Mobile HRM for Online Leave Management System

A.MohanaPriya[1], G.Shyamala[2], R.Dharshini[3]

Assistant Professor, Department of Computer Science & Engineering

Sri Shakthi Institute of Engineering and Technology, Coimbatore, India

Anna University, Chennai

[1] mohanapriya@siet.ac.in, [2] shyamala@siet.ac.in, [3] r.dharshini@siet.ac.in

Abstract -- The Mobile HRM (Human Resource Management) project is aimed at developing an online leave management system which is important to an organization. It is a new concept that is been developed for our management to maintain leave record. The Mobile HRM is an Intranet based application that can be accessed throughout the organization or a specified Department. This system can be used to automate the workflow of leave request and their approvals. There are features like approval of leave, cancellation of leave, report generators in this system. The registered people are to be an employee or a staff of the particular organization. At anytime and anywhere employee or staff can apply their leave using this application. There is no necessity for manual filling of leave form and wait to get higher officials signature. With the help of this application the staff can also view the previous leave applied by them. Then the leave request will be forwarded to the higher official of the organization. In day to day life manual maintenance of leave record became difficult. The advantage of this application is ease of use. The main aim of this application is used to reduce time.
Keywords: DFD, Leave Management.

I.   INTRODUCTION

The objective of this project is to automate leave management. With the help of this application users can apply leave through online, Head of the department can approve or escalate to higher levels; admin can update leave status online. The user can see the status of all leave taken and their remaining leave through this application. Head of the department can view the leave status of all staffs with the help of this application. The work flow is designed in such a way that the leave system generates notification to the respective users. Head of the department and principal enable them to act upon.

Leave management system is very simple to understand, easy to use and more convenient for implementation. The major use of designing such an application is to provide a staff or an employee a better way

for scheduling and calculating their leave details. As the existing system increases the paper work and record maintenance which is a tedious work, so there is a need of new system which makes the record maintenance easy that is the common requirement for the management or an organization.

Application development can be generally being thought of having two major components: analysis and design. In Analysis more emphasis is given to understanding the details of an existing system or a proposed one and then deciding whether the proposed system is desirable or not and whether the existing system needs improvement. Thus, analysis is the process of investigating a system, identifying problems, and using the information to recommended improvements to the system.

II.   EXISTING SYSTEM

In the existing it is individual to apply leave. It increases the paper work and record maintenance which is a tedious work.

III. PROPOSED SYSTEM

The main objective of the proposed system is to automate the existing system. It decreases the paper work and easier record maintenance by having a database for leaves. It reduces the time and manual paper work for applying a leave. The leave management system reduces the work and risk of the Head of the department/Principal.

Advantages of Proposed System

- It is very faster.
- Provide user friendly.
- Less Time Consuming

IV. LEAVE MANAGEMENT SYSTEM

The modules in **MOBILE HRM** are

- Login Module
- Leave Request Module
- Leave Responding Module
- Leave status Module

4.1 LOGIN MODULE

In login module creating user contains two phases. They are registration phase and login phase. The user should register in the application at the very first time of installation. In the registration details the application gets the basic information about user such as username, password, mobile number, Email id and staff id. These details will be updated in the database.

After the registration phase, the user has to login into the application using the email id and password. Both in registration and login phase each and every text fields are validated with certain constraints.

4.1.1 IN REGISTRATION PHASE:

- Username must be a string.
- Password must have four to eight characters.
- Mobile number should be a valid ten digit number.
- Email id of the user should be a valid one.
- Staff id must be a number.

4.1.2 IN LOGIN PHASE:

The registered email id should be used in the login. If user uses unregistered email id, application will display an error message "invalid login". Only the email id which is registered in that particular application should be used for logging in.

4.2 LEAVE REQUEST MODULE:

After logging in using the email id user will login into their home page. The username will be displayed in the top of the page. There are two buttons. They are

- Apply Leave – Bring to the leave form page from current page.
- Leave Status – It will display the leave request and status.

The leave form page of the user will display from and to date. In which user can select the number of days for applying leave. It also has number of day's column which will automatically calculate the total number of leave applied. Leave type will display the different kinds of leave such as CL, VA, ML, OD, COMP-OFF. After filling the leave form if apply button is clicked, the leave is forwarded to higher authorities and will be stored in database.

