Asian School of Management and Technology

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Project Proposal

on

Office Management and Messaging System

Under the supervision of

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B.Sc.CSIT 3rd Year / 5th Semester

Submitted to

Asian School of Management and Technology

Acknowledgement

It is difficult to draw up a list of persons to be thanked because of several people involved in completion of this project in various ways. Knowledge itself is cumulative so it is difficult to acknowledge all the intellectual ideas that has been influencing in completion of this project. It is almost impossible to acknowledge all those who have contributed in this project in some manner. But some of individuals have put in effort which must be publicly acknowledged.

It gives the authors immense pleasure to express their deepest sense of gratitude and sincere thanks to the highly respected and esteemed guide **Mr. Umesh Adhikari**, teacher in Asian School of Management and Technology, for his valuable guidance, encouragement and cooperation for completion of this project entitled **–Office Management and Messaging System** and helping us to accumulate necessary information for the completion of the same. The author has gathered an enormous deal of experience and knowledge while going through completion of this project. His useful suggestion for this project and co-operative behaviour are sincerely acknowledged.

The author would also like to express his sense of gratitude to **Mr. Surya Bam**, coordinator and teacher in Asian School of Management and Technology, for his support throughout this project.

The author would also like to extend our gratitude and appreciation to the principal of Asian School of Management and Technology, **Mr. Anil Lal Amatya**, for support, encouragement and guidance throughout the completion of this project.

Lastly, the author is grateful to all their friends for their co-operation, inspiration, guidance, support and encouragement during all stages of completion of this project.

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Abstract

This project report contains detail description of –Office Management and Messaging System which was developed as a partial requirement in accordance to the extra professional course of B.Sc.CSIT V semester of Asian School of Management and Technology.

The project report incorporates brief information about the office management system and a chat app. It even includes analysis of activities done, requirement specification, design, coding, implementation and testing of the system. Office management system is the integral part of this project. The office management system incorporates the concept of data storing and file sharing. The system uses a chat app as well in order chat with the employees of the office when needed. The system uses the idea of git and messenger together.

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Abbreviations

CRUD	Create Read Update Delete
DDL	Data Definition Language
DML	Data Manipulation Language
ER	Entity Relationship
GHz	Giga Hertz
MB	Mega Byte
RAM	Random Access Memory
SE	Standard Edition
SQL	Structured Query Language

Chapter 1: Project Overview

1.1 Introduction

Office management is a profession involving the design, implementation, evaluation, and maintenance of the process of work within an office or organization, in order to maintain and improve efficiency and productivity.

Online chat may refer to any kind of communication over the Internet that offers a real-time transmission of text messages from sender to receiver. Chat messages are generally short in order to enable other participants to respond quickly. Thereby, a feeling similar to a spoken conversation is created, which distinguishes chatting from other text-based online communication forms such as Internet forums and email. Online chat may address point-to-point communications as well as multicast communications from one sender to many receivers and voice and video chat, or may be a feature of a web conferencing service.

Office Management and Messaging System is a desktop application built with the help of java programming language, that can be used in order to keep the records of the employee and share the files that they are working on. It has chat feature that can be used as any other messaging apps in order to chat with fellow employees.

1.2 Objective and Scope

Considering the problems and flaws in the current system this study aims to build a desktop application- Office Management and Messaging System.

The developed system will aid in smooth operation of an organization by improving the mundane tasks. This project will provide an efficient and reliable way to handle all the daily operations of the organization ranging from entering the personal information of an employee to updating the same information or even deleting and also sharing files.

- Maintain the proper and efficient record of every employee.
- Manage the information about the employees.
- Share the files with each other and work together.

- Ease of getting in touch with other employees.
- To standardize the database required for smooth operation of the system.

