PROJECT REPORT FOR CICT

PROJECT TITLE

E Obituary System

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BY

YOUR NAMES

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Date: MARCH 2, 2016

Submitted in partial fulfillment of the CICT

DECLARATION

I YOUR NAME Hereby declare that this project report entitled "**E Obituary System**", submitted by me, under the guidance of my supervisor, Mr. Mburu is my own work and has not been submitted to any other College or Institute or published earlier.

Name:…….. Signature:…….. Date:……

This computer science project has been submitted for examination with the approval of the undersigned university supervisor.

Supervisor:

Name:…….. Signature:…….. Date:……

ABSTRACT

Local dailies like The Standard and Nation Media are well-known organizations that deal with publishing print as well as online newspapers. The media houses offer a lot of service though they do not have online sites for posting of obituaries, images and condolence messages. "E Obituary System" is a web based system that allows users to register, create funeral forums, post images, obituaries as well as condolence messages. It acts as a source of information regarding the deceased, funeral arrangement, burial day and location. The system has been undertaken in a predefined set of stages in which extensive research and analysis has been taken in order to ensure that the project's objectives are met.

The spiral rapid application model (RAD) was suitable for E Obituary since it is a web based application that involves incremental releases of the final project. The releases are refined incrementally throughout each time around the development cycle. The requirements needed for the system were captured using interviews, internet research and observation as the common fact finding tools. The system aims to reach the scope of internet users and bloggers especially the families of the deceased who wish to discuss the funeral arrangements online.
The method I followed was the Client/Server model in building E Obituary. I applied HTML and CSS for creating the client side user interface. Server side and database management was developed using PHP and MySQL.

DEDICATION

I lovingly dedicate this project to my mother who has been a source of inspiration throughout my life. She has been my motivation and she has given me the courage to tackle tasks with enthusiasm, hard work and determination. The project is also dedicated to my sisters and brothers who through it all they've showed me love and are a source of inspiration.

ACKNOWLEDGEMENT

I would like to thank God almightily for giving me this opportunity to undertake this project. I would further like to thank my family for all the support offered during this period. My supervisors, Mr. Mburu and Mr. KirikaNdegwa, have been the most resourceful project supervisors. I thank my supervisors fortheir patient encouragement and giving advice, insightful criticisms and many ways they provided on how to tackle the project. To my entire friends and classmates who helped in any form what so ever, I thank you sincerely. I specially thank Mr. Githaiga of DB Schenker LTD who inspired me and was a source of advice during my attachment when I came up with the idea of E Obituary System. Thank you all!

Table of **Contents**

ABBREVIATIONS

FIGURES

TABLES

CHAPTER ONE

1.1 INTRODUCTION

1.1.1 BACKGROUND

Online Obituaries is a method of publishing death announcement to a website or blog from a connected computer, filling hard copy documents downloadable from a system, mobile phone or other handheld device. The online obituaries help people especially those in the Diasporas to participate in a funeral arrangement process. The family of the deceased sends the announcement from their computers and hand held devices. The online obituary systems have been made possible by the fast internet available due to technological convergence that allows internet users to upload different media files, update status from computers and mobile devices as in the case with social sites like Facebook and Twitter.

Online obituaries are common especially in the United States where a site like *Legacy.com* publishes 75% of deaths happening in the United States. The site provides relevant information online based on the funeral arrangements, burial locations, tributes and other services for that matter. Kenyan *Obituaryhouse.com* provides a downloadable form for users to fill in the details they want to appear in the obituary. Upon payment, the death announcement is published on the site.

With "*E-Obituary System*", a user will register, create and post an obituary for it to be published, first on a free domain. The announcement will be published and made public viewable by the administrator on the native internet browsers like Google Chrome, internet explorer or Mozilla Firefox. The system allows majority of the internet users to access, read, view obituaries and participate in the forum discussions.

As the world emphasizes on mobility in communication and media devices, bringing into play, most recently mobile phones and tablets, the everyday blogger may require a platform for easily updating his/her obituary announcement on-the-go. Since most online obituary sites offer their services on the "desktops," future prospects of E-Obituary System targets on the highly unexploited mobile applications.

Introducing E-Obituary System stands high chances of viability, practicability and feasibility in Kenya. Nearly all of the media houses in Kenya do not offer online obituaries with forums where people can log in, write condolence messages and post obituaries. This project endeavored to develop an E-*Obituary* web application that would allow posting of images, obituaries and condolence messages by the deceased families.

1.1.2 Problem Definition

In Kenya today, there are online databases and online obituary websites that are being developed. Good examples are the local dailies that are available online; Daily Nation, Standard Newspaper, and systems like the Obituary House (www.obituaryhouse.com), Obituary Kenya (www.obituarykenya.net) and others. The web based systems portray a great idea on online obituary system where a user uploads the obituary and makes it viewable worldwide.

Among the few mentioned sites, most portray statically the obituary data. Despite having a commentary aspect of the site like The Obituary House site, none of the site hosts an online condolence book, an open chat forum for holding discussion for the funeral arrangement; allow users to upload obituary information online. Most of the features mentioned are an improvement from a research done on what is available in the more advanced

system especially in the U.S. example is the *Legacy.com* and the *Expressionstributes.com*. However, the two sites include a guest book to be signed by the user, while my system intends to supplement it to a form of an Online Condolence book available for users to write the condolence messages online as well as the specific funeral discussion forums.

1.1.3 Objectives

The following are the objectives that are to be achieved by E-Obituary System;

General Objective

Allow users to register, create and update funeral arrangements forums via internet access point.

Specific Objectives

1. Increase the number of death announcement posted online by introducing a user friendly interface website allowing the uploading of the data online. Target is any death occurring in an area where there is internet connection.
2. Provide accurate and timely information about the death announcement any time a user is accessing network connectivity. The objective reduces the time the information gets to target audience.
3. To provide online death records storage that allows ease of retrieval for future reference.
4. To provide administrative support, including development of an obituary blog, publishing of the obituary after it has been uploaded by user, manage chat room and handle user disclaimers.

1.1.4 Project Justification

The E-Obituary system will be a technology penetration in terms of death record storage. The local dailies organizations have web based applications that offer news online, and online static deaths announcements. However, the systems do not have an online obituary site that people can login to and write condolence messages or post obituaries of loved ones. The project endeavored to develop an *e-obituary* web application that would allow posting of images, obituaries and condolence messages by the users.
It will provide timely information delivery; store data online which provide ease in future retrieval of data.

The following are the benefits that will be achieved at the end of this project

1. Users will be able to register, create and update funeral forums.
2. The funeral forums will be given specific links for quick access.
3. Users will be able to create posts and comments
4. Users will be able to post advertisements on the websites
5. Super users will be able to moderate number of participants and followers of particular funeral forums.
6. E-Obituary will allow easy access for the admin panel for the super users.

1.1.5 Motivations for Undertaking the Project

Not many years ago I lost my father. During the period of mourning an obituary notice was posted on the Daily Nation newspaper, detailing the age, biological data and a brief history of the deceased. Though the notice was in the local newspaper for one whole week, relatives who reside in the United States of America and other

Diasporas could not access the locally found Daily Nation to read the obituary or see the photo posted. As a result a scanned copy of the obituary had to be emailed to each of them.

To me, this is a common problem to all families that have relatives residing in other countries and one time or the other had lost loved ones and their obituaries posted in the local newspaper. Thus for that reason I decided to implement my IT knowledge by developing a web application that could be used to post obituaries locally that were accessible and viewable globally via the Internet.

Having the system up and running, the idea of getting it known comes at hand. The efforts to make it known will be of great effect here. I intend to make advertisements in the local dailies, magazines and other reading materials. Another great idea of making the site known I got after my research is that of synchronizing the site with Facebook and Twitter. The site will require Facebook and Twitter accounts where users can like or recommend and "follow us". When an obituary, listing of events or any additional information is added to the site, it will automatically be added to Facebook and the Twitter accounts for the site.

1.2 General Scope and Application of the project

E-Obituary System is intended to provide a solution for internet users during funeral arrangements. Many internet users are on the internet most hours of the day as well as their social site friends and other relatives. Internet access is getting cheaper nowadays as well as faster with technologies like fiber optic and cloud computing. Hand held devices like mobile phones have internet enabled platforms that can open any website. Kenya is one of the leading countries in social internet usage. E-Obituary System will target Kenyan social site users and viewers first then span out worldwide.

The society at large will use the application as an information source for the details regarding the deceased families and funeral arrangements. The vendors will create virtual shops for providing information on available condolence cards, flower and other gifts, hearse hire etc. The system will provide the users with physical address of the deceased families.

Upon implementing a fully functioning system with a stable database, I will approach the government and other state organization that might want to embrace my idea and project as large and make use of it for the data storage of the deceased, as well as making statistical analysis using the data.

CHAPTER TWO

2.1 LITERATURE REVIEW

The body of text aims to review the critical point of current knowledge including substantive findings as well as theoretical and methodological contributions towards my project. It doesn't involve any original experimental work, just secondary sources. Chapter two of this document situates the current study within the field and scope covered by the project as well as providing context. The document gives an account of what has been published related to my project by scholars and other researchers. The document highlights on the knowledge and ideas that have been established, their weaknesses as well as strengths.

2.1.1 The Kenyan Spectator

The Kenyan Spectator wholly owned by Country images was established in 2000 to champion the interests of the African population in Kenya, prior to this country images the mother company has owned a range of media companies in Kenya and the rest of East and Central Africa. With its mission statement clearly spelled out at the onset as a newspaper of record, the organization has continued to adhere to the fundamental principles of professional journalism; thus remaining non-partisan, independent, objective and truthful in its news reporting. The organization also has a website that offers news online, but does not have an online obituary site that people can login to and write condolence messages or post obituaries of loved ones. The project endeavored to develop an *e-obituary* web application that would allow posting of images, obituaries and condolence messages by the organizations clients.

2.1.2 Allvoices.com

The site was founded two years ago by a savvy venture capitalist and a team of computer whizzes. It is a fledging website with a grand goal of being a platform for work by citizen journalists from all corners of the globe. The site is tied to events and people and it shares news, videos, images, opinions and obituaries. People worldwide submit stories, photos and videos, and then those submissions are combined with related articles aggregated from mainstream news sources.

The site has only computers and no human editor to monitor content (indeed, the site touts the fact that it is "unedited by humans") making it have mistakes. There is plenty of kooky stuff that has made the site lose accreditation. The site also aggregates mainstream news content without links for individual stories that point directly to the original article and the news organization that produced it. It has few obituary announcement targeted just for the famous people. Good example is the current postings of condolence messages just targeted for the late Prof. WangariMathai. The site doesn't update obituaries frequently.

2.1.3 The ObituaryHouse.com

I highly acknowledge and appreciate the great work done by a fellow student from Jomo Kenyatta University of Agriculture and Technology. The obituary site has a lot of adorable features that also gave me ideas of what to include in my site. The site has features of viewing the obituaries, where all the listed and uploaded details can be viewed by any user. An interesting idea is the synchronization of the site with the social sites - Facebook and

Twitter. Any added obituary to the site uploads details in the Facebook and Twitter pages for that site. This works to send the death announcement to a wider span and scope of readers and bloggers. Apart from new obituaries, the site includes anniversary celebrations and memorials.
However, the site has been stuffed a lot with some feature like blogs and adverts that deviates the whole idea of qualifying the site as a good obituary informative sites. The blogs in the site talks of celebrity gossip and other unnecessary stuff. The adverts are far from what is meant to be the basic function of the site. The adverts are for jewelries, bracelets and used and new cars being sold.
My project targets on adding features like a user friendly chat subsystem where the family and friends will be holding online chats and forums for funeral arrangements. On addition, my site will feature an online condolence book for an individual that will be stored for future reference. I will host videos in two ways; using YouTube API and viewing videos in the web application as well as a feature to download the funeral videos. The system will have open forums where any user can comment to the administrator, discuss on any topic as well as encourage each other.

2.1.4 High Tech, High Touch: Library Customer Service through Technology

Lynn Jurewicz and Todd Cutler's *High Tech, High Touch* supports a narrative description and screenshots and is a springboard for designing customized systems that address unique local services issues. Library directors, branch managers and heads of departments can automate the most tedious library tasks while improving customer service and saving time. This project has a component that maintains its own obituary indexes for researchers to use. The authors profile a grant-funded project they worked on together to develop an email alerting service that notified library and database users of the new materials added to the system- new books, articles, upcoming events, obituaries etc. the authors also explain how the system can be expanded to provide and manage for events and meeting rooms.

