wills advice and emphasizes the importance of making sure that the book which the team will provide to the borrower is a real copy and it is not contrary to copyright. In addition, because the PDF copies of books does not guarantee the rights of the author and publisher it will not be as a part of the whole services that supported by the new system.

This project supports ethically to all customers. I provide some of the privacy policy to customer and these policies are the following:

- Do not copy the source of code.
- The staff does not allow knowing the other staff login information.
- The staff responsible to keep the privacy of customer information.
- It is not allowed for the staff to change any property based on a product unless the manager allow for it.

The manager and the staff responsible for the updating antivirus regularly and

keeping information protected as possible.

3.1 Methodology

This chapter includes the methodology used to develop a system for "Web Based Spa Management System for Let's Relax Spa". The methodology is depends on the nature of the project. There are many methodologies that can be used to develop the project such as waterfall model which is considered as a traditional model. In this model the development process should be in a sequential progression through the previous phase and it is generally represents the processes that are simple to manage and understand. In addition fountain model this model is based on the waterfall model and it reflects that some phases cannot start before the other. Moreover spiral model and DSDM methodology as I mention below:

3.1.1 DSDM (Dynamic System Development Method)

This is organized, common-sense process focused on delivering business solutions quickly and efficiently it is similar in many ways to SCRUM and XP, but it has its best uses where the time requirement is fixed. DSDM focuses on delivery of the business solution, rather than just team activity. It makes steps to ensure the feasibility and business sense of a project before it is created. It stresses cooperation and collaboration between all interested parties. DSDM makes heavy use of prototyping to make sure interested parties have a clear picture of all aspects of the system.

• Feasibility Study

In this phase the problem of the system will be define and the technical feasibility of the desired application verified.

Business Study

In this stage a business study is carried out in such a way that business requirements will be specified and the information requirements will be collected.

Functional Model Iteration

This phase mainly focuses on building prototype and getting it reviewed from the users to specify clearly the requirements of the desired system.

• Design and Build Iteration

In this phase most concentration is on the prototype where it should be satisfactorily and properly engineered to suite the operational environment. In addition it includes the designing of the software during functional modeling.

• Implementation

It is the last phase in this methodology which involves the training of users and putting the system into the operational environment.

- ♣ I choose DSDM as methodology for my project for many reasons which are:
- ❖ At any stage user can easily return and change the requirements.
- ❖ This methodology result in reducing project costs.
- ❖ It helps in improving the quality of the product.
- ❖ It makes the operations during the project runs smoothly and step by step.
- ❖ Helps the user to understand system problems.
- ❖ It ensures most of the requirements to be delivered.

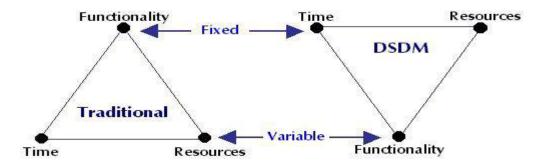


Figure 3.1.1.1: DSDM methodology

3.1.2 Spiral Model

This is a type of iterative software development model which is generally implemented in high risk projects. In this system development method, we combine the features of both, waterfall model and prototype model. In Spiral model we can arrange all the activeities in the form of a spiral. There are many stages that are involved in the Spiral model and these stages are as follows:

Planning

It helps to understand the project concept clearly. Identify the objective and constraints of the project.

➤ Risk analysis

In this stage all the possible future risks are considered and analyze carefully.

Engineering

This stage handles the actual development and verification process. It can be done by using prototyping or simulation.

Customer Evaluation

This stage will carry out the customer evaluation of the model and any modification need to be made based on the dback of the customers.

3.1.3 Critical Path Method:

It is an algorithm for scheduling activities related to the project, and through the identity of the project path; which was the training program for owners of large projects.

4 Advantages:

- ❖ Determine the length of time it takes to complete the project.
- Planning a good time for the project.
- ❖ Ease of project management for project managers and building human network to solve all the problems.
- **Stimulating human resources in the project is completed on time.**
- ❖ Early preparation for each project from the requirements needed
- Good assessment activities.

Disadvantages:

- * Resources cannot be monitored accurately.
- ❖ The difficulty of redrawing the plan if the plan changed suddenly without warning.
- ❖ The difficulty of determining when the path provides similar paths in the project.
- ❖ Need new members of the project team more time to understand this method.



Figure 3.1.3.1: The critical path method

3.1.4 Waterfall model:

Advantages: +

- Scheduling appointments for all stages of development.
- Observation by the administration.
- It leads to deliver the project on time.
- **♣** Disadvantages:
- Cannot refer back.
- If it does not allow for review and audit.

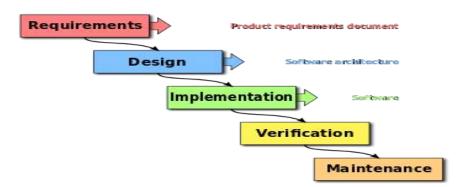


Figure 3.1.4.1: Waterfall model diagram

3.1.5 Prototype Model:

Advantages	Disadvantages
It possible to detect mistakes early.	High complexity.
Suitable for web online systems and interface.	There is no deadline for each stage or task so this may lead to expend the project duration and scope.
Support the interaction with end user to develop requirements.	Within several changes the system plan may change.
Provides initial structure of the system in the early stage.	The problem cannot have full analysis from the beginning.