The developed system can be viewed as two components or modules, office management system and instant chat application. The above-mentioned objectives are related to the former. The instant chat application basically provides an environment to contact other employees. The system is developed so that any employee working in an office can share the works s/he has done with other employees and can get in touch with other employee with an ease. The developed system is capable to disseminate the information in a uniform manner to all the employees who are working on the same project. The authorized personnel can view detailed information of any employee and their works. The system will also allow the authorized personnel to organize all the records and works of the employees in a systematic way. The information will be stored in an efficient and reliable way, thus making it easily accessible for future reference. The scope of the system developed during this project can be listed as follows:

- Personal Information about the employees.
- Managing the works in a systematic way within the organization.
- Creating an environment where the employees can chat with each other.

1.3 Features

As mentioned earlier, the developed system constitutes of two different independent modules integrated together, Office Management System and Instant Chat Application. The former deals with all the process or activities necessary to maintain an efficient and reliable database of an office whereas the later provides an instant chat environment with other employees. The developed system has two types of users according to the right and authority they have, they are

- Administrator
- General User

The administrator has the full authority to the whole system and can use Data Definition Language (DDL) as well as Data Manipulation Language (DML). The administrator has full access to all the data as well as the relationships among the data entities. They have

the right to insert, update and delete different employees. They are responsible for the management and maintenance of the database of the office.

General users on the other hand can only view the information that is provided by the administrators. They do not have right to insert or modify or delete any records from the system except their own. They do not have authority to use any DDL queries or even the DML queries that are not authorized by the administrator.

The salient features of the ANFA Database can be listed as:

i. CRUD operations – CRUD operations abbreviation for Create, Read, Update and Delete allows the administrator to create new attributes related to any employee as per requirement. The operation also enables the administrator to update the information of employee or other related entity of the organization. This feature also allows administrator to insert and update the information of any employee as the need of the organization.

ii. File Sharing – The developed system distributes all the information as per required by the user. The system has different types of views for displaying information such as: Employee Information, File Information and Work Information.

iii. Instant Chat – The Messaging System provides an environment where the employee can discuss about the work and get in touch with an ease.

1.4 Feasibility Study

Feasibility is the study of impact, which happens in the organization by the development of a system. It is wise to think about the feasibility of any problem this project looks to solve or undertake. The impact can be either positive or negative. When the positives nominate the negatives, then the system is considered feasible. Here the feasibility study can be performed in two ways such as technical feasibility and Economical Feasibility.

- Technical Feasibility – The author can strongly state that the system is technically feasible, since there will not be much difficulty in getting required resources for the development and maintaining the system as well. All the resources needed for the development of the software as well as the maintenance of the same are easily available.

- Economic Feasibility – Development of this application is highly economically feasible. The organization does need not to spend much money for the development of the system. If such factors are considered, then this study can attain the maximum usability of the corresponding resources. Even after the development, the organization will not be in condition to invest more in the system. Therefore, the system is economically feasible.

1.5 System Requirement

The developed system provides various functionalities as given below:

- The system shall enter, update and delete employees' information.
- The system shall facilitate to enter, update and delete employees' information.
- The system shall provide the details of employees.
- The system shall allow viewing the information according to user access rights.
- The system shall allow to share the files and data that an employee is working on.
- The system shall provide an environment to chat with fellow employees.

1.6 Methodology

A systematic process was followed for the development of the project. The overall system development process was carried out into different phases like requirement analysis, design, coding, testing, debugging and implementation.

At first the present system, that is, manual system was overviewed in brief so that the deficits and irregularities in the current system would be pointed out. This helped the author to identify the problem and find the probable solutions. The development process was then started with data collection phase which supported the author in pointing out the requirement for the proposed system. The author of the project has used data provided in the internet and some dummy data for various purposes involved in the development process. The functional and non-functional requirements of the system

were specified. The system requirement specification document was prepared at the end of this phase.

After completion of the requirement analysis and specification phase, system design process was carried out. It included database design and interface design. Among the available list of possible designs, the best design was chosen by keeping in point the feasibility of the project.

The next phase was the coding phase. The front end of the system was designed using Java, while the back end was designed and managed using MySQL

Along with the coding, testing was also performed in parallel to remove any unnecessary bugs and errors. If any error or bug was detected, the error was noted for future reference and fixed immediately.

