

OFFICE COLLABORATOR

**A Project Report Submitted
in Partial Fulfillment of the Requirements
for the Degree of**

MASTER OF COMPUTER APPLICATIONS

By

HARSHIKA SRIVASTAVA

(University Roll No. 1900290140015)

AYUSHI SRIVASTAVA

(University Roll No. 1900290140011)

SHIVANGI SAXENA

(University Roll No. 1900290140035)

Under the Supervision of

Mr. NARESH CHANDRA

**Assistant Professor
KIET Group of Institutions**



**Submitted to
DEPARTMENT OF COMPUTER APPLICATIONS
KIET Group of Institutions, Ghaziabad
Uttar Pradesh-201206
December 2021**

DECLARATION

We hereby declare that the work presented in this report entitled “**Office Collaborator**”, was carried out by us. We have not submitted the matter embodied in this report for the award of any other degree or diploma of any other University or Institute.

We have given due credit to the original authors/sources for all the words, ideas, diagrams, graphics, computer programs, experiments, results, that are not my original contribution. We have used quotation marks to identify verbatim sentences and given credit to the original authors/sources.

We affirm that no portion of my work is plagiarized, and the experiments and results reported in the report are not manipulated. In the event of a complaint of plagiarism and the manipulation of the experiments and results, we shall be fully responsible and answerable.

Harshika Srivastava (1900290140015)

Ayushi Srivastava (1900290140011)

Shivangi Saxena (1900290140035)

ACKNOWLEDGEMENT

At the outset, we would like to thank our guide and advisor, **Mr. NARESH CHANDRA Assistant Professor**, for giving us an opportunity to work on this challenging topic and providing us ample and valuable guidance throughout the Project.

Without his encouragement and constant guidance, we would not have been able to finish this project. He has been always a source of inspiration and motivator for innovative ideas during the entire span of this work.

We are grateful **Dr. Ajay Kumar Shrivastava, Professor and Head, Department of Computer Applications, KIET Group of Institutions, Ghaziabad** for providing all the necessary resources to carry out this Project work.

We will be failing in our duty if we don't acknowledge the people behind this work to give us moral and psychological support. Our special thanks to our parents for their endless care and constant support.

Harshika Srivastava (1900290140015)

Ayushi Srivastava (1900290140011)

Shivangi Saxena (1900290140035)

CERTIFICATE

Certified that **Harshika Srivastava (1900290140015)**, **Ayushi Srivastava (1900290140011)**, **Shivangi Saxena (1900290140035)** have carried out the project work having “**Office Collaborator**” for Master of Computer Applications from Dr. A.P.J. Abdul Kalam Technical University (AKTU) (formerly UPTU), Technical University, Lucknow under my supervision. The project report embodies original work, and studies are carried out by the student himself/herself and the contents of the project report do not form the basis for the award of any other degree to the candidate or to anybody else from this or any other University/Institution.

Date:

Harshika Srivastava (1900290140015)

Ayushi Srivastava (1900290140011)

Shivangi Saxena (1900290140035)

This is to certify that the above statement made by the candidate is correct to the best of our knowledge.

Date:

Mr. Naresh Chandra
Assistant Professor
Department of Computer Applications
KIET Group of Institutions, Ghaziabad

Signature of External Examiner

Signature of Internal Examiner

Dr. Ajay Kumar Shrivastava
Head, Department of Computer Application
KIET Group of Institutions, Ghaziabad

ABSTRACT

Employees are the backbone of any company therefore their management plays a major role in deciding the success of an organization. Office Collaborator makes it easy for the employer to keep track of all records. This software allows the administrator to edit employees, add new employees, transfer/promote/terminate employees. Each employee in the database is associated with a position can be added and edited when need arises.

Employees can be transferred between positions easily without having to retype back their information in the database. You can check to see if there are duplicate positions/employees in the database. Most of all, the employer can assign tasks to employees and assess their progress in order to keep track of employee performance.

This software allows the administrator to edit employees, add new employees, transfer/promote/terminate employees. Each employee in the database is associated with a position can be added and edited when need arises. Employees can be transferred between positions easily without having to retype back their information in the database.

TABLE OF CONTENTS

S.No.	Tittle	Page
	DECLARATION	ii
	CERTIFICATE	iii
	ABSTRACT	iv
	ACKNOWLEDGEMENTS	v
	Table of Contents	vi
CHAPTER 1	INTRODUCTION	8
1.1	PROBLEM STATEMENT	8
1.2	PROJECT BACKGROUND	8
1.3	PROJECT OBJECTIVE	9
1.4	PROJECT SCOPE	9
1.5	EXPECTED BENEFITS	10
1.6	REQUIREMENTS AND CONSTRAINTS	10
1.6.1	FUNCTIONAL REQUIREMENTS	10
1.6.2	NON-FUNCTIONAL TREQUIREMENTS	11
CHAPTER 2	FEASIBILITY STUDY OF PROJECT	12
2.1	FEASIBILITY STUDY	12
2.2	MAIN ASPECTS	13
2.2.1	TECHNICAL FEASIBILITY	14
2.2.2	OPERATIONAL FEASIBILITY	15
2.2.3	ECONOMICAL FEASIBILITY	15
2.3	BENEFITS	15
2.4	SYSTEM REQUIREMENT SPECIFICATION	16
2.5	TECHNOLOGIES USED	19

2.6	LANGUAGES USED	19
CHAPTER 3	SOFTWARE REQUIREMENT SPECIFICATION	21
3.1	GENERAL DESCRIPTION	21
3.1.1	PROBLEM STATEMENT	21
3.1.2	SYSTEM AND OBJECTIVES	21
3.2.1	IMPROVEMENT IN PERFORMANCE	22
3.2.2	REQUIREMENT SPECIFICATION	22
3.3	EXSISTING VS PROPOSED SYSTEM	22
3.4	SOFTWARE SYSTEM ATTRIBUTES	23
3.5	FEATURES OF OFFICE COLLABORATOR	23
3.6	PRELIMINARY INVESTIGATION	24
3.7	MODEL USED INCREMENTAL	24
3.8	PRILIMINARY DESCRIPTION	25
CHAPTER 4	PLANNING AND SCHEDUELING	26
4.1.1	GANT CHART	26
4.1.2	SOFTWARE REQUIREMENTS	27
4.1.3	HARDWARE REQUIREMENTS	27
4.2	DATA FLOW DIAGRAM	30
4.3	ENTITY RELATIONSHIP DIAGRAM	31
CHAPTER 5	SYSTEM TESTING AND IMPLEMENTATION	33
5.1	SYSTEM TESTING	34
5.2	TEST PLAN	34
5.3	BLACK BOX TESTING	34

5.4	UNIT TESTING	35
5.5	INTEGRATION TESTING	35
CHAPTER 6	CODING	36
6.1	SALARY	36
6.2	DEPARTMENT	40
6.3	HOME	42
CHAPTER 7	SNIPPETS	51
CHAPTER 8	BIBLIOGRAPHY	55

CHAPTER 6	CODING	
CHAPTER 7	SNIPPETS	
7.1		
7.2		
7.3		
7.4		
CHAPTER 8	BIBLIOGRAPHY	

Table of Figures

1.1	INCREMENTAL MODEL	
2.0	GANT CHART	
3.1	DATA FLOW DIAGRAM SYMBOLS	
3.2	ADMIN MODE DFD	
3.3	EMPLOYEE DFD	
3.4	EMPLOYEE DFD WHO IS SOMEONE REPORTING MANAGER	
3.5	ENTITY RELATIONSHIP DIAGRAM	

CHAPTER 1

INTRODUCTION

1.1 PROBLEM STATEMENT

Another challenge is that multi-national companies will have all the employee information stored at the headquarters of the company making it difficult to access the employee information from remote places when needed at short notice. The problems can be tackled by designing and implementing a web-based HR management system.

This system will maintain employee information in a database by fully privacy and authority access. The project is aimed at setting up employee information system about the status of the employee, the educational background and the work experience in order to help monitor the performance and achievements of the employee through a password protected system.