Table: 3.1.5.1 Prototype Model

3.1.6 Comparison between waterfall Model and prototype Model:

	Waterfall Model	Prototype Model
The stability of the scope and work plan.	High	Low
There is a deadline for each task.	Yeas	No
Suitable for all size of project.	For all size of project.	For huge and complex project.
There is no budget expand.	Full budget define in the beginning.	Budget may expend.
Defining the requirement.	From the beginning.	Constantly change with the passage of time.
Return back to the previse stage for any modification.	No	Yeas

Table: 3.1.6.1: Comparison between waterfall and prototype model

3.2 Project plan

Project Plan is the term that describes the most important document that is created before the project is started to use to control and guide a successful project execution. In information technology specialization the gantt chart is the most necessary part of the project plan. In addition there are many documents that are used in the project plan such as: Communication Plan, Acceptance Plan, Resource Plan and Risk Management Plan. All those parts of project plan will discuss in the following:

3.2.1 Work Breakdown Structure:

Task Mode	Task Name	Duration	Start	Finish
Auto Scheduled	web based spa management system for let's relax spa	132 days	Thu 10/20/16	Mon 2/20/17
Auto Scheduled	Project initiation	14 days	Thu 10/20/16	Wed 11/2/16
Auto Scheduled	Select project title, project environment and interview the owner of the company	5 days	Thu 10/20/16	Tue 10/25/16
Auto Scheduled	Prepare Project Initiation Report	4 days	Tue 10/25/16	Thu 10/27/16
Auto Scheduled	Prepare introduction of the project chapter	3 days	Sun 10/30/16	Mon 10/31/16
Auto Scheduled	Complete project initiation report	2 days	Tue 11/1/16	Wed 11/2/16
Auto Scheduled	Feasibility Analysis	14 days	Wed 11/2/16	Tue 11/15/16
Auto Scheduled	Collect necessary information from the company	6 days	Wed 11/2/16	Tue 11/8/16
Auto Scheduled	Prepare Feasibility Study Report and include different types of feasibility	2 days	Tue 11/8/16	Wed 11/9/16
Auto Scheduled	Complete feasibility analysis report	2 days	Wed 11/9/16	Thu 11/10/16
Auto Scheduled	Estimate different cost	2 days	Sun 11/13/16	Mon 11/14/16
Auto Scheduled	Get the owner feedback and agreement about the proposed system	2 days	Mon 11/14/16	Tue 11/15/16
Auto Scheduled	Project plans	9 days	Tue 11/15/16	Wed 11/23/16
Auto Scheduled	Specify different project plans	3 days	Tue 11/15/16	Thu 11/17/16
Auto Scheduled	Define communication plan ,schedule, plan etc	4 days	Thu 11/17/16	Tue 11/22/16
Auto Scheduled	Identify risk management plan and its mitigation plan.	2 days	Tue 11/22/16	Wed 11/23/16
Auto Scheduled	Project Requirements	11 days	Wed 11/23/16	Sun 12/4/16

Auto Scheduled	Identify different project requirements	6 days	Wed 11/23/16	Tue 11/29/16
Auto Scheduled	Define security requirements	2 days	Tue 11/29/16	Wed 11/30/16
Auto Scheduled	Define database requirements	3 days	Thu 12/1/16	Sun 12/4/16
Auto Scheduled	Logical Design	15 days	Mon 12/5/16	Sun 12/18/16
Auto Scheduled	Prepare different logical design	5 days	Mon 12/5/16	Thu 12/8/16
Auto Scheduled	Prepare DFD	4 days	Thu 12/8/16	Mon 12/12/16
Auto Scheduled	Prepare flow charts	3 days	Tue 12/13/16	Wed 12/14/16
Auto Scheduled	Prepare ERD	3 days	Thu 12/15/16	Sun 12/18/16
Auto Scheduled	Prepare final report	19 days	Mon 12/19/16	Wed 1/4/17
Auto Scheduled	Complete project chapters	5 days	Mon 12/19/16	Thu 12/22/16
Auto Scheduled	Submit the first draft for checking	3 days	Thu 12/22/16	Mon 12/26/16
Auto Scheduled	Organize final draft of report	5 days	Mon 12/26/16	Thu 12/29/16
Auto Scheduled	Submit final draft of report	2 days	Thu 12/29/16	Sun 1/1/17
Auto Scheduled	Ensure project report is complete	2 days	Mon 1/2/17	Tue 1/3/17
Auto Scheduled	Submit report	2 days	Tue 1/3/17	Wed 1/4/17
Auto Scheduled	Complete design	10 days	Wed 1/4/17	Sun 1/15/17
Auto Scheduled	Reorganize design	5 days	Wed 1/4/17	Mon 1/9/17
Auto Scheduled	Complete design part	3 days	Tue 1/10/17	Wed 1/11/17
Auto Scheduled	Submit design	2 days	Thu 1/12/17	Sun 1/15/17
Auto Scheduled	Implementation	15 days	Sun 1/15/17	Sun 1/29/17
Auto Scheduled	Convert information into codes	6 days	Sun 1/15/17	Thu 1/19/17
Auto Scheduled	Start physical design	5 days	Thu 1/19/17	Tue 1/24/17
Auto Scheduled	Complete physical design	4 days	Tue 1/24/17	Sun 1/29/17
Auto Scheduled	Testing	10 days	Sun 1/29/17	Mon 2/6/17

Auto Scheduled	Test developed system by experts	4 days	Sun 1/29/17	Tue 1/31/17
Auto Scheduled	Test developed system by the owner of company	3 days	Wed 2/1/17	Thu 2/2/17
Auto Scheduled	Train the employees for using the system	3 days	Sun 2/5/17	Mon 2/6/17
Auto Scheduled	Project conclusion	6 days	Tue 2/7/17	Sun 2/12/17
Auto Scheduled	Conclusion	3 days	Tue 2/7/17	Wed 2/8/17
Auto Scheduled	Recommendations	3 days	Thu 2/9/17	Sun 2/12/17
Auto Scheduled	Maintenance	5 days	Mon 2/13/17	Thu 2/16/17
Auto Scheduled	Check the functionality for each part if it is working or not and get the feedback	5 days	Mon 2/13/17	Thu 2/16/17
Auto Scheduled	Prepare Last report	4 days	Thu 2/16/17	Mon 2/20/17
Auto Scheduled	Organize final report and submit it	4 days	Thu 2/16/17	Mon 2/20/17

