

Personal Document Management System

By

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Dissertation submitted in partial fulfilment of
the requirements for the
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(Information Technology)

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CERTIFICATION OF APPROVAL

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A project dissertation submitted to the
Information Technology Programme
Universiti Teknologi PETRONAS
in partial fulfillment of the requirements for the
BACHELOR OF TECHNOLOGY (HONS)
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TRONOH, PERAK
January 2008

CERTIFICATION OF ORIGINALITY

This is to certify that I am responsible for the work submitted in this project, that the original work is my own except as specified in the references and acknowledgements, and the original work contained herein has not been undertaken or done by specified sources or persons.



MUHAMMAD SAUFI BIN HUSSIN

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ABSTRACT

In definition, a document management system (DMS) is a computer system (or set of computer programs) used to track and store electronic documents and/or images of paper documents. As people nowadays are constantly on the move and the wide spread availability of internet access, the usage of web based systems are increasing by leaps and bounds. And the amount of data and information that is being created and stored is getting bigger by the moment. Sometimes, people who are constantly on the move might forget to bring along their files and documents and there might be a situation when they will need those files and documents urgently. Most of the people might not even be aware of a system available online that would help them organize their files and documents. This might be caused by the fact that these systems are more oriented towards enterprises and businesses. Seeing this situation, the author has initiated a web based system project that is more oriented towards a more personal version of a document management system. This personal document management system will enable users to manage and organize their files easily. Files and documents will be stored centrally on a server and this centralization enables users to access them anytime anywhere through a web based portal. This personal management system is designed as an online system that is install on individual computers where it allows user to upload, retrieve, view, edit, delete, share and even send files to other users that uses the system. In the process of developing this system, the author has done online researches on similar systems and for information that are related to the development of the system. Along with a user intuitive interface with heavy emphasis on usage of icons and graphics, it makes it easier for users to understand the system and ultimately find it as a useful tool to make their everyday life easier.

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LIST OF ABBREVIATIONS

DMS	Document Management System
GUI	Graphical User Interface
CLM	Contract Lifecycle Management
ECM	Electronic Content Management
PHP	PHP: Hypertext Preprocessor
WAMP	Windows Apache MySQL PHP package

CHAPTER 1

INTRODUCTION

1.0 Overview

BORA Personal Document Management System is an online personal document management system that is designed as a tool to help its users to manage and organize their files and documents online through a web based system. The system allows proper file management thus providing users easier access and file retrieval. The system focuses more on personal use therefore emphasizing in a more user friendly graphical user interface (GUI). Users will benefit from online file management by reducing file redundancy and the reduction of paper trail and paper usage and paper wastage when using conventional file management or filing system.

1.1 Background study

Have you ever asked yourself this question before or heard someone asking it – “I wish I had that file with me now!” or “How could I forgot to bring that document along?” or “I wanted to show you the picture but I forgot to bring it along” and wish you are able to have access those files and documents somehow. These questions are often asked and silently mentioned time and time again. This maybe because humans are forgetful beings and thus it is in our nature to sometimes forgets things which are important. That is why the author decides to develop a personal document management system. Through analysis drawn from a quite number of journals and other literature resources and from own researches and knowledge management readings the author managed to apply most of the important components and methods in file sharing and information storage to the BORA Personal Document Management System. From the analysis gathered the author has been able to improve the development of BORA Personal Document Management System in order to meet users’ needs. The term document management in this particular project covers the processes by which files, documents, users and system administrator are stored and managed within an online system providing end users easy access to their files online.

The current document management systems available in the market are more oriented towards enterprises and businesses. They focus more on business needs rather than personal needs and this provides a base for the author to develop this project. A personal document management system will be more suitable for a wide range of users who are not bothered with features relating to business and enterprises. Personal users will be more interested in a system that is straight forward and user friendly.

1.1.1 What is Document Management?

A **document management system (DMS)** is a computer system (or set of computer programs) used to track and store electronic documents and/or images of paper documents. (Wikipedia, 2006) the need for a DMS is getting more and more essential nowadays because of **data proliferation** which refers to the unprecedented amount of data, structured and unstructured, that business and government continue to generate at an unprecedented rate and the usability problems that result from attempting to store and manage that data. While originally pertaining to problems associated with paper documentation, data proliferation has become a major problem in primary and secondary data storage on computers (Wikipedia, 2006)

1.2 Problem Statement

1.2.1 Problem Identification

Computer users generate documents almost everyday using various packages and store them on the hard disk. Apart from locally generated data, users tend to download anything and everything from the Net and store them on the hard disk. However, data are stored in a haphazard fashion and there is no mechanism to know what things are available on the hard disk and at times users may even download material already stored.

Also, while many are aware that a specific resource is available on the hard disk, they may not be able to retrieve it unless they know its exact filename/location.

All such hindrances mentioned above can be eliminated if we organize the resources properly and store them in appropriate locations with enough data so that they can be retrieved quickly. A resource management tool that has been developed with this goal in mind is known as document management system (DMS).

A DMS provides the necessary tools to store/organize data and features several search/navigation methods that assist the user retrieve the documents stored in its repository easily.

The advantage of having a web-based DMS is that users can access their files from anywhere on the web also. This will create knowledge and information sharing between users of the system where they can have easy access to one another's file and document provided that they have proper authorization.

Also, by having a personal document management system especially an online system, it helps to eliminate file redundancy. Since users are always on the move, nowadays they have to have a copy of a document on their computers and their thumb drives. This waste precious storage space and time whenever they go looking for it especially when they cannot recall the filename or path name of the file.

1.3 Project Benefits/Significance

Here are the identified benefits that the system will deliver to its users:

1.3.1 Allow authorized user to access the system.

The system will only allow authorized users to access to the system. Users need to create their own account and the system administrator will have an inspection from time by time to prevent unauthorized personnel and also to inform users who are not active about their accounts.

1.3.2 Medium of communication.

This system also can act as a medium of communication among users. File sharing and viewing of other user's permitted files and documents.

1.3.3 Reduce paper trail / usage / wastage.

The usage of paper documents will be greatly reduced thus saving cost and also help save precious natural resource. Users can store and retrieve their documents online making it accessible anytime, anywhere readily available.

1.3.4 Intuitive User-Interface.

1.3.5 Eliminate file redundancy

1.4 Objectives and Scope of Study

The BORA Personal Document Management System's main concern is on the development of an online web based application system. Below are the lists of objectives that need to be accomplished at the end of the project development:

1.4.1 To provide users with means of organizing and/or managing and accessing their files/documents online, anytime, anywhere.

Allows user to upload, retrieve, view, edit, and delete their files and documents online.

1.4.2 To load and maintain files on a centralized server.

Allows users to access their files through a centralized portal for ease of use.

1.4.3 To be used within the local network or location and accessible online.

Can be installed on a local network server and be access locally or having the option of installing it on a web host server and being able to access files and documents online and on the go.

1.5 Scope of Study

As the BORA Personal Document Management System is being developed to be more oriented towards personal use, therefore the interfaces and functions will be develop to cater those needs. Users are mainly online users who will have access to their files once they have registered and acquire the necessary login credentials.

CHAPTER 2

LITERATURE REVIEW

2.0 Literature Review Gathered

The followings are the segments from articles and information that the author managed to gather as a reference and guide in the development of this project:

2.1 Overview

A **document management system (DMS)** is a computer system (or set of computer programs) used to track and store electronic documents and/or images of paper documents. The term has some overlap with the concepts of Content Management Systems and is often viewed as a component of Enterprise Content Management Systems and related to Digital Asset Management, Document imaging, Workflow systems and Records Management systems. Contract Management and Contract Lifecycle Management (CLM) can be viewed as either components or implementations of ECM.

A document management system will typically address some or all of the following areas:

2.1.1 Location and Time

Where will documents be stored? Where will people need to go to access documents? Physical journeys to filing cabinets and file rooms are analogous to the onscreen navigation required to use a document management system

2.1.2 Retrieval

How will documents be found? Typically, retrieval encompasses both browsing through documents and searching for specific information.

2.1.3 Filing

How will documents be filed? What methods will be used to organize or index the documents to assist in later retrieval? Document management systems will typically use a database to store filing information

2.1.4 Security

How will documents be kept secure? How will unauthorized personnel be prevented from reading, modifying or destroying documents?

2.1.5 Disaster Recovery

How can documents be recovered in case of destruction from fires, floods or natural disasters?

2.1.6 Retention Period

How long documents should be retained? This is an organizational policy and practice that defines what information, or documents are to be retained; for what length of time; and what point in time the information must be removed or deleted. Retention rules are usually based on organizational practice of Records Management

2.1.7 Archiving

How can documents be preserved for future readability? Archiving is the removal from the active repository of documents and related metadata that have, by organizational definition, reached the end of their active lifespan, and are required to be stored, or archived, in a separate area. Usually archiving entails movement of documents, whether paper or electronic to a separate storage facility, be it an archival warehouse, or a near line or offline storage device.

2.1.8 Distribution

How can documents be available to the people that need them?

2.1.9 Workflow

If documents need to be passed from one person to another, what are the rules for how their work should flow?

2.1.10 Creation

How are documents created? This question becomes important when multiple people need to collaborate, and the logistics of version control and authoring arise

2.1.11 Authentication/Approval

How do we provide needed requirements for legal submission to government and private industry that the documents are original and meet their standards for authentication?

2.2 History

Document management should be divided into two streams, based on the material being managed. Beginning in the 1980s, a number of vendors began developing systems to manage paper-based documents. These systems managed paper documents, which included not only printed and published documents, but also photos, prints, etc.

Later, a second system was developed, to manage electronic documents, i.e., all those documents, or files, created on computers, and often stored on local user file systems. The earliest electronic document management (EDM) systems were either developed to manage proprietary file types, or a limited number of file formats. Many of these systems were later referred to as document imaging systems, because the main capabilities were capture, storage, indexing and retrieval of image file formats.

These systems enabled an organization to capture faxes and forms, save copies of the documents as images, and store the image files in the repository for security and quick retrieval (retrieval was possible because the system handled the extraction of the text from the document as it was captured, and the text indexer provided text retrieval capabilities).

EDM systems evolved to where the system was able to manage any type of file format that could be stored on the network. The applications grew to encompass electronic documents, collaboration tools, security, and auditing capabilities.

2.2.1 Document Management and Communication

Electronic document management is in particular worked out by Carzaniga and Wolf (2001) in their paper "Content-based networking: a new communication infrastructure". The authors introduce content-based networking as a communication infrastructure where information is driven by the content throughout the network. The users express their interests, and the senders simply input the message into the network.