After the system was developed as a whole, the system testing was conducted to make sure that all the modules were compatible to each other and worked together as a single unit. The bugs and errors were identified and corrected and the proposed system was then delivered to the supervisor for final testing.

Chapter 2: System Development

2.1 Project Management

Project management is an important aspect of developing any projects. If a project is not managed properly then the chance of success of that project is minimal and in addition to that the project might turn out to be expensive in terms of cost as well as time. On the other hand, a well-managed project can have a prosperous future and has a high probability of success as well as the project turns out to be time and cost effective. There are various aspects of project management which is described in this report later on.

Project Planning consist the complete plan for scheduling the time required to complete the assigned project and allocation of resources for each time period. The minimum time required to complete the project have been allocated and the complete duration of the project including the documentation of the project has been calculated.

The time period for each activity of the software development process has been allocated considering the total duration allocated to complete the project.

2.2 Analysis

System Analysis is a detailed study of the various operations performed by a system and their relationships within and outside of the system. Here the key question is – what all problems exist in the present system? What must be done to solve the problem? Analysis begins when a user or manager begins a study of the program using existing system.

During analysis, data was collected on the various files of the present system. The success of the system depends largely on how clearly the problem is defined, thoroughly investigated and properly carried out through the choice of solution. A good analysis model should provide not only the mechanisms of problem understanding but also the frame work of the solution. Thus, it should be studied thoroughly by collecting data about the system. Then the proposed system should be analysed thoroughly in accordance with the needs.

2.2.1 Technical Requirement Analysis

- Hardware Requirement

  The minimum hardware requirement for developed system and its operations include the following:

  - Processor: Pentium IV, 1 GHz or faster.
  - RAM: 512 MB
  - Monitor: Colour monitor
  - Keyboard: 104 Keys

- Software Requirement

  - Operating System: Windows NT, Windows XP or higher
  - Language: JavaSE
  - Framework: NetBeans
  - Database: MySQL

2.2.2 Interface Requirement

- User Interface

  The new system will have efficient and user-friendly Graphical User Interface. The new system provides various types of features depending upon the type of user. For instance, a user without administration privilege can only view the information of the employees but cannot update or delete this information. The user with administrator privilege can insert, update or delete information related to the employees.

- Interface with Operator

  The new system does not interfere with other existing functionality. Therefore, the system does not lock any of the other programs running in the computer. The developed system is compatible with the other programs that are present in the operating system.

2.2.3 Tools Used

Design and Development Tools

- JavaSE: For front-end design
- MySQL: For back-end design

Applications Used for Report Writing

- Microsoft Word 2016: To prepare document.

2.3 Design

The design document contains the overall design of the Office Management and Messaging System. The design process includes modular decomposition of the system, functional partitioning of the system and entity relationship diagram.

2.3.1 Functional Partitioning of the System

The developed system can be partitioned according to the authority and privileges given to the users. As mentioned earlier, the system revolves around two types of users, one is the administrator with all the right and authority within the database, and the other is general users who can only request and view information.

The following are the functions of administrator:

- Add/delete/edit employees' information
- View employees' information
- Add/delete/update files
- View file information
- Search information
- View their own information
- Chat with another administrator/employee

