

WEB-BASED MANAGEMENT SYSTEM FOR THE DORMITORY OF UNIVERSITY STUDENTS

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Abstract

Management of the dorms for students is crucial to university administration. With the increase in student enrolment at schools, the management of undergrad dormitories is forced to deal with an increasing number of perplexing, complicated situations. This paper is gone at building up an Online android application Dormitory College Management System (DCMS) that is of significance to understudies in college quarters. This technique could be used to assist students in finding solutions to their challenges. This system (DCMS) is being produced for a building school to keep up and encourage simple access to data. The purpose of this system is to provide a stress-free, reliable, and automated approach. Both students and staff members in charge of registration and dormitory administration can use this dormitory system. We take care of data storage and authentication, and HTML would be used for the front-end, giving the user a graphical user experience. The efficiency, economy, and time management of the common forms and procedures for university student registration and accommodation in dorms were evaluated. The people now have access to education thanks to this development. By being more graphical-user-interface oriented, user-friendly, dependable, efficient, and safe with access control mechanisms, the proposed system solves the inadequacies of previous dormitory administration systems.

Keywords: *Android Platform, Dormitory Management System, College Students, Web Services.*

Introduction

The purpose of this system, a reliable, and automated approach, is to facilitate contributions from both students and staff members responsible for registration and dormitory administration. This dormitory system manages data storage and authentication, utilizing HTML for the front end to provide a graphical user experience [1]. The evaluation of efficiency, economy, and time management in common forms and procedures for university student registration and accommodation in dorms demonstrates its effectiveness [2]. This development grants people access to education. The proposed system, characterized by graphical user interface orientation, user-friendliness, dependability, efficiency, and safety with access control mechanisms, addresses inadequacies in previous dormitory administration systems. The dormitory management benefit system can give an advantage, and powerful administration stage for the students [3]. Alongside the quick advancement of higher professional training, a considerable measure of enlistment development has been finished by the higher professional universities, new with this sort of circumstance. The college dormitory management is winding up overwhelming weight. College is difficult to find each understudy quarters, under the state of more can't be focused to the understudies' residence administration and direction. What's more, with the quick improvement of PC programming innovation and Internet innovation, college of advanced grounds organize step by step intensive, the understudy quarters administration data system in light of clever information procurement of development has turned into a squeezing need of high professional universities [4].

Through the DMS, we can understand the administration of understudy's issues in residence, track and gather the understudy's data genuine convenient, precisely, lessen the workload of understudy's data administration, in this way to advance the administration of undergrads to complete high productively [5]. The residence school administration arrangement of current data innovation can convenient inquiry of undergrad's work whereabouts, unit of welcome applications for work related data. Following on an administration system in view of Web Technology College Students Employment dispatches the investigation, went for through this sort of administration system, adding to the administration of data, effective advancement [6].

This system uses to examine the understudy quarters administration work process, to enhance the understudy's residence administration effectiveness, enhance understudies, residence heads, and college staff quarters administration fulfillment, through the investigation and research of the understudy's quarters administration work process, joined with the ebb and flow college of advanced grounds arrange preferences, in view of the Android based on the innovative work of the clever data administration arrangement of the understudy's residence. The entire system includes the director data administration stage, and the understudies' residence data administration stage [7].

Education is now more readily accessible to everyone thanks to the advancement. As result, it has increased access to information and helped to create a population of knowledgeable individuals who can easily sustain the ideals of a civilized society.

Numerous freshly founded educational institutions nevertheless administer every record and, in particular, dorm facilities, in accordance with outmoded norms. As a result, the institution's effectiveness is diminished by this outmoded approach of document processing. The suggested framework solves the drawbacks of the existing dormitory management systems and is easier to use and graphical-UI focused.