The online obituary database makes the data available to any individual who is on a computer in the library or has internet at home. The records can be searched using keywords rather than thumbing through index cards. An example is the Mooresville Public Library that has collected 21,000 obituaries from newspapers and residents scrapbook collections over thirty year period. The database is the key component that makes an online obituary system function. The web pages are useless without data in the database and the obituary database is not as complicated as other systems that have been developed. It may usually consist of one table that may include the fields that make up the obituary. The ultimate goal is to transfer data from the index cards to database in a consistent manner that can be searched. In this scenario, staff interface will consist of a webpage for viewing and searching lists of existing entries, a web page for editing existing entries, and a web page for entering new entries. The web browser is the only tool, or software, that a staff member needs to keep the database updated, with the Add and Edit pages being on the same page. The system will have a patron interface that obviously needs a way to view the obituaries in the database. Some type of searching capability is a must. The database will thus provide a way of housing information as well as sorting, searching and retrieving data in various ways.

The idea got from this narrative demonstration involves online uploading of the obituary by the registered staff that has the rights. In my system, I prefer to call them system administrators. Also meaningful

idea is that of having a patron account with limited access rights, which on my system I refer to as users. Idea of searching for a specific obituary from a database will also be implemented in my system as borrowed from the narration.

On my system, the scope will not be limited to the library visitors, in contrast to the above narration. However, my stem will be accessible by any person worldwide who has access to the internet. I will also have an additional feature of a chat forum for holding online funeral arrangements, as well as an online obituary book for the obituary. My system will allow streaming of funeral videos as well as allowing users to upload photos. The videos may be downloaded by users. My system will have a guest book and open forums feature.

2.1.5 Naked in Cyberspace: How to Find Personal Information Online- Deaths in the News

When the famous die, you can expect to find information about them and their deaths in the newspapers, magazines and often even television or radio scripts. News of a celebrity death is often accompanied by information summarizing the subject's accomplishments and events in their lives. The news may also contain articles about the deaths of the less celebrated individuals. People who die in accidents or who suffer violent deaths are often featured in news stories. At times, those who die under normal circumstances may be mentioned within other articles or may be featured in an obituary, particularly in local newspapers, many of which are now available online. Obituaries usually also lists surviving members, which can provide a lead to further information about the subject. New database vendors sometimes make it simpler to search for deceased by coding obituaries in such a way that are easy to locate. A good example is Factiva that uses the code N/OBT to identify obituaries in the Press Release Wires.
Genealogists are also interested in obituaries, thus encouraging some efforts to be made in compiling obituary databases from newspapers. Good example is the Legacy.com that offers an obituary finder searching more than 1000 newspapers, searchable by name, keyword or newspaper or at its site (www.legacy.com/legacyhome.asp).

Free obituaries On-line can be searched at www.king.igs.net. Obituary daily times is a compilation of daily obituaries by volunteers at www.rootsweb.com/~obituary. Other sites are available for people to register obituaries for their own loved ones on the internet, including The Virtual Memorial Garden (www.monument.to/vmg) and The Worldwide Cemetery (www.cemetry.org).

These and many other databases offer death records online. Other web sites are dedicated to dead musicians, dead sports men like soccer legends and other deceased celebrities. The information above inspired me by giving me the idea of coming up with an online obituary system that will cater for all individuals, not just the famous and the celebrities. Apart from gathering data from the newspapers, the system will allow the uploading of information of the obituary of the deceased. A chat forum for funeral arrangements will also be available.

*2.1.6 Expressions Tributes (**www.expressionstributes.com**)*

The site introduces the expressions CMS program. The program gives the funeral director the freedom to use expressions CMS to simply be online as little as ten minutes. The system gives the user a step-by-step guide in building own website with ease. It provides a library from where the user chooses the designs suited for funeral home. It includes the Exclusive Expressions Tributes Online Obituary System. There is easy to use interface, add and delete pages, many beautiful websites templates, help visitors find your funeral home with

both a Google map and written directions, automatically provide contact information and directions for all your locations. There is a place for user to provide the list of upcoming events, both at the funeral home and in the community. There is an easy create photo gallery, link to Facebook page and an interactive testimonials page.

Expressions Tributes is a world-class obituary system that offers a combination of over 80 background choices, and 60 music selections to personalize each online tribute you create. All this is done at a fee by any user.

My site will not implement an area for a user to create a "sub-site" or a webpage for their Funeral Home. However, the already uploaded obituary photo will be a link connecting to the deceased's blog where the user will be able to view all the required details about the deceased, the progress in the funeral arrangements, physical address, date and place of burial, as well as the contact details.

The chat forum will allow for online hosting of funeral arrangement where many users can log in to the system and discuss issues pertaining to the funeral. At the same time, a guest book will be replaced by an online condolence book where users can write condolence messages online from anywhere in the world. The web application allows users to upload photos, view and stream videos as well as download funeral videos of interest.

2.1.7 Legacy.com

Legacy.com has and its newspaper affiliates publish obituaries for approximately 75 percent of people who die in the U.S. - and the site is updated continuously throughout each day. It is also used as a government record for all the U.S. deaths. A user can find an obituary, sign a guest book or build an interactive memorial. An individual can get directions to a funeral home, order flowers or donate to charity. Also available is an online discussion that an individual can participate in as well as reading advice from experts.

From the site, *legacy.com*, comes my idea of a site which will also be hired by the government as the official record holder for the death of the country's citizens, locally and abroad in the Diasporas. The site includes a map for giving the details and physical address to the deceased home, as well as online ordering for flowers, and donations to charity. My site will include an online e-shop for flowers, gifts to the deceased and also give details for the donations to reach the family and relatives of the deceased.

Some of the improvements in my site will involve the hosting of an online condolence book for all the already uploaded obituaries. Each deceased person will have an online condolence book where family members, friend and relatives will be writing their condolence messages.

2.1.8 Obituary Kenya

Obituary Kenya, (www.obituarykenya.net), offers two major services. The services are advertisements for funerals in Kenya through internet services to cover the community locally and in Diaspora. Under this, the system connects the people to their community in grief moments and provides an online note pad for the condolence.

The site also has advertisement for the photography for funerals. They offer photography, both still and video photography which they later archive in the server for viewing over the internet.

Both the above services are great ideas the developers and designers of the site had. However, I tend to differ that most of the funerals happening; it will be possible for the photography service. This brings me to my idea of implementing my site to allow the users and the family of the deceased to send the information,

including the details and the photos to the administrator. The administrator will then function to upload and making the photos public to be viewed online by the users. This will be regardless of where the funeral took place, thus eliminating transport barrier accommodating for wide area coverage.

Also availability of a condolence book for each obituary, and a chat forum for holding funeral arrangements further advocates my site more in terms of additional features and services offered for the subject matter.

CHAPTER THREE

3.1 METHODOLOGY

Rapid Application Development (RAD) is the preferred methodology for the development of the web application. RAD is a methodology will compress the analysis, design, build, and test phases into a series of short, iterative development cycles (Figure 1). This has a number of distinct advantages over the traditional sequential development model. An application is built in a four-step process supporting an incremental or prototype process model. Each step focuses on a particular design concern, and an object-oriented model is built : -

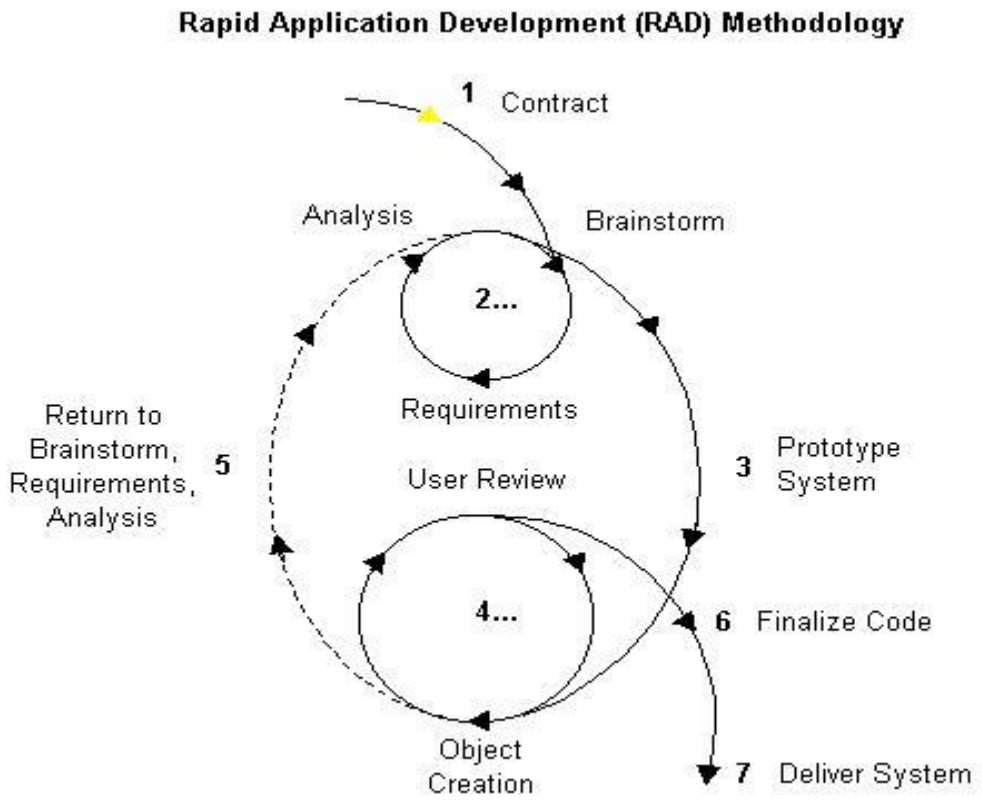


Figure 1: RAD methodology phases

3.1.1 Why RAD?

The RAD method has a task list and a work breakdown structure that is designed for speed. Among the most important are:

- **Prototyping** - an approach based on creating a demonstrable result as early as possible and refining that result. The refinement is based on feedback from the business, the eventual users of the system. Prototyping requires an open approach to development; it also requires an emphasis on relationship management and change management. There are dangers involved in starting prototype development too early and in starting it too late.
- **Iteration** - is a commitment to incremental development based on refinement. Prototyping and iteration go hand in hand.
- **Time boxing** - is a management technique that focuses attention on delivery above all else. Under a time box

scope can change but delivery cannot.

3.1.2 Fact Finding

Fact finding tools aimed at collecting information that forms the building blocks for E-Obituary System examination.

Facts Collected

Data I collected created useful information. Processes needed to carry out the objectives are also collected. How the system interacts with the users is an area worth studying. The facts on the storage for that data and processes and how interfaces happen is also important to collect.

Facts Finding Tools Used

My project applied three techniques during the development. These were the most suitable techniques depending on my personal opinions and views on the advantages and disadvantages.

Study and Sampling of Existing documentation, forms and Databases

Most facts were collected from existing documentation rather than the people. These documents include customers' complaints, evolutions and history of related projects, information systems project requests - past and present, sample of manual and computerized databases.

Critical study on *High Tech, High Touch: Library Customer Service Through Technology* reveals a lot of crucial facts (Jurewicz). Previous works was tedious but using technology will improve customer service and save time in the libraries. Obituaries are maintained for researchers to use. Unlike the manual use of books as database, the online obituary database will make the data available to any individual on a computer in the library, or has internet at home. Keywords will ease the searching process rather than the traditional thumbing through the index cards. An example is in Mooresville Public Library that has collected 21,000 obituaries form newspapers resident's scrapbooks over thirty year period.

Commonly-used-condolence books wear and tear with time. They offer a limited storage that is challenging to retrieve in future. Sampling this fact resulted to emergence of the idea of making the condolence book, with the endless obvious advantages of unlimited space, ease of future retrieval and overcomes wear and tear.

Research and Site Visits

The second fact finding technique was a thorough research of the application and the problem. I read computer journals, blogs, reference books and visited websites. In my literature review, I extensively mentioned several sites that I visited during my research. I acknowledged the developers efforts in inventing great ideas that they expressed in their sites. I borrowed a lot of facts from the sites. At the same time, I was able to gather the facts of what already exists in this area, and what I think should be done to improve.

Sites researched on and visited include The Kenyan Spectator, Allvoices.com, The Obituary House.com, High Tech, High Touch: Library Customer Service Through Technology, Naked in Cyberspace, legacy.com among others.

Interviews

The technique of interview may go together with the technique of observation of the environment. All personal interviews emerged from participating or watching people perform activities in funeral arrangements. The 4W's of who, what, when and why results to facts that was crucial in my project.

From what I observed, I engaged in face to face technique of fact collection. This technique was crucial in finding, verifying and clarifying facts. I involved the end users which helped me identify requirements with ease. Listen, listen and listen were my principles. I tried my best to use clear and concise language and I avoided my opinions in the interview questions. I applied simple and short questions.

