Project Report

Leave Database Management System

CSE2004 – Database Management Systems

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Contents

Abstract:

Nowadays, everything is automated from booking tickets online to online payments,online shopping etc. In schools and colleges, many authorities are opting for digitized ways of taking attendance and applying for leave.The Leave Management System does the same and can be accessed throughout the organization or a specified group/Dept. This system can be used to automate the workflow of leave applications and their approvals. The periodic crediting of leave is also automated. There are features like notifications, automatic approval of leave, pending requests etc in this system. Leave Management application will reduce paper work and maintain records in a more efficient way. The Leave Management System in many places is totally manual and it takes a long time to process a leave request. In the current system a leave application has to go through a long chain of people such as wardens or dean and as a result, several times the competent authorities get manipulated information. The proposed system will make the leave associated activities easier and will also save time and energy. The tasks which can be processed using the Leave Management module are applying for leave, viewing leave history, viewing leave stats and granting/rejecting leave applications. This system can make the existing system faster, more productive and would require less manpower to handle it.

INTRODUCTION:

The advancement in technology in the last few decades has improved our lives in every aspect. Manually driven systems are being substituted by the computerized systems. The existing Leave Management System of DBBL is totally manual to keep track of all the leave associated records. In the existing system, leaves are maintained using the attendance register . The people or students needs to submit their leaves manually to their respective authorities. This increases the paperwork & maintaining the records becomes tedious. The main objective of the proposed system is to reduce the paperwork and help in easier record maintenance by having a particular centralized Database System, where Leaves are maintained. The proposed system modernizes and automates the existing system. It decreases the paperwork and enables easier record maintenance. It also reduces chances of Data loss. This module intelligently adapts and allows easy leave handling for better scheduling of workload. This project includes options for applying leave, the respective authorities can enter any department or student information if needed, approval of leaves. Students can easily upload their leave applications online just on one click. The application will directly go to the concerned faculty and respective coordinators of student either after approval or without approval of parents. This will eliminate the redundant paper work. Whenever required any student can upload their leave application on their timeline. This will help to reduce the paper work and loss of students attendance when they are not able to send the leave applications on time. There will be an admin account where the Admin can

view and maintain all the details related to leave and payroll of the employee related to the organization. Then there will be a student log so that they can apply for leave, keep track of their leaves, status of the applications for leave. The project's frontend has been created using php , html and css and for backend mysql has been used.

LITERATURE SURVEY:

1. Soni, G., Nagar, K., Fumakiya, M., Raghuvanshi, N., & Kadam, K. INTERNATIONAL JOURNAL OF ENGINEERING SCIENCES & RESEARCH TECHNOLOGY STUDY PAPER ON STUDENT LEAVE MANAGEMENT APPLICATION.

--In this research paper, the authors have focussed on the importance of attendance for the students and how they find it difficult to manage and keep a record of it. When students apply for leave by submitting handwritten letters then they have chances of missing classes due to late leave approval. Also it has been told that all of the problems discussed in this paper and have been solved are done with the help of brainstorming.

2. Bester, K., Chandler, A. T., Shewell, M. A., & Yates, S. J. (2018). *U.S. Patent No. 9,977,798*. Washington, DC: U.S. Patent and Trademark Office.

--In this paper , the techniques used to migrate or transfer data from one table to another using structured query language i.e sql has been explained. Also how the data present in the tables can be manipulated is also given. The commands which we use for manipulation and what effect they have have been discussed.

3. Choudhury, N. (2005). *A proposed leave management system for Dutch-Bangla bank limited* (Doctoral dissertation, BRAC University).

--Here the need for an automated leave system has been stated. There is bank which has manual system of applying and approving leaves and the leave goes through a chain of officials hence making the entire process tiring and cumbersome for both the authorities and the employees. Thus the need for a database system has been explained and also how to achieve this with the help of php and sql languages has been given.

4. Williams, H. E., & Lane, D. (2004). *Web Database Applications with PHP and MySQL: Building Effective Database-Driven Web Sites*. " O'Reilly Media, Inc.".

--This is an excerpt from a book which explains how to use php and mysql to make complete databases with a frontend. It also tells us about the database tiers and what exactly is a database management system.

5. Goyal, Abhinav, Wenbin Ma, Nattavut Sutyanyong, and Calisto P. Zuzarte. "Optimizing relational database queries with multi-table predicate expressions." U.S. Patent 9,892,117, issued February 13, 2018.