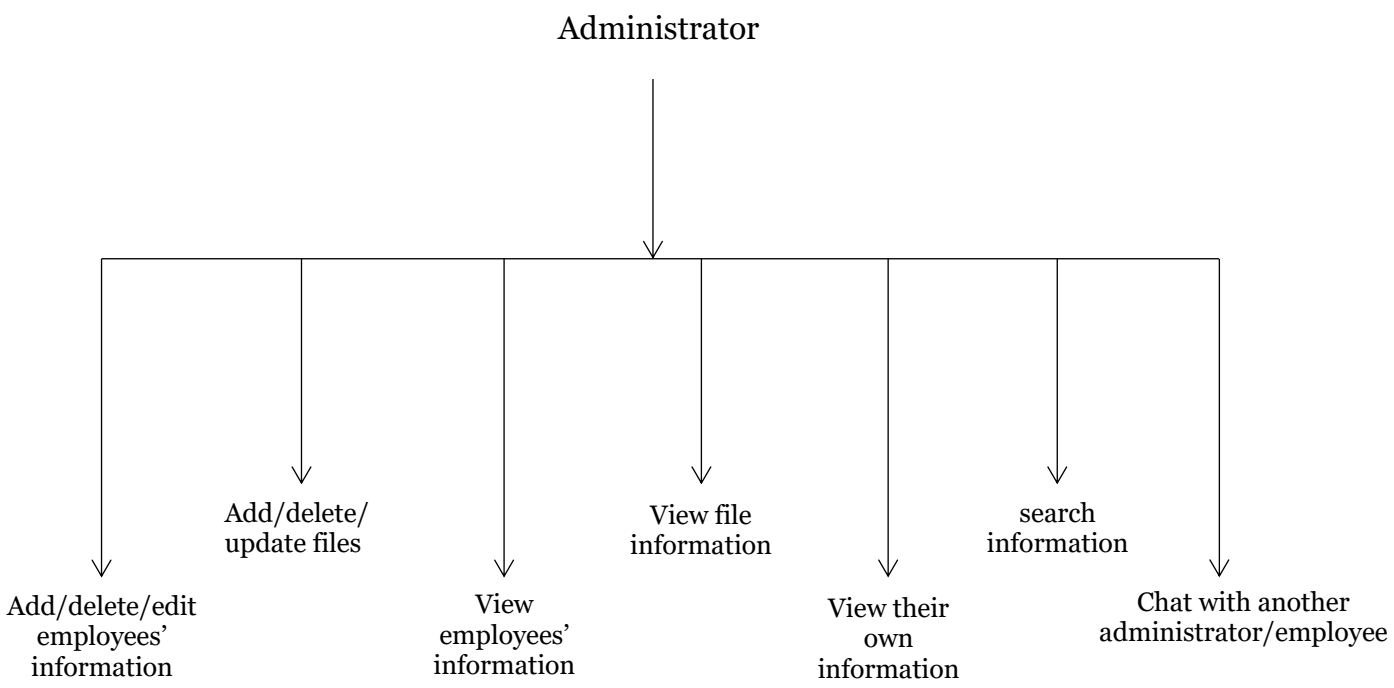

Fig. 1: Functional Partitioning of admin

The functions of the general user are:

- Create account
- View employees' information
- View shared file information
- Chat with another administrator/employee