Table 3.2.1.1: Work breakdown structure

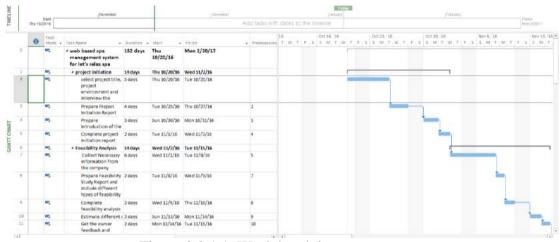
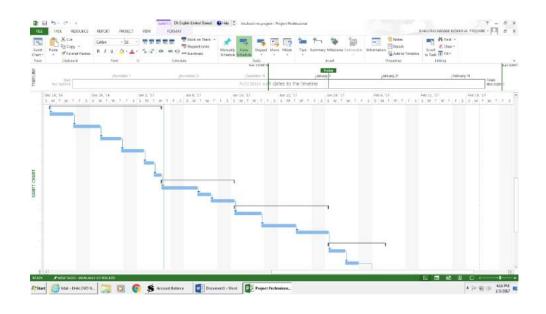


Figure 3.2.1.1: Work breakdown structure

3.2.1.1 Gantt Chart:

It is a useful tool for planning and scheduling a project. It is a graphical representation of the duration of the tasks. It illustrates the start and finish dates of project elements.





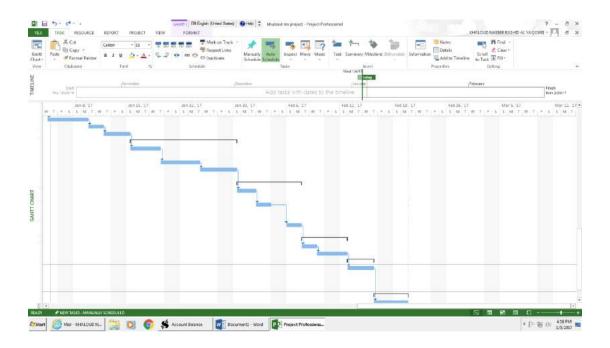
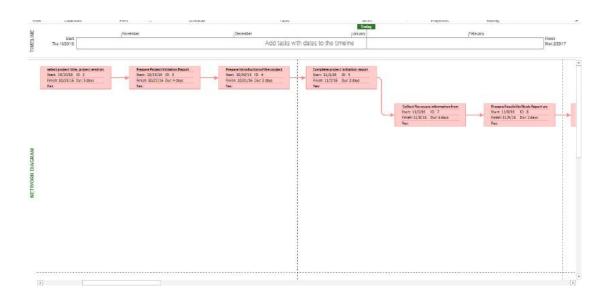
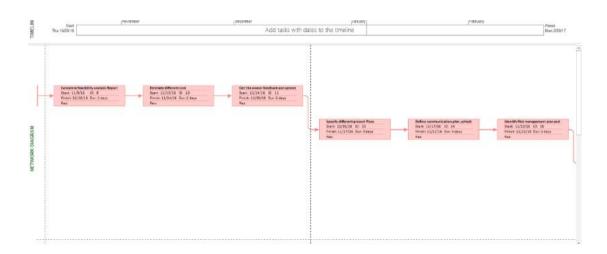
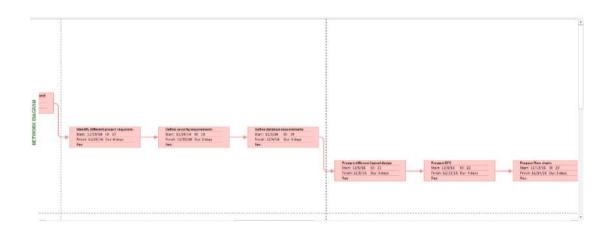


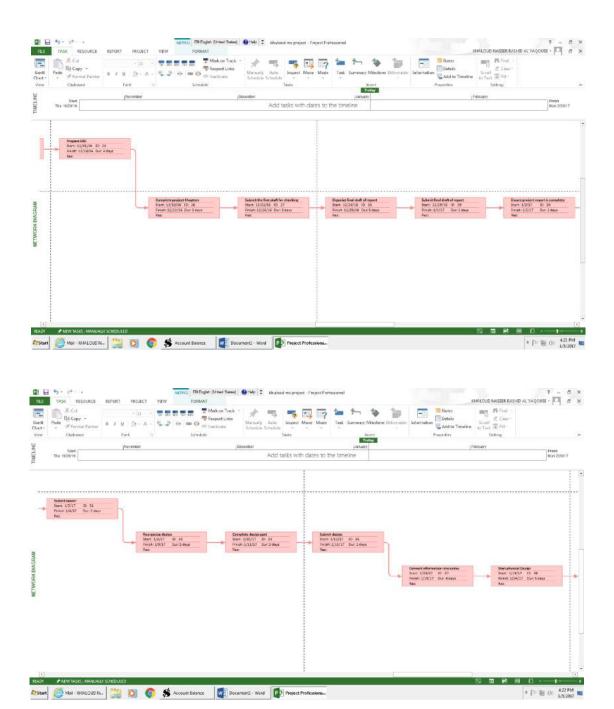
Figure 3.2.1.1.1: Gantt chart

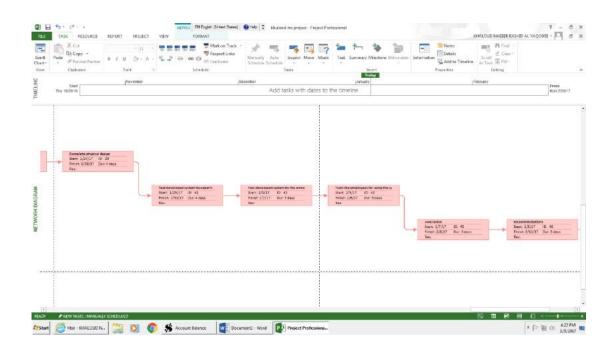
3.2.1.2 Network Diagram:











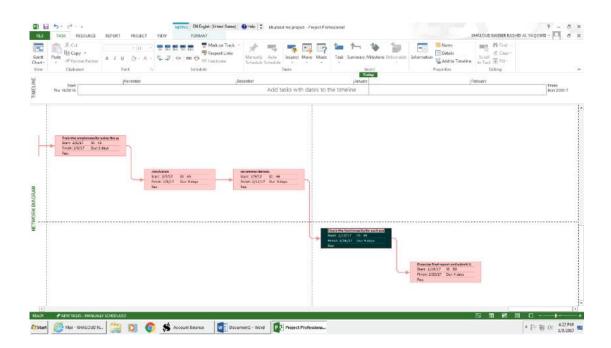


Figure 3.2.1.2.1: Network Diagram

3.2.3 Communication Plan:

A communications plan is the approach that is used to provide stakeholders with project information. This plan defines the people who will get the specific information about the project in the specific time and by using a type of communication.

