Project Report

Project Name – <u>Software Project Management System</u>

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1. Introduction

1.1 Purpose

The main objective of this document is to illustrate the requirements of the 'Software Project Management System'. The document gives the detailed description of the both functional and non-functional requirements proposed by the client.

1.2 Scope

The purpose of this project is to provide an Effective management portal for management of the software projects ongoing in the company and making the management of the employees and projects easier as compared to conventional paper works .The main purpose of this project is to maintain the details of ongoing projects, team members and make it accessible to all the employees working in the company. This project aims effective communication among all its users in an easy way too. This document describes the hardware and software interface requirements of the project. The abstractions and basic structure of the project is described using ER diagrams and UML diagrams.

1.3 Definitions, Acronyms, and Abbreviations

PHP - language used for development
SQL - Structured query Language (Language used for manipulation of Database)
ERD - Entity Relationship Diagram
UML - Unified Modelling Language
HTML - Hypertext Mark-up Language
JS – JavaScript

1.4 References

Refer to Appendix-1 for all references and direct links.

1.5 Overview

The SRS contains:-
1) General description
2) Specific requirement
3) Appendices

2. The Overall Description

2.1 Product Functions

The Employee Management system is a hierarchy based software which categorizes all employees of company in -

1. Admin
2. Super Head
3. Head
4. Managers
5. Employees

We have following Phases of a Software Project in a company

1) Analysis
2) Design
3) Coding
4) Testing
5) Deployment
6) Maintenance

These are the common functionalities among all Employees of the company

1. They can update their personal Details.
2. Can update and reset their password.
3. Can send or receive the email
4. Can ask for technical help from admin.
5. Can see general Project Details except admin.
6. Can see current Project Details except admin.
7. All of them can track progress of a project except admin.

Specific Features for all kinds of users of the project

1. Admin
   ➢ Handles localhost E-mail Server
   ➢ Has full control over database
   ➢ Add other members except Superhead
   ➢ Can resolve all the requests made by users.
2. Superhead
   ➢ Superhead handles all project related details.
   ➢ Superhead decides head for particular phase.
   ➢ Superhead can track overall project progress.
   ➢ Superhead updates general project details for everyone.

➢ Superhead can access all submissions made by Heads.
➢ Superhead give commands to Admin before manipulation of database.

3. Head
   ➢ Head decides the team members
   ➢ Head can directly check the phase details of other Head's too.
   ➢ Head can only put the notifications and delete as well.
   ➢ Head can see all submissions by Managers.
   ➢ Head can report final submission to Superhead.
   ➢ Head puts the details of a particular phase of a project.

4. Manager
   ➢ Manager puts the task for every employee under it directly.
   ➢ Manager can view submissions of its employee directly.
   ➢ Manager can report to head for the submissions for a particular phase.
   ➢ Manager can view all tasks assigned to employee.

5. Employee
   ➢ Employee can view his current tasks.
   ➢ Employee can view his pending tasks.
   ➢ Employee can view his upcoming tasks.
   ➢ Employee can directly submit his task to manager.
   ➢ Employee can view his submissions.

2.3 User Characteristics
All the intended users of this system must have a basic knowledge of using a web application. The admin of the system must have a deep knowledge of database and database management system.

2.4 Constraints
There are certain constraints involved, Admin credential is provided with this software. Admin cannot add Superhead account in the database. Admin needs direct permission from Superhead in order to alter database for changes as per request made by either manager or head. Admin need to look after directory and has to decide read or write decision on various files by priority of working people.

2.5 Assumptions and Dependencies

Adding Admin and Superhead profile into database:-
The Client will contact directly to the developers to add admin and Superhead profile into database. After company received the software, Admin first need to update his/her details personal email is compulsory and same for Superhead

account. After these changes has been made company can fully rely on this software, Vendor will then only responsible for maintenance as per requirements.

