

## Infrastructure Management System

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### ABSTRACT

Since the computer system come into existence the way we do our work has changed. Since technology constantly changes there is a constant change in software and hardware and we need to upgrade the given system. The Infrastructure Management System is a web-based application, which focuses on an activity or function, which is based on management of infrastructure of institutions. In this web-based application, we select a faulty accessory and report it to the admin with particular complaint. It maintains a database of all the information that are recorded and received. It helps the college to maintain all the accessories safely.

**Keywords – Infrastructure Management System, complaint, admin.**

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### I. INTRODUCTION

The Infrastructure Management System is a web-based application, which focuses on an activity or function, which is based on management of infrastructure of institutions. In this system we select a faulty accessory and report it to the admin with particular complaint. It maintains a database of all the information that are recorded and received. It helps the college to maintain all the accessories safely. So, it is time saving. Through this system one can send the complete information about the college infrastructure such as faults in a benches, in chairs, water problem, Fan and AC problem. When admin get this information, he can perform quick action to repair infrastructure of college. Also, according to students and teachers (who are referred as users in our system) complaints, admin quickly know the location of accessories as classroom, canteen, library, etc. This system mainly focuses on the maintenance of college infrastructure. The main scope of this system is used for managing the complaints, track the complaints easily. We can use the infrastructure management system in various places such as companies, schools, colleges, hospitals, libraries, etc. and in many more places. For placing their complaints regarding some issue and send it to the respective person who will handle this and find solutions for these complaints. After sending complaint user also can view status of their complaint either it will get solved or in a running condition etc. So, this process normally we will use for solving complaints. So according to this our project is helpful in any area for solving complaints.

The Infrastructure Management System is a digital replacement of the manual procedure for a real time usage helping the individuals involved as well as the environment. Consider this system being used by the entire institution, consider it being used by multiple institutions, this system is a largescale solution which eases the process of managing the infrastructure. The user can easily register the complaint and the complaint will be directly sent to the respective admin who is responsible for that problem and the problem can be solved. This system saves the lot of time for the user.

### II. LITERATURE SURVEY

Infrastructure Management System is a web-based application, which focuses on an activity or function, which is based on management of infrastructure of institutions. Before this there was no system which was built to

perform these activities digitally, it was all done manually. This system was built with the help of various technologies like HTML, CSS, JS, PHP, MySQL and XAMPP.

For references we have researched many books, websites, research papers and documentations. The book that helped us the most was "PHP and MySQL Web Development". The book was written by the Laura Thompson (She is a lecturer in the School of Computer Science and Information Technology at RMIT University in Melbourne, Australia. She is also a partner in the award-winning Web-development firm Tangled Web Design.) and Luke Welling (He is a lecturer in the School of Computer Science and Information Technology at RMIT University in Melbourne, Australia. He is also a partner in Tangled Web Design. He holds a Bachelor of Applied Science (Computer Science) degree and is currently completing a master's degree in Genetic Algorithms for Communication Network Design.). This book was published by the Addison-Wesley Professionals on September 20, 2016. This book teaches the reader to develop dynamic, secure, commercial Web sites. Using the same accessible, popular teaching style of the first edition, this best-selling book has been updated to reflect the rapidly changing landscape of MySQL and PHP. The book teaches the reader to integrate and implement these technologies by following real-world examples and working sample projects, and also covers related technologies needed to build a commercial Web site, such as SSL, shopping carts, and payment systems. The second edition includes new coverage of how to work with XML in developing a PHP and MySQL site, and how to draw on the valuable resources of the PEAR repository of code and extensions.

Code shack is one of the websites which we used for reference purposes. It consists of many documentations of the different functions related to web development which helped us in establishing the connection between the frontend and backend. Code shack provides free tutorials, examples, tools, and references for your everyday website development needs. Code shack is created for all users interested in the web development scene with minimal programming experience.

### III. EXISTING SYSTEM

In the existing system the infrastructure management is done manually. The user is required to give the complaint manually to the admin. It takes a lot of time and needs many employees to accomplish the task. It even lacks security and disability to produce various types of reports. And there are few drawbacks of existing system no user friendly, manual operation, no security features, time consuming process.

### IV. PROPOSED SYSTEM

In the proposed system the infrastructure management is done digitally. The user can register the complaint via web application. It reduces the time consumed by the user to register the complaint and the complaint will be directed to the admin. The admin can check the complaint via the proposed system and can resolve it quickly as the complaint given by the user also contains the details about the location of the problem. Several controls help the application to be friendly to the users. The entire infrastructure management is made simpler and more adaptable. During the process of complaint registration there is no chance of data mishandling it offers great degree of security employing various protocols.