From that point the network delivers all the information to the right people. Sprague (1995) delivers a more elaborate work in which he introduces document management through using IT. He calls it electronic document management: EDM. He defines managing of documents as the “creation, storage, organization, transmission, retrieval, manipulation, update, and eventual disposition of documents to fulfill an organizational purpose” (pp.32), and he further states that EDM improves communication among people and groups of people (pp 42-43).

There are several other examples from the literature for the link between EDM and communication. Hansen and Haas (2001) elaborate on the role of the suppliers and users of information in electronic documents. Another research with a very clear link between EDMS and communication is that of Thorpe and Mead (2000).

They showed that an EDM system changes the communication patterns. Of the three case projects they researched, EDM acquired a central role in two of them, (the third project was abandoned after three months). A research of Howard and Pettersen (2001) about the way of communicating in a construction project had as result that EDM (Howard and Pettersen call it project web) was number three communication tool just after telephone and a meeting, leaving e-mail, paper-post and fax behind.

Rene Brohm (2005) introduced in his dissertation the theater model. The theater model illustrates metaphorically how document management systems correspond with a stage in a theater. His argumentation is that the interaction in a play on the stage is similar with the functioning of a document system.

If all the data and information would be put in a central database/intranet, which can be used by everyone in the organization, there would be a clear link between IT and dissemination of information according to Marin & Poulter (2004). They argue that because of the easy access to

the information, it would flow through the organization. The authors confirm this in their paper (2004) by stating that distribution of intelligence can be aided by technology.

There are different ways of improving this communication tool. Hansen and Haas (2001) see the electronic document management as a market, with competition. According to them suppliers should have a strategy about how to share information and how to persuade their clients (employees) to use the system?

One way to do this is introduced by Yan & Garcia-Molina (1999 pp.2) who use EDM to: “make long term profile consisting of a number of standing queries to represent his information needs”. Through this they state that dissemination of information is improved. Users receive information in their field of interest because of a profile that was submitted. Therefore search costs and search time for employees are decreased.

2.2.2 Components

Document management systems commonly provide storage, versioning, metadata, security, as well as indexing and retrieval capabilities. Here is a description of these components:

2.2.2.1 Metadata

Metadata is typically stored for each document. Metadata may, for example, include the date the document was stored and the identity of the user storing it. The DMS may also extract metadata from the document automatically or prompt the user to add metadata. Some systems also use optical character recognition on scanned images, or perform text extraction on electronic documents. The resulting extracted text can be used to assist users in locating documents by identifying probable keywords or providing for full text search capability, or can be used on its own. Extracted text can also be stored as a component of metadata, stored with the image, or separately as a source for searching document collections.

2.2.2.2 Integration

Many document management systems attempt to integrate document management directly into other applications, so that users may retrieve existing documents directly from the document management system repository, make changes, and save the changed document back to the repository as a new version, all without leaving the application. Such integration is commonly available for office suites and e-mail or collaboration/groupware software. Integration often uses open standards such as ODMA, LDAP, WebDAV and SOAP to allow integration with other software and compliance with internal controls.

2.2.2.3 Capture

Images of paper documents captured using scanners or multifunction printers. Optical Character Recognition (OCR) software is often used, whether integrated into the hardware or as stand-alone software, in order to convert digital images into machine readable text.

2.2.2.4 Indexing

Track electronic documents. Indexing may be as simple as keeping track of unique document identifiers; but often it takes a more complex form, providing classification through the documents' metadata or even through word indexes extracted from the documents' contents. Indexing exists mainly to support retrieval. One area of critical importance for rapid retrieval is the creation of an index topology.

2.2.2.5 Storage

Storing electronic documents. Storage of the documents often includes management of those same documents; where they are stored, for how long, migration of the documents from one storage media to another (Hierarchical storage management) and eventual document destruction.

2.2.2.6 Retrieval

Retrieve the electronic documents from the storage. Although the notion of retrieving a particular document is simple, retrieval in the electronic context can be quite complex and powerful. Simple retrieval of individual documents can be supported by allowing the user to specify the unique document identifier, and having the system use the basic index (or a non-indexed query on its data store) to retrieve the document.

More flexible retrieval allows the user to specify partial search terms involving the document identifier and/or parts of the expected metadata. This would typically return a list of documents which

match the user's search terms. Some systems provide the capability to specify a Boolean expression containing multiple keywords or example phrases expected to exist within the documents' contents. The retrieval for this kind of query may be supported by previously-built indexes, or may perform more time-consuming searches through the documents' contents to return a list of the potentially relevant documents.

2.2.2.7 Distribution

2.2.2.8 Security

Document security is vital in many document management applications. Compliance requirements for certain documents can be quite complex depending on the type of documents. For instance the Health Insurance Portability and Accountability Act (HIPAA) requirements dictate that medical documents have certain security requirements. Some document management systems have a rights management module that allows an administrator to give access to documents based on type to only certain people or groups of people.

2.2.2.9 Workflow

Workflow is a complex problem and some document management systems have a built in workflow module. There are different types of workflow. Usage depends on the environment the EDMS is applied to. Manual workflow requires a user to view the document and decide who to send it to.

Rules-based workflow allows an administrator to create a rule that dictates the flow of the document through an organization: for instance, an invoice passes through an approval process and then is routed to the accounts payable department. Dynamic rules allow for branches to be created in a workflow process.

A simple example would be to enter an invoice amount and if the amount is lower than a certain set amount, it follows different routes through the organization.

2.2.2.10 Collaboration

Collaboration should be inherent in an EDMS. Documents should be capable of being retrieved by an authorized user and worked on. Access should be blocked to other users while work is being performed on the document.

2.2.2.11 Versioning

Versioning is a process by which documents are checked in or out of the document management system, allowing users to retrieve previous versions and to continue work from a selected point. Versioning is useful for documents that change over time and require updating, but it may be necessary to go back to a previous copy.

2.2.3 The Importance of Availability

According to a study by **STEVE WHITTAKER** and **JULIA HIRSCHBERG** of **ATT Labs-Research** one of the reasons why a good document management system is needed nowadays is the availability:

*“Uniqueness was not the sole criterion for determining whether to archive data, however. Only 49% of people’s original archive was unique: 15% was unread and 36% consisted of copies of publicly available documents. We have already discussed why people acquire unread data, but what explains them keeping paper duplicates of publicly documents? Four main reasons were given: *availability, reminding, lack of trust in external stores, and sentiment.*”*

Availability allows relevant materials to be at hand when people need them. Several people mentioned not wanting to experience the delay associated with ordering reference materials, or even accessing them on the Web.

“What is important is how fast I can access that information. ... My problem has been often I am unable to find where things are quickly, and if it is not quick, you lose interest.”

The importance of immediate access was also revealed in discussions about off-site storage of archival material. During discussions prior to the move, concern was voiced about lack of storage at the new location. In response to this, management offered to provide off-site storage. The majority of interviewees however felt that access delays reduced the usefulness of off-site information, revealing the importance of availability:

“I have nothing I would store or put off site. As far as I’m concerned, if it goes that far away, I’ll never see it again. That’s just a hard way to throw things away. I have put things in [name of local storage company],”

and I have never, ever had occasion to get things back All you eventually do is sign off and let them destroy it.” [5]

Thus by having an online document management system, users can have access to their files and documents easily.

Compared to other system available on the market today, BORA Personal Document Management system will be more focused on personal used without the corporate feel and look that usually turns most people down when using them since it looks complicated and hard to use.

DMS such as Mipsis, Mercury, DocuXplorer and many more have a personal version of their software but it is still based on their enterprise edition only with limited features and for single user.

So, why not develop a simple document management system that caters to a truly personal context? – Just straight forward functions without confusing users about what they are suppose to do. Just upload, download, view and delete.

CHAPTER 3

METHODOLOGY

3.0 Methodology

For this particular project, the general development methodology that will be used is the phased development methodology.

3.1 Phased Development Methodology – Waterfall Model

A phased development-based methodology breaks the overall system into a series of versions that are developed sequentially. The analysis phase of the system development focuses on identifying the overall system concept, and categorizing the requirements into a series of versions. The most important and fundamental requirements are bundled into the first version of the system.

After the analysis phase, the development phase is proceeding with the design and implementation phases. During these two phases, the development focuses on the set of requirements that was identified in the version one of the system. Once the version one of the system has been implemented, work has started for the version two of the system.

Additional analysis are performed based on the previously identified requirements and combined with new ideas and issues that arise from the version one of the system. Version two of the system is designed and implemented, and work starts immediately for the next version of the system. This process continues until the system is complete.

BORA Personal Document Management System Methodology - Waterfall Model

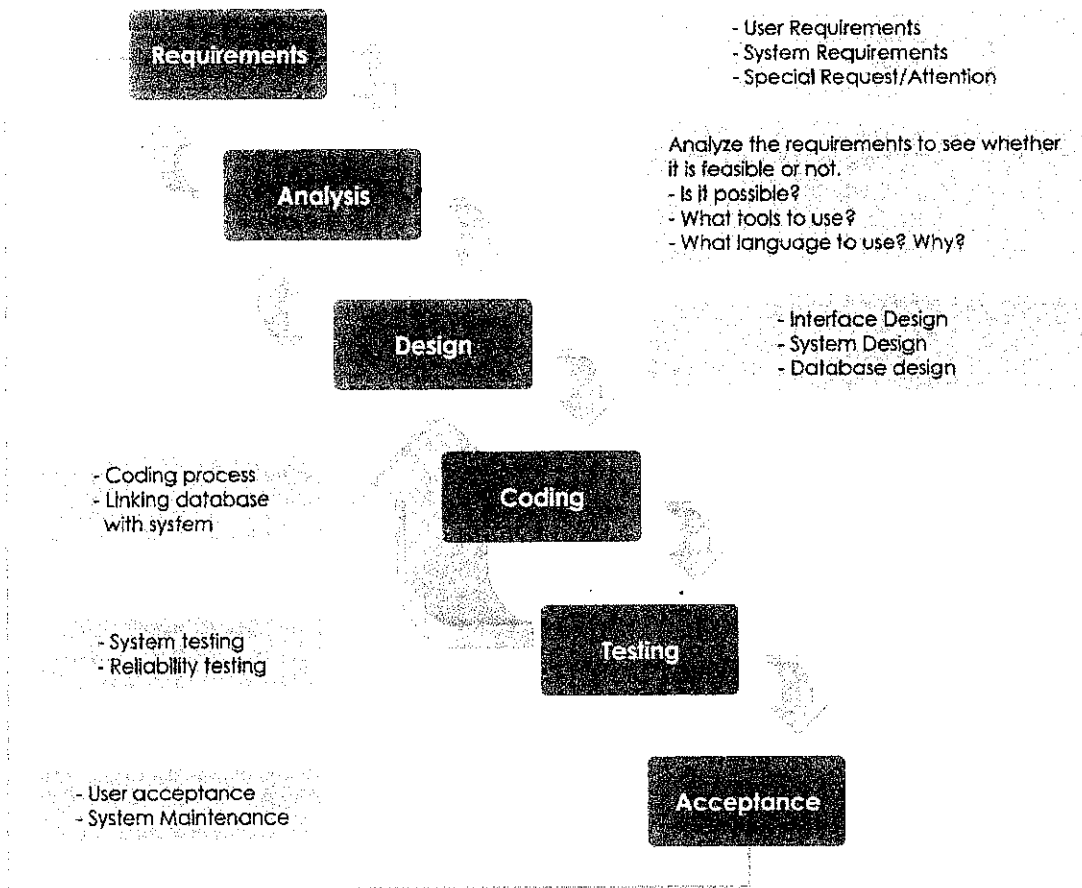


Figure 1 Phased Development Methodology –The Waterfall Model

3.1.1 Requirements:

- In the requirements phase, the author gathers information on what the users might want in the system in terms of functionalities and user preferences
- System requirements are also taken into account to see about how the system is run and maintained.