Type of Communicati on	Purpose	Owner	Audience	Frequency	Documentations
Project meeting	Collect data or information about the old system and prepare the problems and define solutions.	Project manager	Project Team	Before the start in the project	Meeting and communicate by Social media
Project initiation	Takes information or background about new project and start.	Project manager	Project Team	Before the start in the project	Meeting
Project start	Divide all activities related in this project between all the members	Project manager	Project Team	When start the project	Meeting and email
Project status	Check If the team members understand all the task contain in this project	Project manager	Project Team	Once the week	Email
Stakeholders Sponsor	Estimate and establish if project in correct track and meeting all stakeholder's	Project manager	Stakeholder s and sponsor	Once the month	Meeting and Email
System issue	Discuss about the new system for this project and test the system	Project manager	Project Team	As needed	Meeting and Email

Table 3.2.3.1: Communication Plan

3.2.4 Acceptance Plan:

Acceptance Plan	Date: 1/11/2016	
Deliverables	-Acceptance Criteria -Budget	-Acceptance Standard The budget should be enough to cover all the project requirements.
Project Plan	Time	The time should not exceed more than one year.
Functional prototype	Quality	It should meet the desired quality and listing all the business requirements.
Design prototype	-Quality	- The new system should satisfy user requirements and it should be easy to understand.
	-Budget	- The budget should not be more that agree upon.
	-Time	- The project completion should be on time.
Project Review	Quality	The project must meet the project requirements and the company gets benefits from it.

Table 3.2.4.1: Acceptance Plan

3.2.5 Resource Plan:

This plan assist to define all the resources required for a specific project to meet the user needs and achieve its goals successfully. Also, by using this plan it will be easy to identify the quantity of software, hardware and manpower that will needed to create the project.

Manpower		
Labor	Role	Quality
Project Manager	Managing and coordination the project.	1
Program Manager	Managing and handling the program.	1
Technician	Handel the technical issues.	1
Designer	Responsible for the design part of the system.	1

Hardware and Software	
Equipment	Purpose
PCs and Laptop	The project and those people who work in the
	organization need to have one PC to do their work.
Printer and Scanner	To scan papers, pictures or documents.
CD-ROM	To save data
USB	To save data
DVD	To save data
Microsoft office	- MS Word use to prepare documents such as reports.
	- MS Power Point use for meeting to present the works.
	- MS Excel use to do some mathematical operations and

	also to keep some data.	
Windows 7 OS	All personal computers must have operating system as	
	interface.	
MYSQL	Used to keep all the database data related to the business.	
PHP Designer7	Used to write PHP scripts.	
ADSL Modem router	To connect with the internet and share files and	
	documents with the other machines.	
Adobe Dreamweaver	Use for interfacing during developing website.	
Adobe Photoshop	Use for reorganize some photos related to project.	
HTML	To design the website.	
ORCLE	To design and develop database and write the codes.	
Anti-Virus	To protect computers from virus	

Table 3.2.5.1: Resource Plan

3.2.6 Risk Management Plan:

This plan is a necessary to identify, control and manage any risk that may happen during the project. Every project has some degree of risk. However, we should have a complete plan to analyse, manage and control these risks or to avoid them.

Internal Risk	
Risk	Mitigation Plan
Customers may not allocate sufficient resources to exploring requirements.	The requirement should be detailed at the top priority and the need more customer effort.
The goals of the stakeholders may conflict.	Necessary to keep list with all goals of the stakeholders and project manager will report progress to each declared goal.
Customer may accept the delivery of the system and that does not meet their goals.	Customers should declare acceptance criteria as each released is planned.
Difficulty to estimate work time that prevents the customers from deciding priorities effectively.	Team must gain experience in estimating the work and deliver the first estimates after 6 months and compare estimate work with actual work.
Team member take more time to understand the project needs.	Experienced people are requiring handling the project and who have more knowledge.
New technologies are appear	The new system should be more flexible in such a way to adapt the new technologies.
Lack of Budget	Divide the budget properly and the methodology should help to deliver the project with consistence budget.
External Risk	
Weather changing may cause in stopping the connection any unexpected disaster that can lead to lose the data.	Necessary to have weekly backup using different media and mechanism to ensure data safety and availability.

Type of risk	Details of risk	Level	Mitigation plan
Technical risk	Installation of wrong	High	Before the installation of the
	software in the pc		software in the computer there
	according to the		should be proper check-up of the
	properties of the		properties and the kind of software
	computer.		which is to be installed in the
			computer.
	Loss of data.	High	The loss of data due to the entrance
			of virus in the computer or loss of
			the hard disk in which the data has
			been saved. It can be saved with
			the help of antivirus and have
			proper place for keeping the hard
			disks because they are company
			sensitive products.
	Malfunctioning of the	High	Alternative should be found by
	computer		calling the expert or by having the
			backup of the data at other place.
Risk of timing	Problem in the time	High	Proper time management plan
	management of the		should be made before the start of
	project which will		the project. While making the plan
	further contribute in		there should be consideration of the
	delivering the project		contingencies and constraints
	on time which will		during the execution of the project
	further affect the		and the contingency management

	efficiency and		skills of the manager so that he
	effectiveness of the		could able to deliver the work on
	project manager.		time.
Risk of	Employees do not	High	There should be a training plan for
resources	know how to use the		the employees who do not know
	programs that are		how to use the programs.
	installed in the		
	computer.		
Risk of	Communication	High	Effective communication can be
improper	problem within the		raised by building a strong bond
communication	staff involved in the		between the people who are
between the	project.		involved in the project.
employees			
Risk of	Risk can be faced	High	This can contribute in rising the
transport	when the material is		time of completion and can affect
	not transported on		the process of the company. This
	time at the site of the		can be mitigated by proper
	office of the		communication with the team who
	company.		have the responsibility to take care
			of the material required and
			knowing and solving the problems
			with contingency management
			skills can reduce this risk.