1.2 PROJECT BACKGROUND

Employees are the backbone of any company therefore their management plays a major role in deciding the success of an organization. Human Resource Management Software makes it easy for the employer to keep track of all records. This software allows the administrator to edit employees, add new employees as well as evaluate an employee's performance.

Employees can be managed efficiently without having to retype back their information in the database. You can check to see if there are duplicate positions/employees in the database. A flexible and easy to use Office Collaborator for small and medium sized companies.

1.2 OBJECTIVE

In this world of growing technologies everything has been computerized. With large number of works opportunities, the Human workforce has increased. Thus, there is a need of a system which can handle the data of such a large number of Employees. This project simplifies the task of maintaining records because of its user-friendly nature. The objective of this project is to provide a comprehensive approach towards the management of employee information. This will be done by designing and implementing an Office Collaborator that will bring up a major paradigm shift in the way that employee information is handled. The objectives of this system include Design of a web based office collaborator to fulfill requirements such as project

- Management, leave management, report generation to assist in performance appraisal, ESS and employee trainings.
- Well-designed database to store employee information.
- A user friendly front-end for the user to interact with the system.

1.3 SCOPE

The scope of this project will be limited to the following: Employee profiles:

- Employees will have access to their personal profiles and will be able to edit their details.
- Electronic leave application
- Complete elimination of paperwork in leave management by enabling an employee for leave as well as check their leave status through the system. This will also enable the HR manager to accept/reject leave application through the system Project Management.
 - Assign tasks and projects to employees, assign a project team and keep track of the progress.
- Report generation.
- The HR manager will be able to generate timely reports in order to monitor employees and this can be used for performance appraisals. The reports will have all the information of an employee from educational background, trainings attended, projects done as well as technical skills.

- The admin will add an employee and a default password and employee id will be generated and sent to the new employee's email. The HR manager will then have the ability to add an employee's information to the database.

1.4 EXPECTED BENEFITS

This system is expected to be user friendly and will offer easy access to data as well as services such as online leave management, e-recruitment, and timely report generation, monitoring employee trainings, task management, project management and employee tracking. The employee is expected to have direct interaction with this system through a password protected user account therefore proposed system is web based to enable accessibility from any location as long as internet connectivity is available. This direct interaction with the system will enable employee self-service. Without an employee management system, it's a tedious job for the human resource department to keep track of each employee and even harder for a project manager to assign tasks to the project team. The Office Collaborator will be developed to provide information of employees and many other facilities at the click of a button.

1.6. REQUIREMENTS AND CONSTRAINTS

1.6.1. FUNTIONAL REQUIREMENTS:

- **Admin Generated Email and Password**

The application will work with email and password generated by the admin after joining the firm.

- **Delete and Update Employee:**

Admin will add, update, and delete an employee.

- **Register and Login:**

To work on the web application, one should be registered and should have to login with the organizational email and password.

1.6.2 NON FUNCTIONAL REQUIREMENTS:

- User friendly: The system should be user friendly so that it can easily be understood by the user without any difficulty.
- Ease of maintenance: System should be easy to maintain and use.
- Less time consuming: The system should be less time consuming which could be achieved by good programming.
- Error free: The system should easily handle the user error in any case.
- Static: Application runs on standalone machine. Support only single user.

CHAPTER 2

FEASIBILITY STUDY OF THE PROJECT

2.1. FEASIBILITY STUDY:

The feasibility of the system is an important aspect, which is to be considered. The system needs to satisfy the law of economics, which states that the maximum output should be yielded in the minimum available resources.

A feasibility analysis evaluates the project's potential for success; therefore, perceived objectivity is an essential factor in the credibility of the study for potential investors and lending institutions. There are five types of feasibility study separate areas that a feasibility study examines, described below.

2.1.1. Technical Feasibility

This assessment focuses on the technical resources available to the organization. It helps organizations determine whether the technical resources meet capacity and whether the technical team can convert the ideas into working systems. Technical feasibility also involves the evaluation of the hardware, software, and other technical requirements of the proposed system. As an exaggerated example, an organization wouldn't want to try to put Star Trek's transporters in their building currently, this project is not technically feasible.

This assessment typically involves a cost/ benefits analysis of the project, helping organizations determine the viability, cost, and benefits associated with a project before financial resources are allocated. It also serves as an independent project assessment and enhances project credibility—helping decision-makers determine the positive economic benefits to the organization that the proposed project will provide.

This assessment investigates whether any aspect of the proposed project conflicts with legal requirements like zoning laws, data protection acts or social media laws. Let's say an organization wants to construct a new office building in a specific location. A feasibility study might reveal the organization's ideal location isn't zoned for that type of business. That organization has just saved considerable time and effort by learning that their project was not feasible right from the beginning.

This assessment involves undertaking a study to analyze and determine whether and how well the organization's needs can be met by completing the project. Operational feasibility studies also examine how a project plan satisfies the requirements identified in the requirements analysis phase of system development.

This assessment is the most important for project success; after all, a project will fail if not completed on time. In scheduling feasibility, an organization estimates how much time the project will take to complete.

When these areas have all been examined, the feasibility analysis helps identify any constraints the proposed project may face, including:

- Internal Project Constraints: Technical, Technology, Budget, Resource, etc.
- Internal Corporate Constraints: Financial, Marketing, Export, etc.
- External Constraints: Logistics, Environment, Laws, and Regulations, etc.

2.2 MAIN ASPECTS

There are three aspects of feasibility to be considered namely.

1. Technical
2. Operational
3. Economical

In the technical aspects one may consider the hardware equipment for the installation of the software. The system being centralized will required very little hardware appliances. Hence this helps the system to work smoothly with limited amount of working capitals.

In the operational aspects may think of the benefits of the workload that many a personal may have to share. This is eased out and the required output may be retrieved in a very short time. Thus, there is accuracy in the work on time is also saved there will be very little work that needs to be performed.

Economical system is definitely feasible because the software requirement is less and the operational working for the system requires less number of recruits. This help introduction over-staffing and wastage funds.

We studied on the position to evaluate solution. Most important factors in this study were tending to overlook the confusion inherent in Application Development the constraints and the assumed studies. It can be started that it the feasibility study is to serve as a decision document it must answer three key questions.

1. Is there a new and better way to do the job that will benefit the user?
2. What are the costs and savings of the alternatives?
3. What is recommended?

2.2.1 TECHNICAL FEASIABILITY:

This centers on the existing computer system (hardware, software etc.) and to what extent it can support the proposed additional equipment .in this stage of study, we have collected information about technical tools available by which I could decide my system design as the technical requirements.

2.2.2 OPERATION FEASIBILITY:

In this stage of study, we have checked the staff availability. I concentrate on knowledge of end users that are going to use the system. This is also called as behavioral feasibility in which I have studied on following aspects; people are inherently resistant to change, and computers have been known to facilitate change. An estimate has been made to how strong a reaction the user staff is having toward the development of a computerized system. It is common knowledge that computer installations have something to do with turnover. I had explained that there is need to educate and train the staff on new ways of conducting business.

2.2.3 ECONOMICAL FEASIBILITY:

Economic analysis is the most frequently used method for evaluating the effectiveness of candidate system. More commonly known as cost\benefit analysis, the procedure is to determine the benefits and savings that benefits outweigh costs. The decision was to design and implement system because it is for having chanced to be approved. This is an ongoing effort that improves the accuracy at each phase of the system life cycle.

In developing cost estimates for a system, I need to consider several cost elements. Among these is hardware personal facility. Operating and supply costs.

2.3 BENEFITS

Benefits of conducting a feasibility study:

- Improves project teams' focus
- Identifies new opportunities
- Provides valuable information for a "go/no-go" decision
- Narrows the business alternatives
- Identifies a valid reason to undertake the project
- Enhances the success rate by evaluating multiple parameters
- Aids decision-making on the project.