3.1.2 Analysis:

- After the author have gathered information needed, it is then analyzed to decide whether the system is feasible or not in terms of possibility of

the system being developed, the cost, the technical skills needed, software needed and other relevant resources needed.

3.1.3 Design:

- During this phase, the author designs the graphical user interfaces, the system flow and functionalities, and the database. Together they will be linked and form the system. The GUI is designed using Adobe Photoshop 7.0.

3.1.4 Coding:

- In this phase, the author starts the coding process in ASP using Macromedia Dreamweaver MX 2004 and Microsoft Office Access 2003.

3.1.5 Testing:

- The system is tested in phases. Starting with the login page and ending with logging out of the system. This is to check whether each pages and functions in the system is working and linked correctly.
- This is the most challenging phase the author encounters as there were many errors that happened and discovered along the testing phase. Each error is then corrected and got the author iterate back to design and coding phase again.
- The biggest problems were establishing connection with the database and with the database design itself.

3.1.6 Acceptance

- This is the final phase in the methodology being used. Here user acceptance and system maintenance is done.

3.2 Development Tools:

This BORA Personal Document Management System is developed using web based technology and adopting PHP as a scripting language. PHP is an open source server-side script engine for dynamically-generated web pages. Programming PHP websites is made easier by various built-in objects. For the database, MySQL database is used as it is stable.

Software:

- i. Microsoft Windows XP Professional
- ii. PHP using Macromedia Dreamweaver 2004 MX
- iii. MySQL database
- iv. Adobe Photoshop 7.0
- v. WAMPP version 2.0
- vi. Microsoft Internet Explorer 6.0

3.3 System Architecture

As a personal document management system, the system can be physically installed as a stand alone system in individual computers.

With the option of being accessible online, the system will physically be installed on a central server and database (Linux Server or any open source server considering the system is developed using PHP technology) and is administered by a system administrator.

Authorized clients/users can have access to the system and its content via the interface. There is an option of allowing authorized users to have access to the system online anytime, anywhere and provides a means of sharing and viewing files between users as well.

3.4.1 Administrator

- The administrator controls and monitors the system. It is responsible for system maintenance and updates
- Can also acts as a client and needs authorization to use the system in terms of registered username and password.
- Highest level of authority.

3.4.2 Client

- The Client(s) are the main users of the system. They need to register first by filling in a form and submitting it for authorization by the system. Only then can they login and use the system.
- Once logged in, users are able to utilize the systems functions such as uploading, viewing, editing, deleting and downloading their files. Also creating, updating/editing and deleting their accounts.
- Other functions they are able to use are the calendar and to-do-list functions.

3.4.3 Server

- The server is where the system will be physically be installed and accessed through by the clients and administrator.
- The server being used will be a Windows server since the system is developed using ASP technology.
- The server will process all the requested operations and executes them. It will also store all the databases of the system.

CHAPTER 4

RESULTS AND DISCUSSION

4.0 System Development

Throughout the development of the system, the author encountered a lot of challenges. One of the main challenges is the shift from using ASP and MS Access database (.mdb) to PHP and MySQL database. Also, major redesigning of the GUI to suite with the shift and time constraint is done. The author has trouble with the uploading function and setting the folder path of the uploaded files into the desired folder. The integrated Yahoo Messenger function has also been left out for future enhancement because of the time constraint.

4.2 Use Case Diagram:

Identifying the important elements and chronologies that shape the system is done by applying the Use Case Diagram. The author has been able to represent the system functionalities in a simplified context in order to provide understandable functional aspects.

The Use Case Diagrams displayed the functionalities of the system in early phase of identification. With such help, the author has managed to retain user requirements and its finalizations.

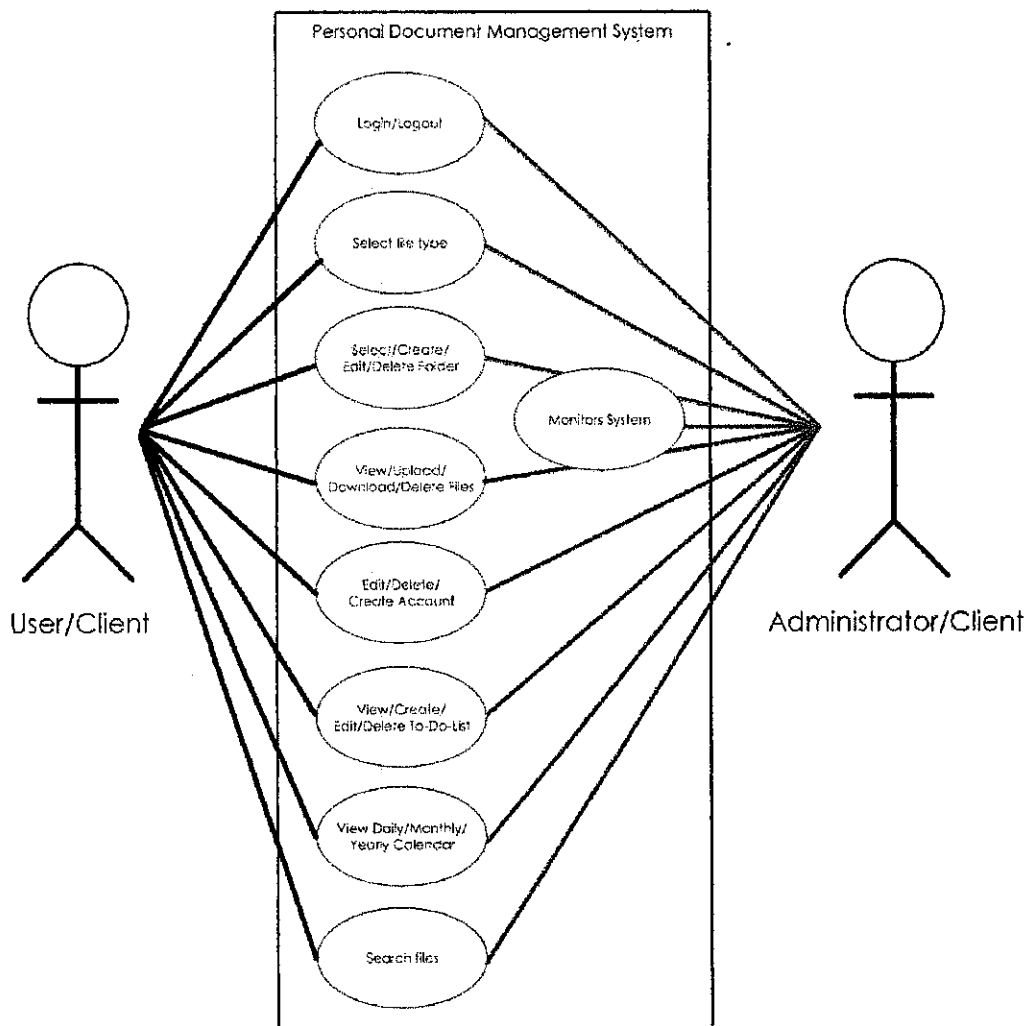


Figure 4 Use Case Diagram

4.3 Use Case Specifications

Use Case diagrams specifications provide better understanding of the flow of events that occur in the system. They are used to understand the possible set of event that may occur.

4.3.1 Personnel Module

4.3.1.1 Use Case: Login

Description: This use case is for the users to login allowing authorized user access the system

Author:

Actor(s):

Location:

Status: Pathway defined

Priority: (1)

Assumptions: Administrator already created all accounts for personnel

Precondition(s): User needs to have their username and password

Post Condition(s): User is able to access to the system

Primary (happy) path: User can edit her/his profile

Alternate pathways(s): User can use the modules in the system

Exception pathway(s): User can access to the system

Happy Path Flow of Events

User key in his/her username and password and logs in successful into the system

1. User logs in with valid username and password
2. User can have access to all modules
3. User can edit their profile

Exceptional Path Flow of Events

User username does not match the password entered.

1. Unauthorized user
2. Account cannot be accessed

4.3.1.2 Use Case: Using Modules

Description: This use case is for user to use the modules such as the search

engine, photo gallery, files, videos, calendar etc.

Author:

Actor(s):

Location:

Status: Pathway defined

Priority: (1)

Assumptions: User has successfully logs in

Precondition(s): User needs to logon to the system

Post Condition(s): User is able to access the modules

Primary (happy) path: User may choose the desired modules

Alternate pathways(s): User can use the modules in the system

Exception pathway(s): User cannot use the modules

Happy Path Flow of Events

User key in his/her username and password and logs in successfully into the system

1. User logs in with valid username and password
2. User can have access to all modules
3. User can edit their profile

Exceptional Path Flow of Events

User username does not match the password entered.

1. Unauthorized user
2. Account cannot be accessed
3. Contact administrator

4.3.2 Administrator Module

4.4.2.1 Use Case: Login

Description: This use case is for the administrator to login to allow authorized user access the system

Author:

Actor(s):

Location:

Status: Pathway defined

Priority: (1)

Assumptions: User is an authenticate to log on as administrator

Precondition(s): Administrator has username and password

Post Condition(s): Administrator can access the administrator page

Primary (happy) path: Administrator is able to access the administrator's page

Alternate pathways(s): Administrator is able to edit and modify the user

in the system

Exception pathway(s): User cannot log on as administrator

Happy Path Flow of Events

Administrator key in his/her username and password and logs in successfully into the system

1. Administrator logs in with valid username and password
2. Administrator has access to all modules

Exceptional Path Flow of Events

Administrator's username does not match the password entered.