4.3 LEAVE RESPONDING MODULE:

Responding for leave is done by HoD and principal. In this module the applied leave (leave request) by a staff will be displayed in HoD and principal's page. This page will contain particular staff name, their department and their designation. The leave applied "from" and "to" will be displayed along with the total "no of days"."Ok" and "cancel" button is placed. If HoD accepts their leave he/she can approve it by clicking "ok" button, If they want to reject that particular leave they can click "cancel" button. In principal's page only applied leave can be viewed. He can't accept or reject.

4.4 LEAVE STATUS MODULE

In leave status module responded activities are viewed by clicking the responded button all the responded activities are displayed. The pending activities are also displayed by clicking the pending activity button. Both employer and manager can view the leave status. In HoD's page all the staff belonging to one particular department leave status will be displayed. Whereas in principal's page leave applied by staffs of different department is also visible.

V. CREATING USER USING DFD SYMBOLS

The Figure 5.1 explains about creating of user by registering their details in database. They can also edit their details. Each user have their own login id and password.
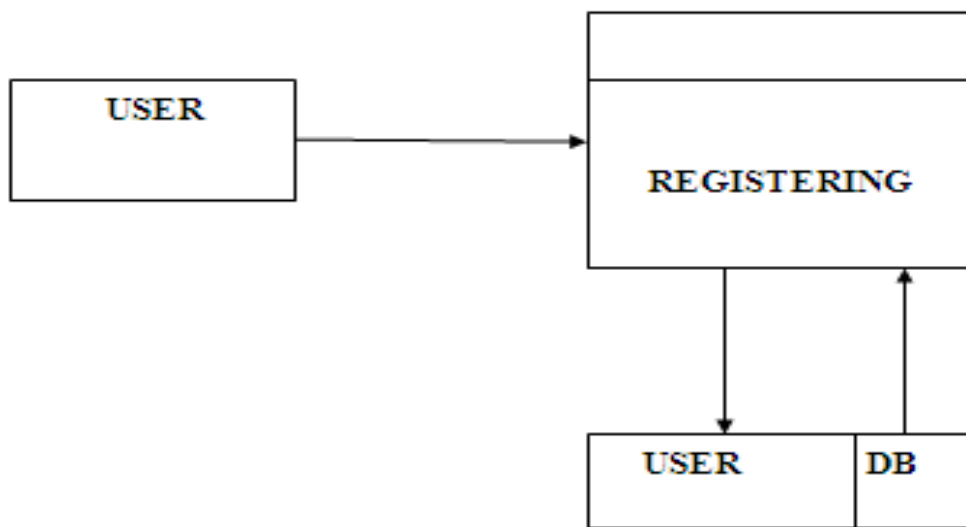
Figure 5.1 Dataflow Diagram for creating user

VI.LEAVE REQUEST USING DFD SYMBOLS
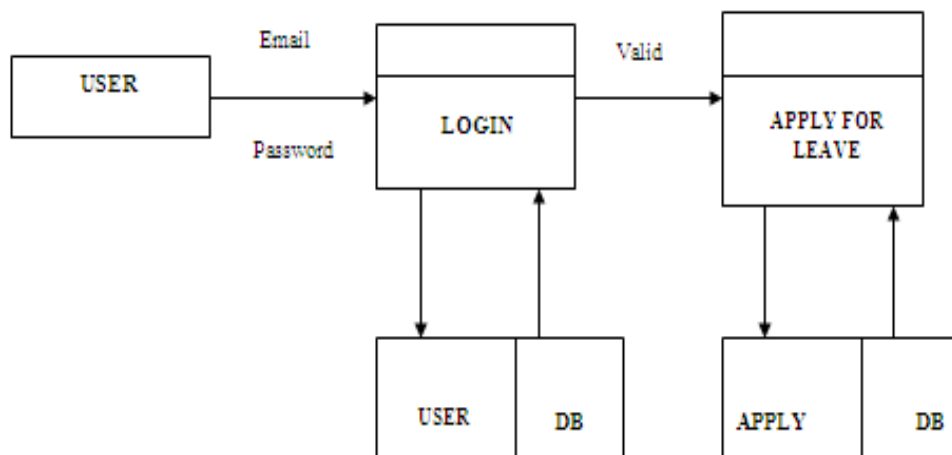
Figure 6.1 Data flow Diagram for Leave Request

Thus the figure 6.1 explains about applying leave for staffs. Here the user login through valid login id and password. After entering into the leave form they can fill their leave details and can click apply button. Thus their leave request will be stored in database.

