CHAPTER 1

INTRODUCTION

1.1 Need of the system

- In this world of growing technologies everything has been computerized. With large number of work 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 in an organization.
- Employee Management System makes it easy for the employee to keep track of all records.

1.2 Detailed problem definition

- Design of a web-based Employee management system to fulfil requirements such as project management, leave management, report generation to assist in performance appraisal.
- Well-designed database to store employee information.
- A user friendly front-end for the user to interact with the system.
- Employees will have access to their personal profiles and will be able to edit their details.
- An employee apply 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.

1.3 Viability of the system

- A flexible and easy to use Employee Management system solution for small and medium sized companies provides modules for personnel information management thereby organization and companies are able to manage the crucial organization asset- people.
- Complete elimination of paperwork in leave management.

1.4 Presently available system

- https://www.pockethrms.com
- https://www.orangehrm.com
- The records are maintained manually.
- In this system is not very User-Friendly.
- Existing system is based on standalone system.

1.5 Future prospects

- In future this system would be expand by adding client feature.
- This system also provide high security using digital biometric attendance system.

CHAPTER-2
ANALYSIS

2.1. Requirement Analysis

Authentication

- Login – the Employee can login to the system with his/her username and password.
- Logout – the Employee can log out from the system.
- Login failure – if the Employee does not exist in the database or the user has not yet been authorized by the admin of the system.

Process data

- **Display** – Employee with defined roles can display the contents of the database like employee can only view his/her personal info Project manager can see his/her personal info and also employee's information who are working under his/her department.
- **Edit** – A user with employee role can edit his/her specific personal information. Project manager can only edit employee's personal information. Admin can edit all information related to all employee's including their user role type.
- **Search** – user with project manager role can search the content of database for the employees who are under his/her coverage. HR and Admin role can search all employee's info in the database. search feature works on specific keywords showing employee's characteristics, skills, features, etc. for example, HR wants to find employee's characteristics who are well trained in "java

programming". He/she will write the specific keyword and then it will give then he/she will get a list of all employees who know "java programming".

- **Update authentication** – This feature can be used by admin and HR. Admin can update the role type of a specific user. for example, an employee got promotion and his role will be changed from employee to project manager. Admin will be able to update this authentication mechanism.

Leave application/approval

- **Leave application** – the employee can be able to fill leave application form in the appropriate fields.
- **Leave approval** – the HR can be approve/deny leave application based on the reason.

Employee Registration

- **Add new employee** – HR and admin are able to add new employee to the database. New employee will have all the personal information related to his/her and employees will have an own id.

Report generation

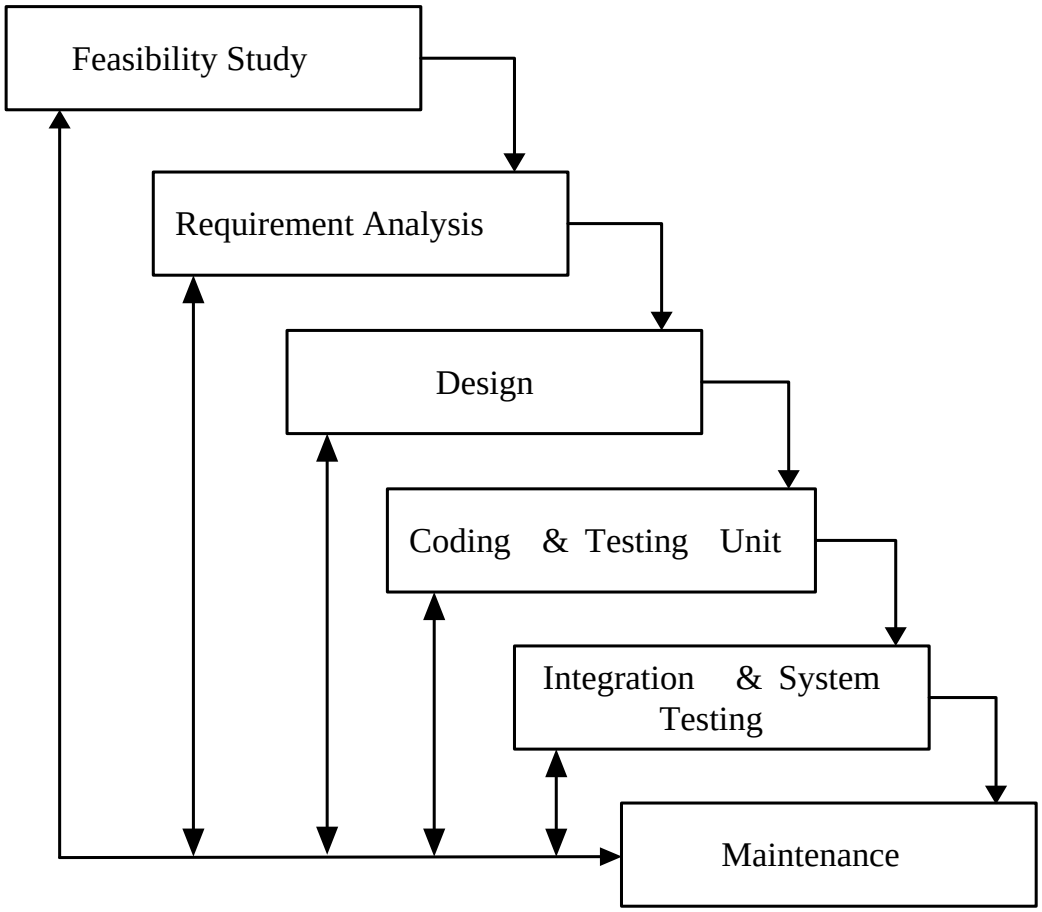
- **Report generation** – HR shall be able to generate a report in pdf format for each employee based on the information in the database.