1. Unauthorized user
2. Account cannot be accessed
3. Contact super administrator

4.3.2.2 Use Case: Manage Modules

Description: This use case is for the administrator to manage all the modules created in the system

Author:

Actor(s):

Location:

Status: Pathway defined

Priority: (1)

Assumptions: User is an authenticate to log on as administrator

Precondition(s): Administrator has successfully logs on as administrator

Post Condition(s): Administrator can access the administrator page

Primary (happy) path: Administrator is able to manage all modules

Alternate pathways(s): Administrator is able to edit and modify all the modules in the system

Exception pathway(s): User cannot log on as administrator

Happy Path Flow of Events

Administrator key in her/his username and password and logs in successfully into the system

1. Administrator logs in with valid username and password
2. Administrator has access to all modules

Exceptional Path Flow of Events

Administrator's username does not match the password entered.

1. Unauthorized user
2. Account cannot be accessed
3. Check IIS Server Settings

4.4 Interface Design:

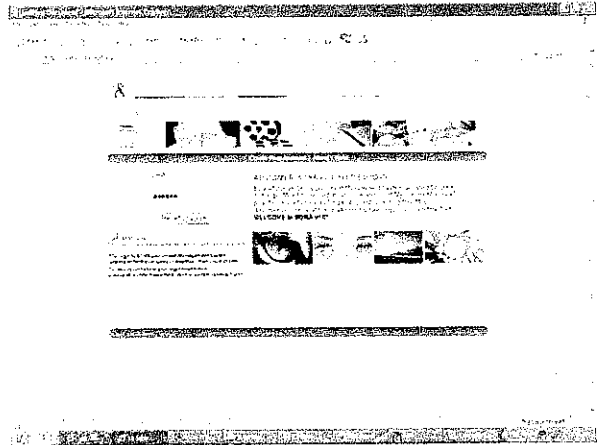
The followings are the sample screen shot off the system.

**Please do take note that these are the pages that ARE CURRENTLY WORKING. While the other pages are still under construction and development and cannot be done in time of writing of this report.*

Login page

The login page is what users will see first when using the BORA personal document management system.

Here existing user will be prompt to key in their login credentials while new users will be able to create a new account by clicking the CREATE NEW ACCOUNT button.



Create New Account Page

The Create New Account page enables new users to create their new BORA account and start using the system.

Here new users are required to fill-in the required fields (Username, Password, etc) to create an account so that they have the privilege to access the BORA system.

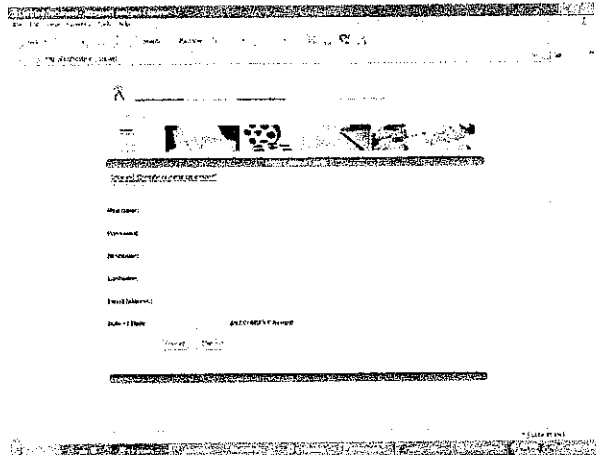


Figure 5 Sample Screenshot of Login Page and Create New Account Page

Main Menu Page

The Main Menu page is the heart of the BORA personal document management system.

Here, users will be able to access and use the functions of the system. Users can edit their account, view their files, images or music folder and upload/download, delete or edit their contents anytime, anywhere.



Calendar Page

The Calendar page allows users to plan their day, months and even years! Users can even be alerted of an event via email and never miss out on that special occasions.

Here, users are able to set or plan an event and choose to be alerted via email. It works together the TO-DO-LIST page.

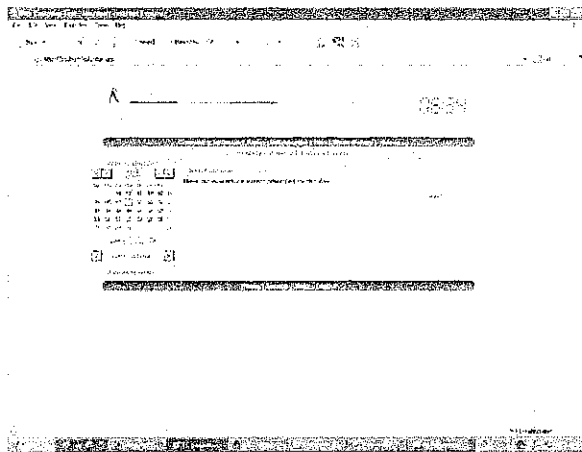


Figure 6 Sample Screenshot of Main Menu Page and Calendar Page

TO-DO-LIST Page

The TO-DO-LIST page is part of the calendar page. It shows users events that are planned for the day.

Here, users will be able to note down things to-do for the day, view, editing and deleting them when necessary. *This sample screenshot shows the page without any events recorded.

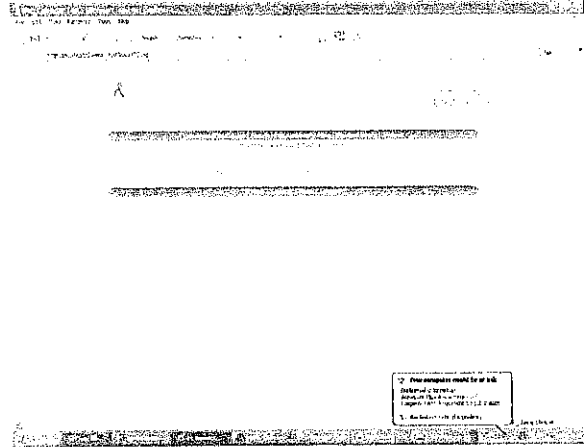


Photo Gallery Page

The Photo Gallery page allows users to upload, download, edit, delete and view their favourite and personal images and photos.

Here, users are able to sort their images and photos according to categories via subfolders.

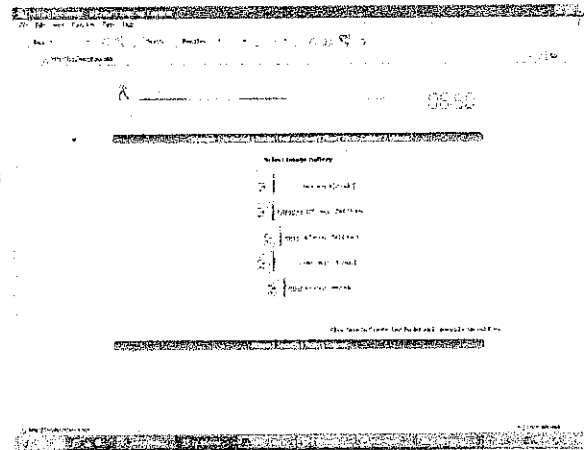


Figure 7 Sample Screenshot of To-Do-List Page and Photo Gallery Page

Photo Gallery Subfolder Page

The Photo Gallery Subfolder page is part of the Photo Gallery page, it show users thumbnails of the images and photos that are in the subfolder.

Here, users will able to see thumbnails of the images and photos that have been uploaded in the system. Images and photos are listed in 2 by 5 cells and can be sorted in ascending or descending order. To view an image or photo, users have to click on the desired image or photo.

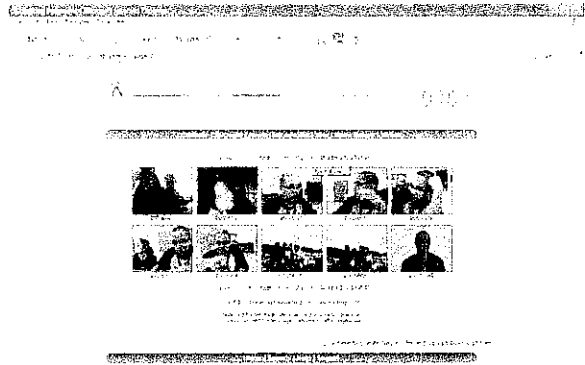


Photo Gallery Image Display Pop-out

The Photo Gallery Image Display Pop-out lets users view the images and photos that have been uploaded in their full size. It is enabled once a user clicks on the desired image thumbnails they wish to view.

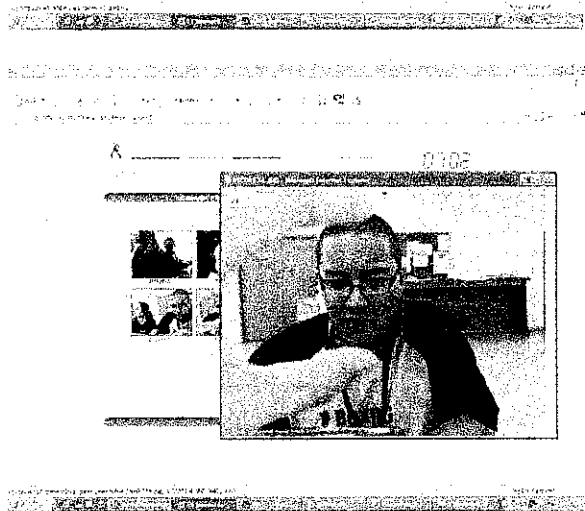


Figure 8 Sample Screenshot of Photo Gallery Subfolder Page and Photo Gallery Image Display Pop-out Page

CHAPTER 5

CONCLUSIONS AND RECOMMENDATIONS

5.0 Conclusion

The author did not successfully manage to fully develop the system as intended due to time constraint and problems encountered during development. But the author truly believes that a personal document management system that the author is trying to develop is a great and useful tool to have.

It can help save time in terms of file management and also able to create information and knowledge sharing once a group/ multi-user function is introduced.

As for future enhancement and recommendations, the author would like to be able to integrate an instant messaging function feature such as Yahoo Messenger or Google Talk and features a different theme where users can personalize their page so that it can be viewed by other users similar to MySpace and Friendster social network program. Also the author would like to integrate a blog feature so that users can share their lives with other users.