3. Specific Requirements

3.1 Functional Requirements

3.1.1 Feature – 1: User Login

Purpose	User logs in to system using existing Profile
User	A user with existing Profile
Input Data	Profile username and password and phase except admin and Superhead
Output Data	Corresponding page data
Invariants	Profile tale data and user information
Pre-Conditions	User is not logged in to a profile, input profile exists in database, user password matches profile
Post-Conditions	User's computer has been supplied with appropriate cookie, page data is appropriated for selected profile.
Basic flow	Webpage looks up profile data and returns the matching cookie, Webpage is updated to match new user data.
Alternative flow	Invalid password, invalid username or mismatched username and password display error message
Business rules	This allows users to log in to their profile from localhost computers only.

3.1.2 Feature – 2: Add Members

Purpose	Add a user's Profile to database
User	Only admin is authorized to add the member
Input Data	Profile username and password ,phase, position and personal e-mail of employee
Output Data	None
Invariants	Profile table data and user information
Pre-Conditions	User is not logged in to a profile, input profile does'nt exist in database

Post-Conditions	Usser's computer has been supplied with appropriate cookie, page data is appropriated for selected profile.
Basic flow	Webpage adds up the profile to database and returns to admin_ profile page
Alternative flow	Username already exists, personal e-mail already in use
Business rules	This allows only admin from localhost computers only to add new members.

3.1.3 Feature – 3: Update profile

Purpose	Modify the profile of user.
User	A user with existing profile who is logged in.
Input Data	New profile details input by user
Output Data	New Profile details are displayed on the page.
Invariants	None
Pre-Conditions	User is logged in to a profile.
Post-Conditions	User's computer has been supplied with appropriate cookie, page data is appropriated for selected profile.
Basic flow	Webpage updates the profile into database
Alternative flow	If inappropriate details are filled in so appropriate message is shown

3.1.4 Feature – 4: Mark attendance

Purpose	User marks his attendance
User	A user with existing Profile
Input Data	Profile username and password and phase except admin and Superhead
Output Data	A pop-up confirming marking of attendance
Invariants	Profile table data and user information
Pre-Conditions	User is not logged in to a profile, input profile exists in database, user password matches profile
Post-Conditions	User's computer has been supplied with appropriate cookie, page data is appropriated for selected profile.

Basic flow	Webpage looks up profile data and returns the matching cookie, Webpage is updated to match new user data.
Alternative flow	Invalid password, invalid username or mismatched username and password display error message
Business rules	This allows users to mark his attendance from localhost computers only and the design of this functionality only marks attendance once a day.

3.1.5 Feature – 5: Submissions (Content Sharing)

Purpose	A user (only employee, Manager and head are allowed to share some files regarding project) wants to share some data.
User	A legitimate user logged into the system.
Input Data	File in form of .png or .jpeg format
Output Data	File ready to be viewed
Invariants	The file
Pre-Conditions	User is logged in, file should be present on computer
Post-Conditions	Any other person to whom content is made available is logged in.
Basic flow	The user uploads the file and according to the position of the user the file is saved into local host and made available to download for intended user to whom the logged user reports.

3.1.6 Feature – 6: Assign Project

Purpose	Superhead receives project from clients and decides overall budget, start and finish date and Manpower and he also appoints head for each phase of the project
User	Superhead of company
Input Data	All project details mentioned in purpose
Output Data	Project details in all project details
Invariants	Project details
Pre-Conditions	Superhead is logged into profile, Project name should not exist in database.

Post-Conditions	User's computer has been supplied with appropriate cookie, page data is appropriated for selected profile.
Basic flow	The project details are uploaded in database
Alternative flow	Project details if already in database are not added back to database and appropriate message is shown
Business rules	Only Superhead is allow to assign project

3.1.7 Feature – 7: Track Progress

Purpose	A user can track the progress of the project he is part of.
User	Superhead of the company.
Input Data	The name of project and Number of submissions of valid reports by head of each phase to Superhead
Output Data	A bar graph showing the progress of each project
Invariants	None
Pre-Conditions	System must be connected to internet to access java-script files
Post-Conditions	None
Basic flow	The number of submissions get incremented after a submission is approved by Superhead and the graph is plotted after each submission

3.1.8 Feature – 8: Request

Purpose	If a user is facing technical difficulty then he may ask admin for help.
User	All users except admin.
Input Data	A request/help statement to be entertained by admin.
Output Data	The request statement to be displayed to user
Invariants	The uploaded request
Pre-Conditions	User is logged in.