Project management

- **Creating project team** - the project manager will able to create a project and come up with a project team.

- **Work breakdown structure** – the project manager will able to assign tasks to the project team.

2.2 Project Model



[Figure 1: Iterative Waterfall Model]

- This application is developed using Iterative model. Almost every other model is derived from the waterfall model.
- The phase of detecting errors is close to its points of introduction is known as face containment of errors.
- Incremental model is also referred as the successive version of waterfall model using incremental approach and evolutionary model.

- In this model, the system has broken down into several modules which can be incrementally implemented and delivered.

- First develop the core model and when customer evaluate the system then the initial product skeleton is redefined into increasing levels capacity by adding new functionalities in successive versions.

Advantages

- Each successive version performing more useful work than previous versions.
- The core modules get tested thoroughly, thereby reducing change of error in final product.
- The model is more flexible and less costly to change the scope and requirement.
- User gets a change to experiment with partially developed software.
- This model helps finishing exact user requirements.
- Feedback providing at each increment is useful for determining the better final product.

2.3 Schedule Representation

Generalized project scheduling tools and technique can be applied with little modification to software projects.

Project evolution and review technique and critical paths method are two project scheduling method that can be applied to software development.

Both techniques are driven by information already developed in earlier project planning activities:

- A decomposition of the product function.
- The selection of appropriate process model and task set.

- Estimate of effort.
- Decomposition of data.

[Table 1: Schedule Representation]

ACTIVITY	START DATE	FINISH DATE
Requirement Analysis		
System Analysis		
System Design		
System Coding		
Testing and Integration		

2.4 Feasibility Study:

2.4.1 Technical Feasibility:

- The proposed system will be developed in web bases completely and it is required to use web technologies appropriately. Technology to build the overall system is available.
- Currently available web technology – php, ASP.net, etc.
- Servers – Apache.
- DBMS – ORACLE, MySQL etc.

2.4.2 Economical Feasibility:

- Economic feasibility is the most frequently used method for evaluating the effectiveness of a new system. More commonly known as cost/benefit analysis, the procedure is to determine the benefits and savings that are expected from a candidate system and

compare them with costs. If benefits outweigh costs, then the decision is made to design and implement the system.

2.4.3 Operational Feasibility:

- It is the measure of how well a proposed system solves the problems and takes advantages of the opportunities identified during the scope definition and problem analysis phases and how well it satisfies the system requirements identified in the requirement analysis phase.
- Potential users of the system are familiar with the website navigation and handling. Hence training up to necessary level would be easy.
- Existing internal network - The implementation of the system in the intranet can be easily managed, and the security issues needs to be addressed in network level or else in the application level. PHP supports object-oriented development approaches so that well defined design can maintain the smooth run and the flexibility of the proposed systems.
- Securing the data by providing various access levels for different user and the system. Users Authentication, Authorization and Audit-Procedures will be facilitated to the system administrators.
- Data retrieval is done easily.