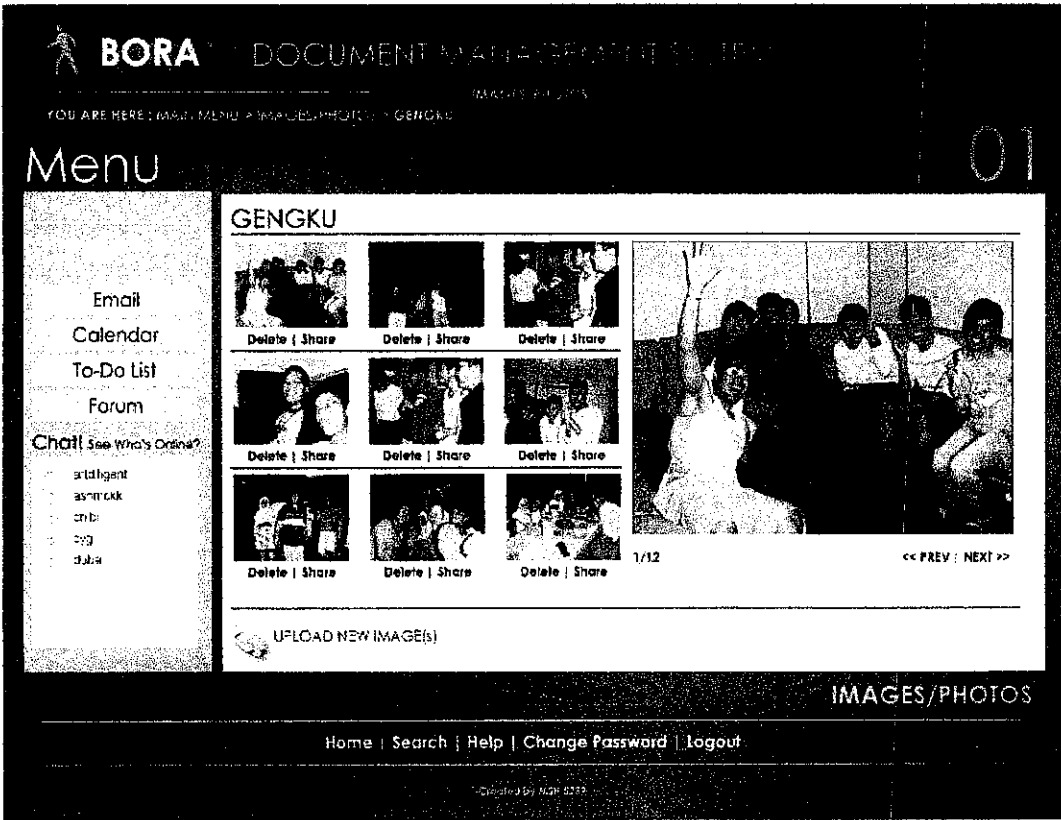


Figure 12 Images/Photos View Folder Page

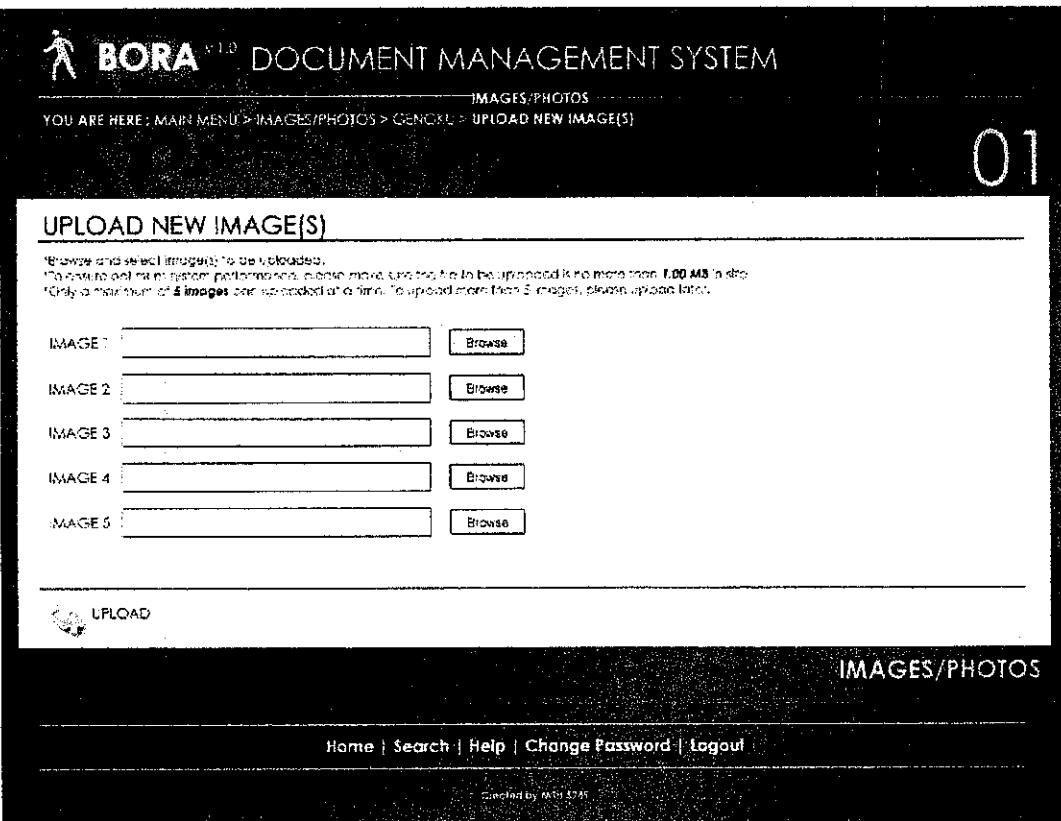


Figure 13 Upload New Images/Photos Page

5.1 Future Recommendations

5.1.1 Future Interface Design

The followings are future interface designs of how the system could be like.