2.4 SYSTEM REQUIREMENT SPECIFICATION

Any system can be designed after specifies the requirement of the user about that system. For this first gathered information from user by the preliminary investigation which is starting investigation about user requirement.

The data that the analysts collect during preliminary investigation are gathered through the various preliminary methods.

2.4.1 Documents Reviewing Organization

The analysts conducting the investigation first learn the organization involved in or affected by the project. Analysts can get some details by examining organization charts and studying written operating procedures.

1) Collected data is usually of the current operating procedure:

- The information relating to clients, projects and students and the relationship between them was held manually.
- Managing of follow-ups was through manual forms.
- Complaints require another tedious work to maintain and solve.
- Payments details had to be maintained differently.

2) Gathering Information by Asking Questions

Interviewing is the most used techniques in analysis. It is always necessary first to approach someone and ask them what their problems are, and later to discuss with them the result of your analysis.

3) Questionnaires

Questionnaires provide an alternative to interviews for finding out information about a system. Questionnaires are made up of questions about information sought by analyst. The questionnaire is then sent to the user, and the analyst analyzes the replies.

4) Electronic Data Gathering

Electronic communication systems are increasingly being used to gather information. Thus, it is possible to use electronic mail to broadcast a question to a number of users in an organization to obtain their viewpoint on a particular issue.

In my project, with the help of Marg software solutions, I have send questionnaire through electronic mail to twenty employees of the company and retrieved the information regarding the problem faced by existing system.

5) Interviews

Interview allows the analysts to learn more about the nature of the project request and reason of submitting it. Interviews should provide details that further explain the project and show whether assistance is merited economically, operationally or technically.

One of the most important points about interviewing is that what question you need to ask.

It is often convenient to make a distinction between three kinds of question that is

- Open questions
- Closed question
- Probes

Open questions are general question that establish a person's view point on a particular subject.

Closed questions are specific and usually require a specific answer.

Login module:

It is used for logging in the employee details manager. It is used for verifying the user. Once the user is authenticated, they can access the system.

Registration module:

New user can register in order to use the full features of this system. Normal users can also access the proposed system but with limited features. Only the registered userscan get more priorities than the unregistered guest user. Once the guest users register to this system, they can also get full access to this system.

User module:

It is used for adding new user and for updating existing customers. It is used for storing new user as well as for updating the customer's details. The module is very useful to find the number of users who registered.

Add Employee module:

It is used for adding new employee and for viewing, editing and deleting existing employs. It is used for searching items in this system. Here the admin have the privileges to search items in this system. Employee details are stored with their name. When a particular module is being liked by people, that particular module will be shown to user.

Attendance module:

In this module of project, we are keeping records of employee attendance and if any new employee comes into the company than we have a option to add that new employee into the database.

Salary module:

In this module of project, we are keeping records of employee salary and if any new employee comes into the company than we have a option to add that new employee salary into the database.

Support module:

In this module of our project, we placed a very important feature i.e. feedback and issue complain. At runtime if any problem occurred to user than they may direct contact to us and write us their problem in a very elaborative way.

2.5 TECHNOLOGIES USED

XAMPP Server

XAMPP is a free and open-source cross-platform web server solution stack package developed by Apache Friends, consisting mainly of the Apache HTTP Server, MariaDB database, and interpreters for scripts written in the PHP and Perl programming languages.

Notepad++

Notepad++ is a text and source code editor for use with Microsoft Windows. It supports tabbed editing, which allows working with multiple open files in a single window. The product's name comes from the C increment operator. Notepad++ is distributed as free software.

Based on the powerful editing component Scintilla, Notepad++ is written in C++ and uses pure Win32 API and STL which ensures a higher execution speed and smaller program size. By optimizing as many routines as possible without losing user friendliness, Notepad++ is trying to reduce the world carbon dioxide emissions. When using less CPU power, the PC can throttle down and reduce power consumption, resulting in a greener environment.

TECHNOLOGIES USED

APPLICATION	: Xampp Server, Notepad++
DESIGNING	: HTML, CSS, JavaScript
Backend	: PHP

2.6 LANGUAGE USED

This project has been developed HTML and Java.

2.6.1 HTML:

- HTML stands for Hyper Text Markup Language
- HTML is the standard markup language for creating Web pages
- HTML describes the structure of a Web page
- HTML consists of a series of elements
- HTML elements tell the browser how to display the content
- HTML elements label pieces of content such as "this is a heading", "this is a paragraph", "this is a link", etc.

2.6.2 CSS:

- CSS stands for Cascading Style Sheets
- CSS describes how HTML elements are to be displayed on screen, paper, or in other media
- CSS saves a lot of work. It can control the layout of multiple web pages all at once

2.6.3 JavaScript:

JavaScript, often abbreviated as JS, is a programming language that conforms to the ECMAScript specification. JavaScript is high-level, often just-in-time compiled and multi-paradigm. It has dynamic typing, prototype-based object-orientation and first-class functions.

2.6.4 PHP:

PHP is an acronym for "PHP: Hypertext Preprocessor"

- PHP is a widely used, open-source scripting language
- PHP scripts are executed on the server
- PHP is free to download and use

CHAPTER 3

SOFTWARE REQUIREMENT SPECIFICATION

3.1 GENERAL DESCRIPTION

This combined aggregation of information and workplace activity constructs a general, specific program or aim which is to be executed or produced within the workplace while working with others as a squad. The history of coaction began many centuries ago, long before the B.C. or A.D. epochs, where at least two persons had to pass on in the attempt of finishing a undertaking, undertaking, or written papers. Therefore, coaction is not a new term, but an enhanced and improved one in the professional workplace.

3.1.1 PROBLEM STATEMENT:

The problem occurred before having computerized system includes:

- Seeking for the help to play this traditional mode.
- Excessive use of Paper for maintaining register and updating data.
- More chance of Unfairness while giving marks due to biasness.

3.2 SYSTEM OBJECTIVES

3.2.1 IMPROVEMENT IN CONTROL AND PERFORMANCE

The system is developed to cope up with the current issues and problems of forgetting the traditional mechanism. The system identifies who is accessing the profile and the

data/information will be updated on the portal. To declare the Project and performance of the employee and details.

Save cost

The existing system is based on the pen paper mode and several in the digital mode but is not secured and efficient to work.

Save Time

People at any location will be able to perform or know there seniors subordinate team and there uniqueness etc. by registering or Login in the Portal. People at any location will able to perform or know there seniors subordinate team and there uniqueness etc. by registering or Logging in the Portal.

3.2.2 REQUIREMENT SPECIFICATION

The application requirement specification is produced at the analysis task. The function and performance allocated to application as part of system engineering are refined by establishing a complete information description, a detailed functional and behavioral description, an indication of performance requirements and design constraints.

3.3. EXISTING VS PROPOSED SYSTEM

Existing system does not have a secure facility of Employee Performance System application with transparency in Workplace whereas proposed system is secure and transparency in the work of the people.

Existing system does not have any facility of generating Email Online whereas proposed system is working on the facility of generating email and password online by the admin with security.

Existing System does not have the facility of registering and generating organizational password Whereas proposed system are more focused on it.

3.4. SOFTWARE SYSTEM ATTRIBUTES

- **Portability:** - The system should be machine independent.
- **Security:** - The system is designed in such a way that it will store the recorded data in the system of the owner. The system will be secure from unauthorized access of the application.
- **Maintainability:** The system will be designed in a maintainable order. The system can be easily modified and renewed according to the need of the organization

3.5. FEATURES OF OFFICE COLLABORATOR

- No internet connection required against the computer.
- Multiple users can login and register on the same portal remotely.
- People can register and login in the system.
- Graphics with a classic look and the feel of a royal Web Application.
- Classic Profile Details to display profile of each employee.
- Security of data to be stored.
- Ensures data accuracy (number of alert generated).
- Minimize manpower.
- Minimize time consumption.
- Greater efficiency.
- Fast.
- Better services.
- User friendliness and Interactive.
- Minimum time required.
- Easy to add, update and delete.

- User friendly.
- Free for the user.