Post-Conditions	User's computer has been supplied with appropriate cookie, page data is appropriated for selected profile.
Basic flow	The request is written into database and is shown to user on his working page

3.2 External Interface Requirements

3.2.1 User Interfaces

- ➢ The entire user interface is designed using HTML, CSS and JavaScript
- ➢ The fonts used in the GUI are standard fonts packaged with the default CSS Layout.
- ➢ The pop-ups and button layout are generalized for different browsers.
- ➢ The minimum screen resolution to be supported is 460x768.

3.2.2 Hardware Interfaces
- ➢ The Application is supported onto various hardware platforms like Intel, AMD etc.

3.2.2.1 Server Side
The web application will be hosted on a web server which is listening on the web standard port, port 80.

3.2.2.2 Client Side
All the information intended to display is displayed on the user's system

3.3 Software Interfaces
This software is supported on Windows, Linux and Mac OS platforms
The following dependencies are must for a system for smooth functioning of the software:-

3.3.1 Web server
- ➢ Apache will be used as web server.
- ➢ The user inputs data is the web server using HTML forms.
- ➢ The web server executes the PHP as a module and PHP script retrieves the post data if available.
- ➢ The web server receives information back from the PHP script.
- ➢ The web server displays a HTML page as result to the end- user.

3.3.2 PHP Application

➢ The actual program that will perform the operations is written in PHP.

3.3.3 MySQL Database
➢ It is an open source SQL database to store all data which communicates with the application on server.

3.4 Communicational Interfaces
➢ The HTTP or HTTPS protocols will be used to facilitate communication between client and server.
➢ Hmail server is used as e-mail server for sending and receiving information through e-mail.

3.5 Memory Constraints
At least 512 MB RAM and 500 MB space of hard disk will be required to run the software.

3.6 Other Requirements
Active Internet connection for password reset feature & for tracking progress of each user and also for Project Overall Progress chart. Chart feature is for trail version only and hence company need to pay additional money to have this feature active for all time.