An online portal and program called the "Dormitory Management System" was developed to help manage different hostel activities. It is easy to use, has a user-friendly design, and automates, organizes, and controls every aspect of managing a dorm office. This website was created using Firebase for the database, Google Script and JavaScript for the backend, and HTML, CSS, and Bootstrap for the front end. Users will value the website. In large colleges with plenty of dormitories, it is really helpful. The dorm administration processes are fully managed using this website and application.[8]

This essay describes the system, together with its requirements and constraints. It provides a primarily generalized, crowd-targeted description of the activity. The first section includes information such as information prerequisites, practical requirements, and a broad description of the item and its interaction with customers. The second section, which is intended for an internal audience, provides certain specialized prerequisites as the group now understands them. The third section contains information such as outside interface requirements, execution requirements, and other particular requirements expected to define the product. This is an independent program that can operate on many computers connected to the internet. An android portable will be needed to interface with the customers when using the product.

THE PURPOSE

This paper is the Android Software Requirement Specification (ASRS) for the (DCMS). The motivation behind this document will ease life's burdens, for the entire student and all the workers of this dormitory, and will make them gain a lot of time and energy, below are some of the problems facing the Dormitory of University Students in some universities in the Middle East.

- a. The establishment of an electronic system linking all these buildings (combos) with some and each department (combos) has the ability only to send or inform the internal sections to electronically record the date and time of request and cannot see the other sections.
- b. The general control of this system is the official of the internal departments (Dormitories) and the authority to consider all sections with the instructions for each section and other administrative matters.

SCOPE FOR DEVELOPMENT OF THIS PROJECT

The system's login page, which invites users to log in using their user name and secret key, is located on the system's front viewpoint and includes a variety of administrations provided by the system.

Organization: This module bargains for the most part with, Affirmation: This fundamental bargain enrolling the understudies/staff and allocating them with a login id and secret word.

Records: This monitors the money related points of interest of the school.

Lodging: It provides information on the school to both male and female students.

Transport Routes: This maintains the transportation's course points of interest. A manager should be

- Log in using the admin name and password.
- Adding new user by giving his/her username and password.

The requirement of the user is to.

- Determine the type of problem you have encountered.
- Log in to the system through the primary page of the application.
- Write the problem to the competent employee.
- Write the function.
- can receive assistance through the support option to view specific system highlights.
- Students may criticize the institution.

The technology updates the understudy's subtle elements as they log in. The student can view their subtle elements, tests, and report points of interest once all the material has been entered. All information is preserved after the understudy's session ends. Staff members can also approach the system and login using their ID and secret key.

For the instructor to access all student data in a table frame, there will be a special login name and secret key (in order to prevent students from updating their details other than their profile). Here, the manager can add students and employees to the system dormitory and modify their areas of interest.

STATEMENT OF THE PROBLEM

1. There are a number of dormitories located throughout the university in my nation for students.
2. Every building needs urgent maintenance or emergency medical care that requires rapid and positive intervention.

3. The direct supervisor of the income departments must be informed of all these needs in order to intervene by instructing the competent staff to go to the specified section.
4. This system will record the notification the date of the request, the type of application, and the hour of the request.

ANALYSIS OF THE SYSTEM FUNCTION REQUIREMENTS

This system can comprehend the required capabilities for building administration, room administration, quarters administration, client administration, rights administration, power administration, residence dispersion, and residence wellbeing evaluation through the control of the server database and administration. For instance, system operation is straightforward, pleasant to use, and stable. The entire creative process for the clever understudy residence administration data system is presented in detail in this paper. It explains how the process of developing a product is connected to a number of strategies and techniques, essentially completing the requirements analysis, system outline, database plan, system improvement, and testing, etc.

The administration of the understudy residence procedure can be institutionalized, staff dorm administration, dorm managers, and understudy workforce can be reduced, and work effectiveness can be increased thanks to the student dormitory information management system.