Table 3.2.6.1: Risk Management Plan

3.3 Requirement Analysis:

3.3.1 Data collection methods:

Data collection methods are simply the methods that are used to collect the relevant information that is need to be used for a particular research or project. These methods data collection are interview, observation and survey. During my project I use three methods that were suitable to collect the information need and these methods are Interview, Observation and Survey by SurveyMonkey website. The interview is a conversation between more than one people where one person is asking questions and the other is responding according to that particular question. The person who is doing the interview is called as the interviewer and the other who is responding is known as interviewee. There are many advantages of the interview and these advantages can be the following:

- Learn from the experience of the others when you are asking the questions that you are interested in.
- Learn from the other skills during the conversation.
- Developing relationship with the interviewee.

Observation is one of the data collection methods that simply mean an act of viewing or noticing a fact or occurrence for some scientific or other special purpose. The data gathered from the observation can be highly reliable, it helps the analyst to see what have been done and it allows to do work measurement.

3.3.2 Data analysis:

Data analysis is the process of cleaning, transforming, highlighting and inspecting data collected. In this point I'm going to concentrate on analysing the data that was collected from the interview, observation and survey.

3.3.2.1 Interview:

On 25/ December /2016 through the interview that I conducting with Mrs. Intisar AlKindi I find out the following:

Let's Relax Spa faced a lot of problems and challenges by using the traditional process of appointments or sell products to the different people including:

- They cannot reach to a large number of people.
- the people cannot see the different services and products easily.
- The people cannot contact with the Spa easily.
- They can loss data easily.

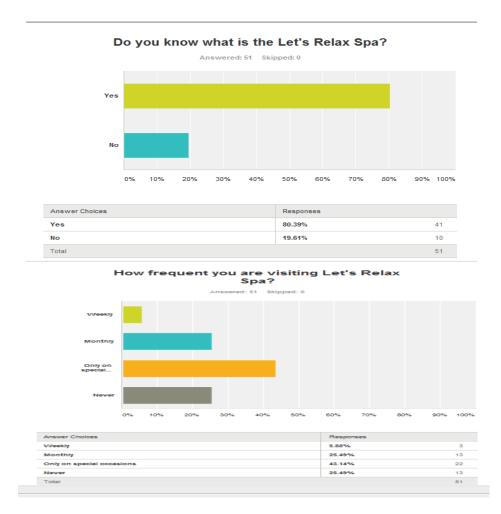
For this reason the Let's Relax Spa wants to create a system to avoid these problems and for all the people to see the different services and products available in the system and when anyone wants to book the service or buy the product she should register in the system, it will assign a username and password to use the benefit of the system.

3.3.2.2 Observation:

On 25/ December /2016 during my visit to the Let's Relax Spa for the interview with owner of the spa I noted they do not have any electronic system for all services where they are using the manual system in the process of booking appointments or sell products, the manual system is not secure and can easily data lost, in addition to that I noted that the Let's Relax Spa having a normal and simple payment system. Also, they are complaining about the data security where they do not have a way to do weekly backup for the data to avoid any unexpected problems could occur.

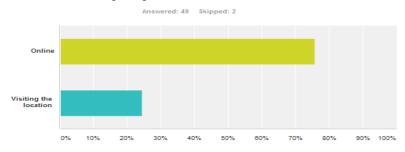
3.3.2.3 Survey:

On 6/ January/2017 I did a survey by SurveyMonkey website. I wrote seven questions that are related to my project. After one day I got the result of the survey that was taken by 51 people.



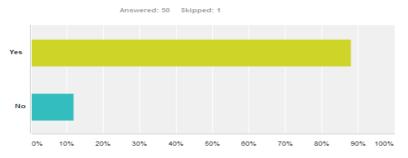
Q3

Which way do you like to book the services?

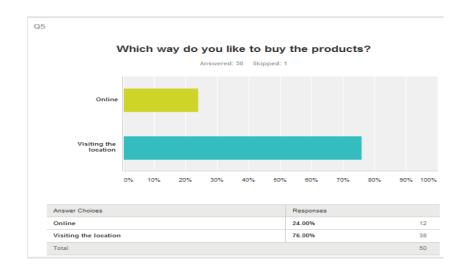


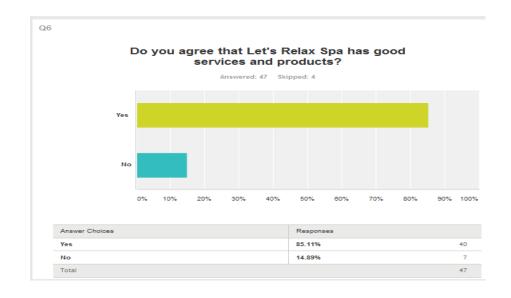
4

Do you like to book the services online?

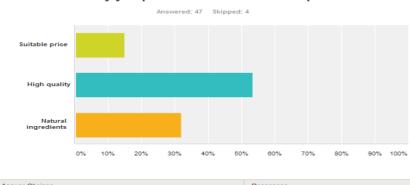


Answer Choices	Responses	
Yes	88.00%	44
No	12.00%	6
Total		50





Whay you prefer to visit Let's Relax Spa?



Answer Choices	Responses	
Suitable price	14.89%	7
High quality	53.19%	25
Natural ingredients	31.91%	15
Total		47

Figure 3.3.2.3.1: Survey

3.3.3 External Interface Requirements:

User interface	Hardware interface	Software interface
Mouse	Widows	Database
		My SQL
Printer	CPU	ORCAL
	Manage	Programming language
Scanner	Memory	HTML PHP
Keyboard	Hard drive capacity	

Table 3.3.3.1: External Interface Requirements

3.3.4 Functional Requirements:

Requirements	Objectives
Application server must be able to serve thousands of users concurrently.	Server must be available for the users.
Administrator should have the ability to add users and change the user permissions using his interface.	 - Protect the user's information from unauthorized user. - Restrict unauthorized user from adding and changing user's information.
Users who are registered able to search and purchase the products based on their need.	 Protect information of register user from unauthorized user and unregister user. Restrict register user from obtaining the product with wrong price. Web user interface is available for the register user to purchase the product.
Login Capabilities	The system should provide user login to the system capabilities
Mean time Repair	The system will be developing in such a way that in case of the failure should be recovered backup within less than an hour.