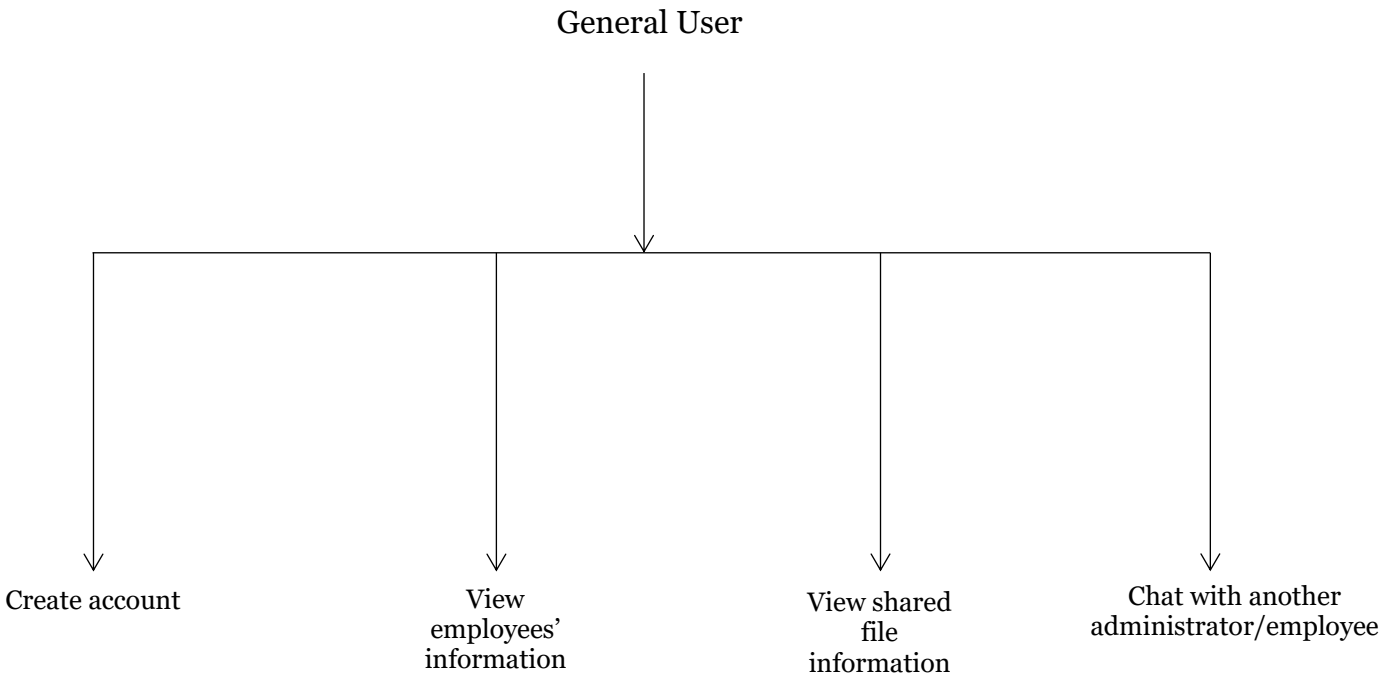

Fig. 2: Functional Partitioning of General User

2.3.2 Entity Relationship Diagram

In software engineering, an Entity – Relationship model (ER model for short) is an abstract way to describe a database. It usually starts with a relational database, which stores data in tables. Some of the data in these tables point to data in other tables - for instance, your entry in the database could point to several entries for each of the phone numbers that are yours. The ER model would say that you are an entity, and each phone number is an entity, and the relationship between you and the phone numbers is 'has a phone number'. Diagrams created to design these entities and relationships are called entity–relationship diagrams or ER diagrams.