### V. METHODOLOGY

#### 5.1 MODULES:

This system consists of two major modules. They are:

- A. User Module
- B. Admin Module

**A. User Module:** It consist of four major processes. They are:

- 1) **User Registration:** To create a new user, the user has to register by using the register button available on the web application homepage. After clicking the register now button a popup will be displayed with the registration form where the user has to enter the details like username, password and email. After that he can submit the registration form using the submit button and the user details will be added to the database.
- 2) **User Login:** To login, the user can use the login button available on the website where the user has to enter the username and password in the login form. After filling the details and clicking the login button the system will check the user database and authenticate the user based on the details given by the user and if the details provided by the user is correct then the user will be redirected to the user homepage.
- 3) **Complaint Registration:** To register a complaint, the user can use the register complaint button which is available in the user homepage, then the user will be redirected to a page where he has to fill a form regarding the complaint and submit it. After submitting the complaint, the details of the complaints will be stored in the database.
- 4) **View complaints:** To view the complaints which are registered by the user, the user can use the view complaint button available in the user homepage which redirects the user to a new webpage and displays the complaints details which are registered by the user in a tabular form.

**B. Admin Module:** It consists of three major processes. They are:

1) **Admin Login:** To login, the admin can use the login button available on the website where the admin has to enter the username and password in the login form. After filling the details and clicking the login button the system will check the admin database and authenticate the admin based on the details given by the admin and if the details provided by the admin is correct then the admin will be redirected to the admin homepage.

2) **Process Complaints:** To process the complaints, the admin can use the process complaints button available in the admin homepage. After clicking the button, the admin will be redirected to a new page where all the unprocessed complaints registered by all the users will be shown in a tabular form along with the status column where the admin can process the complaints by adding the status to the complaints with the help of radio buttons available in that column.

3) **View Complaints:** Unlike the user the admin can view all the complaints registered by all the users. The admin can view the complaints with the help of view complaints button available in the admin homepage. After clicking the view complaints button the admin will be redirected to new homepage where all the processed and unprocessed complaints registered by all the users will be displayed in a tabular form. Here the complaints are displayed according to the date when they are created.

### 5.2. ALGORITHMS USED:

There are several algorithms which are used in the development of infrastructure management system. They are:

#### Search Algorithms:

Search algorithms can be used to search for the complaints in the database when the user or admin wants to view the complaints. Some commonly used search algorithms for these operations are Linear Search and Linear Search Equality on Key.

#### Encryption Algorithms:

Encryption algorithms can be used to encrypt and decrypt sensitive information such as passwords of the user and admin to ensure that it is transmitted and stored securely. Some commonly used encryption algorithms are SHA1 and MD5.