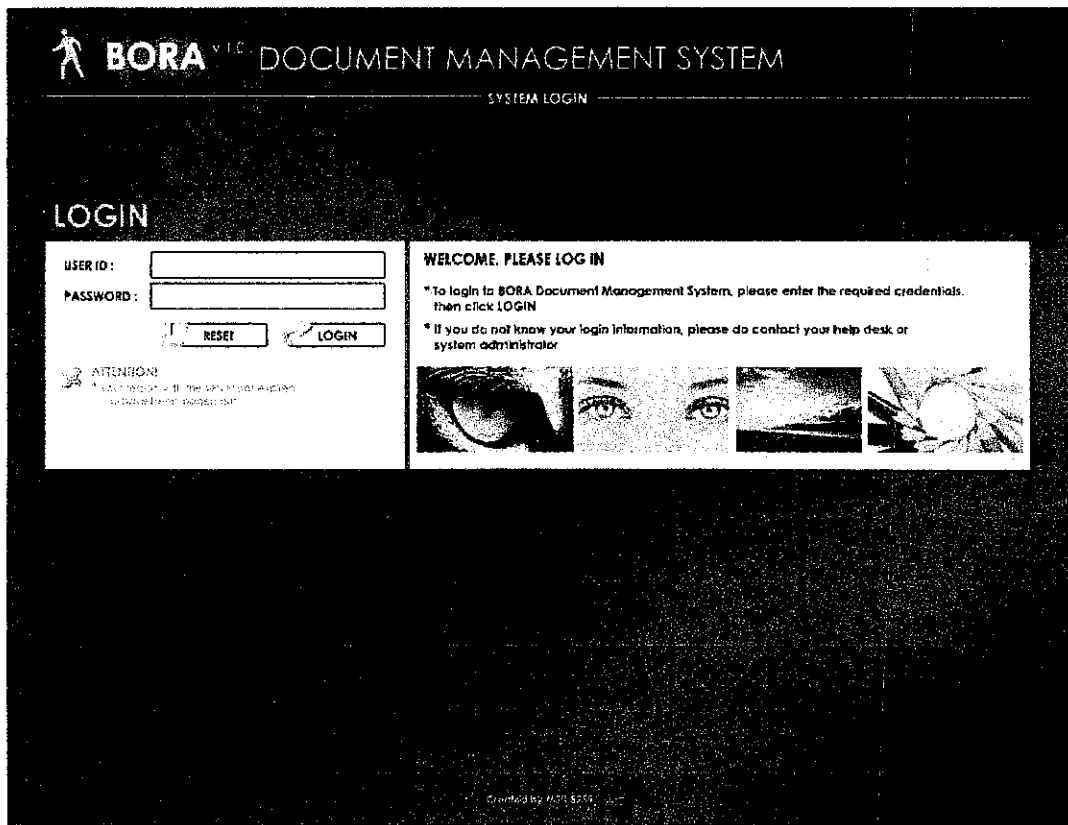


Figure 9 Login Page

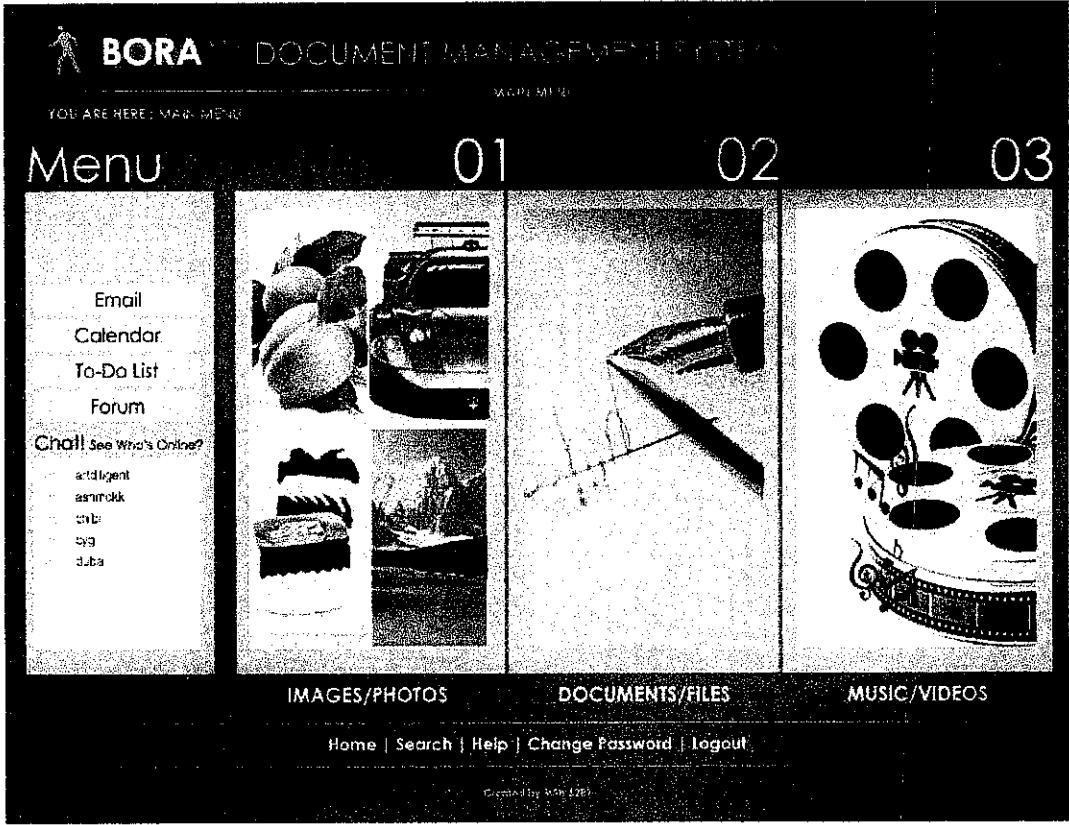


Figure 10 Main Menu Page

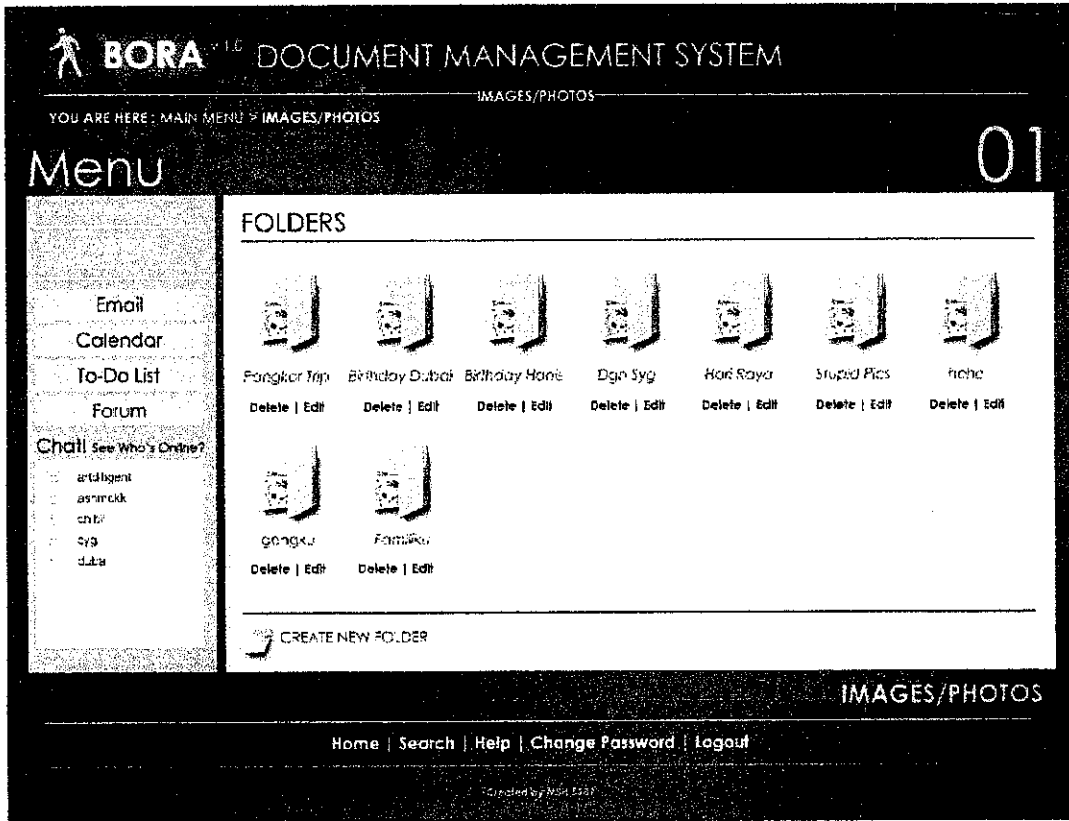


Figure 11 Images/Photos Folder Page

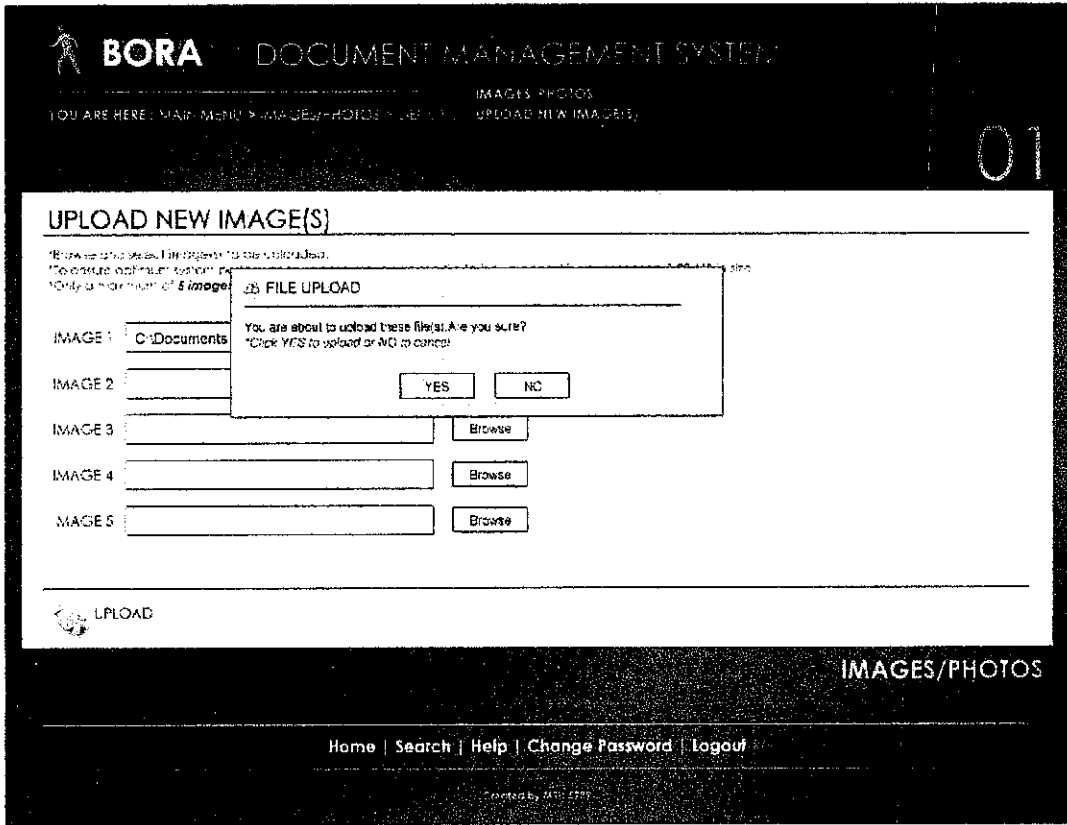


Figure 14 Upload New Images/Photos Confirmation Popup Message

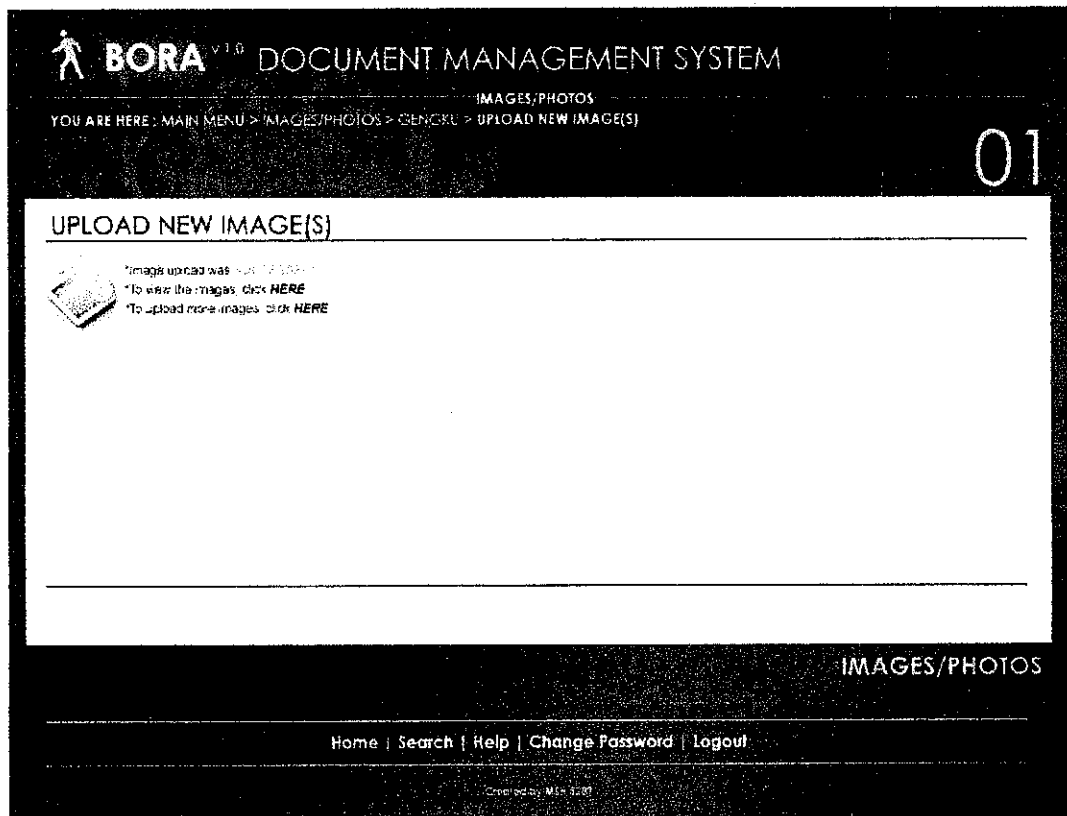


Figure 15 Upload New Images/Photos Successful Page

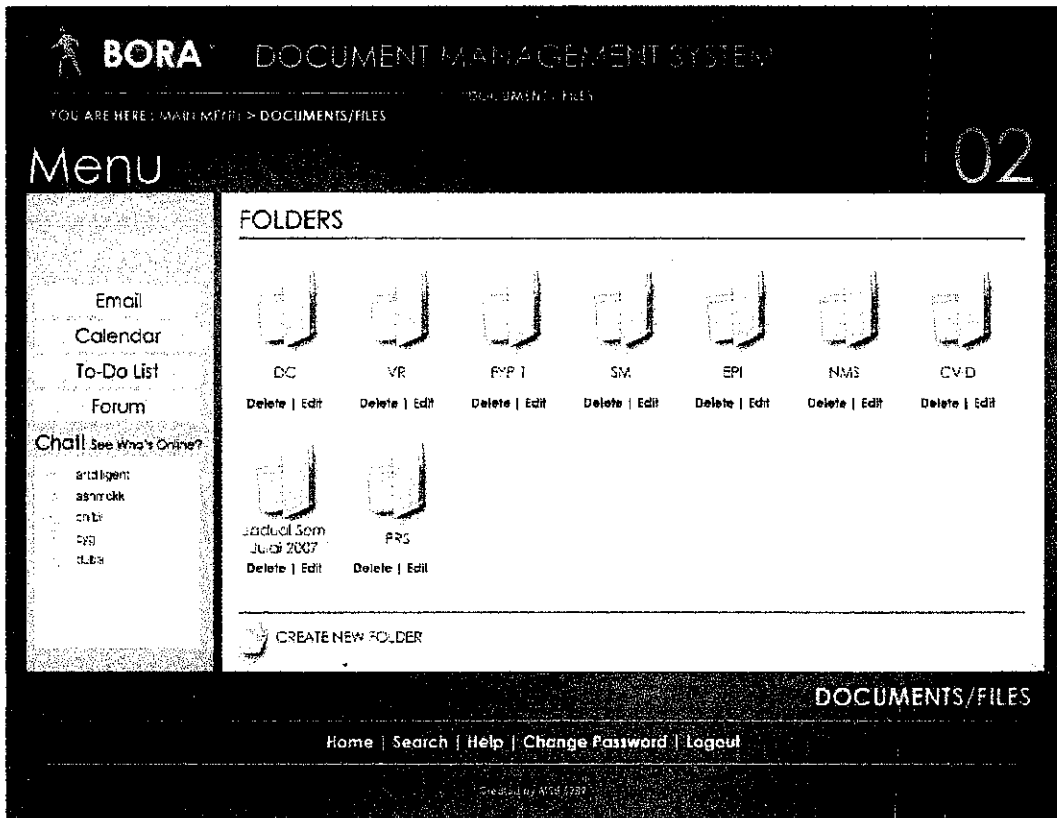


Figure 16 Document/File Folder Page

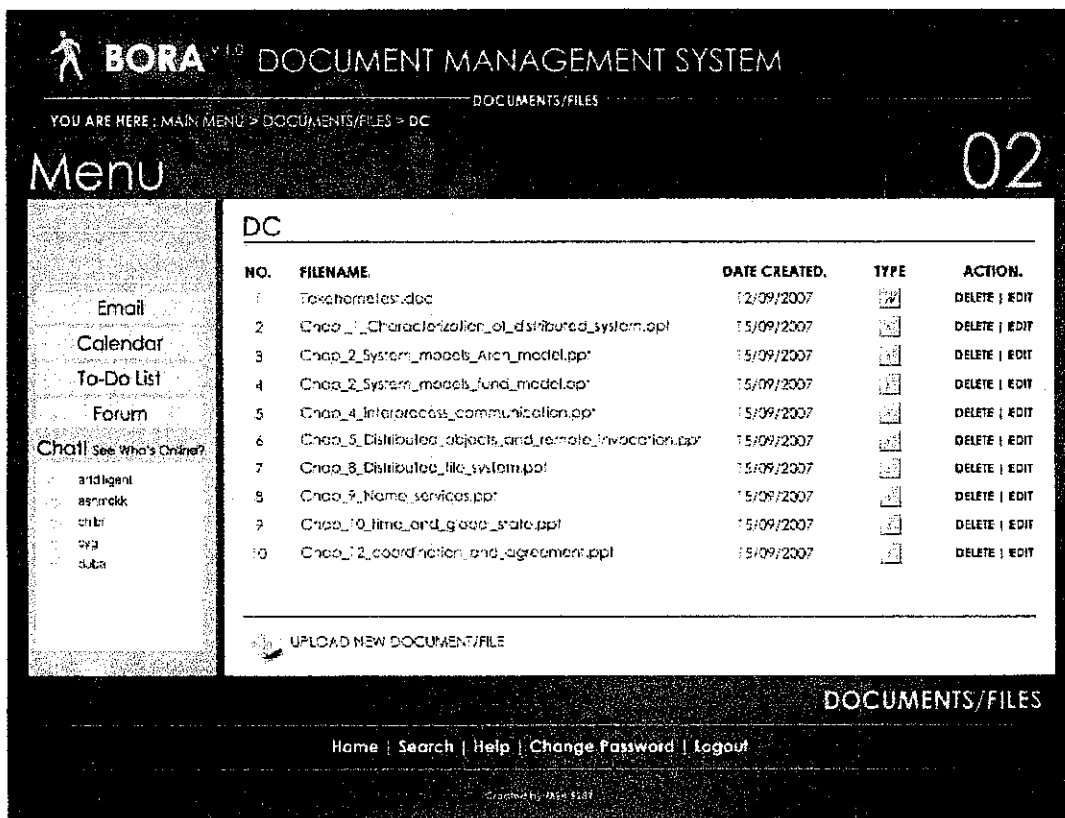


Figure 17 Document/File View Folder Page

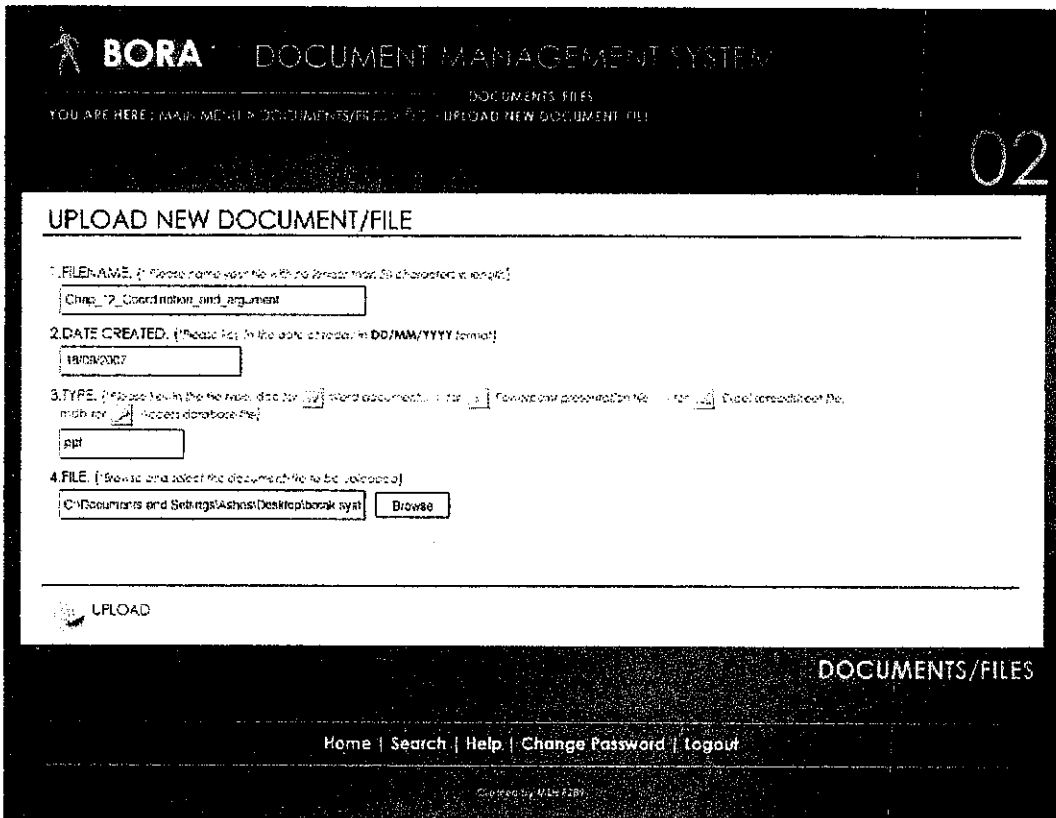


Figure 18 Upload New Document/File Page

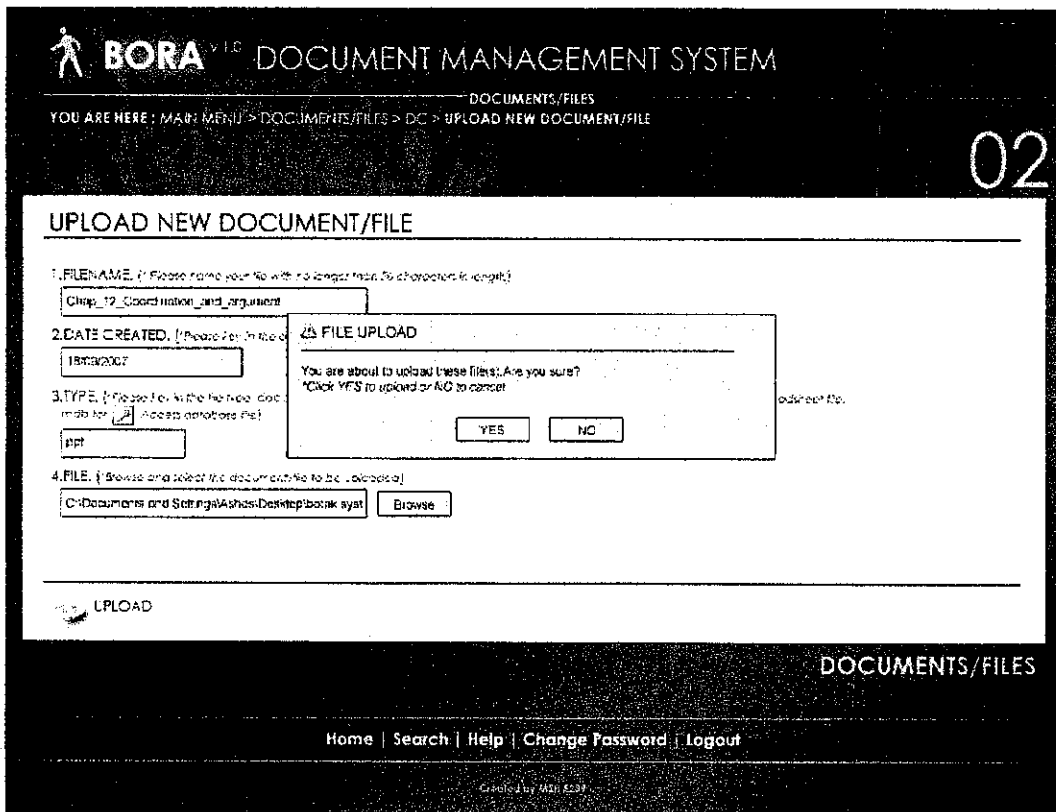


Figure 19 Upload New Document/File Confirmation Popup Message

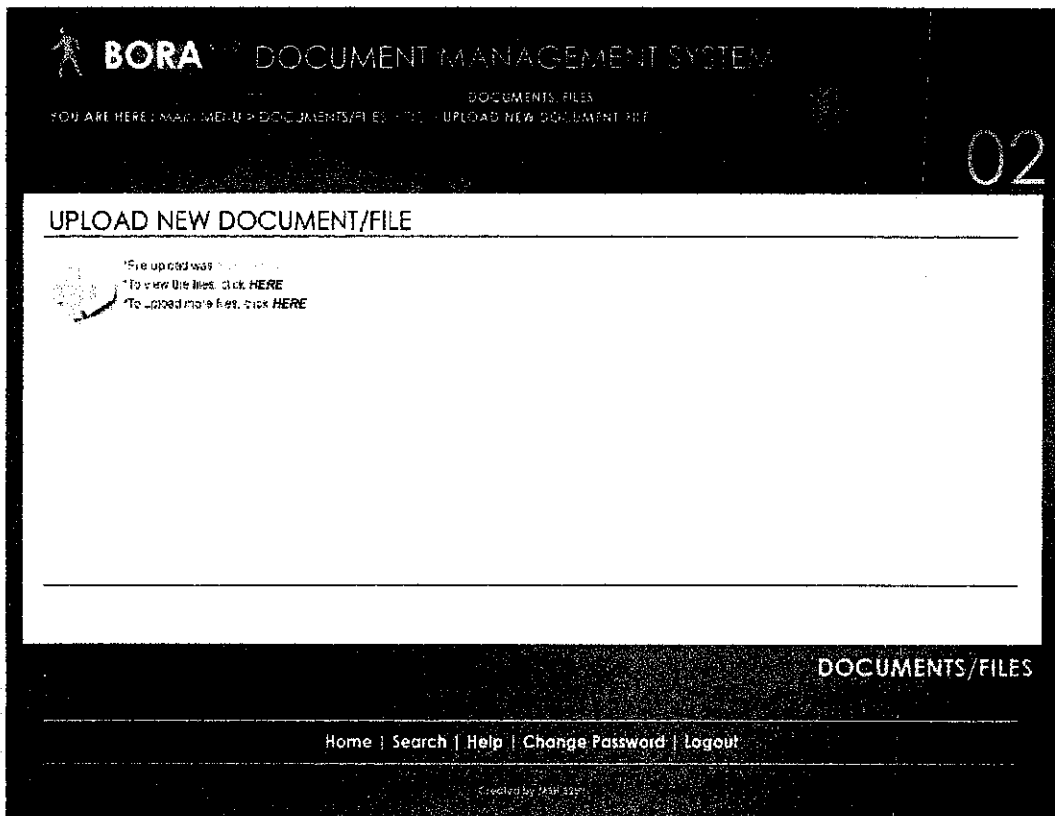


Figure 20 Upload New Document/File Successful Page