VII. LEAVE RESPONSDING USING DFD SYMBOLS
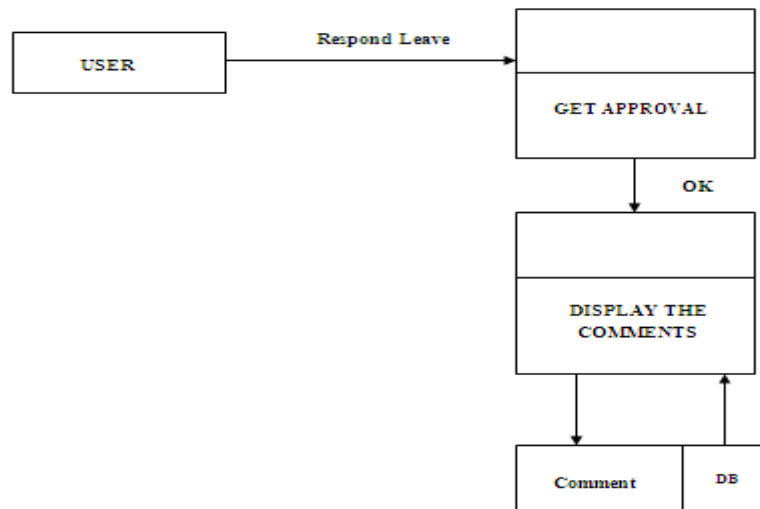
Figure 7.1 Dataflow Diagram Leave Responding

In Figure 7.1 Leave responding task is been performed. The request send by the user is approved by the higher official and then they can also add their comments in that responded form. Thus the comments are stored in db which can be viewed by the user.

VIII. TABLE

Table name: EMPLOYEE TABLE

Description: Maintains account information of the users.

Primary key: empid

empid	bigint(20)		UNSIGNED	No		
firstname	varchar(30)	latin1_general_ci		No		
lastname	varchar(30)	latin1_general_ci		No		
degree	varchar(30)	latin1_general_ci		Yes	*NULL*	
contactno	bigint(20)		UNSIGNED	No		
department	varchar(30)	latin1_general_ci		Yes	*NULL*	
designation	varchar(30)	latin1_general_ci		Yes	*NULL*	
mailid	varchar(30)	latin1_general_ci		No		
pwd	varchar(30)	latin1_general_ci		No		
dob	date			Yes	*NULL*	
usertype	varchar(30)	latin1_general_ci		No		

Table 8.1 Employee Registration Form

Thus the above Table 8.1 explains about the details that the new user has to fill in order to register.

		empid	firstname	lastname	degree	contactno	department	designation	mailid	pwd	dob	usertype
		1	Kannamal	Eswaramoorthy	M.E, ph.d	9843633389	CSE	HOD	kek@siet.ac.in	ka1	0000-00-00	Teaching Staff
		2	saranya	Natarajan	M.E	8870800500	CSE	Assistant Professor	nsaranya@siet.ac.in	sa1	0000-00-00	Teaching Staff
		3	Mohanapriya	A	M.E(pursuing)	9095023960	CSE	Teaching associate	mohanapriya@siet.ac.in	mo1	0000-00-00	Teaching Staff
		4	Hemalatha	S	M.E	9626540006	CSE	Assistant Professor	hemalatha@siet.ac.in	he1	0000-00-00	Teaching Staff
		0	Natarajan	C	M.E, ph.d	9994630696	ECE	Principal	principal@siet.ac.in	na1	0000-00-00	Principal
		5	Selvakumar	G	M.E	9443256566	CSE	Associate Professor	selva@siet.ac.in	se1	0000-00-00	Teaching Staff

Table 8.2 Employee Details

Thus the above Table 8.2 explains about the employee details.

Table name: LEAVE TABLE

Description: Maintains Leave.