--Here, we get to know the relational database queries (for example, SQL queries) in a new way. It tells that the join operation precedes the row limiting operation, when responding to the query, machine logic (for example, software) performs the row limiting operation before the join operation. And how this improves time and processing efficiency.

Tools and Methodologies:

Frontend- php,html and css

Backend- MySql

In the backend, standard query language has been used. For storing details related to our leave applications we have created a database. This includes all the tables for all the entities i.e admin like proctor or warden, student, leave application, leave type and department. In our project using the frontend we have made separate login modules for both admin and students. As soon as the student logs in, he or she can choose the leave type and add all the details about the leave i.e time and date, place and reason and submit the leave.

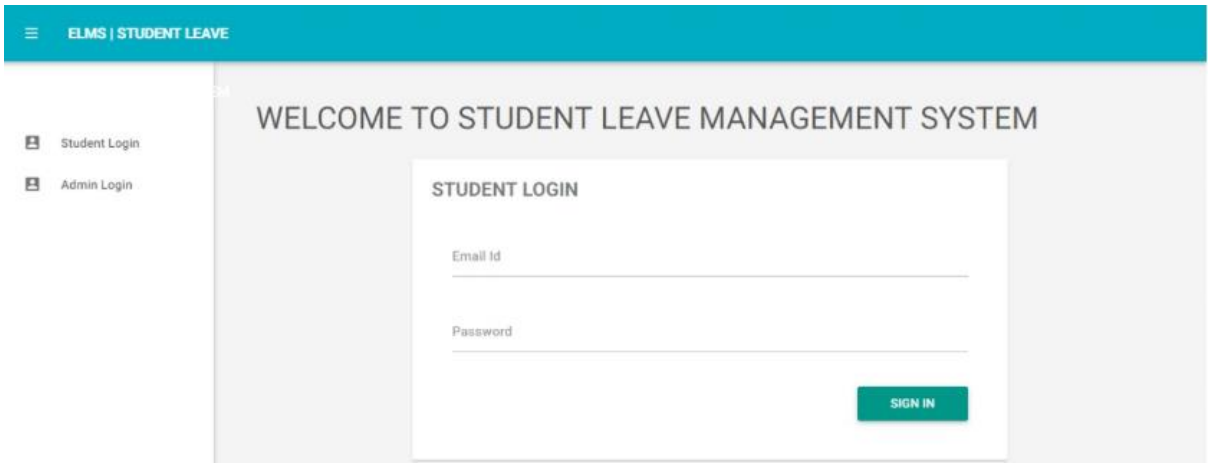
As soon the students click the submit button the leave is saved and it goes to the admin for approval. Now all the tables have íd'as their primary key i.e each admin has a unique id given by the authorities. The students who are allocated to that particular admin have the id of that admin stored in the table alongwith other details. When the student submits the leave it goes to the admin to whom he or she has been allotted. The admin receives notification which is facilitated with the help of an icon. The admin can approve leave and give comments as well. He or she can also see the approved leaves, not approved leaves and pending leaves. The admin can also add a student recently allocated to him. He can also add more leave types if wanted. Initially, we have only three types of leave in this demo i.e casual leave, holiday leave and medical leave. The admin can also add department if the student allotted to him is of some other department that not existing in his database from the starting.

The students can also view the approved and not approved leaves.

EXPERIMENT AND RESULT:

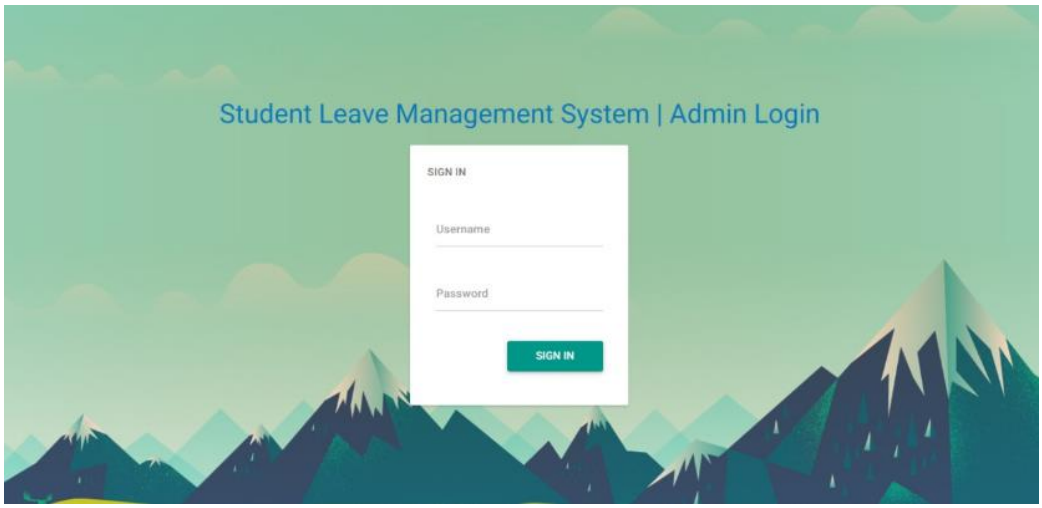
These are the screenshots of the frontend which we will see while applying for a leave or while approving a leave.