Table 3.3.4.1: Functional Requirements

3.3.5 User Characteristics:

Attribute of User	Specific User Characteristics
Age and Gender	- The user can be above 20 year The user must be female.
Education	The user should have high school or above in IT field or she attends some courses related to IT.
Experience	Not necessary to have deep experience the user needs only to have experience in IT.
Skills	Using computers and ability to deal with hardware and software.

Table 3.3.5.1: User Characteristics

3.3.6 Performance Requirements:

- Response time: The system should be able to handle large amount of job in few minute.
- User's response: The system should response to the users quickly.
- Throughput: The transactions are mostly depending upon the number of the users using the system.
- Capacity: The system should be able to handle large number of users in same time.

3.3.7 Design Constraints:

- All statements, whether user data or items related to existing or in the Spa of
 data products and services offered by the Spa electronically must be stored in
 the database in a separate and very accurate tables and can be up to it by the
 user connect to a network or the Spa web site.
- Each user has a user name and password when you recorded to connect in online Spa management system.
- System accessible and available at all times.

3.3.8 Database Requirements:

(Mansion only the Database use and the reasons and the feature of the database MySQL)

Name	MySQL
Size	Include the size of MySQL on the Hard Disk.
Capacity Planning	Specify the capacity that includes the size of the database data.
Database Configuration	Identify the config file that will store the database connection values.
Storage Configuration	Specifying the database that used internally in the PhpMyAdmin for additional features such as bookmarking queries.

Table 3.3.8.1: Database Requirements

3.3.9 Security Requirements:

Procedures	Status
Formal access right administration for users	- Enrollment process to add users to the system. -Authorization process to add, delete and modify the authorized users access to specific information. -Authentication process to identify the user during the activities. -Monitoring process to manage the access right granted to each user in the system. -Identifying each privylege associated with each user in the system.
Privileges access control	- Documenting the granting and administrative limits to privileges.
	- Auditing the use of privyleges access.

Table 3.3.9.1: Security Requirements

3.3.10 Maintainability Requirements:

Setup	Scripts are setup through configuration file.
Graphic User Interface Change	Changes in the GUI screen require code changes.
Business Logic Change	Individual code changes Visual Prototype
Code Maintenance	- Business Logic Framework- Code is bigger than application code.
Data Maintenance	- Test I/O independent data model - Business verification rules.

Ta.ble 3.3.10.1: Maintainability Requirements

3.3.11 Usability Requirements:

Understandability	- Interface elements should be easy to understand.
	-The purpose of the system should be
	understandable.
	-The system should be easy to learn.
Learnability	-The user documentation and help should be complete.
	be complete.
	- The system should meet the user
Omanahility	requirements.
Operability	- The interface actions should work
	properly.
	The interference have at a should are a le
	-The interface elements should wor.k.
	- The error messa.ges should be clearly
	explain how to be solved.
	- A guide should be prepared.
Attractiveness	- 11 guide silouid de prepared.
A LULIGO TO THE STATE OF THE ST	The color and screen layout should be
	attractive.

Ta.ble 3.3.11: Usability Requirements

3.4 Logical Design

3.4.1 ER Diagram:

This diagram shows the 8 tables and the different entities each of this entity is related and these relationship with the other entity. These tables are Manger, Payment, Customer, Services, Product, Employee Order and Order_detail. This diagram shows many types of relations one- to- many, many-to-many, One-to-one, many-to-one and one-to-many.

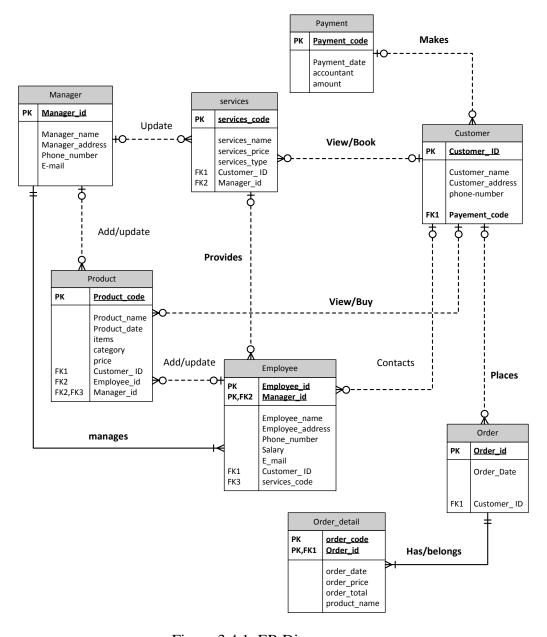


Figure 3.4.1: ER Diagram

3.4.2 Flow Chart Diagram:

Flow chart diagram is a diagram that shows the flow of the conditions. In the figure below I choose some conditions that represent the new developed system. The flow chart below shows the flow of condition in case when Manager use the system. First he will asked to login if the username and password are correct then the form related to Manager will open then he can complete his process and then exit the system but if the login is not correct then process will end.