Primary key: leaveid

	Field	Type	Collation	Attributes	Null	Default	Extra	Action
	leaveid	int(11)			No		auto_increment	
	applieddate	varchar(50)	latin1_general_ci		No			
	empid	varchar(20)	latin1_general_ci		No			
	startdate	varchar(50)	latin1_general_ci		No			
	enddate	varchar(50)	latin1_general_ci		No			
	leavetype	varchar(30)	latin1_general_ci		No			
	department	varchar(30)	latin1_general_ci		No			
	approvestate	varchar(40)	latin1_general_ci		No	applied		
	finalapprovestate	varchar(50)	latin1_general_ci		No	applied		
	message	varchar(200)	latin1_general_ci		Yes	*NULL*		
	comments	varchar(200)	latin1_general_ci		Yes	*NULL*		

Table 8.3 Leave form

Thus the Table 8.3 explains about the details to be entered in the leave form to apply leave.

	leaveid	applieddate	empid	startdate	enddate	leavetype	department	approvestate	finalapprovestate	message	comments
🖉❌	84	2015-03-17	4	2015-03-17	2015-03-19	ML	CSE	applied	applied	not_well..	
🖉❌	2	2015-2-25	2	2015-2-25	2015-2-27	CSE	CSE	approved	applied		
🖉❌	3	2015-2-27	2	2015-2-27	2015-2-27	CSE	CSE	approved	approved		
🖉❌	4	2015-2-27	2	2015-2-27	2015-2-27	CSE	CSE	approved	applied		
🖉❌	5	2015-2-25	3	2015-2-25	2015-2-25	CSE	CSE	approved	approved		
🖉❌	6	2015-2-26	3	2015-2-26	2015-2-28	CSE	CSE	approved	rejected		
🖉❌	7	2015-2-26	2	2015-2-26	2015-3-26	CSE	CSE	approved	applied		
🖉❌	8	2015-2-28	2	2015-2-28	2015-3-2	CSE	CSE	approved	applied		
🖉❌	9	2015-2-27	2	2015-2-27	2015-2-27	CSE	CSE	approved	approved		
🖉❌	10	2015-2-28	2	2015-2-28	2015-2-28	CSE	CSE	rejected	applied		

Table 8.4 Leave Details

Thus the Table 8.4 explains about the leave applied by the user in the leave status page.

IX. RESULTS

STAFF ACTIVITY

Figure 9.1 User Login

Thus the Figure 9.1 explains that the user can enter into this application using a valid username and password.
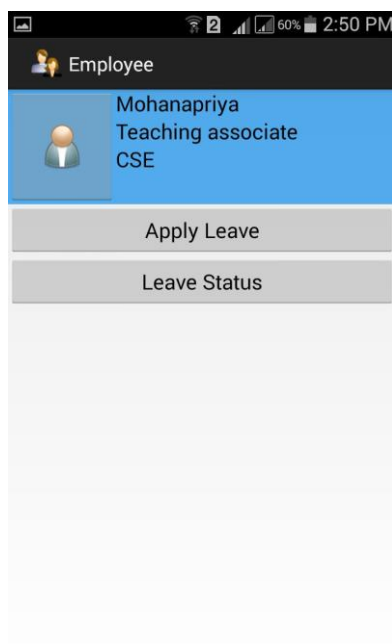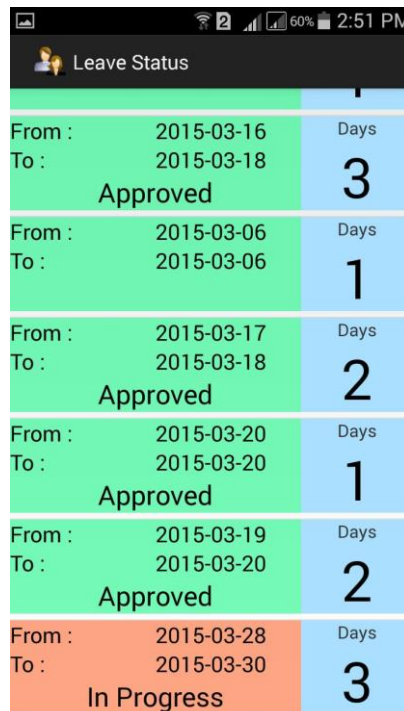
Figure 9.2 Staff Home Page

Thus the Figure 9.2 explains about the home screen that consists of username, designation and department. It also consists of two buttons to apply leave and to view the leave status.

Figure 9.3 Leave Form

Thus the above Figure 9.3 explains that, by clicking apply leave button a leave form appears in which the leave dates, leave types are selected and the reason for the leave is also explained. After clicking apply button in the leave form the leave request is sent.