1.)



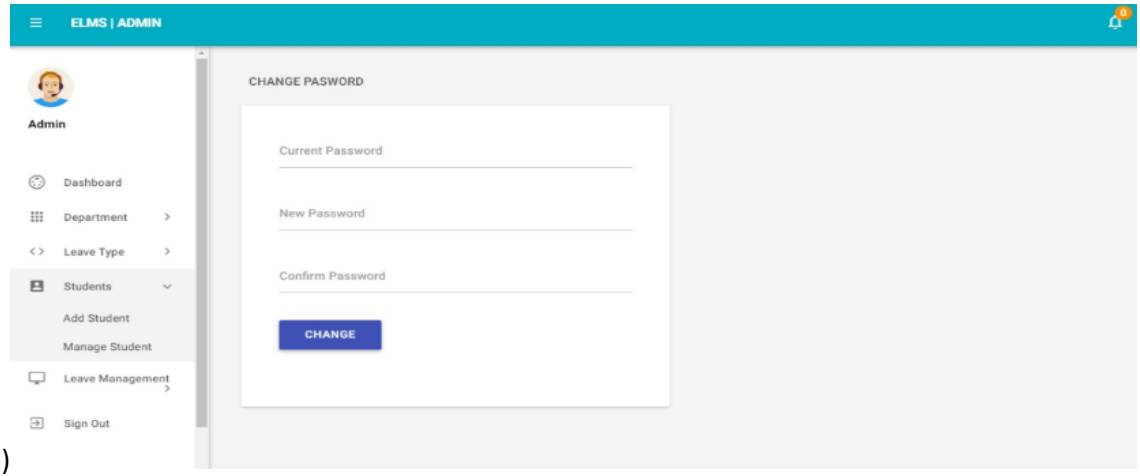
This is the frontend for our student login.

2.)



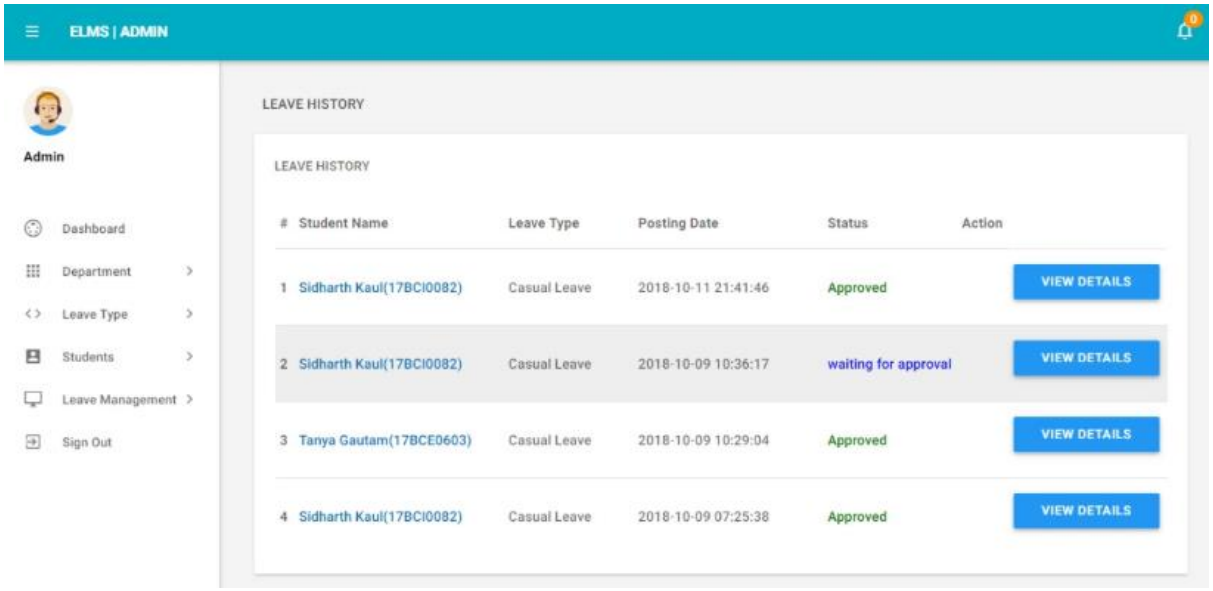
This is the admin login frontend.