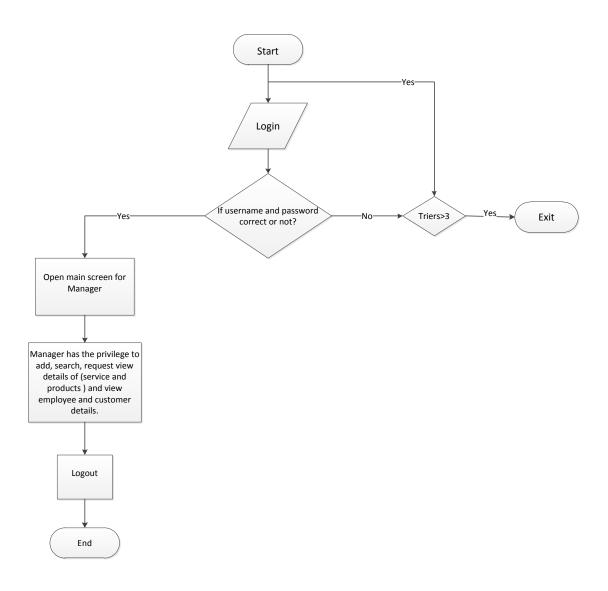


Figure 3.4.2.1 Manager Flow Chart Diagram

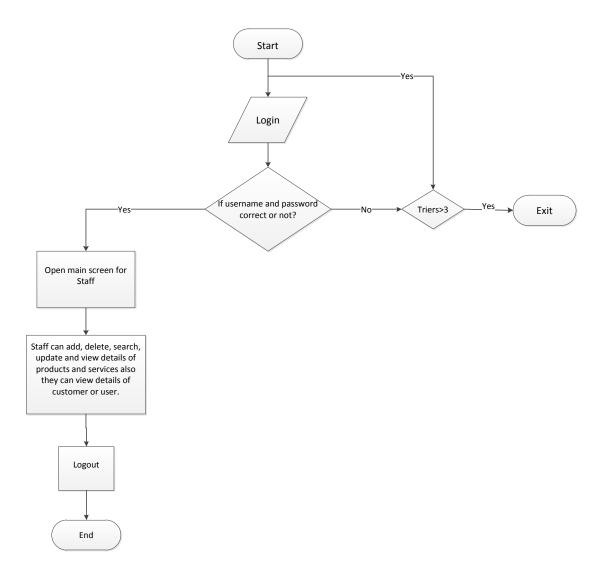


Figure 3.4.2.2 Staff Flow Chart Diagram

The flow chart shows the flow of condition in case when staff uses the system. First he will asked to login if the username and password are correct then the form related. to staff will open. Then he can complete his process and then exit the system but if the login is not correct then process will end.

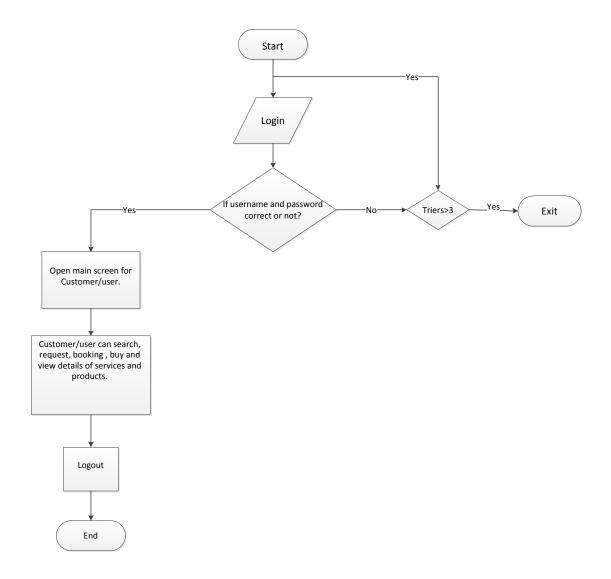


Figure 3.4.2.2 Customer Flow Chart Diagram

The flow chart shows the flow of condition in case when customer uses the system. First he will be asked to register if the customer have registered before and he have an account then he enters his username and password and then the customer form will show up and the customer can complete his process and then exit the system but in case he did not register before in the system, he is returned register first and then login to system.

3.4.3 Start UML (use case diagram):

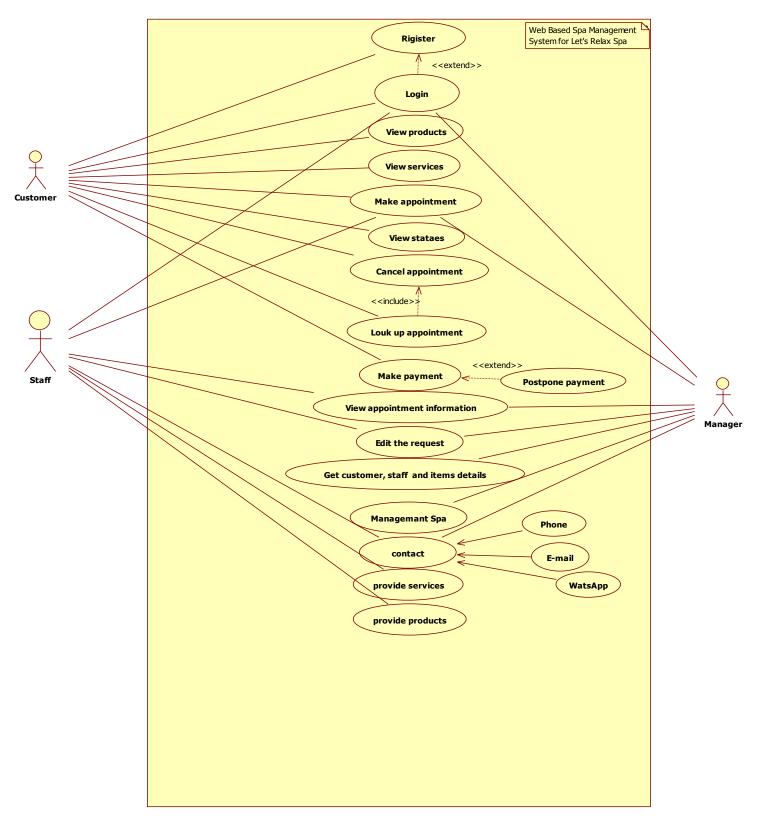


Figure 3.4.3: Star UML

3.4.4 Context Diagram:

The below context diagram describes the process for each external entity with the new system where we have different external entities that are using the system and those entities are Manager, Staff and Customer. The figure shows some of the process assign for each entity regarding to the system and what the system in giving and providing for each one in the same time. For example in case of the customer entity she can register, login, search for items, request and pay and in the same time the system will accept the login, display items and accept request etc.