3.6. PRELIMINARY INVESTIGATION:

After obtaining the background knowledge, we began to collect data on the existing system.

The tools that are used in information gathering are as follows:

- Online Apps observation.
- Review of the peoples.

The model we have used is Incremental Model. In this model, first of all the existing system is observed, then customer requirements are taken in consideration then planning, modelling, construction and finally deployment and again adding the new system if asked by the customer to do so.

3.7. MODEL USED: INCEMENTAL MODEL

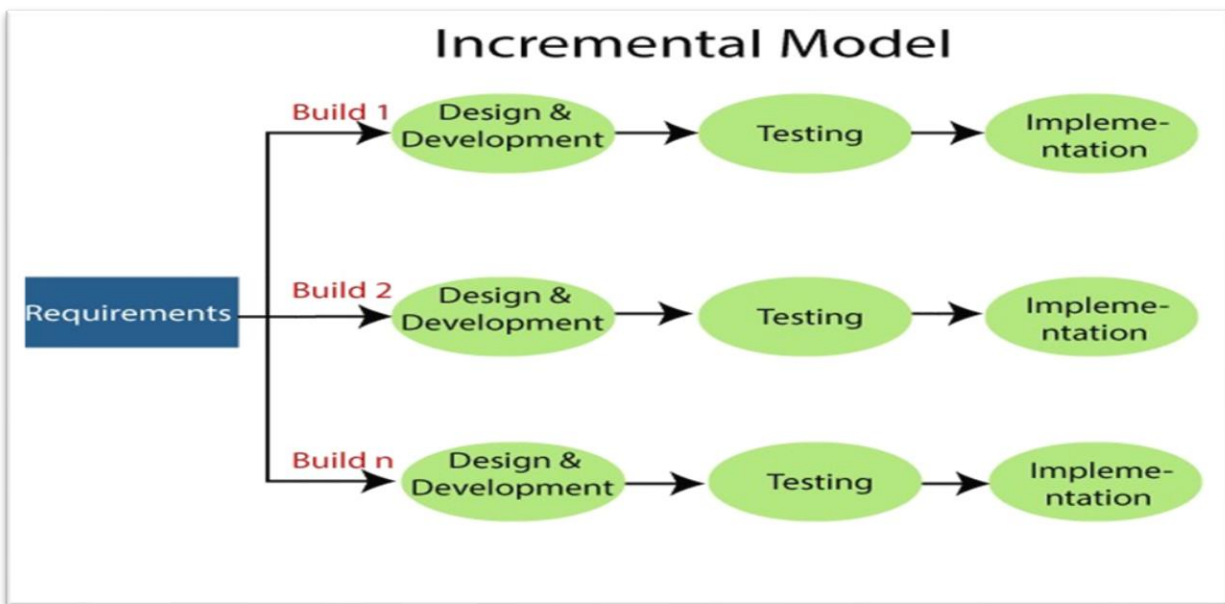


Fig 1.0: Incremental Model

Incremental Model is a software development process where requirements are divided into several stand-alone software development modules. In this project the first increment is often core product where the basic requirements are addressed, and supplementary features are added.

3.8. PRELIMINARY DISCRIPTION:

The first step in the system development life cycle is the preliminary investigation to determine the feasibility of the system. The purpose of preliminary investigation is to evaluate project requests. It is not a design study, nor does it include the collection of details to describe the system in all respect. Rather, it is the collecting of information that helps committee members to evaluate the merits of project request and make an informed judgement about the feasibility of the proposed project.

Analyst working on the preliminary investigation should accomplish the following objectives:

- Clarify and understand the project request.
- Determine the size of the project.
- Access costs and benefits of alternative approaches.
- Determine the technical and operational feasibility of alternative approaches.
- Report the findings to management with recommendations outlining the acceptance and rejection of the proposal

CHAPTER 4

PLANNING AND SCHEDULELING

4.1. GANTT CHART

A Gantt chart can be developed for the entire project, or a separate chart can be developed for each function. A tabular form is maintained where rows indicate the task with milestones and columns indicate duration (Days).

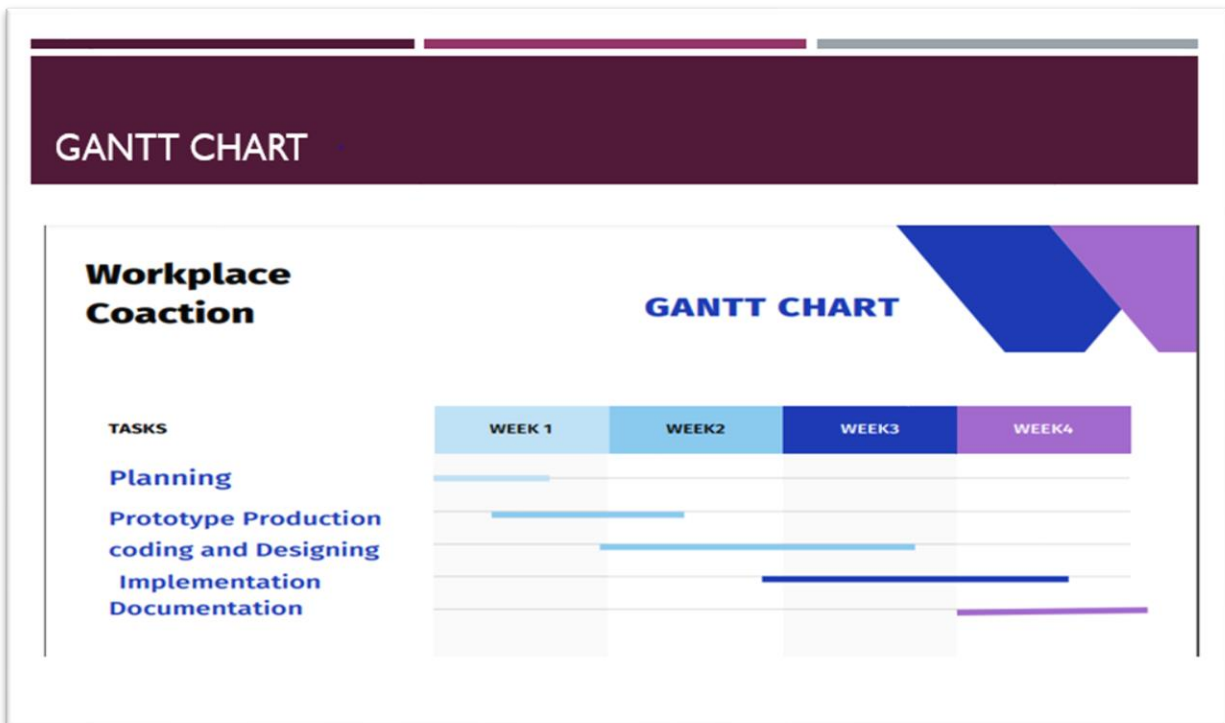


Fig 2.0 Gantt Chart

4.1.1. SOFTWARE REQUIREMENTS:

Name of Components	Specifications
Operating system	Windows
Language	HTML, CSS, JavaScript, PHP

Software Development kit	XAMPP, Google Chrome
Markup Language Enable	HTML

4.1.2. HARDWARE REQUIREMENTS:

Name of Components	Specifications
Desktop/Laptop	Any Configuration
Memory Used	6.31 MB

4.2 DATA FLOW DIAGRAM

A Data Flow Diagram (DFD) is a diagram that describes the flow of data and the processes that change data throughout a system. It's a structured analysis and design tool that can be used for flowcharting in place of or in association with information. Oriented and process-oriented system flowcharts. Four basic symbols are used to construct data flow diagrams. They are symbols that represent data source, data flows, and data transformations and data storage. The points at which data are transformed are represented by enclosed figures, usually circles, which are called nodes.

For achieving the abovementioned criteria's, we have to make use of various features that are available with the RDBMS by enforcing integrity constraints, it is possible to ensure data integrity and reduce data inconsistency to a great extent.