3.)



Frontend to change the password

4.)


ELMS | ADMIN
Admin
Dashboard
Department
Leave Type
Students
Leave Management
Sign Out
LEAVE HISTORY
LEAVE HISTORY
Student Name
Leave Type
Posting Date
Status
Action
1 Sidharth Kaul(17BCI0082)
Casual Leave
2018-10-11 21:41:46
Approved
VIEW DETAILS
2 Sidharth Kaul(17BCI0082)
Casual Leave
2018-10-09 10:36:17
waiting for approval
VIEW DETAILS
3 Tanya Gautam(17BCE0603)
Casual Leave
2018-10-09 10:29:04
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VIEW DETAILS
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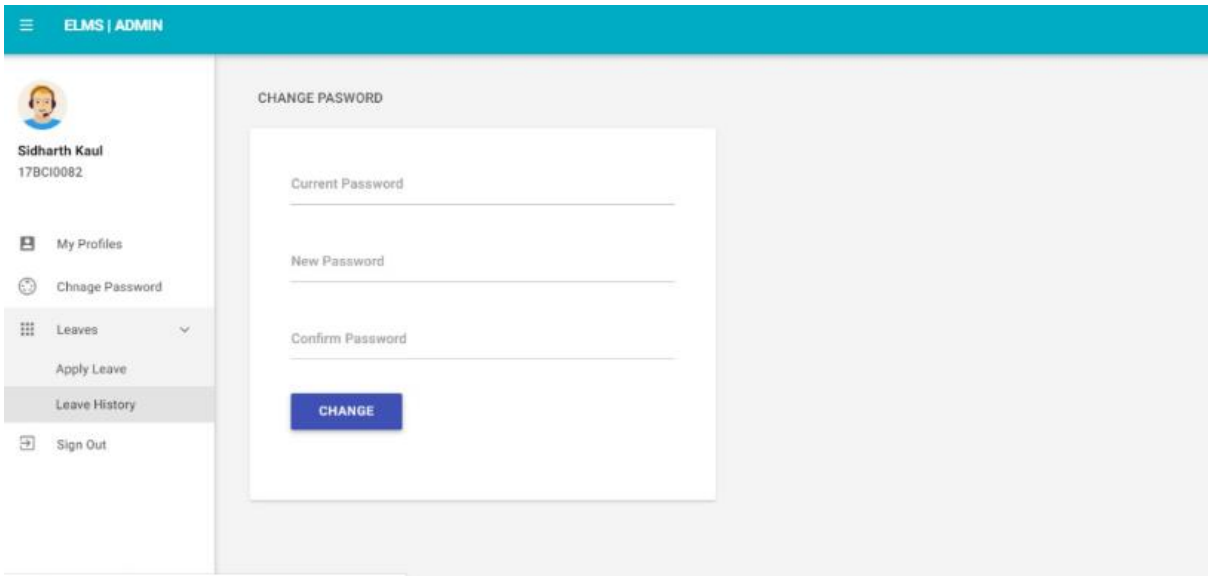
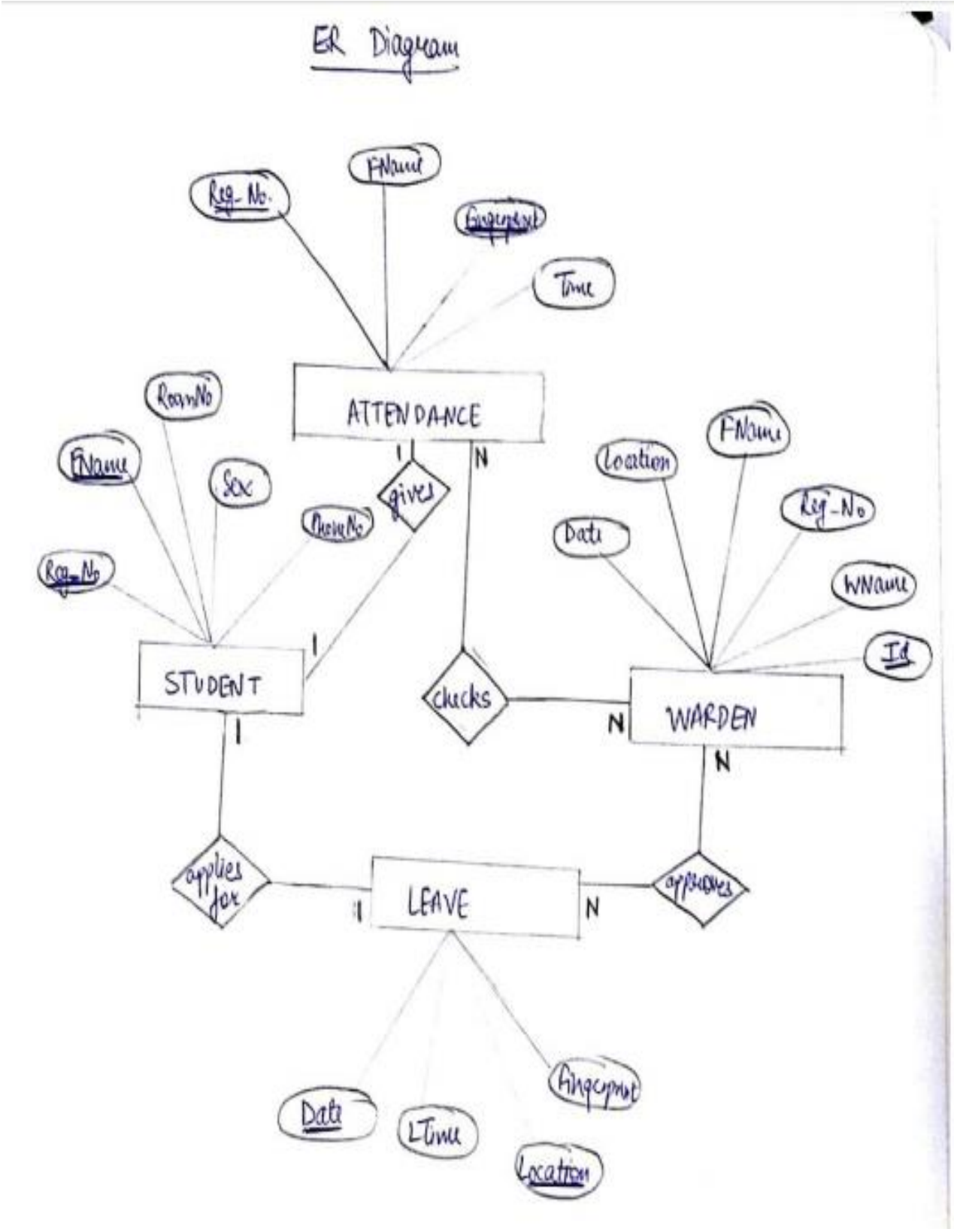
VIEW DETAILS