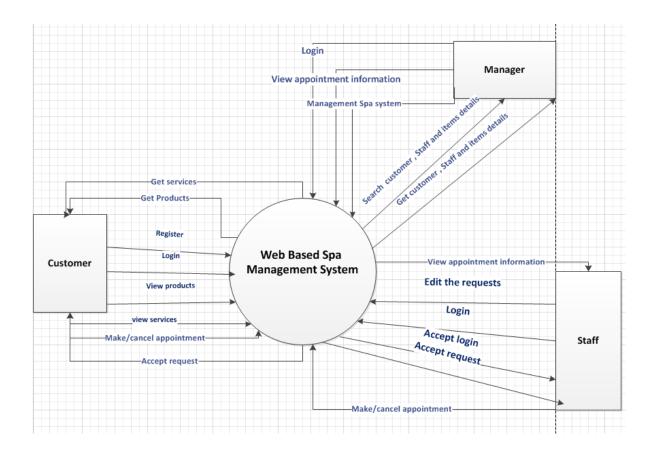


Figure 3.4.4.1: Context Diagram

3.4.5 DFD Level 0:

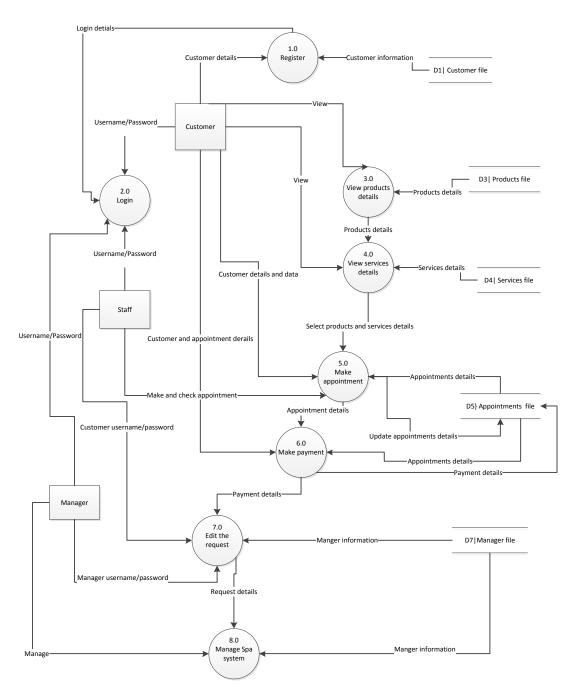
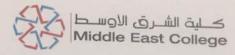


Figure 3.4.5.1 DFD Level 0

Appendixes

1.0 Interview

ڪلية الشرق الأوسط Middle East College
These questions are prepared to collect information of your company which it will be helpful in implement the new system for your company. Please the following questions:
1) What is your company name? Let's Relax Spece
2) Who is the owner of this company?
Inlisar and Fadya L.L.C
3) Does your company use any system?
We have manual system
4) What are the goals of your company? Our gord is to provide high quality services to our customers with fair prices. Also we are planning to target more austomers from outside Mascat. 5) Does your company face any problems? What are the problems that my you face during your work? With the high competition in this field, we are facing difficulties to attract more new austomers. For this reason we are working to develop new marketing strategy and to like the time beingly we are using manual Products enders.
7) Do you have future plan about the current system development? We are planning to have electronic System. So Our Customers can reach us easily to book their appointments without any delay. Also the new electronic system will help to sell our products on line.
Signature: Date: 25 / December / 2016



These questions are prepared to collect information of your company which it will be helpful in implement the new system for your company. Please the following questions:

- What is your company name?

 Let's Relax Spa
- Who is the owner of this company? Intisar and Fadya L.L.C.
- 3) Does your company use any system?We have manual system.
 - 4) What are the goals of your company?

Our goal is to provide high quality services to our customers with fair prices. Also we are planning to target more customers from outside Muscat.

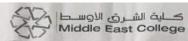
5) Does your company face any problems? What are the problems that my you face during your work?

With the high competition in this field, we are facing difficulties to attract more new customers. For this reason we are working to develop new marketing strategy and to use the social media to market our self to the customers.

- 6) Can you describe the current system of your company?
 For the time beaning, we are using manual system to take appointments and any products orders.
 - 7) Do you have future plan about the current system development?

We are planning to have electronic system, so our customers can reach us easily to book their appointments without any delay. Also the new electronic system will help to sell our products online.

2.0 Project Initiation Report



Project Initiation Report

1. Proposed Project Title

Web Based Spa Management System For Let's Relax Spa

For whom is the system being developed for?

2. Please describe the type of the project being planned.

This system being developed for (administration, reception, staff and customer). The system is a book appointment and view or select the products for customer. The customer can access to the system and they can see which services are available, times of services, with who they want to take the services and the price. This system serves to provide the time and effort of staff and customers at the same time.

3. State the reason(s) for selecting this topic (pls. mention the nature of the problem that is currently being faced and the key benefits that can be achieved by this project)

The reasons for selecting this topic because the spa has less number of staff and they are most of the time busy, on the other hand large number of customer. The customer cannot easily see the spa services, know the prices and the product only if they visit the spa or by calling. The current system at the spa is manual system and it weak system because the staff cannot easily found the data, also loss of data will be easy. In addition to that the customer should book by go to the spa or calling as opposed to the new system because the customer will contact at the spa to book an appointment through the system. The function on this project are between (administration, reception, staff and customer) in this system the administration can login to the system, make appointment and (manage the system) by add or cancel. The reception can make appointment. The staff can login, view diaries, make appointment and (manage the system) by add or cancel. The customer should be female then can make appointment, cancel appointment, view treatment type and view or select the products. In this project I will generate report system that which show many things like (number of spa customer, number of working hours and the profit

4. What will be the main challenge for you in doing this project?

- 1) (Lecture view) collect information for the project.
- 2) Time Management.
- 3) The project design.
- 4) Database design.
- 5) Development system.

Name of the Project Supervisor

Name of the Student Signature of the Student Contact No(s)

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