3.1.3 System Analysis

E-Obituary System adopts a **Client/Server Model** where the **Client** is the web interface that serves a medium where the user posts data and saves it to a database hosted by the server. The **Server** renders the data, validates and saves it into a MySQL database. When a viewer (client) requests for an obituary post the server will render the request and respond to the request.

The above is implemented via HTML/XHTML, CSS, PHP, MySQL and the Apache2 server. HTML/XHTML and CSS is used to create the client side while PHP is used as the server-side scripting language. The DBMS in use is MySQL, and all these are powered by the Apache2 Server.

HTML and CSS is used to create the user interface which includes forms, buttons, dropdown lists, etc. PHP as earlier mentioned is used as a server-side scripting language. It specifically validates forms, verifies them and supports embedding of SQL query strings used in querying the MySQL database.

3.1.4 Requirements Analysis

By definition, "Requirements analysis is the process of developing software specifications that are intended to communicate the system needs of the customer to the system developers." (Ian Sommerville, Software Engineering, 9th edition.)

The term "Requirement" is not consistently used in the software industry. In some cases, a requirement is simply a high-level, abstract statement of a service that a system should provide or a constraint on a system. Software system requirements are often classified as *functional* or *non-functional requirements*. In the following section, gives in detail, the Functional and Non- Functional requirements

Functional Requirements

i. A user should be able to create a funeral and access it at any given time and place. The assumption here is that the network service from the internet service provider shall always be available.
ii. A user should be able to post funeral meetings to a specific forum and moderate the participants in the meeting at any given time and place.
iii. Each user using the system shall be uniquely identified by his/her username/email address
iv. Each funeral forum shall be assigned a name and it will be identified using the deceased name.
v. The system shall allow site viewers/followers to read a comments at any time and place
vi. Users who are registered shall be allowed to make comments.

Non-Functional requirements

Speed
Be fast in terms of processed transactions/second. The user/event response time screens refresh time.

Size

Occupy less server memory and the database should be able to handle and save all data types.

Ease of use

Be learnable and easy to use for all types of users i.e. novice users, expert users and infrequent users.

Reliability

Minimum meantime to failure, low probability of unavailability and rate of failure occurrence. It should be available at all times.

Robustness

Time to restart after failure, percentage of events causing failure, probability of data corruption on failure.

Portability

Percentage of target dependent statements, number of target systems

Security

Username and password verification, data encryption, user/participant moderation, basic sever side security measures.

3.1.5 Development

E-Obituary System was implemented using HTML/XHTML, CSS, PHP and MySQL. As is with the **RadomApplication Development M**odel, during the development cycle, prototypes were frequently released for user reviews, testing and debugging. Risk assessment and management was also carried out as the development of **E-Obituary System** continued.

3.1.6 Deployment

Release

During the course of development, E-Obituary System prototypes were and shall continue to be released for user testing and reviews. The prototypes and final application shall be hosted on the server.

Install and activate

The application is installed on the server and is accessible via the native web browsers on the PC and other hand-held devices.

Versioning and Update

The versioning shall continue with every release of the E-Obituary System prototype. Updates shall be implemented once a newer version of E-Obituary System has been released.

3.2 PROCESS ANALYSIS

3.2.1 Process Analysis

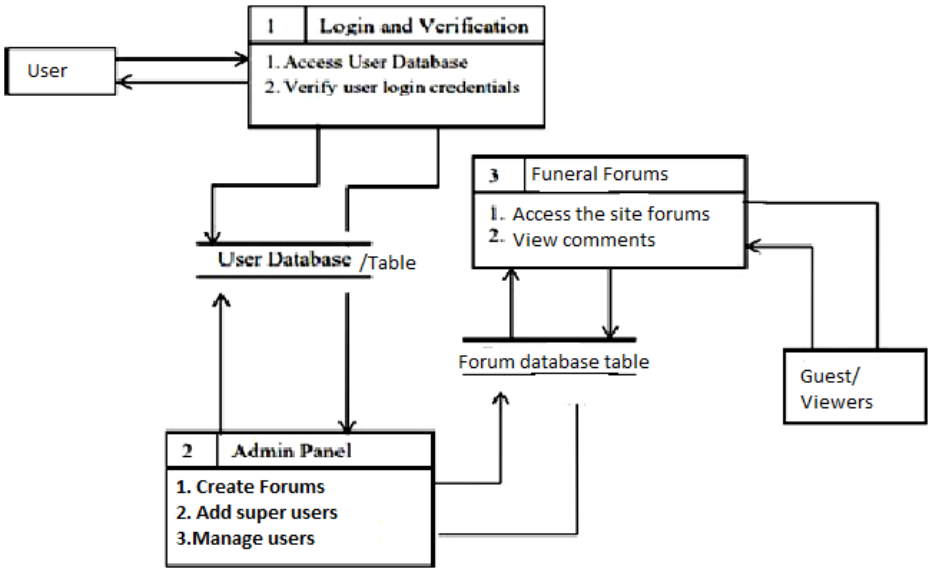
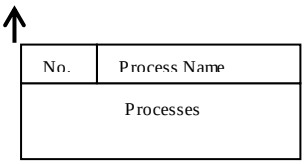


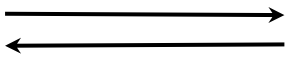
Figure 2: E-Obituary System Process Analysis

Symbols:

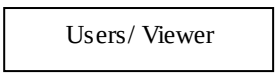
Process:



Data flow



External Entity



Data Flow Diagram

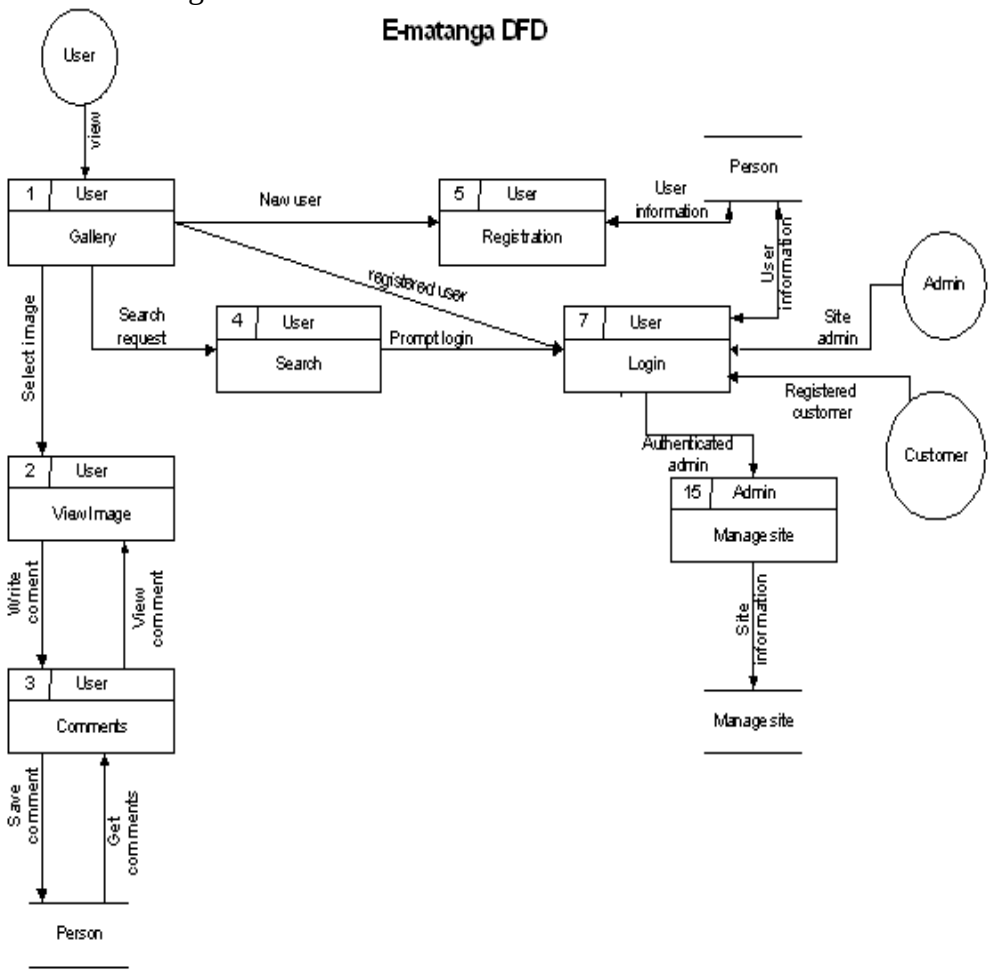
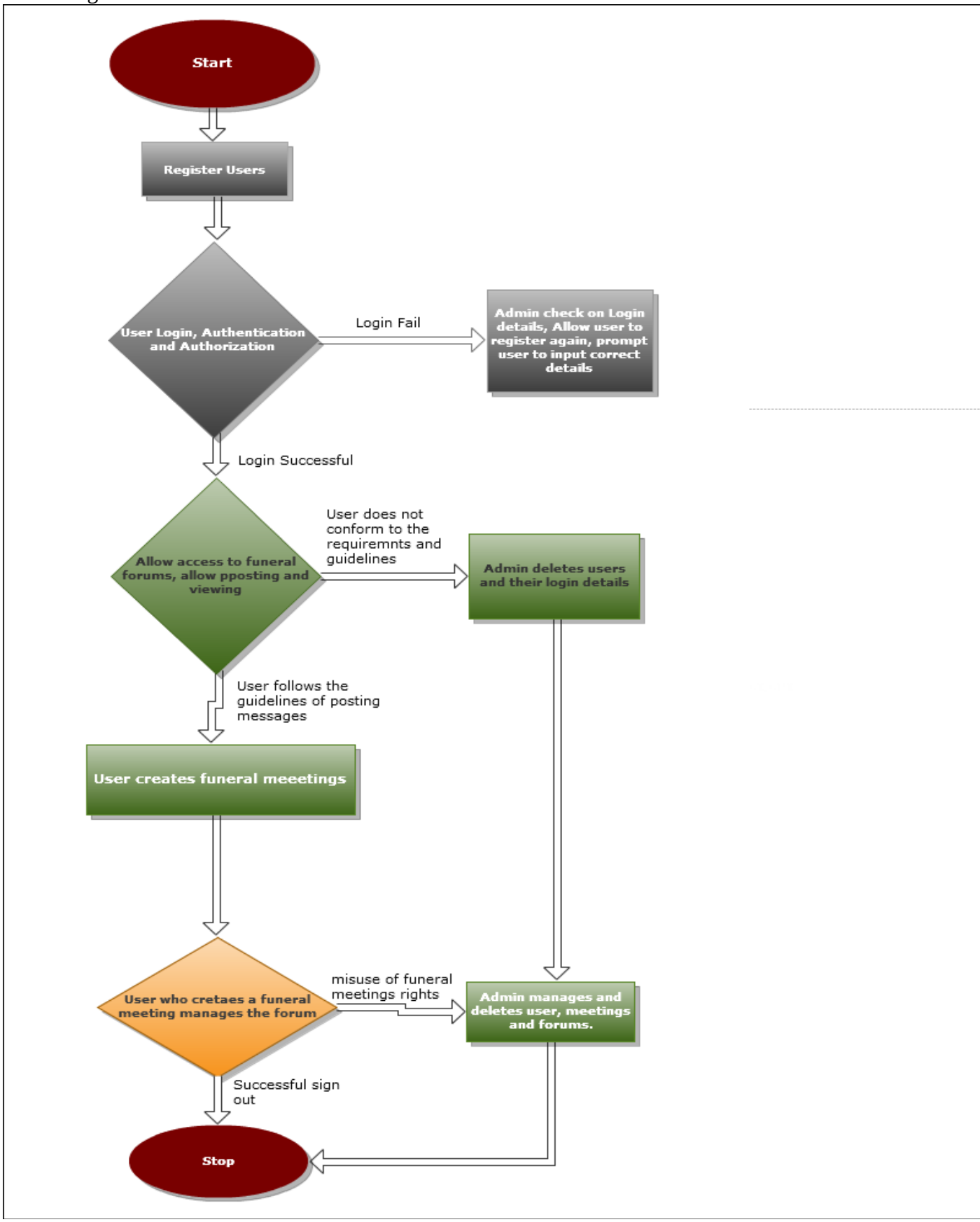