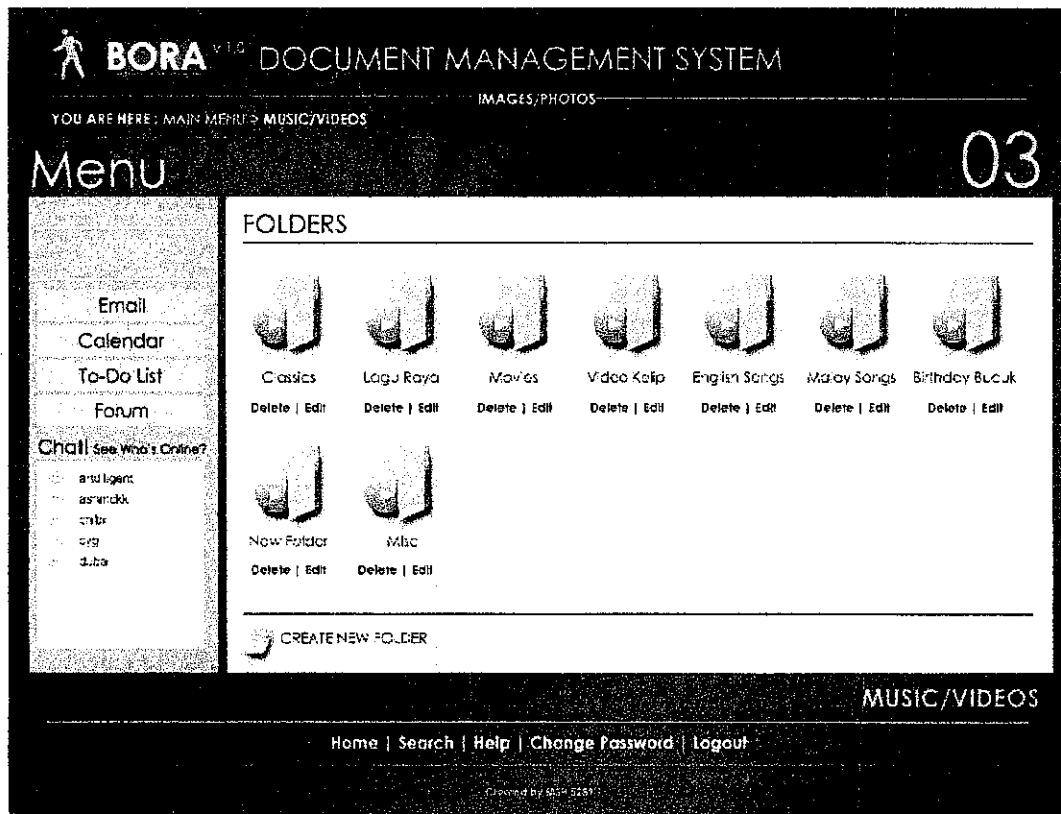


Figure 21 Music/Video Folder Page

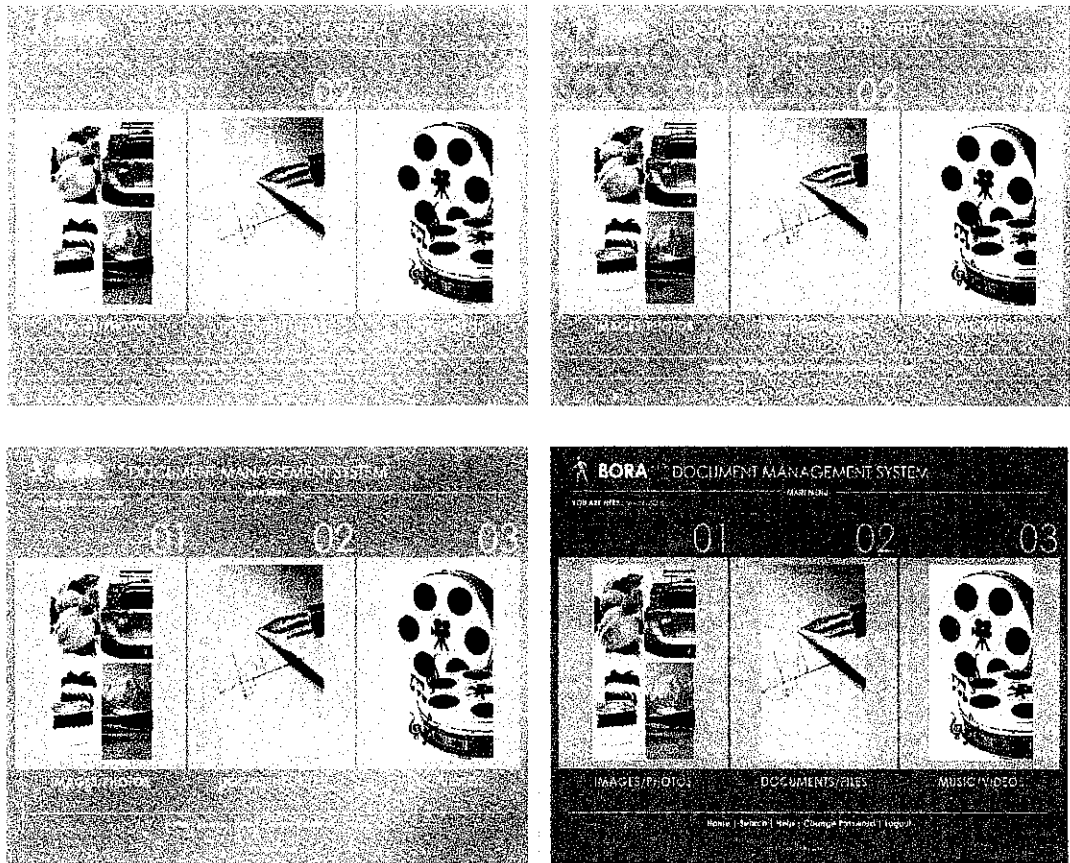


Figure 22 Different Coloured Themes for More Personal Touch

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APPENDICES

Project Timeline/Milestone

The entire project will be divided into 2 main part which corresponds to the requirement of the university which is Final Year Project 1 and 2.

In Part A, the author has covered the planning, analysis and development phases. The author focuses on the current technology and application used for the document management system. During Part A, the author is required to perform a research on current trend in personal document management system, possible user's wants and needs of the system, design and finally produce a prototype of the system to be