These are used to graphically represent the flow of data in a Employee Performance System. DFD describes the processes that are involved in a system to transfer data from the admin to the employee, employee to the employee, employee to admin etc.

Employee Performance System this system shows the flow of data in admin Modules on many Actions. It shows the flow of data among the sub module in it Admin data flow on the sub screen.

When analysts prepare the Data Flow Diagram, they specify the user needs at a level of detail that virtually determines the information flow into and out of the system and the required data resources.

The network is constructed by using a set of symbols that do not imply physical implementations.

The Data Flow Diagram reviews the current physical system, prepares input and output specification, and specifies the implementation plan.

Steps to Construct Data Flow Diagrams

Four steps are commonly used to construct a DFD

- Process should be named and numbered for easy reference. Each name should be representative of the process.
- The destination of flow is from top to bottom and from left to right.
- When a process is exploded in to lower level details they are numbered.
- The names of data stores, sources and destinations are written in capital letters.

Rules for constructing a Data Flow Diagram

- Arrows should not cross each other.
- Squares, circles and files must bear names.
- Decomposed data flow squares and circles can have same names.
- Draw all data flow around the outside of the diagram.

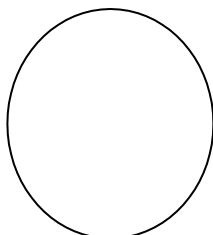
Data Flow Diagram Symbols



- **Source or Destination of data**



- **Data Flow**



- **Process**



- **Storage**

DATA FLOW DIAGRAMS

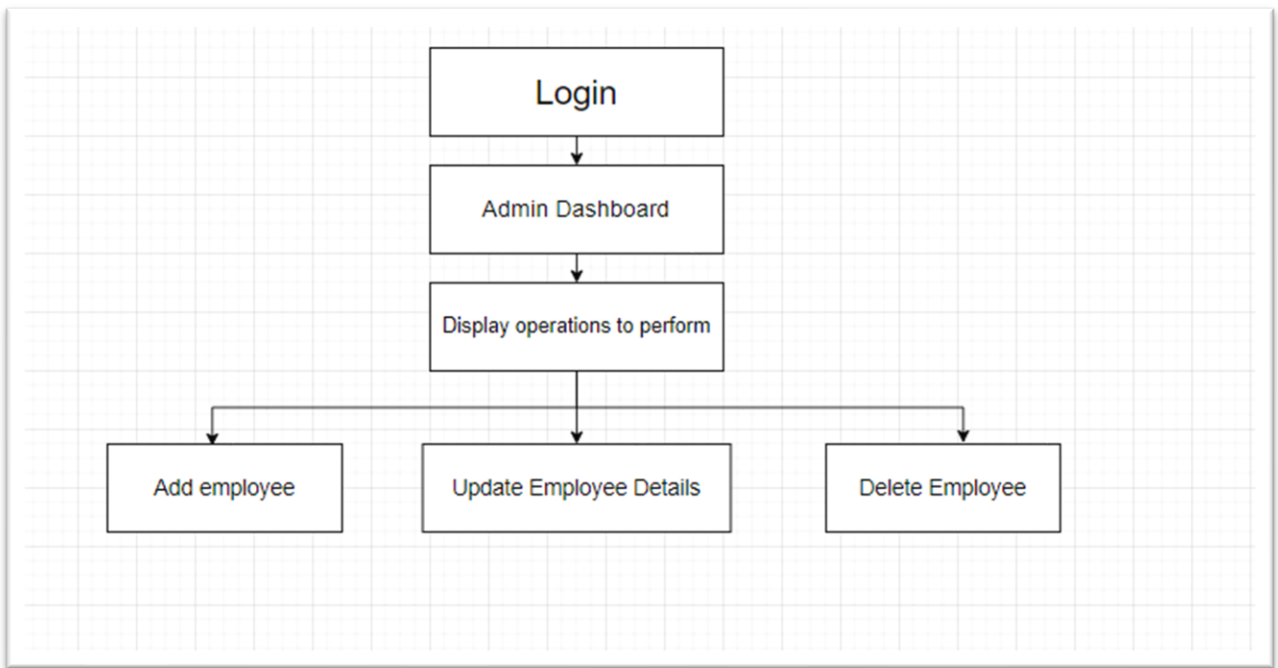


Fig 3.1 Admin Mode DFD

This software allows the administrator to edit employees, add new employees, transfer/promote/terminate employees. Each employee in the database is associated with a position can be added and edited when need arises. Employees can be transferred between positions easily without having to retype back their information in the database.

Each employee in the database is associated with a position can be added and edited when need arises. Employees can be transferred between positions easily without having to retype back their information in the database. You can check to see if there are duplicate positions/employees in the database. Most of all, the employer can assign tasks to employees and

assess their progress to keep track of employee performance.

Office Collaborator this system shows the flow of data in Employee Modules on many Actions It shows the flow of data among the sub module in it. Employee data flow on the sub screen. It is with who is someone's reporting manager.

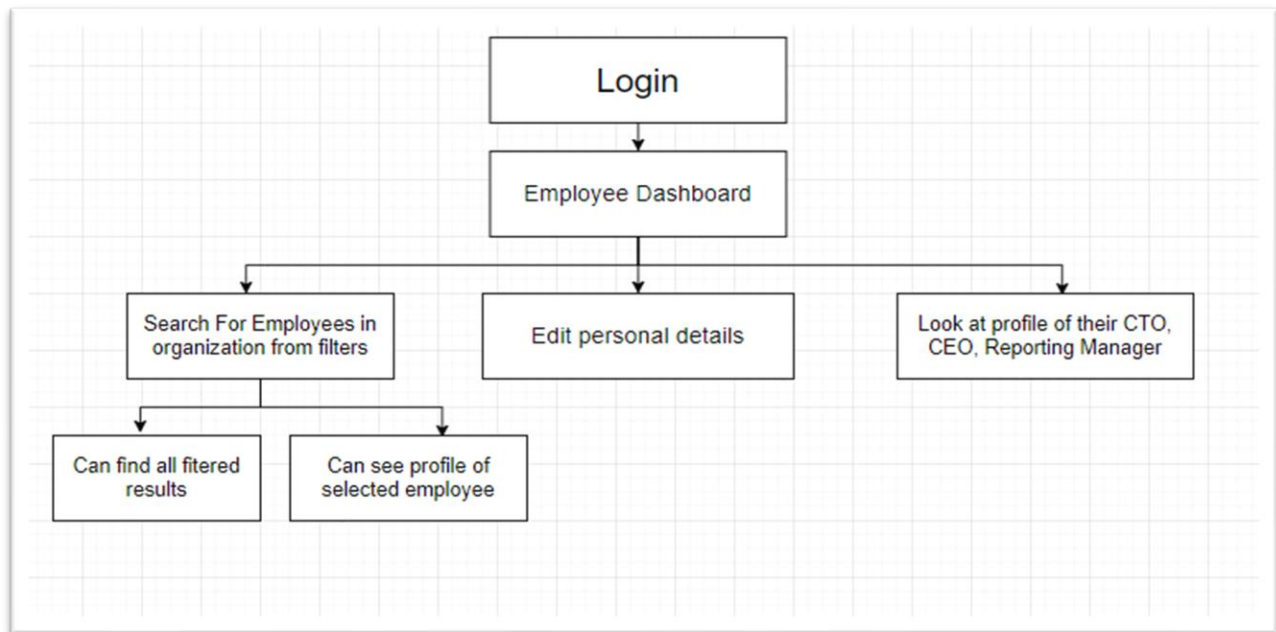


Fig 3.2 Employee DFD

Office Collaborator this system shows the flow of data in Employee Modules on many Actions. It shows the flow of data among the sub module in it Employee data flow on the sub screen. It is with who is not someone's reporting manager. In this we can see that one can find out profile of employees or if the want to see their CTO, CEO, reporting manager they can see that also.

It is very helpful for a new user, as it will him to understand that whole working in less time.