Figure 3: Data flow Diagram

Figure 4: Flow Chart



Use Cases

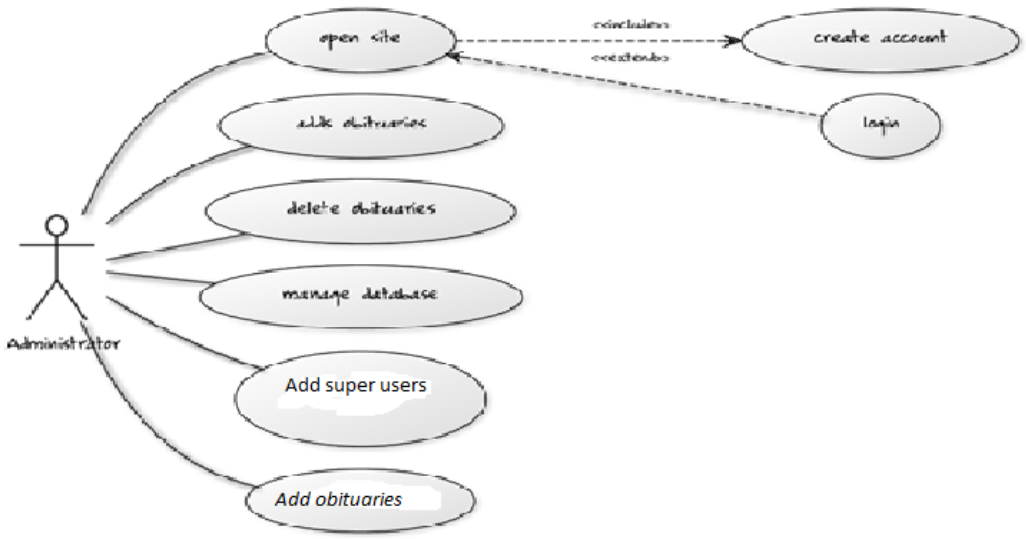


Figure 5: Administrator Use Case

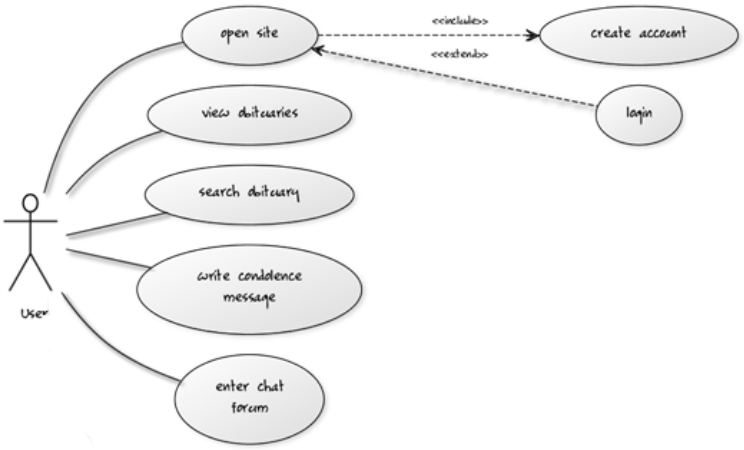


Figure 6: User case

3.2.2Process SpecificationForm

Number:	1
Name:	Login andVerification
Description:	TheUserenters his**username**and**password**.
	Theuserdatabaseisaccessed to verifythe userlogin credentials.
	IfTRUE, the userislogged in, otherwise requestedto register fora new forum.
Input DataFlow:	Admin LoginFormfromtheAdminPanel
UserRecordfromdata store	
OutputDataFlow:	Login is successfulandredirected to create_cat Panel
	Otherwise give warning message
Type ofprocess:	Online

Number:	2
Name:	Admin Panel
Description:	Access E-Obituary Database
	The site Admin createsoredits funeral forums. Theadmin maycreate pagesand categories Theadmin moderates users and can delete the users and forums.
Update Obituary Databse	
Input DataFlow:	New Forum form Admin access Panel
New forum/CategoryFormfromthe	Admin Panel
	Manage Users/Forums/Meetings Formfromthe Admin Panel
OutputDataFlow:	Created Forums/Pages/Categories
	Manage users and forums
	UpdateEobituary database Database
Type ofprocess:	Online

Number:	3
Name:	**E-**Obituary Site
Description:	Access Obituary Database.
Read/View forums and comments.	
	Create Comments on forum
Input DataFlow:	New CommentFormfromtheGuest/user Panel
OutputDataFlow:	Forums/Pages/Categories
	Comments
Type ofprocess:	Online

3.2.3Structured English

```
GET e-Obituary Home Page
        BEGIN IF
                IF select link is "AddFuneralForum"
                        THEN GET Registration Form
                                BEGIN IF
                                        IF selected user does not exist
        THEN    ADD forum to database
                                        ADD forum information to database
                                        WRITE deceased name as a link
                                        ADD forum to the categories
                        ELSE
                                THEN    ADD forum to database
                                        ADD user info to database
                                        WRITE name of the forum
        ADD forum to categories
                                END IF
                ELSE
                        THEN    GET Login Form
                                GET user details from database
                                GET forum details from database
        END IF


GET e Obituary Home Page
GET funeral forums page
        GENERATE pages and forums
        BEGIN IF
                IF selected link is "Deceased Name"
                        THEN    GENERATE specific funeral forum
                                GENERATE comments form
                                BEGIN IF
                                        IF comments is filled and submitted
                                                THEN    ADD comments to database
                                        ELSE    DO nothing
                                END IF
                ELSE DO nothing
        END IF
```

3.3DATA ANALYSIS

3.3.1 Data Specification

The data which used in E Obituary System can be divided into two parts:

User information

User information is the data used to describe any user who is registered and has an account in E Obituary:

Webpage information

Webpage information is the data used to describe the webpage that is created as well as the designed forums:

i. CategoriesTable
ii. CommentsTable
iii. Posts Table
iv. MembersTable
v. DeadmembersTable
vi. Photos table
vii. Thread list table
viii. Topic table

3.3.2Database Specification

TableName	Column Name	Column Type	Size	ColumnStatus	Key Name
Ctegories	Cat_id	int	8	NOTNULL	PRIMARY
	cat_name	varchar	255	NOTNULL	
	County	varchar	100	NOTNULL	
	Cat_description	Varchar	255	NOTNULL	
Comment	Commentid	int	11	NOTNULL	PRIMARY
	Name	varchar	30	NOTNULL	
	Content	Varchar	300	NOTNULL	
	Comsubid	Int	11	NOTNULL	UNIQUE
	Images	Varchar	30	NOTNULL	
Deadmembers	Id	int	11	NOTNULL	PRIMARY
	Fname	Varchar	100	NOTNULL	
	Mname	Varchar	100	NOTNULL	
	Lname	Varchar	100	NOTNULL	
	Age	Varchar	100	NOTNULL	
	County	varchar	100	NOTNULL	
Members	Id	int	11	NOTNULL	PRIMARY
	Fname	Varchar	100	NOTNULL	
	Mname	Varchar	100	NOTNULL	
	Lname	Varchar	100	NOTNULL	
	Country	Varchar	100	NOTNULL	
	County	varchar	100	NOTNULL	
Photos	Id	Int	11	NOTNULL	PRIMARY
	Location	Varchar	100	NOTNULL	
	Name	Varchar	100	NOTNULL	
	Burialsite	varchar	100	NOTNULL	
posts	Post_id	int	8	NOTNULL	PRIMARY
	Post_content	text		NOTNULL	
	Post_date	datetime		NOTNULL	
	Post_topic	int	8	NOTNULL	
	Post_by	int	8	NOTNULL	
topics	Topic_id	int	8	NOTNULL	PRIMARY
	Topic_subject	varchar	255	NOTNULL	
	Topic_date	datetime		NOTNULL	
	Topic_cat	Int	8	NOTNULL	FOREIGN
	Topic_by	int	8	NOTNULL	FOREIGN
users	User_id	int	8	NOTNULL	PRIMARY
	User_name	varchar	30	NOTNULL	
	User_pass	varchar	255	NOTNULL	ENCRYPTED
	User_email	varchar	255	NOTNULL	
	User_date	Datetime		NOTNULL	
	User_level	int	8	NOTNULL	

Table 1: Database Specification

3.3.3ERD Model

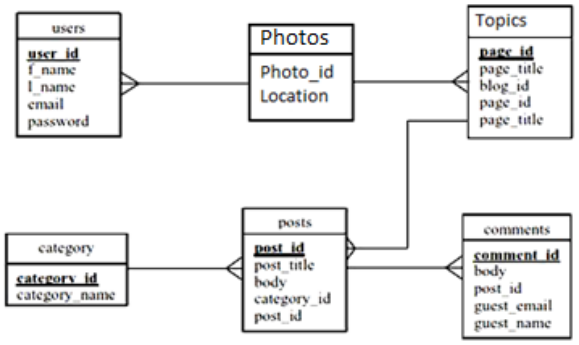


Figure 7:E Obituary ERD Model

3.3.4Data Dictionary

Name:	Users
Aliases:	VIEWERS
When/How used:	Create/edit funeral obituary, create funeral topics/ meetings, categories, superuser moderates who participates (input) View obituaries, funeral forums, topics, posts and comments (Output)
Description:	user_id = *an integer that serves as a unique identifier/primary key to identify the person creating a funeral topic* user_name = *a string that represents the name of the user* user_pass= * a string that represents the password of the user / encrypted * email = *a string that represents the email address of the user * user_level = *an integer, either 0,1 or 2 that represents the privileges given to users *

Name:	categories
Aliases:	<none>
When/How used:	Keeps a record of the registered and approved funeral forums (Input) Provide the superuser, administrator and viewer with funeral details (Output)
Description:	cat_id = *an integer that serves as a unique identifier/primary key to identify and differentiate the funeral forums * cat_name = *a string that represents the name of the funeral forum* county = *a string that serves represents the county of the deceased * cat_description = *a string that gives the key words and description of a funeral forum*

Name:	Topics
Aliases:	Meetings

When/How used:	Provide a form to allow comments and posts (Input) Display the posts and comments for a particular topic that belongs to a particular forum (Output)
Description:	topic_id = *an integer that serves as a unique identifier/primary key to identify and differentiate the topics in the categories* topic_subject = *a string that represents the name of the topic in a category* topic_date = *a datetime variable that records the date a particular topic was created* topic_cat= *an integer that serves as a unique identifier/primary key to identify and link the topics to their respective categories* topic_by = *an inteher that serves as a unique identifier/primary key to identify the user who creates a topic*

Name:	Posts
Aliases:	Threadlists
When/How used:	The content/a set of strings that the users posts to the funeral forums (Input) The content/a set of strings that are displayed in the funeral forums (Output)
Description:	post_id = *an integer that serves as a unique identifier/primary key to identify and differentiate the funeral forum posts * post_content = *a string that contains the contents of a post* post_id = *a datetime variable that records the date and time a particular post is created* post_topic = *an integer that serves as a unique identifier/primary key to identify and link the posts to the forum category topic* post_by = * an integer that serves as a unique identifier/primary key to identify and link the posts to the users creating that post *

Name:	Comments
Aliases:	<none>
When/How used:	Receive post comments (Input) Retrieve and display post comments (Output)
Description:	commentid = *an integer that serves as a unique identifier/primary key to identify and differentiate the guest post comments * name = *a string that contains the name of the user making comment* content = *content of a comment by users* comsubid = *an integer that serves as a unique identifier/primary key to identify and link the comments to other related comments*

3.4DECISION ANALYSIS

3.4.1Decision Tree

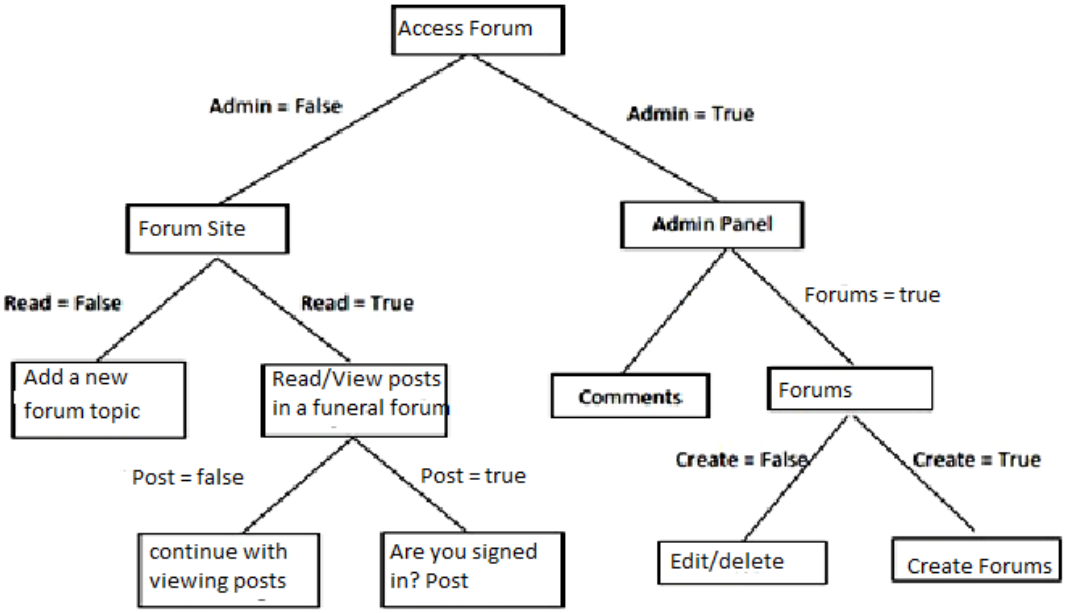


Figure 8: E Obituary Decision Tree

3.5DESIGN ANALYSIS

3.5.1 Output Design

This design concerns what emerges from the system for the user to act upon. The output in E Obituary System is in form of web pages in screen displays (i.e. HTML and PHP web pages).