Appendix – 1:
https://en.wikipedia.org/wiki/Software_project_management
http://php.net/manual/en/intro-whatis.php
https://canvasjs.com/php-charts/column-chart/
https://www.w3schools.com/html/
https://www.w3schools.com/css/
https://www.javascript.com/
https://en.wikipedia.org/wiki/Project_management_software
https://www.apachefriends.org/download.html
https://www.hmailserver.com/documentation/v5.6/?page=overview
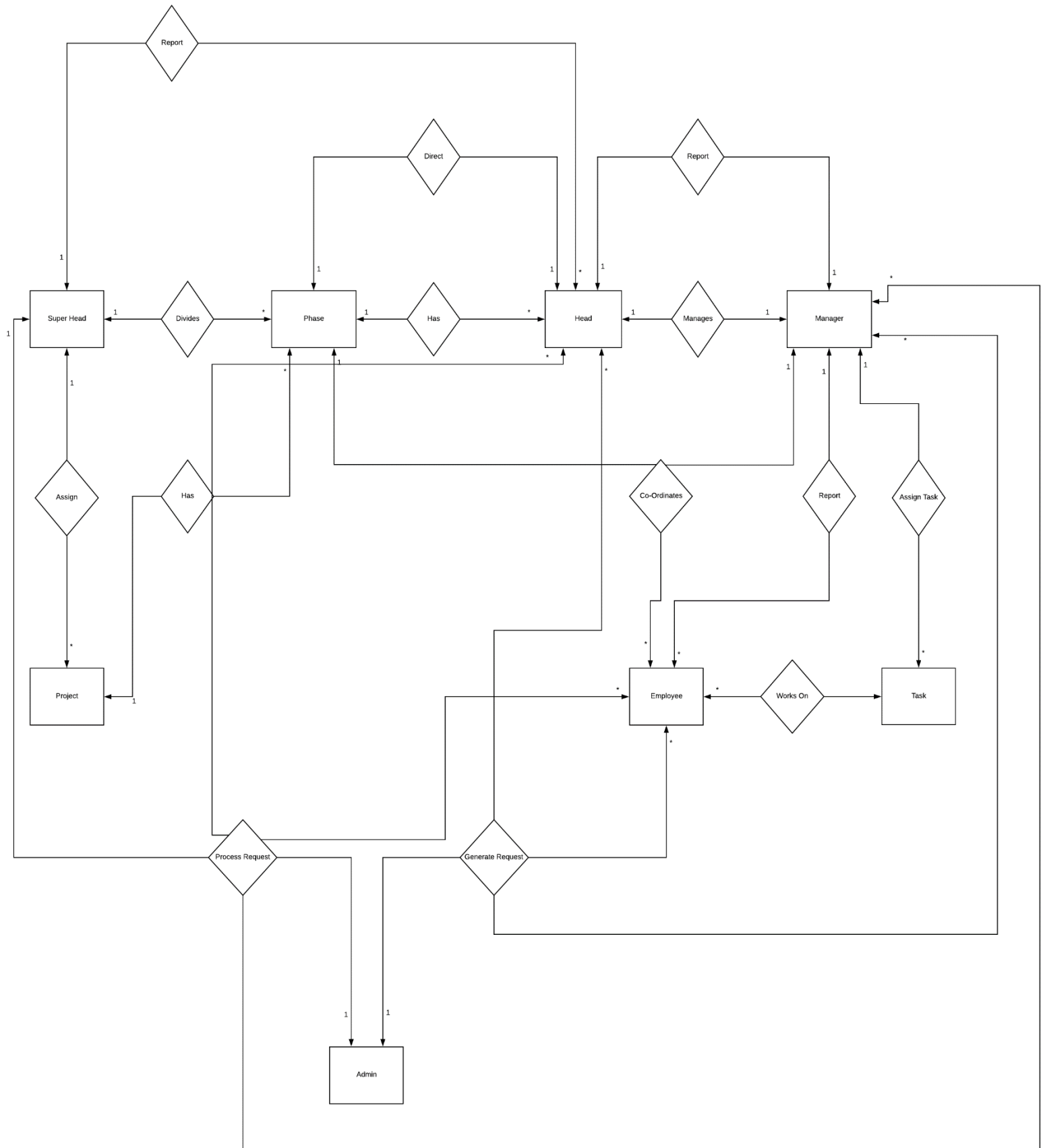http://squirrelmail.org/documentation/
https://www.webslesson.info/2018/07/live-chat-system-in-php-using-ajax-jquery.html

Appendix-2
Entity-Relationship Diagram

Relation Schema Diagram

admin_login
- username
- password

superhead_login
- username
- password

head_login
- username
- password
- personal_email
- phase

manager_login
- username
- password
- personal_email
- phase

emp_login
- username
- password
- personal_email
- phase

manager_profile
- username
- name
- dob
- email
- personal_email
- tempadd
- permadd
- mobile
- phase
- image
- attendence
- date
- salary
- efforts

emp_profile
- username
- name
- dob
- email
- personal_email
- tempadd
- permadd
- mobile
- phase
- image
- attendence
- date
- salary
- efforts

admin_profile
- username
- name
- dob
- email
- personal_email
- temp_add
- perm_add
- mobile

superhead_profile
- username
- name
- dob
- email
- personal_email
- tempadd
- permadd
- mobile

head_profile
- username
- name
- dob
- email
- personal_email
- tempadd
- permadd
- mobile
- phase
- image
- attendence
- date
- salary
- efforts

report
- task_id
- emp_id
- man_id
- status

all_task
- task_id
- current
- pending
- upcoming

assign_task
- manager_name
- emp_name
- assign_date
- finish_date
- task_id

phase
- ph_name
- head_name
- prj_name

project
- prj_file
- prj_name
- in_it
- inid
- budget
- efforts

project_dir
- days
- cprj_file
- prj_name
- ph_name
- budget

graph
- prj_name
- analysis
- design
- coding
- testing
- deployment
- maintenance

request
- req_id
- request

notification
- notification
- n_id
- n_date