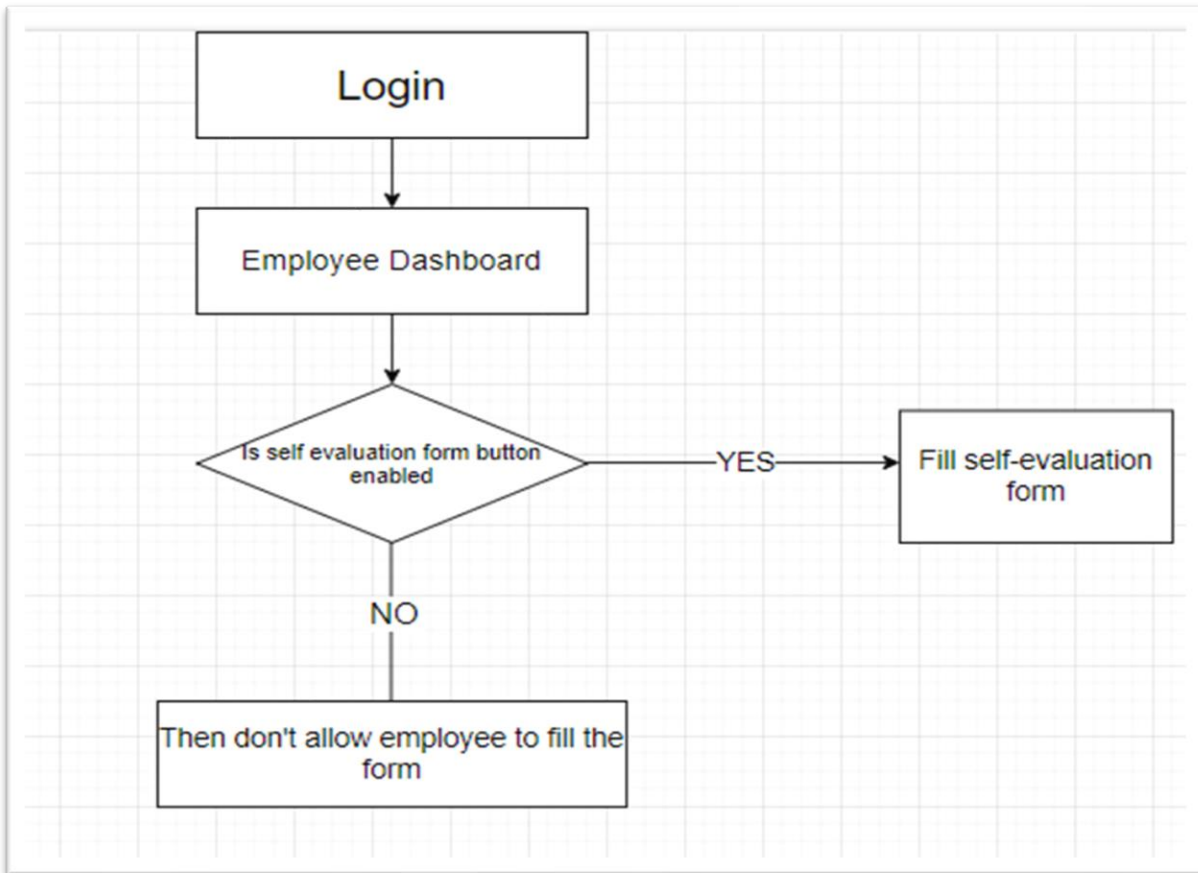


Fig 3.3 Employee DFD who is someone's reporting manager

4.3. ENTITY RELATIONSHIP DIAGRAM:

This ER Diagram represents the model of Workplace Coaction System Entity. The Entity Relationship Diagram show all visual instrument of Database table and relation between Homepage, Admin Page, Employee Page. All of it have Structured data and every entity may have some attributes.

Workplace Coaction System Entity and their Attributes:

1. Admin: Attribute of admin: Email id, Password, Forget Password.
2. Insert New Employee Details: Attributes are Name, Email, Password, Gender, Qualification, Project, Project Manager, Phone.

3. Delete New Employee: Attributes are Name, Email, Password, Gender, Qualification, Project, Project Manager, Phone.
4. Update Details of Self: Attributes are Name, Email, Password, Gender, Qualification, Project, Project Manager, Phone.
5. Employee: Attribute of Employee: Email id, Password, Forget Password.
6. Employee Update Details: Attributes are Name, Email, Gender, Qualification, Project, Project Manager, Phone.
7. Search Employee: Attributes are Name, Email, Gender, Qualification, Project, Project Manager, Phone.
8. View Profile of Employee: Attributes are: Name, Email, Gender, Qualification, Project, Project Manager, Phone.

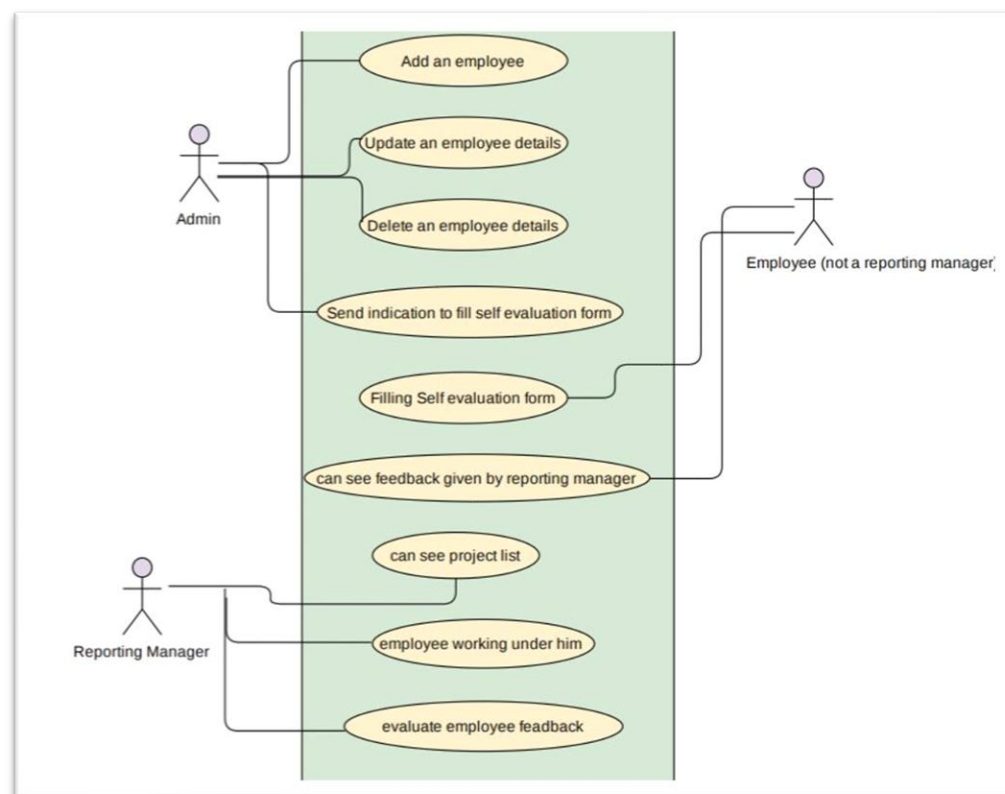


Fig 3.4 Entity relationship Diagram

CHAPTER 5

SYSTEM TESTING AND IMPLEMENTATION

5.1. SYSTEM TESTING:

The common view of testing held by users is that it is performed to prove that there are no errors in a program. It is extremely difficult since designer cannot prove to be one hundred percent accurate. Therefore, the most useful and practical approach is with the understanding that testing is the process of executing a program with explicit intention of finding errors that make the program fail.

Testing has its own cycle. The testing process begins with the product requirements phase and from there parallels the entire development process. In other words, for each phase of the development process there is an important testing activity. It is extremely difficult since designer cannot prove to be one hundred percent accurate. Therefore, the most useful and practical approach is with the understanding that testing.