The following are the basic objectives of the output design in E Obituary System:

1. Accuracy

   The information is free from error. Posts should be displayed in a manner that suits each web page. The page should display accurate data and the funeral forums posts should appear in a specified funeral topics and categories.

2. Output media

   E Obituary data is displayed using the monitor and mobile media screen. The display screen should consider different screen sizes for computers, laptops, tabs and mobile phones.

3. Cost

   E Obituary System design of output process is as cost effective and inexpensive as possible as the screen displays data from the internet.

4. The output should be easy to use and acceptable to all PC's connected to an internet as well as phones and their browsers.

The following factors have been considered during the output design:

1. Contents and format of output

   The web pages in E Obituary should be visible in any browser, Mozilla, Opera, Internet Explorer as well as Google Chrome and viewable in all screen sizes.
2. Output medium

   Since the output media is a screen, all the elements in the webpage should be visible and legible.
3. Frequency and timing of production

   E Obituary may be accessed and viewed at any time of the day. The output i.e. web pages, should be visible in a consistent manner.
4. Cost

   The medium of output should as cost effective as possible.

3.5.2 Input Design

E Obituary's input includes the following:

1. Forumcreation
2. Comments
3. Posts
4. Other Links e.g. categories (Ads)

With this in mind, web forms are used to input this data into the E Obituary database. Forms are the most common and preferred way of inputting data in any online/web based system. PHP and JavaScript is used for input data validation and verification.

These forms range from registration forms, login forms to forum topic posting forms. The following are samples of the forms designed:

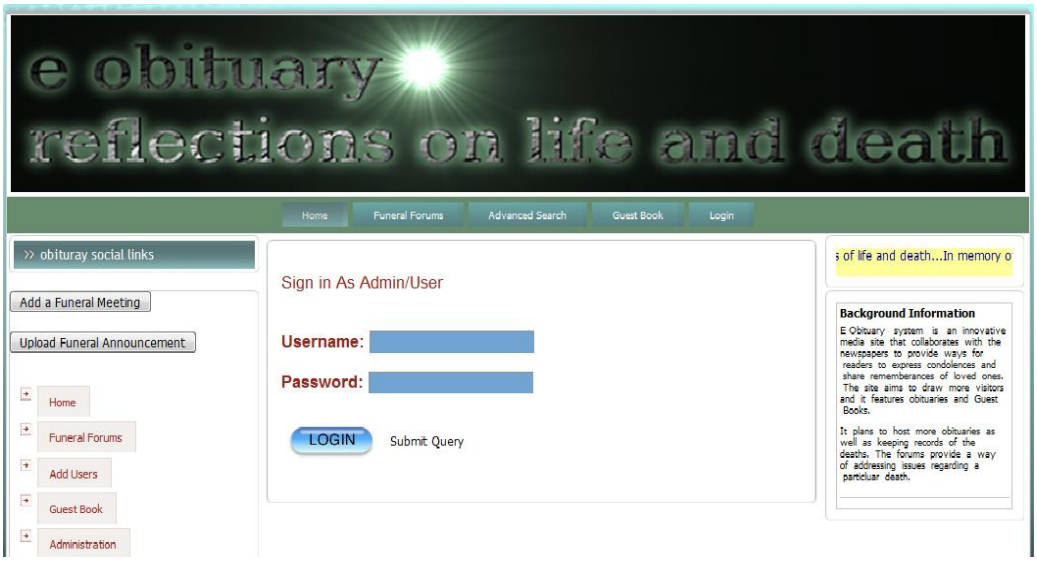


Figure 9: E Obituary Login Form

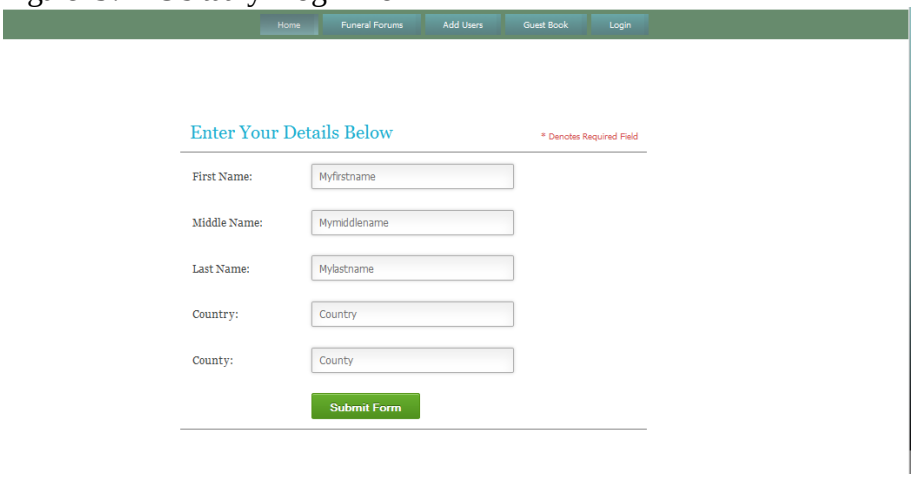


Figure 10: New user registration form

3.5.3 Process Design

E Obituary System is an online application, and it requires the development to address several process designs:

1. What task the system must carry out e.g. a task which requires sorting, or do these tasks require intensive processing manipulation? Web applications can have higher processing capabilities with the current technology. E Obituary system should be able to provide "light" web pages that will easily be processed by the native browsers.
2. How data in the files, which are being input in the system, will be converted into information. E Obituary System data is saved by a databases hosted by the server. That data should be converted at the server side reducing the need for the client browser to perform the conversions which in turn reduces the processing power needed to convert the data at the client browser.
3. How conveniently on can break down the tasks within the system to manageable units or programs. E Obituary System being a web application, modularity comes in as an advantage. Web applications are divided into modules that are easy to debug and upgrade.

3.6 SCHEDULING AND BUDGETING

3.6.1 Resources

Hardware

1. Laptop/Desktop Computer
2. Cable Network
3. Internet Modem
4. Camera/ Camcorder

Software

1. Apache2 Server
2. PHP 5.4
3. MySQL 5.5 DBMS
4. Mozilla/Google Chrome/ Internet Explorer
5. Adobe Dreamweaver CS5.5

3.6.2 Budgeting

Item Required	**Description**	**Cost**
Hardware	Laptop /Compaq Presario CQ56	40,000/=
Software	Dreamweaver (Licensed)	5,000/=
Printing Material/Documentation	Proposal, progress and final documentation	1,000/=
Safaricom Modem	Huawei modem	2,500/=
Data Bundles	Subscription and purchase of data	5,000/=
Sundry	Transport and other sundry	1,500/=
	TOTALS	**55,000/=**

Table 2: E Obituary System Budgeting

3.6.3 Schedule

	2012							
	APR	MAY	JUNE	JULY	AUG	SEP	OCT	NOV
RESEARCH								
PRESENTATION								
ANALYSIS								
DESIGN								
CODE GENERATION								
TESTING AND DEBUGGING								
DOCUMENTATION								

Table 3: A Basic Gantt chart for the E Obituary Development

CHAPTER FOUR

4.1 TESTING AND RESULTS

In this section I shall demonstrate some few test case of E Obituary then give the results generated by the system.

4.1.1 Forum Registration

The test case below is for a funeral forum registration/ creation for a sample forum with the name "George Saitoti". The screenshots and results are shown below:

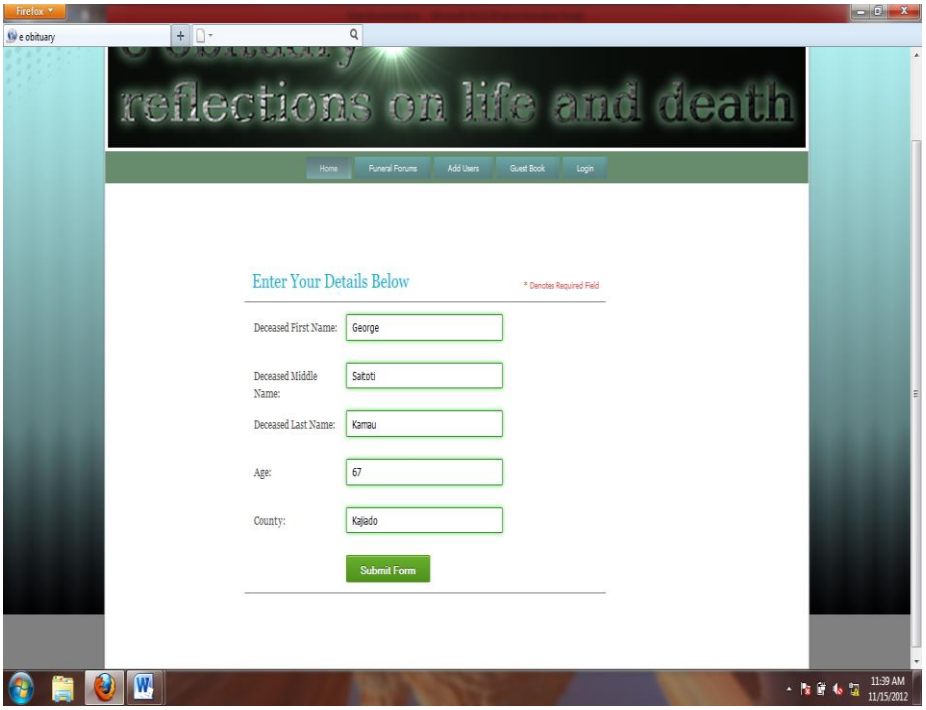


Figure : Form for Registering Obituary

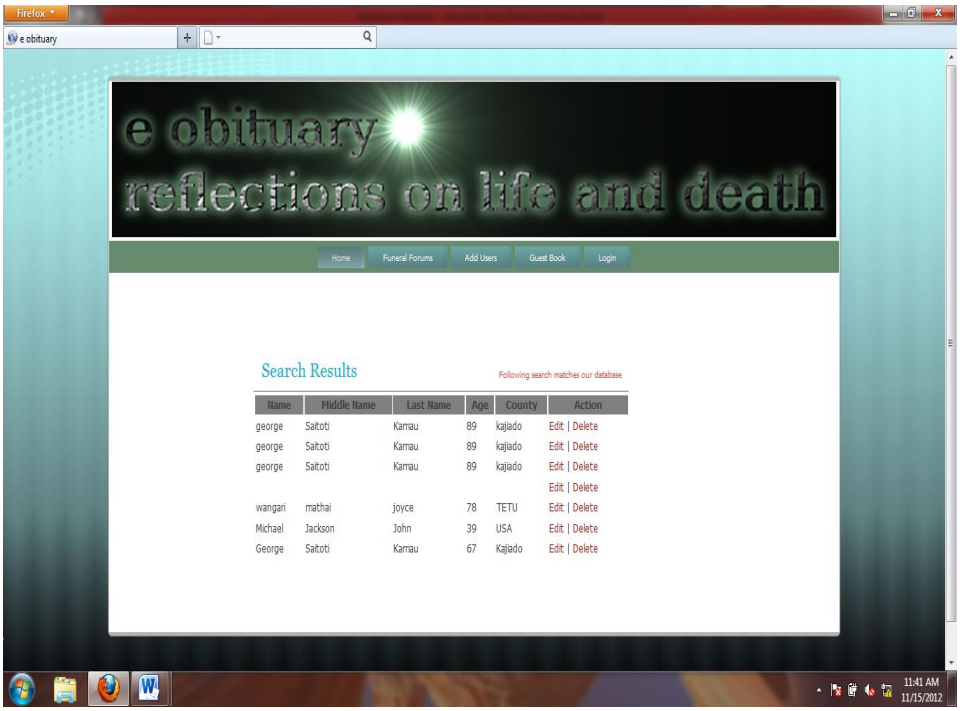


Figure 11: Admin reference to open Funeral Forums

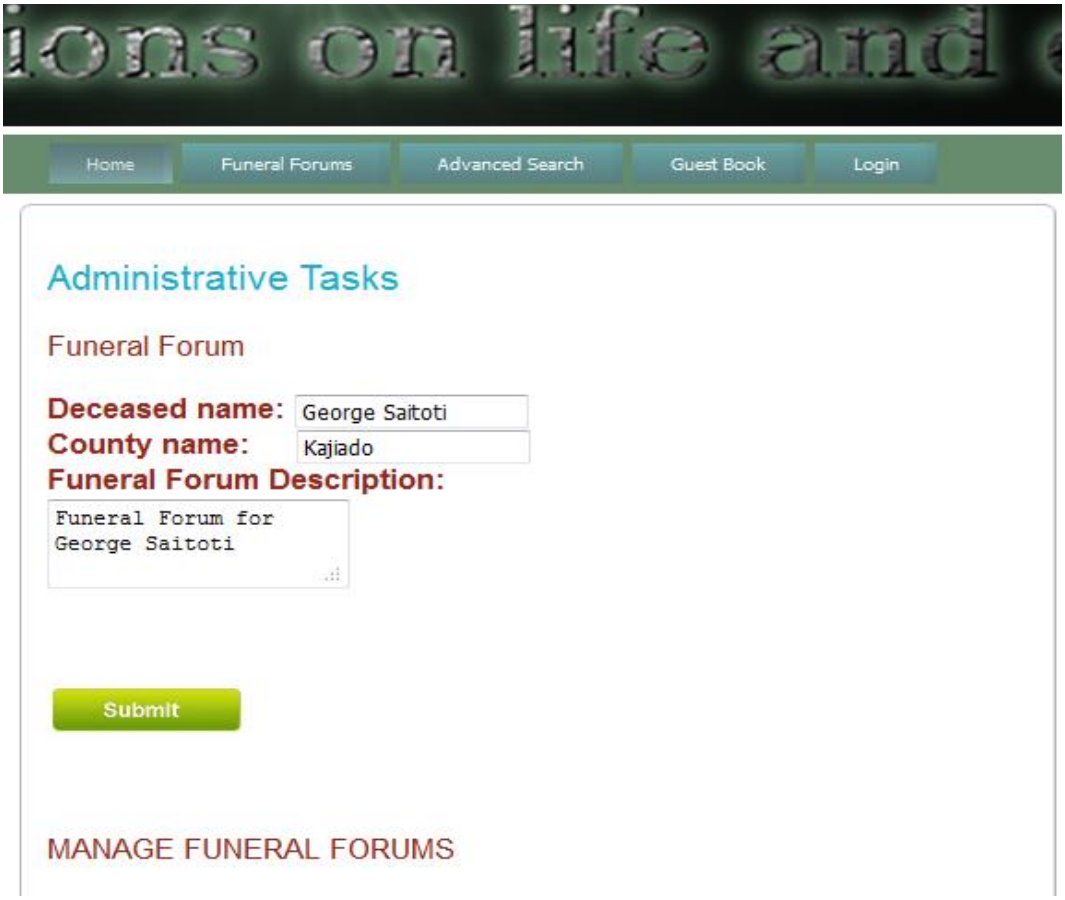


Figure 12: Approval for theFuneral Forum

If successful i.e. no errors have occurred, the following are the expected results:

1. Sub account created, i.e. "George Saitoti" funeral forum page. Once accessed the created funeral forum will be available online.
2. The forum subdirectory will be created in the main web application directory in the server with a copy of the user files
3. The forum and user data will be registered into the database and the forum link made unavailable to other registering users.

The user creating the obituary will be given a super user account with privileges to open and moderate accounts for participants.

Figure 13: Created Forums

An empty form is submitted	You have submitted an empty form!
A user submits the registration form with an empty First Name field	Please enter your First Name!
A user submits the registration form with an empty Last Name field	Please enter your Last Name!
A user submits the registration form with an empty country field	Please enter your Country!
A user submits the registration form with an emptycounty name	Please enter Your County!
A user submits the Forum registration form with an empty fields	Please enter the Fields!

Table 4: Test Case and Error Messages for New members Registration Modules

4.1.2Admin Login

The test case below is for Admin Panel. The system uses user levels to address admin privileges. A normal user is given user_level 0, an superuser is given user_level 1 and the overall system administrator is user_level 2. The screenshots and results are shown below:

The admin logs in just like a normal user but his user Id and Password are assigned user_level 2. This gives the admin overall privileges in using the system.

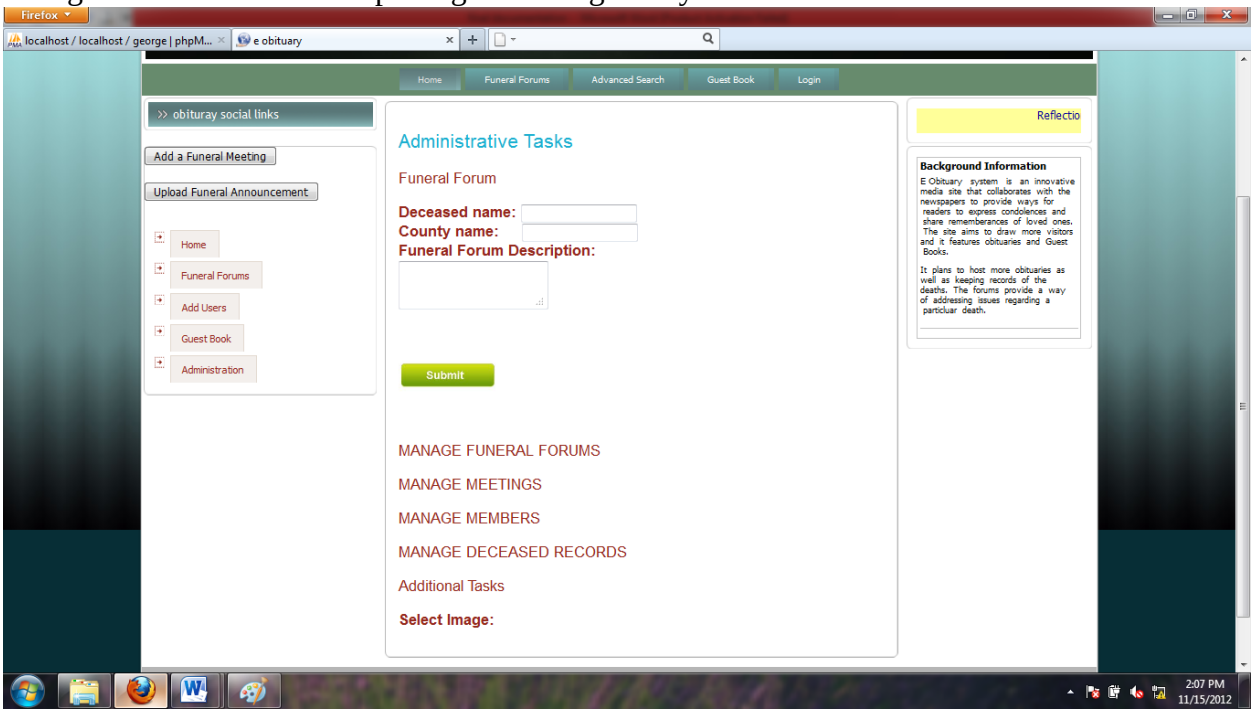


Figure 14: Admin Panel

4.1.3 Post Creation

The test case below is for Forum Creation at the Admin Panel for a sample forum with the name "George Saitoti". Consider a new topic with the title/name "Fundraising". If the page creation encounters no errors, then the page will be successfully created otherwise the page will not be created.

The screenshots and results are shown below:

Figure 15: Creating a Topic in a Forum

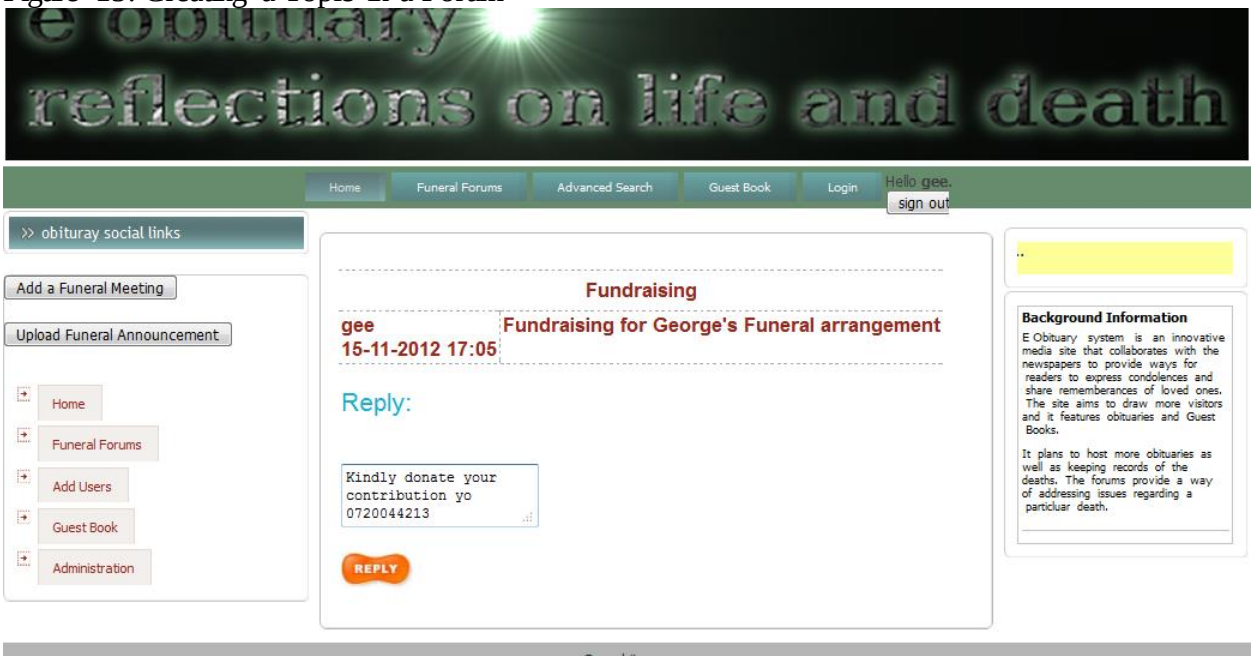


Figure 16: The funeral forum topic and a post

The screen shot above show how the "Fundraising topic" post is created, the message and the results as viewed in the "Fundraising" page. The user writes on the text area below the previous posts.

CHAPTER FIVE

5.1 IMPLEMENTATION AND DEPLOYMENT

5.1.1 Implementation

E Obituary System being a web application that is aimed to serve a large number of users, it is expected that the server hosting it will always be bombarded with heavy traffic. Thus E Obituary System needs to be hosted on the best server hardware and software.

Red Hat Enterprise Linux. Besides its best performance, the administrator will have a hard time finding faults and problems with the components in this OS, mainly because all of them have been tested by time and any possible security breach or serious bug is quickly fixed by the developers.
With Red Hat one can be able to install third party application like Apache server and PHP which in turn are easily upgradable.

Server hardware uses the same basic architecture or configuration as the desktop computer. However, a server has enhanced hardware features such as:

1. Multiple multi-core processors
2. Faster memory options for increased application performance
3. Multiple hard drives for increased data capacity and redundancy
4. Specialized networking cards — and more
5. Hot swapping the components. Good for maintenance and scalability.

The best server to host E Obituary System should be:

1. **Consistently dependable:**ensures long-term reliability with uninterrupted functionality
2. **Outstanding operational efficiency:** simplifies deployment, updating, monitoring and maintaining with the.
3. **Intelligent data management:** It builds a high-density data center with the kind of asset flexibility that enables the administrator to intelligently manage data and other critical business resources.
4. **Workload flexibility:** By combining the outstanding performance, density and efficiency into an individually serviceable quarter-height the server should give an exceptional opportunity to build the ideal data center for E Obituary System.

For testing and development purposes at the *localhost* (i.e. my desktop computer), I have used the **XAMPP** server that provides the Apache2 server, PHP5.4 and.MySQL5.5 database that are to be installed in the server.
They will redirect all traffic to my web server using the provided public IP.
The database is to be installed in the MySQL database in the server. The Apache2 server installed in the server OS will power the PHP scripts.

5.1.2 Deployment

Release

During the course of development, E Obituary System prototypes were and shall continue to be released for user testing and reviews. The prototypes and final application shall be hosted on the server.

Currently E Obituary System is on the second version, after first version was revised for interface improvement.

Install and activate

The application is installed on the server and is accessible via the native PC web browsers. A future prospect is to host the web application with an internet service provider.

Versioning and Update

The versioning shall continue with every release of the E Obituary System prototype. Updates shall be implemented once a newer version of E Obituary System has been released.