## VI. RESULT

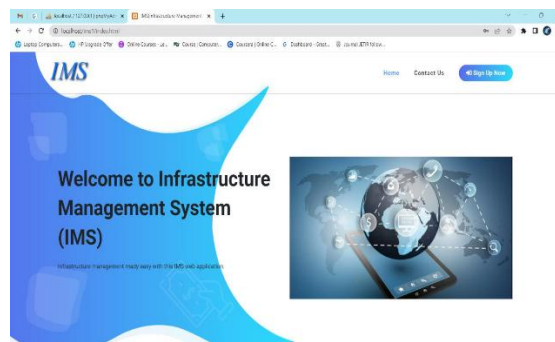


Fig. 1: Homepage

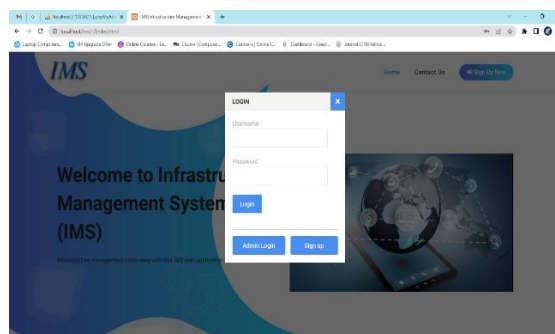


Fig. 2: User Login page

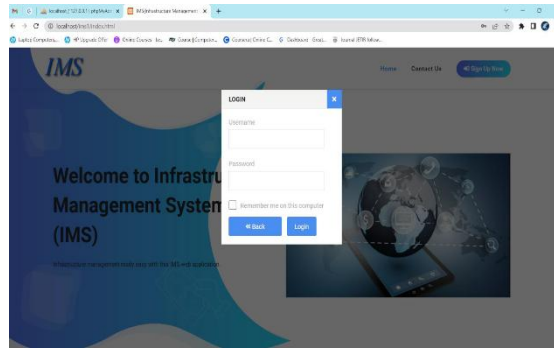


Fig. 3: Admin Login page

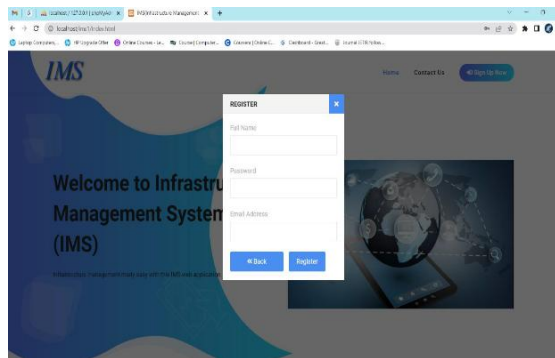


Fig. 4: User Registration page

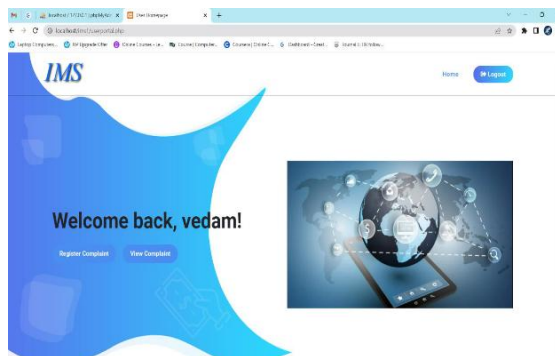


Fig. 5: User Homepage

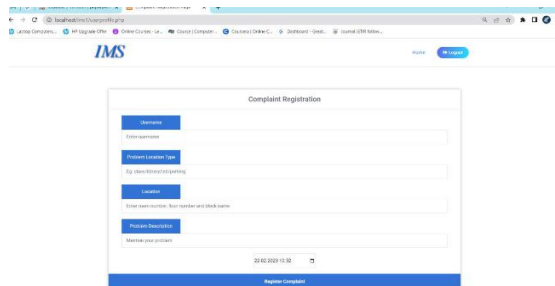


Fig. 6: User Complaint Registration page

id	Username	Type	Location	Description	Created	Status
2	vedam	lab	ja block, 203	fan not working	2023-02-16 21:04:00	solved
24	vedam	class	id block,404	projector not working	2023-02-17 05:38:00	solved
25	vedam	lab	ja block, 203	fan not working	2023-02-17 05:38:00	unsolved
27	vedam	class	ja block, 203	dfjzf	2023-02-17 05:58:00	solved
88	vedam	library	H-408	fans not working	2023-02-22 15:20:00	

Fig. 7: User View Complaints page

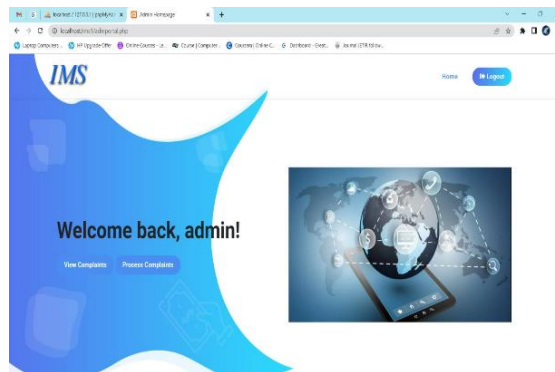


Fig. 8: Admin Homepage

S. No.	Username	Type	Location	Description	Created	Status
1	harsha	class	id block,404	projector not working	2023-02-16 21:03:00	solved
2	vedam	lab	ja block, 203	fan not working	2023-02-16 21:04:00	solved
3	haraha	class	ja block, 203	projector not working	2023-02-16 23:18:00	solved
21	haraha	parking	ja block	dfjzf	2023-02-17 01:22:00	solved
22	harsh	lab	ja block	light not working	2023-02-17 02:23:00	solved
24	vedam	class	id block,404	projector not working	2023-02-17 05:38:00	solved
25	vedam	lab	ja block, 203	fan not working	2023-02-17 05:38:00	unsolved
26	poornya	library	ja block	light not working	2023-02-17 05:59:00	solved
27	vedam	class	ja block, 203	dfjzf	2023-02-17 05:58:00	solved
28	vignesh	class	h block, 303	lights are not working	2023-02-20 11:22:00	solved
29	antam	class	H-408	fans not working	2023-02-20 11:30:00	solved
36	haraha	library	ja block	light not working	2023-02-21 11:53:00	unsolved
37	haraha	library	ja block	fan not working	2023-02-21 12:02:00	
88	vedam	library	H-408	fans not working	2023-02-22 15:20:00	

Fig. 9: Admin View Complaints page

S. No.	Username	Type	Location	Description	Created	Status
37	haraha	library	ja block	fan not working	2023-02-21 12:02:00	[unsolved] <input type="button" value="Submit"/>
88	vedam	library	H-408	fans not working	2023-02-22 15:20:00	[unsolved] <input type="button" value="Submit"/>

Fig. 10: Admin Process Complaints page

Fig. 1 to 4 shows the operations performed in the homepage of the web application which includes details about the application, user registration, user login and admin login. Fig. 5 to 7 shows the user interface of the user and also the complaint registration and view complaints page of the user. Fig. 8 to 10 shows the user interface of the admin and also the processing complaints and view complaints page of the admin.

## VII. CONCLUSION

Infrastructure Management System is web based application which focuses on the maintenance of the college infrastructure digitally. It provides the user with portal to register their complaints about the faulty accessories in college infrastructure directly to the admin and the users can also view the status of their

complaint in real time. Its main goal is to save the time of the user and make the process of management of infrastructure digital.

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