Successful testing requires a methodical approach. It requires focusing on basic critical factors:

- Planning
- Project and process control
- Risk management
- Inspections
- Measurement tools

5.2. TEST PLAN

Before going for testing, first we must decide upon the type of testing to be carried out. The following factors are taken into consideration:

- To ensure that information properly flows into and out of program
- To find out whether the local data structures maintain its integrity during all steps in an algorithm execution
- To ensure that the module operate properly at boundaries established to limit or restrict processing
- To find out whether error - handling paths are working correctly or not
- To find out whether the values are correctly updated or not
- Check for validations

5.3. BLACK BOX TESTING

It is a software testing approach in which the tester doesn't know the internal working of the item being tested. For example, in a Black box test, on software design the tester only knows the input and the expected outputs. Tester doesn't know how the program derives the output. Tester doesn't even imagine as to how; the coding is done. Testers need to know only the specifications.

The advantages of black box testing approach are:

- The test is unbiased because the designer and the tester is independent of each other
- The tester needs no specific knowledge on any programming language
- The test is done from the point of view of the user, not the designer.
- The test can be designed as soon as the specifications are complete
- The disadvantages of black box testing approach are
- The test can be redundant if the software designer has already run a testcase.

5.4. UNIT TESTING

Unit or module testing is the process of testing the individual components (subprograms or procedures) of a program. The purpose is to discover discrepancies between the modules interface specification and its actual behavior. In our system each module must be tested independently for validation.

5.5. INTEGRATION TESTING

Integration testing is the process of combining and testing multiple components together. The primary objective of integration testing is to discover errors in the interfaces between the components. In our system each of the modules mentioned above, are tested for checking the integration between them, after each of them are tested individually.

Software testing is an investigation conducted to provide stakeholders with information about the quality of the software product or service under test. Software testing can also provide an objective, independent view of the software to allow the business to appreciate and understand the risks of software implementation. Test techniques include the process of executing a program or application with the intent of finding software bugs (errors or other defects), and verifying that the software product is fit for use.

Software testing involves the execution of a software component or system component to evaluate one or more properties of interest. In general, these properties indicate the extent to which the component or system under test:

- meets the requirements that guided its design and development,
- responds correctly to all kinds of inputs,
- performs its functions within an acceptable time,
- it is sufficiently usable,
- can be installed and run in its intended environments, and
- achieves the general result its stakeholder's desire.

CHAPTER 6

CODING

Salary.php

```
<?php
defined('BASEPATH') OR exit ('No direct script access allowed');

class Salary extends CI_Controller {

    function __construct ()
    {
        parent::__construct();
        if (! $this->session->userdata('logged_in'))
        {
            redirect(base_url(). 'login');
        }
    }

    public function index ()
    {
        $data['departments'] = $this->Department_model->select_departments();
        $this->load->view('admin/header');
        $this->load->view('admin/add-salary', $data);
        $this->load->view('admin/footer');
    }

    public function invoice($id)
    {
        $data['content'] = $this->Salary_model->select_salary_byID($id);
        $this->load->view('admin/header');
        $this->load->view('admin/salary-invoice', $data);
        $this->load->view('admin/footer');
    }

    public function invoice_print($id)
    {
        $data['content'] = $this->Salary_model->select_salary_byID($id);
        $this->load->view('admin/invoice-print', $data);
    }
}
```

```

}

public function manages ()
{
    $data['content']=$this->Salary_model->select_salary();
    $this->load->view('admin/header');
    $this->load->view('admin/manage-salary',$data);
    $this->load->view('admin/footer');
}

public function view()
{
    $staff=$this->session->userdata('userid');
    $data['content']=$this->Salary_model->select_salary_byStaffID($staff);
    $this->load->view('staff/header');
    $this->load->view('staff/view-salary',$data);
    $this->load->view('staff/footer');
}

public function insert()
{
    $id=$this->input->post('txtid');
    $basic=$this->input->post('txtbasic');
    $allowance=$this->input->post('txtallowance');
    $total=$this->input->post('txttotal');
    $added=$this->session->userdata('userid');

    $salary=array();
    for ($i=0; $i < count($id); $i++)
    {
        if($total[$i]>0)
        {
            $data=$this->Salary_model->insert_salary(array('staff_id' => $id[$i],
                'basic_salary' => $basic[$i],
                'allowance' => $allowance[$i],
                'total' => $total[$i],
                'added_by' => $added)
            );
        }
    }
}

if($this->db->affected_rows() > 0)
{
    $this->session->set_flashdata('success', "Salary Added Succesfully");
}
else{
    $this->session->set_flashdata('error', "Sorry, Salary Adding Failed.");
}

```

```

    }
    redirect($_SERVER['HTTP_REFERER']);
}

public function update ()
{
    $id=$this->input->post('txtid');
    $department=$this->input->post('txtdepartment');
    $data=$this->Department_model-
>update_department(array('department_name'=>$department),$id);
    if($this->db->affected_rows() > 0)
    {
        $this->session->set_flashdata('success', "Salary Updated Succesfully");
    } else{
        $this->session->set_flashdata('error', "Sorry, Salary Update Failed.");
    }
    redirect(base_url()."department/manage_department");
}

function edit($id)
{
    $data['content']=$this->Department_model->select_department_byID($id);
    $this->load->view('admin/header');
    $this->load->view('admin/edit-department',$data);
    $this->load->view('admin/footer');
}

function delete($id)
{
    $data=$this->Salary_model->delete_salary($id);
    if($this->db->affected_rows() > 0)
    {
        $this->session->set_flashdata('success', "Salary Deleted Succesfully");
    }else{
        $this->session->set_flashdata('error', "Sorry, Salary Delete Failed.");
    }
    redirect($_SERVER['HTTP_REFERER']);
}

public function get_salary_list()
{
    $dept = $_POST['dept'];
    $data=$this->Staff_model->select_staff_byDept($dept);

```



```

if(isset($data)){
    print '<div class="box-body">
    <div class="col-md-12">
    <div class="table-responsive">
    <table class="table table-bordered table-striped">
    <thead>
        <tr>
            <th>Staff</th>
            <th>Basic Salary</th>
            <th>Allowance</th>
            <th>Total</th>
        </tr>
    </thead>
    <tbody>';

    foreach($data as $d)
    {
        print '<tr>
        <td>'. $d["staff_name"].'</td>
        <td><input type="hidden" name="txtid[]" value="'. $d["id"].'">
            <input type="text" name="txtbasic[]" class="form-control expenses">
        </td>
        <td><input type="text" name="txtallowance[]" class="form-control expenses"></td>
        <td><input type="text" id="total" name="txttotal[]" class="form-control"></td>
        </tr>';
    }
    print '</tbody>
    </table>
    </div>
    </div>
    </div>

    <div class="box-footer">
        <button type="submit" class="btn btn-info pull-right">Submit</button>
    </div>';
    // print '<div class="col-md-12">
    //     <div class="form-group">
    //         <label for="exampleInputPassword1">Department Name</label>
    //         <select class="form-control" name="slcdepartment"
onchange="getstaff(this.value)">
    //             <option value="">Select</option>

    //         </select>
    //     </div>
    // </div>';
}

```

department.php

?php

defined('BASEPATH') OR exit('No direct script access allowed');

class Department extends CI_Controller {

function __construct()

{

parent::__construct();

if (! \$this->session->userdata('logged_in'))

{

redirect(base_url().'login');

}

}

public function index()

{

\$this->load->view('admin/header');

\$this->load->view('admin/add-department');

\$this->load->view('admin/footer');

}

public function manage_department()

{

\$data['content']=\$this->Department_model->select_departments();

\$this->load->view('admin/header');

\$this->load->view('admin/manage-department',\$data);