5.)


ELMS | ADMIN
Sidharth Kaul
17BCI0082
My Profiles
Chnage Password
Leaves
Apply Leave
Leave History
Sign Out
CHANGE PASWORD
Current Password
New Password
Confirm Password
CHANGE

ER DIAGRAM:


ER Diagram
FName
Reg_No.
Fingerprint
Time
ATTENDANCE
RoomNo
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Sex
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STUDENT
1
1
checks
N
WARDEN
N
Location
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Reg_No
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WName
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applies for
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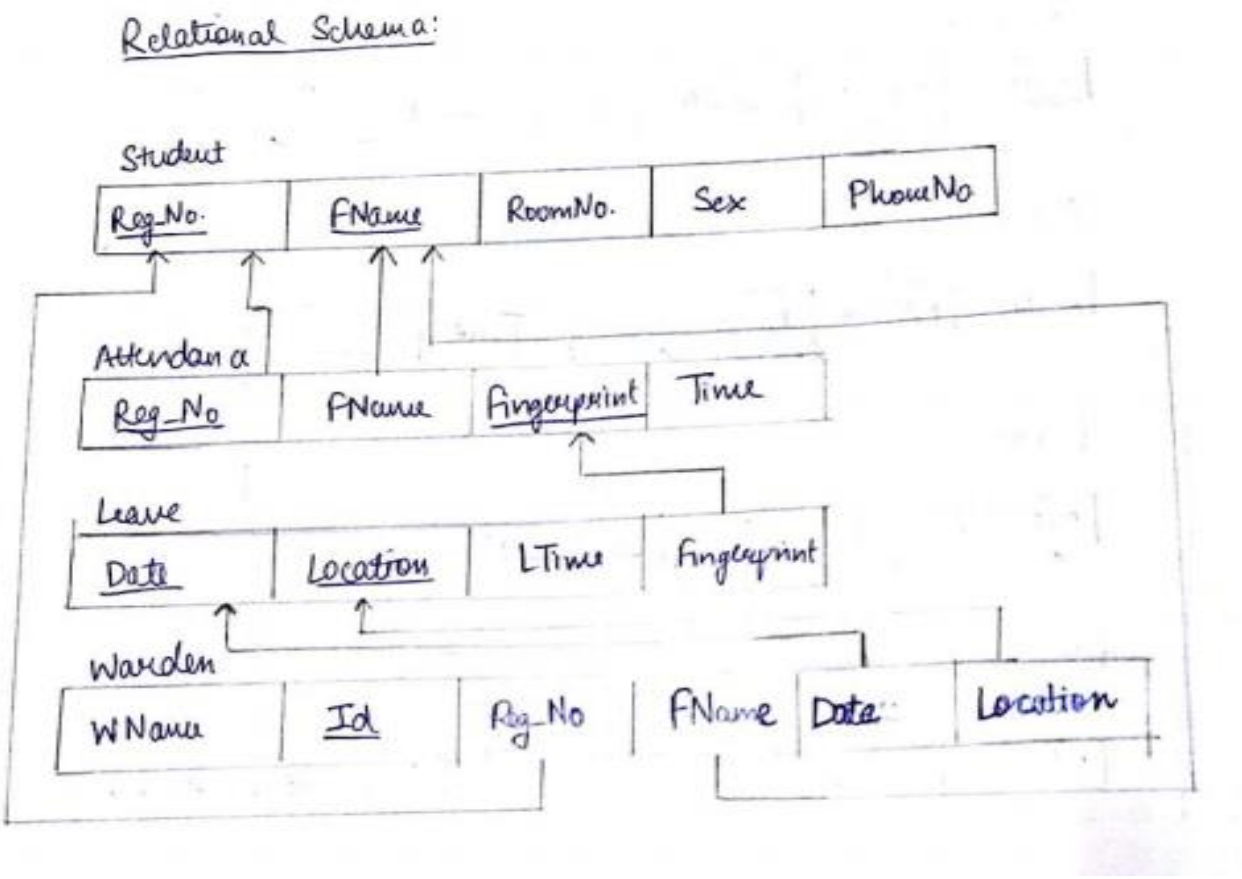
LEAVE
N
approves
Date
LTime
Fingerprint
Location

RELATIONAL SCHEMA:



CONCLUSION:

Due to lack of coordination or inefficient system, handling of leave records becomes very difficult. With the help of the proposed system concerned faculties will have proper information about student. Faculties will also have relaxation from the proposal as all hustling and bustling of maintaining records gets almost eliminated. Further upgradation of the Leave Management System for various types of organisations with multiple hierarchies can help in reducing paperwork, help achieve error free tabulation and calculation of leaves. The proposed Leave Management System will make the whole leave management process efficient. Users will be able to access the software from anywhere. This supporting software will help the management in decision making in case of leave related affairs. Moreover, it will ensure less paper works and as a result the whole process will be swift and reliable.

REFERENCES:

Soni, G., Nagar, K., Fumakiya, M., Raghuvanshi, N., & Kadam, K. INTERNATIONAL JOURNAL OF ENGINEERING SCIENCES & RESEARCH TECHNOLOGY STUDY PAPER ON STUDENT LEAVE MANAGEMENT APPLICATION.

Bester, K., Chandler, A. T., Shewell, M. A., & Yates, S. J. (2018). *U.S. Patent No. 9,977,798*. Washington, DC: U.S. Patent and Trademark Office.

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