Figure 9.4 Leave Status

Thus the above Figure 9.4 explains that, as soon as the higher authority respond for the leave, the leave status appears in the user page.

HOD ACTIVITY
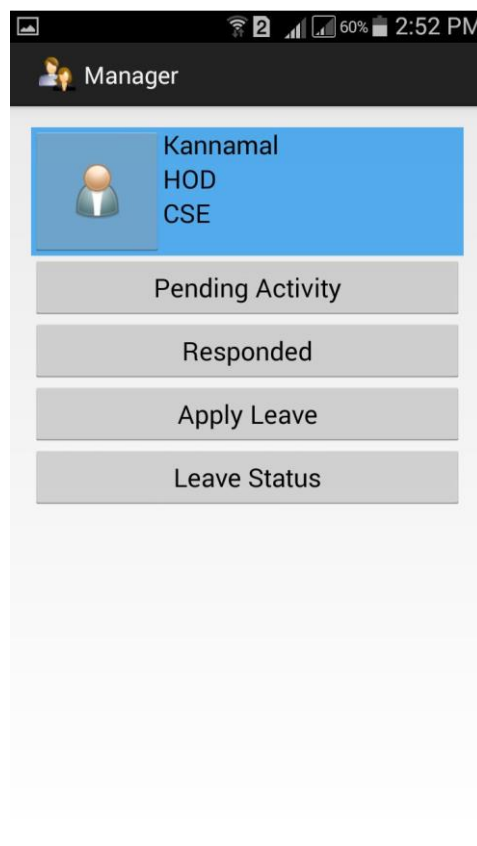
Figure 9.5 HOD Home Page

Thus the above Figure 9.5 explains about the home screen for HOD with his/her name and department. It also includes pending activity responded apply leave and leave status buttons.

Figure 9.6 Leave Request

Thus the above Figure 9.6 explains about the pending activity that is displayed in HOD's page. After viewing the entire leave details of the staff he/she can approve or reject the particular leave.

Figure 9.7 Leave Detail

Thus the above Figure 9.7 explains about the leave detail for the applied leave by the staff. If HOD wants to comment for their leave they can use the comment column. This activity is displayed after clicking the particular staff name which is in "pending activity" of the HOD's page.

Figure 9.8 Responded activity

Thus the above Figure 9.8 explains about the Responded activity done by HOD that is displayed in HOD's page.

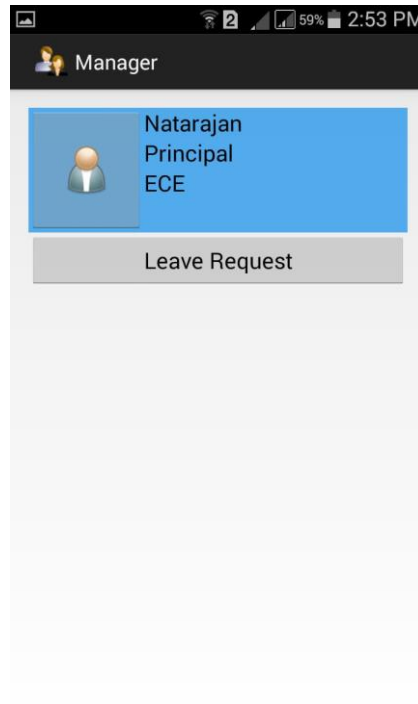**PRINCIPAL ACTIVITY**

Figure 9.9 Principal Home Page

Thus the above Figure 9.9 explains about the Home screen for principal with his/her name and department. It includes leave request button.

Figure 9.10 Viewing Activity

Thus the above Figure 9.10 explains about the Responded activity done by HOD that is displayed in principal's page. He/she can only view the responded activity.

X. CONCLUSIONS

Thus the "MOBILE HRM" has been developed to overcome the problem of manually applying leave which is time consuming. It helps a staff or an employee to apply the leave through online and get approval from higher officials. Thus the Mobile HRM provides an optimized solution like leave status can be viewed directly by the staff.

In future works we overcome the above limitation that is by making this application to run under offline. The future enhancement also includes payroll calculation for the staff and also the staff can view their entire leave details of any particular month or a year. Their salary will also be automated according to their leave taken by the employee or staff.

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