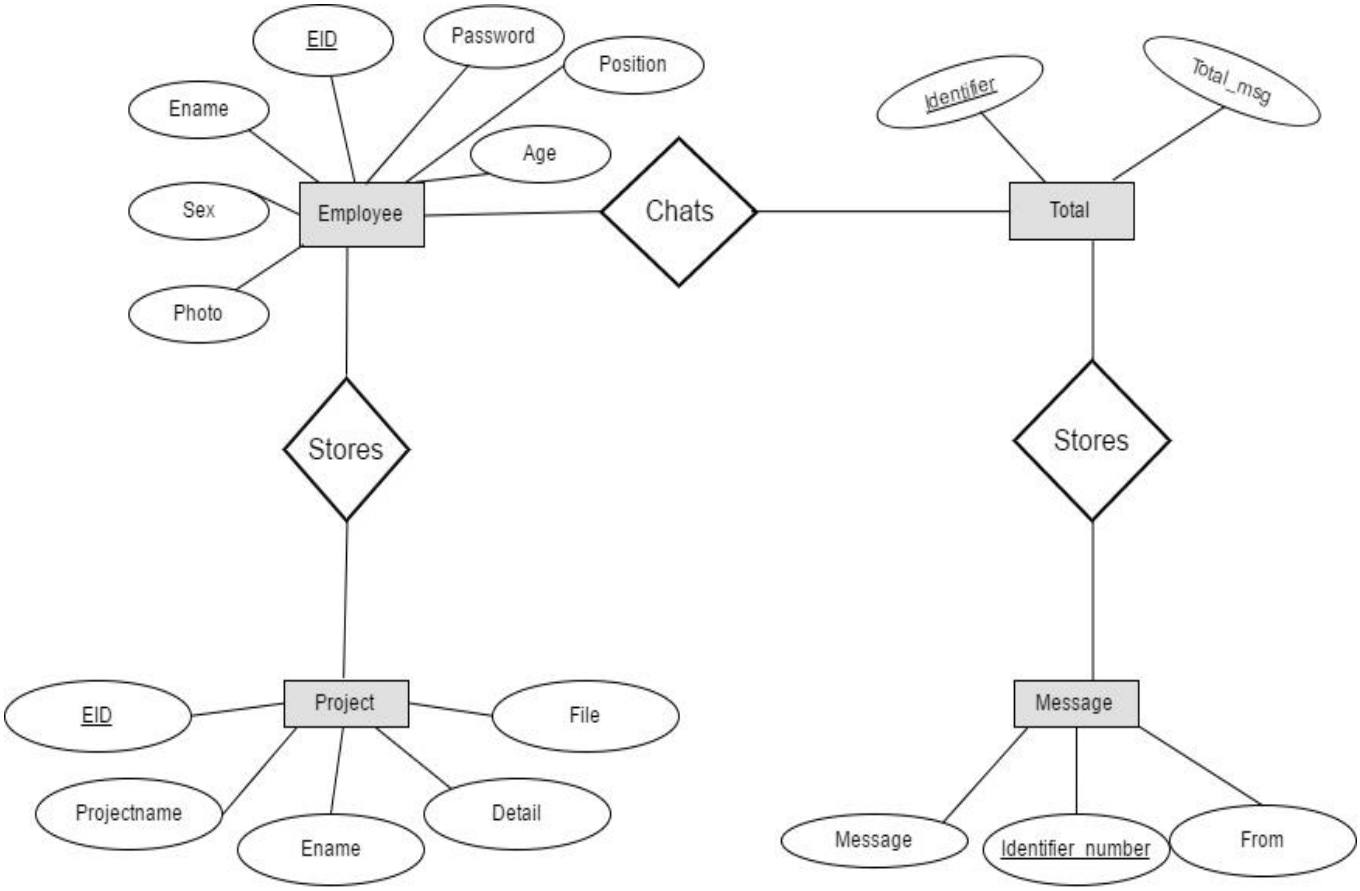

Fig. 3: E-R Diagram of Office Management and Messaging System

2.3.3 Schema Diagram

A schema is an outline, diagram, or model. In computing, schemas are often used to describe the structure of different types of data.

Fig. 4: Schema Diagram of Office Management and Messaging System

Chapter 3: Epilogue

3.1 Result

A system that can solely maintain the entire database of an office was developed. The term entire database here refers to data about the personal information of employee, information about the file shared of a work. The system is capable of letting employees chat with each other.

- Improvement in the quality of management of the office.
- Reduction of tedious and mundane tasks.
- Better and easy way to get in touch with fellow employees.

3.2 Problems faced

The major problems that came across throughout the completion of this whole project are listed below:

- Finding required data for instant chat system was very difficult.
- The data thus found were in raw format which needed to be refined according to the system requirement.

The other problems faced during the completion of this project was the lack of practical knowledge of developing a system. This made difficult to work in the time constraint which was required to finish the project on time.

As the project started progressing, with the help of our supervisor and our determination all these problems started to fade away and finally the project was developed and is ready to be implemented.

3.3 Limitation

Though there are numerous features of the database system, there are few limitations of this system. They are:

- The program codes might not be fully optimized.
- The user interface is simple but might still be confusing for someone who is not frequent to computer use.

3.4 Conclusion

The project to develop the Office Management and Messaging system is built on NetBeans framework using java programming language. The developed system has many features that are unique to it in comparison to other such systems available at the market at present.

The development of this project has helped to gain the practical knowledge of developing desktop application software. It helped to understand the different phases in the life cycle of software development which can be of great use for future endeavour.

All in all, this project was a fruitful experience which resulted in an automated system comprising of many unique features.

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