5.1.3Security

For security purposes, I will implement the following:

Password Security

1. Use passwords for authentication.
2. Encourage use of complex passwords that include numbers, symbols, and punctuation.
3. Use of user levels 0, 1 and 2 with different privileges.
4. Allow superuser to create and moderate accounts of participants.
5. Administrator should open account for the superuse.
6. Use of audit trail for every visit in a page.

Web Application Security

1. Delete cache memories to avoid automatic remembering and cache storage of username and passwords.
2. Update web applications promptly.
3. Use sessions, when user logs out, clicking back button in the browser will prompt the user to enter the username and password.
4. Scan web applications using remote security tools such as Nessus.
5. Use a web application firewall.
6. Test file upload fields to assure code cannot be uploaded.
7. Use POST instead of GET to submit data so sensitive information is not in the URL.
8. Validate data server-side not client-side.

9. Limit file upload, creation activities to specific directories.
10. Create safe error messages by not disclosing sensitive information in errors.

Server Security

1. Update the server OS regularly.
2. Update the control panel regularly.
3. Reduce information disclosure, e.g. changing ServerTokens in Apache.
4. Not to install software that is not used.
5. Not to store backups or old versions of software on the production system.
6. Restrict access to directories with proper permissions
7. Make sure logs are working properly.
8. Make sure you log all admin level accesses with date, times and usernames.
9. Make sure you use a firewall.
10. Remove default accounts in MySQL.
11. Disable unused services.
12. Maintain backups.
13. Test backups.
14. Monitor web traffic for unusual activity.
15. Conduct regular, remote security scans.
16. Conduct regular, local security scans.
17. Use root account only when required.
18. Use private networks for internal server traffic.
19. Use encryption when appropriate.
20. Conduct password audits.
21. Enforce strong passwords and change policies.

CHAPTER SIX

6.1 ASSUMPTIONS

The following are the assumptions made on this project:

1. Internet services and web application are always available.
2. The user has availability of internet, cable, modems, and configured internet settings.
3. The user's computers have preinstalled native web browser.
4. The user already knows or has an idea of using forums.

6.2DISCUSSIONS

Most application, as well as almost all media, is become much accessible via internet. Not only are people reading and updatingobituaries on the go, but they are also recording, writing and photographing it as well.

This move stems directly from available of internet, which often include high speed internet, video and photo uploading as well as real time communication. E Obituary System will particularly be helpful to deceased families, friends and relatives who can access internet but can't attend the funeral arrangement venues.These participants can actively participate in the forums and discussions without having to travel to the venues.

The web application supports forums and users can generate new forums and posts.

1. Authors can upload new funeral forum entries. Most of the time, they enter postsinto the forums.
2. Readers can view a list of forum entries using a web browser. The forum page usually presents these in reverse chronological order, so that the newest entries are at the top of the blog page.

On the business domain E Obituary System will be a marketing tool for companies especially the media houses and the government as well as other interested nongovernmental organizations. The system will generate income from the people registering forums as well as form any media house that may purchase the system. There is significant opportunity for growth in this sector; however there are still few users willing to use E Obituary System. However, proper marketing and advertisement of this obituary toll will make a turnaround in the world of obituaries and media houses.

6.3 RECOMMENDATIONS

The following are the recommendation for E Obituary System:

1. Continual redesign/overhaul of E Obituary System. Many online users get "bored" with the same user interface over time and may opt to go with the newest, trendy obituary sites that are available. This will also ensure that E Obituary System is at per with the competing world of web application.

2. Ensure that E Obituary System is available at all times. It is very crucial to ensure that E Obituary has the full trust from its users. Breakdown of the system will cause loss of clients.

3. The creation of domains in the *localhost* (i.e. desktop computer) is somewhat taxing as one has to manually create the subdomains. It is crucial for the developers of virtual host servers to provide a test DNS server to be installed in the desktop computers for testing purposes.

4. Many people do not know what online obituary is and its marketing value. Awareness is therefore needed so that people online obituaries and funeral forums in general. Media houses such as Nation Media and the Standard Companies, NGOs shoulddeploy online obituaries that support hosting of funeral forums online.

6.4 LIMITATIONS

The following are the limitations and challenges that I face during the development of E Obituary System:

1. Configurations: the systems available were not compactible to support E Obituary System in implementing service like sending emails, and video streaming.
2. Budget constraints: I was constrained by cost overruns. I intended to do more research on the literature review that involved travelling to media houses but was affected by lack of funds.
3. Attitude towards obituary services by the users, negative attitude.
4. Less literature review on the online obituaries.

6.5 CONCLUSION

Online obituaries are becoming common among people. This is driven by the need of effective and efficient communication. Online obituaries are an easy way to reach people in diaspora. Users will register their obituaries, upload photos, create forums, and post messages. E Obituary System will penetrate on creating funeral forums for a specific deceased person which is an area that is poorly researched and developed.

Being a cross platform web application, E Obituary System will have a deeper penetration to internet users especially friends and relatives involved.

I would however like to acknowledge the much gained experience and skills from undertaking this project.

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APPENDIX

Appendix 1: User Manual

Log in

1. Go to localhost/final/
2. In the home page click “login” in top link bar
3. Enter your username and password
4. Click "Login."

Sign up/ Register – Task for super users only

1. Go to localhost/final/
2. Click on “Add user” link
3. Input desired user details
4. Fill in the registration form with the details
5. Click submit
6. Click next step to send an email to the created user

Create Forum – Task for Administrator only

1. Admin logs in as a normal user but has overall privileges
2. Click on “Administration” in the menu bar on the left side of the web page
3. Fill in the form to add a funeral forum
4. Submit to create new forum

Add meeting/topic to a forum – Task for Sup users only

1. Login to your account
2. Click on Click on “Add meeting” link in the navigation/menu bar on the left side of the webpage
3. Input the title name of the topic you want to create
4. Select from the drop down list the name of the funeral forum
5. Write the first message you want to display
6. Submit to create a meeting/topic

Delete Funeral Forum - Administrator

1. Login to your account
2. Click on “Administration” in the navigation/menu bar
3. Click “Manage Forums”
4. Select on the combo box the forums you want to delete

5. Click “delete”

Delete Funeral Forum Topic - Administrator

1. Login to your account
2. Click on “Administration” in the navigation/menu bar
3. Click “Manage Topics”
4. Select on the combo box the topics you want to delete
5. Click “delete”

Delete User - Administrator

1. Login to your account
2. Click on “Administration” in the navigation/menu bar
3. Click “Manage Users”
4. Select on the combo box the users you want to delete
5. Click “delete”

Create Post to a Forum

1. Login to your account
2. Click on “Funeral Forums” in the navigation/menu bar
3. Scroll down to the text box
4. Write your message details
5. Click “submit”

Reply to Posts

1. Login to your account
2. Click on “Funeral Forums” in the navigation/menu bar
3. Select the forum you want to reply to
4. Write your message in the text area
5. Click "Submit"

Make an open forum comment

1. Go to localhost/final/
2. Click on “Guess book” in navigation/ menu bar
3. Scroll down to the text area
4. Write the name you want to appear in your comment
5. Click “submit”
6. You can also comment on another person’s comment by first clicking on their comments and then reply

Upload Photo – Administrator and Super Users

1. Login to your account

2. Click on “Administration” in the navigation/menu bar
3. Click “Additional Tasks”
4. Browse for photo
5. Write name of the photo
6. Write location for the burial
7. Click “Upload”

Stream Funeral Video

1. Open E Obituary Webpage/ Login to your account
2. Click on “Stream Funeral Video” on the navigation bar
3. Click play on the video screen
4. Use the video controls for volume and screen sizes

Watch a Funeral Video

1. Open E Obituary Webpage/ Login to your account
2. Click on “Watch a Funeral Video” on the navigation bar
3. Click play on the video screen
4. Select the video you wish to watch
5. Use the video controls for volume and screen sizes

Log Out

1. If session is started, user name and “sign out” link will display on the pages
2. Click “sign out” on the navigation/ menu bar
3. Go back to home page

Appendix 3: ***Code Segments***

index.php

```
<?php
//require_once 'library/config.php';
include '/includes/connect.php';
<li id="current" class="active item2"><a href="index.php" class="active"><span
class="l"></span><span class="r"></span><span class="t">Home</span></a></li>
<li class="parent item7"><a href="forums.php"><span class="l"></span><span class="r"></span><span
class="t">Funeral Forums</span></a></li>
<li class="parent item3"><a href="live.php"><span class="l"></span><span class="r"></span><span
class="t">Advanced Search</span></a></li>
<li class="parent item4"><a href="comments.php"><span class="l"></span><span
class="r"></span><span class="t">Guest Book</span></a></li>
<li class="parent item5"><a href="signin.php"><span class="l"></span><span class="r"></span><span
class="t">Login</span></a></li>
                <?php
                if($_SESSION['signed_in'])
                {
                        echo 'Hello <b>' . htmlentities($ SESSION['user name']) . '</b>.<a
class="item" href="signout.php"><input type="submit" value="sign out"></a>';
                }
                else
                {
                        //echo '<a class="item" href="signin.php"><input type="submit" value="SIGN
IN">  </td></a></a>';
                }
                ?>

</ul>
<h3><div class="buttonback1">
```

```
<a href="create_topic.php"><input name="back" type="button" value="Add a Funeral Meeting"
class="greenButton" /></a>

       </div></h3>
<h3><div class="buttonback1">

<a href="adduser.php"><input name="back" type="button" value="Upload Funeral Announcement"
class="greenButton" /></a>

       </div></h3>
<h3><div class="buttonback1">

<a href="vid.php"><input name="back" type="button" value="Watch a Funeral Video"
class="greenButton" /></a>

       </div></h3>

<h3><div class="buttonback1">

<a href="video.php"><input name="back" type="button" value="Stream Funeral Video"
class="greenButton" /></a>
       </div></h3>
<?php
include('/includes/config.php');
$pull images = mysql query("SELECT * FROM photos ORDER BY RAND() LIMIT 8");
if( @mysql_num_rows( $pull_images ) > 0 ) {
echo '<table>';
$count = 0;
while( $row = mysql_fetch_array( $pull_images ) ) {
if( $count == 0 ) {
echo "<tr><td>";
} else {
echo "<td>";
}

               echo '<a href="forums.php" target="_self">';

echo '<imgsrc="' . $row['location'] . '"width="100px" height="100px"></p></a>';
       echo '<p id="name">'.$row['name'].' </p>';
       echo '<p id="burialsite">'.$row['burialsite'].' </p>';
if( $count == 3 ) {
echo '</td></tr>';
$count = 4;
} else {
echo '<td>';
$count++;
}
}
$cells_left = 4 - $count;
if( $cells_left> 0 ) {
$i = 0;
while( $i <= $cells_left ) {
echo '<td></td>';
$i++;
}
echo '</tr>';
}

echo '</table>';
} else {
echo "No images in the database.";
}
?>
</body></html>
```

forum.php

```
<?php
//require_once 'library/config.php';
include 'includes/connect.php';
session_start();
```

```
$_session['loginid']=$_post['username'];
if($_SESSION['signed_in'])
		{
			echo 'Hello <b>' . htmlentities($_SESSION['user_name']) . '</b>.<a
class="item" href="signout.php"><span class="l"></span><span class="r"></span><span
class="t"><input type="submit" value="sign out"></a>';
		}
		else
		{
			//echo '<a class="item" href="signin.php"><input type="submit" value="SIGN
IN">  </td></a></a>';
		}
//create_cat.php
$sql = "SELECT
			categories.cat_id,
			categories.cat_name,
			categories.cat_description,
			COUNT(topics.topic_id) AS topics
		FROM
			categories
		LEFT JOIN
			topics
		ON
			topics.topic_id = categories.cat_id
		GROUP BY
			categories.cat_name, categories.cat_description, categories.cat_id";

$result = mysql_query($sql);

if(!$result)
{
	echo 'The funeral forums could not be displayed, please try again later.';
}
else
{
	if(mysql_num_rows($result) == 0)
	{
		echo 'No funeral forums defined yet.';
	}
	else
	{
		//prepare the table
		echo '<table border="1">
			<tr>
				<th><font color=#000099>Funeral forum</font></th>
				<th><font color=#000099>Last Meeting</font></th>
			</tr>';

		while($row = mysql_fetch_assoc($result))
		{
			echo '<tr>';
				echo '<td class="leftpart">';
					echo '<h3><a href="category.php?id=' . $row['cat_id'] .
'">>>' . $row['cat_name'] . '</a></h3>' . $row['cat_description'];
				echo '</td>';
				echo '<td class="rightpart">';

				//fetch last topic for each cat
					$topicsql = "SELECT
							topic_id,
							topic_subject,
							topic_date,
							topic_cat
						FROM
							topics
						WHERE
							topic_cat = " .
$row['cat_id'] . "
						ORDER BY
							topic_date
						DESC
```

```
                                                        LIMIT
                                                               1";

                                        $topicsresult = mysql_query($topicsql);

                                        if(!$topicsresult)
                                        {
                                               echo 'Last funeral topic could not be displayed.';
                                        }
                                        else
                                        {
                                               if(mysql_num_rows($topicsresult) == 0)
                                               {
                                                      echo 'no funeral topics';
                                               }
                                               else
                                               {
                                                      while($topicrow =
mysql_fetch_assoc($topicsresult))
                                                      echo '<a href="topic.php?id=' .
$topicrow['topic_id'] . '">' . $topicrow['topic_subject'] . '</a> at ' .date('d-m-Y',
strtotime($topicrow['topic_date']));
                                               }
                                        }
                                 echo '</td>';
                          echo '</tr>';
                   }
            }
}

//include 'footer.php';
?>
```