presented later at the end of the semester. During the first part, the author has designed the interface design for the system.

In Part B – development, implementation, testing, and go & live support phases will be accomplished.

Project Timeline/Milestone

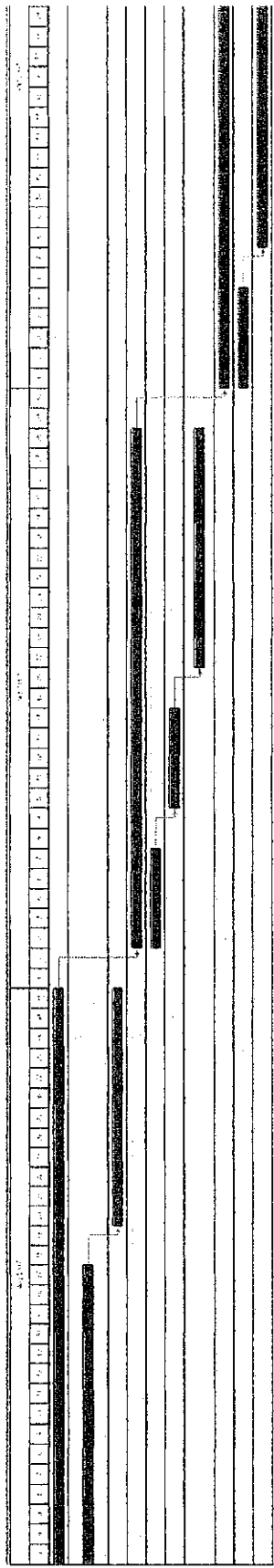


Figure 2 Timeline – Part A

ID	Task Name	Start	Finish	Duration
	Requirements	03/08/2007	31/08/2007	21d
	System Requirements	03/08/2007	17/08/2007	11d
	User Requirements	20/08/2007	31/08/2007	10d
	Analysis	03/09/2007	28/09/2007	20d
	Analyze user's needs	03/09/2007	07/09/2007	5d
	Analyze system's needs	10/09/2007	14/09/2007	5d
	Create a detail functional requirements documents	17/09/2007	28/09/2007	10d
	Design	01/10/2007	19/10/2007	15d
	Prototyping: Interface	01/10/2007	05/10/2007	5d
	Prototyping: System Function	08/10/2007	19/10/2007	10d