\$this->load->view('admin/footer');

```

    }

    public function insert()
    {
        $department=$this->input->post('txtdepartment');
        $data=$this->Department_model-
>insert_department(array('department_name'=>$department));
        if($data==true)
        {
            $this->session->set_flashdata('success', "New Department Added
Succesfully");
        }else{
            $this->session->set_flashdata('error', "Sorry, New Department Adding
Failed.");
        }
        redirect($_SERVER['HTTP_REFERER']);
    }

    public function update()
    {
        $id=$this->input->post('txtid');
        $department=$this->input->post('txtdepartment');
        $data=$this->Department_model-
>update_department(array('department_name'=>$department),$id);
        if($this->db->affected_rows() > 0)
        {
            $this->session->set_flashdata('success', "Department Updated Succesfully");
        }else{
            $this->session->set_flashdata('error', "Sorry, Department Update Failed.");
        }
        redirect(base_url()."department/manage_department");
    }

```

```

    }
    function edit($id)
    {
        $data['content']=$this->Department_model->select_department_byID($id);
        $this->load->view('admin/header');
        $this->load->view('admin/edit-department',$data);
        $this->load->view('admin/footer');
    }
    function delete($id)
    {
        $data=$this->Department_model->delete_department($id);
        if($this->db->affected_rows() > 0)
        {
            $this->session->set_flashdata('success', "Department Deleted Succesfully");
        }else{
            $this->session->set_flashdata('error', "Sorry, Department Delete Failed.");
        }
        redirect($_SERVER['HTTP_REFERER']);
    }
}

```

Home.php

```

?php
defined('BASEPATH') OR exit('No direct script access allowed');

```

```

class Home extends CI_Controller {

```

```

    function __construct()
    {
        parent::__construct();
    }

```

```

public function index()
{
if ( ! $this->session->userdata('logged_in'))
{
    redirect(base_url('login'));
}
    else
{
if($this->session->userdata('usertype')==1)
{
    $data['department']=$this->Department_model->select_departments();
    $data['staff']=$this->Staff_model->select_staff();
    $data['leave']=$this->Leave_model->select_leave_forApprove();
    $data['salary']=$this->Salary_model->sum_salary();

    $this->load->view('admin/header');
    $this->load->view('admin/dashboard',$data);
    $this->load->view('admin/footer');
}
else{
    $staff=$this->session->userdata('userid');
    $data['leave']=$this->Leave_model->select_leave_byStaffID($staff);
    $this->load->view('staff/header');
    $this->load->view('staff/dashboard',$data);
    $this->load->view('staff/footer')
}
}

public function login_page()
{

```

```

        $this->load->view('login');
    }

    public function error_page()
    {
        $this->load->view('admin/header');
        $this->load->view('admin/error_page');
        $this->load->view('admin/footer');
    }

    function login()
    {
        $un=$this->input->post('txtusername');
        $pw=$this->input->post('txtpassword');
        $this->load->model('Home_model');
        $check_login=$this->Home_model->logindata($un,$pw);
        if($check_login<>")
        {
            if($check_login[0]['status']==1){
                if($check_login[0]['usertype']==1){
                    $data = array(
                        'logged_in' => TRUE,
                        'username' => $check_login[0]['username'],
                        'usertype' => $check_login[0]['usertype'],
                        'userid' => $check_login[0]['id']
                    );
                    $this->session->set_userdata($data);
                    redirect('/');
                }
                elseif($check_login[0]['usertype']==2){
                    $data = array(
                        'logged_in' => TRUE,

```

```

        'username' => $check_login[0]['username'],
        'usertype' => $check_login[0]['usertype'],
        'userid' => $check_login[0]['id']
    );
    $this->session->set_userdata($data);
    redirect('/');
}
else{
    $this->session->set_flashdata('login_error', 'Sorry, you cant login right
now.', 300);
    redirect(base_url(). 'login');
}

}
else{
    $this->session->set_flashdata('login_error', 'Sorry, your account is
blocked.', 300);
    redirect(base_url(). 'login');
}

}
else{
    $this->session->set_flashdata('login_error', 'Please check your username or
password and try again.', 300);
    redirect(base_url(). 'login');
}
}

public function logout()
{
    $this->session->sess_destroy();

```

```

        redirect(base_url().'login');
    }

}

```

Leave.php

?php

```
defined('BASEPATH') OR exit('No direct script access allowed');
```

```
class Leave extends CI_Controller {
```

```

    function __construct()
    {
        parent::__construct();
        if ( ! $this->session->userdata('logged_in'))
        {
            redirect(base_url().'login');
        }
    }

```

```

    public function index()
    {
        $this->load->view('staff/header');
        $this->load->view('staff/apply-leave');
        $this->load->view('staff/footer');
    }

```

```

    public function approve()
    {
        $staff=$this->session->userdata('userid');
    }

```



```

        $data['content']=$this->Leave_model->select_leave_forApprove();
        $this->load->view('admin/header');
        $this->load->view('admin/approve-leave',$data);
        $this->load->view('admin/footer');
    }

    public function manage()
    {
        $data['content']=$this->Leave_model->select_leave();
        $this->load->view('admin/header');
        $this->load->view('admin/manage-leave',$data);
        $this->load->view('admin/footer');
    }

    public function view()
    {
        $staff=$this->session->userdata('userid');
        $data['content']=$this->Leave_model->select_leave_byStaffID($staff);
        $this->load->view('staff/header');
        $this->load->view('staff/view-leave',$data);
        $this->load->view('staff/footer');
    }

    public function insert_approve($id)
    {
        $data=$this->Leave_model->update_leave(array('status'=>1),$id);
        if($this->db->affected_rows() > 0)
        {
            $this->session->set_flashdata('success', "Leave Approved Succesfully");
        }else{
            $this->session->set_flashdata('error', "Sorry, Leave Approve Failed.");
        }
    }

```

```

    }
    redirect($_SERVER['HTTP_REFERER']);
}

public function insert_reject($id)
{
    $data=$this->Leave_model->update_leave(array('status'=>2),$id);
    if($this->db->affected_rows() > 0)
    {
        $this->session->set_flashdata('success', "Leave Rejected Succesfully");
    }else{
        $this->session->set_flashdata('error', "Sorry, Leave Reject Failed.");
    }
    redirect($_SERVER['HTTP_REFERER']);
}

public function insert()
{
    $this->form_validation->set_rules('txtreason', 'Reason', 'required');
    $this->form_validation->set_rules('txtleavefrom', 'Leave From', 'required');
    $this->form_validation->set_rules('txtleaveto', 'Leave To', 'required');

    $staff=$this->session->userdata('userid');
    $reason=$this->input->post('txtreason');
    $lfrom=$this->input->post('txtleavefrom');
    $lto=$this->input->post('txtleaveto');
    $desc=$this->input->post('txtdescription');
    $data=$this->Leave_model->insert_leave(array('staff_id'=>$staff,'leave_reason'=>$reason,'leave_from'=>$lfrom
    , 'leave_to'=>$lto,'description'=>$desc,'applied_on'=>date('Y-m-d')));
    if($data==true)

```

```

    {
        $this->session->set_flashdata('success', "New Leave Applied Succesfully");
    }else{
        $this->session->set_flashdata('error', "Sorry, New Leave Apply Failed.");
    }
    redirect($_SERVER['HTTP_REFERER']);
}

public function update()
{
    $id=$this->input->post('txtid');
    $department=$this->input->post('txtdepartment');
    $data=$this->Department_model-
>update_department(array('department_name'=>$department),$id);
    if($this->db->affected_rows() > 0)
    {
        $this->session->set_flashdata('success', "Department Updated Succesfully");
    }else{
        $this->session->set_flashdata('error', "Sorry, Department Update Failed.");
    }
    redirect(base_url()."department/manage_department");
}

function edit($id)
{
    $data['content']=$this->Department_model->select_department_byID($id);
    $this->load->view('admin/header');
    $this->load->view('admin/edit-department',$data);
    $this->load->view('admin/footer');
}

```

```
function delete($id)
{
    $data=$this->Department_model->delete_department($id);
    if($this->db->affected_rows() > 0)
    {
        $this->session->set_flashdata('success', "Department Deleted Succesfully");
    }else{
        $this->session->set_flashdata('error', "Sorry, Department Delete Failed.");
    }
    redirect($_SERVER['HTTP_REFERER']);
}
```