Create_cat.php

```
<?php
//DELETE TOPICS
include 'connect.php';
echo '<h2>Administrative Tasks</h2>';
if($_SESSION['signed_in'] == false | $_SESSION['user_level'] != 2 )
{
       //the user is not an admin
       echo 'Sorry, you do not have Administrative rights to access this page.';
}
else
{
       //the user has admin rights
       if($_SERVER['REQUEST_METHOD'] != 'POST')
       {
              //the form hasn't been posted yet, display it
              echo '<h3>Funeral Forum</h3>';
              echo '<form method="post" action="">
                     Deceased name: <input type="text" name="cat_name" /><br />
                     County name:     <input type="text" name="county"
/><br />
                     Funeral Forum Description:<br /><textarea name="cat_description"
/></textarea><br /><br />
                     <INPUT TYPE="image" SRC="includes/images/submit.jpg" width="20%"
ALT="Submit Form">
                     <p>
                     <b>
                     <A HREF="delete.php">MANAGE FUNERAL FORUMS</A><br>
                     <p>
                     <A HREF="deletetopic.php">MANAGE MEETINGS</A><br>
                     <P>
                     <A HREF="users.php">MANAGE MEMBERS</A><br>
                     <P>
                     <A HREF="managedead.php">MANAGE DECEASED RECORDS</A><br>
                     <P>
                     <P>
                     <A HREF="addimage.php">Additional Tasks</A><br>
```

```
                        <P>
                        </b>


                </form>';
        }
        else{

                $sql = "INSERT INTO categories(cat_name, county, cat_description)
                VALUES('" . mysql_real_escape_string($_POST['cat_name']) . "',
                   '" . mysql_real_escape_string($_POST['county']) . "',
                   '" . mysql_real_escape_string($_POST['cat_description']) . "')";
                        $result = mysql_query($sql);
                if(!$result)
                {
                        //something went wrong, display the error
                        echo 'Error' . mysql_error();
                }
                else
                {
                        echo 'New category succesfully added.';
                }
        }
}

?>
```

Create_topic.php

```
<?php
include 'connect.php';
include 'header.php';
echo '<h2>Super User Tasks</h2>';

echo '<h2>Create a Forum Meeting</h2>';
if($_SESSION['signed_in'] == false)
{
        //the user is not signed in
        echo '<a href="signin.php">sign in</a> to create a topic.';
}
else
{
        //the user is signed in

if($_SESSION['signed_in'] == false | $_SESSION['user_level'] != 1 )
{
        //the user is not an admin
        echo 'Sorry, you do not have Administrative rights to access this page.';
}
else

        if($_SERVER['REQUEST_METHOD'] != 'POST')
        {
                //the form hasn't been posted yet, display it
                //retrieve the categories from the database for use in the dropdown
                $sql = "SELECT
                                        cat_id,
                                        cat_name,
                                        cat_description
                                FROM
                                        categories";

                $result = mysql_query($sql);

                if(!$result)
                {
                        //the query failed, uh-oh :-(
                        echo 'Error while selecting from database. Please try again later.';
                }
                else
                {
                        if(mysql_num_rows($result) == 0)
```

```
                        {
                                //there are no categories, so a topic can't be posted
                                if($_SESSION['user_level'] == 1)
                                {
                                        echo 'You have not created categories yet.';
                                }
                                else
                                {
                                        echo 'Before you can post a topic, you must wait for an
admin to create some categories.';
                                }
                        }
                        else
                        {

                                echo '<form method="post" action="">
                                        Forum Meeting/Topic: <input type="text"
name="topic_subject" /><br />
                                        Category:';

                                echo
'               
  <select name="topic_cat">';
                                        while($row = mysql_fetch_assoc($result))
                                        {
                                                echo '<option value="' . $row['cat_id'] . '">' .
$row['cat_name'] . '</option>';
                                        }
                                echo '</select><br />';

                                echo 'Message: <br /><textarea name="post_content" /></textarea><br
/><br />
                                <INPUT TYPE="image" SRC="includes/images/submit.jpg" width="7%"
ALT="Submit Form">
                                </form>';

                                echo '<h3><div class="buttonback1">

<a href="addimage.php"><input name="back" type="button" value="Add an Obituary Image"
class="greenButton" /></a>

</div></h3></html>';
                        }
                }
        }
        else
        {
                //start the transaction
                $query  = "BEGIN WORK;";
                $result = mysql_query($query);

                if(!$result)
                {
                        //Damn! the query failed, quit
                        echo 'An error occured while creating your topic. Please try again
later.';
                }
                else
                {

                        //the form has been posted, so save it
                        //insert the topic into the topics table first, then we'll save the post
into the posts table
                        $sql = "INSERT INTO
                                        topics(topic_subject,
                                                topic_date,
                                                topic_cat,
                                                topic_by)
                                VALUES('" . mysql_real_escape_string($_POST['topic_subject']) . "',
                                                NOW(),
```

```
                                                        " .
mysql_real_escape_string($_POST['topic_cat']) . ",
                                                        " . $_SESSION['user_id'] . "
                                                        )";

                        $result = mysql_query($sql);
                        if(!$result)
                        {
                                //something went wrong, display the error
                                echo 'An error occured while inserting your data. Please try again
later.<br /><br />' . mysql_error();
                                $sql = "ROLLBACK;";
                                $result = mysql_query($sql);
                        }
                        else
                        {
                                //the first query worked, now start the second, posts query
                                //retrieve the id of the freshly created topic for usage in the
posts query
                                $topicid = mysql_insert_id();

                                $sql = "INSERT INTO
                                                        posts(post_content,
                                                               post_date,
                                                               post_topic,
                                                               post_by)
                                                VALUES
                                                        ('" .
mysql_real_escape_string($_POST['post_content']) . "',
                                                               NOW(),
                                                                 " . $topicid . ",
                                                                 " . $_SESSION['user_id'] . "
                                                        )";
                                $result = mysql_query($sql);

                                if(!$result)
                                {
                                        //something went wrong, display the error
                                        echo 'An error occured while inserting your post. Please
try again later.<br /><br />' . mysql_error();
                                        $sql = "ROLLBACK;";
                                        $result = mysql_query($sql);
                                }
                                else
                                {
                                        $sql = "COMMIT;";
                                        $result = mysql_query($sql);

                                        //after a lot of work, the query succeeded!
                                        echo 'You have succesfully created <a href="topic.php?id='.
$topicid . '">your new topic</a>.';
                                }
                        }
                }
        }
}
include 'footer.php';
?>
```

sendmailform.php

```
<?php
        session_start();
        $valid = $_SESSION['valid'];
        if(!$valid || $valid == ""){
                //header("Location:index.php");
        }
        include 'header.php';
        define('MyConst', TRUE);
?>
<!DOCTYPE html>
```

```
<html>
<head>
	<meta charset="utf-8">
	<title>e obituary</title>
	<link rel="stylesheet" media="screen" href="styles.css" >
</head>
<body>

<form class="contact_form" action="verify.php" method="post" name="contact_form">
<ul>
<li>
<h2>Enter Your Relative's/Friend's Details Below</h2>
<span class="required_notification">* Denotes Required Field</span>
</li>
<li>
<label for="name">First Name:</label>
<input type="text"  placeholder="Relative's First Name" required  name="fname"/>
	<span class="form_hint">Proper format "Relative's firstname"</span>
</li>
	<li>
<label for="name">Middle Name:</label>
<input type="text"  placeholder="Relative's middlename" required name="mname"/>
	<span class="form_hint">Proper format "Relative's middlename"</span>
</li>
<li>
<label for="name">Last Name:</label>
<input type="text"  placeholder="Relative's lastname" required name="surname" />
	<span class="form_hint">Proper format "Relative's lastname"</span>
</li>

	<li>
<label for="name">E Mail:</label>
<input type="text"  placeholder="send to email@gmail.com" required  name="email"/>
	<span class="form_hint">Proper format "Email@gamil.com"</span>
</li>
<li>
<label for="name">User Name:</label>
<input type="text"  placeholder="uname" required  name="uname"/>
	<span class="form_hint">Proper format "username"</span>
</li>
<li>
<label for="name">User Password:</label>
<input type="text"  placeholder="password that you have created" required  name="pword"/>
	<span class="form_hint">Proper format "username"</span>
</li>
<li>
	<button class="submit" type="submit">Send Email</button>
</li>
</ul>

</form>
</body>
</html>
```

sendmailverify.php

```
<?php
//session_start();
include '/includes/connect.php';
include 'header.php';
$fname=$_POST['fname'];
$lname=$_POST['surname'];
$mname=$_POST['mname'];
$email=$_POST['email'];
$username=$_POST['uname'];
$password=$_POST['pword'];


/*function randomString($length = 8) {
 $str = "";
 $characters = array_merge(range('A','Z'), range('a','z'), range('0','9'));
 $max = count($characters) - 1;
```

```
for ($i = 0; $i < $length; $i++) {
  $rand = mt_rand(0, $max);
  $str .= $characters[$rand];
 }
return $str;
}

//$pword = randomString();

$password = randomString();*/


require_once("phpmailer/class.phpmailer.php");

$mailer = new PHPMailer();
$mailer->IsSMTP();
$mailer->Host = 'ssl://smtp.gmail.com:465';
$mailer->SMTPAuth = TRUE;
$mailer->Username = 'eobituarysystem@gmail.com';  // Change this to your gmailadress
$mailer->Password = 'eobituary';  // Change this to your gmail password
$mailer->From = 'eobituarysystem@gmail.com';  // This HAVE TO be your gmailadress
$mailer->FromName = 'E Obituary Services'; // This is the from name in the email, you can put
anything you like here
$mailer->Body = 'Your username: '.$username.'  | Your password is:'.$password.'';
$mailer->Subject = 'Welcome!' .$fname.'';
$mailer->AddAddress($_POST['email']);

if(!$mailer->Send())
{
echo "<script>alert('Registration failed.')</script>";

}
else
{
echo "<script>alert('Registration Success! Email has been sent.')</script>";

mysql_query("INSERT INTO members(fname, lname, mname, email, uname, pword)VALUES('$fname',
'$lname', '$mname', '$email','$username', '$password')");
}

?>
```

guestbook.php

```
<?php
//require_once 'library/config.php';
include 'connect.php';
<?php
//session_start();
$errors = '';

if(isset($_POST['submit']))
{
	//if(empty($_SESSION['6_letters_code'] ) ||
	  //strcmp($_SESSION['6_letters_code'], $_POST['6_letters_code']) != 0)
	//{
	//	$errors .= "\n The captcha code does not match!";
	//}

	if(empty($errors))
	{
		//require_once('connect.php');
		$name=$_POST['name'];
		$content=$_POST['content'];
		$commentid=$_POST['commentid'];
		//$images='http://www.gravatar.com/avatar.php';
		mysql_query("INSERT INTO comment(name, content, images, comsubid)VALUES('$name',
'$content', '$images', '$commentid')");
	}
}
require_once('includes/connect.php');
```

```
$result3 = mysql_query("SELECT * FROM comment where comsubid=0");
while($row3 = mysql_fetch_array($result3))
{
	$id=$row3['commentid'];
	echo '<div id="maincomm">';
	echo '<imgsrc="'.$row3['images'].'">';
echo '<p id="name">'.$row3['name'].'</p>';
	echo '<p>'.$row3['content'].'</p>';
	echo '<p id="comm">'.'<a href="comments.php?id='.$id.'&#link1">comment</a>'.'</p>';

		$result4 = mysql_query("SELECT * FROM comment where comsubid='$id'");
			while($row4 = mysql_fetch_array($result4))
			{
				echo '<div id="subcomm">';
				echo '<imgsrc="'.$row4['images'].'">';
				echo '<p id="name">'.$row4['name'].'</p>';
				echo '<p>'.$row4['content'].'</p>';
				echo '<div class="clearfix"></div>';
				echo '</div>';
			}
	echo '<div class="clearfix"></div>';
	echo '</div>';
}
?>
```