The fundamental sensible structure configuration, work generally total, its operation is steady, after the system test to address the issues of the understudy residence administration work. This system can auspiciously gather nitty gritty data to the understudies' quarters, can precisely and proficiently insights understudy residence convenience, understudy residence power circumstance, the understudies' quarters wellbeing circumstance and outside faculty all through the information, influence the understudies' quarters to work administration staff can constant comprehension of understudies' residence data in detail, and as indicated by the information to change the understudies' quarters administration methodology, to viably take care of the issue of unbalanced data, for the lion's share of understudies to give a decent administration stage.

DESIGN OF A DORMITE MANAGEMENT SYSTEM BASED ON ANDROID FOR COLLEGE STUDENTS

Utilizing the PC and system data means, for example, understudies' quarter administration has turned into an unavoidable pattern. With the nonstop advancement of portable systems and the extension of remote correspondence innovation, the understudy loft administration by 3g remote versatile terminals, office at whatever point and wherever conceivable.

The benefit of the Android platform combining with the qualities of adaptable practical and powerful capacity, its utilization in the management of student housing cannot just explain the present data system is bound to limited transmission and individuals going out in the outside system data, more ready to build up a variety of capacities on the platform, take care of the need of administration. The overall system architecture, as shown in Figure 1, will be built on Android support for online or disconnected learning systems by 3G and WIFI connection. Because of the openness of the Android platform, all manufacturers of portable electronic devices can participate in the Android Development League's application development [9]. A portable Android-based learning system will be the flexible learning system plan of the fundamental customer and the portable learning system in light of the two sections of servers, taking the features of versatile adaptation into full consideration and the client's demand for certification. Figure 1 depicts the overall system architecture. The system will be built on Android and allow online or offline learning networks over 3G and WiFi connections.

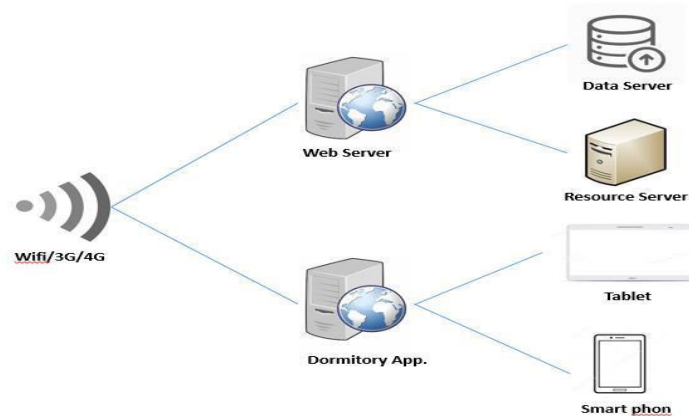


Fig. 1: Dormitory system based on the Android platform.

This system meets the needs as stated by the client. The understudy quarters administration data system is divided into seven capacity modules, including the enlisting module, the module for system administration, the module for understudy settlement, the module for residence administration, the module for wellness checks, and the module for water and power charge. In order to precisely calculate the interactions between the building's systems, the computational subroutines exchange data (interaction between the parameters of the various thermal zones). The population of vagrants is one of the most significant qualities of [10] module, lodging repair benefit module. The system administration module is one of them, and it is divided into two smaller modules: client enrollment and secret key modification.

The dormitory management module incorporates include, questions the quarters. The understudies check module incorporates, inn administration, understudy data inquiry. Wellbeing check module incorporates include examination data and investigation data inquiry two sections. College understudy's residence data administration system to understudies quarters, and administration of every substance significant information and

data through a database system to include, adjust, and erase and so on. to keep up the current of the understudy residence administration data system.

System Implementation

A database will be used by this system to obtain all necessary data. Additionally, all past operations and sectional dialogues will be saved. Database Management Systems (DBMSs) are the end product of decades of study and development in both said academia and industry. They are a common and essential part of modern computing. DBMSs were historically among the first multi-user server platforms to be created, and as a result, they invented numerous system design strategies for scalability and reliability that are currently used in many other situations. [11]

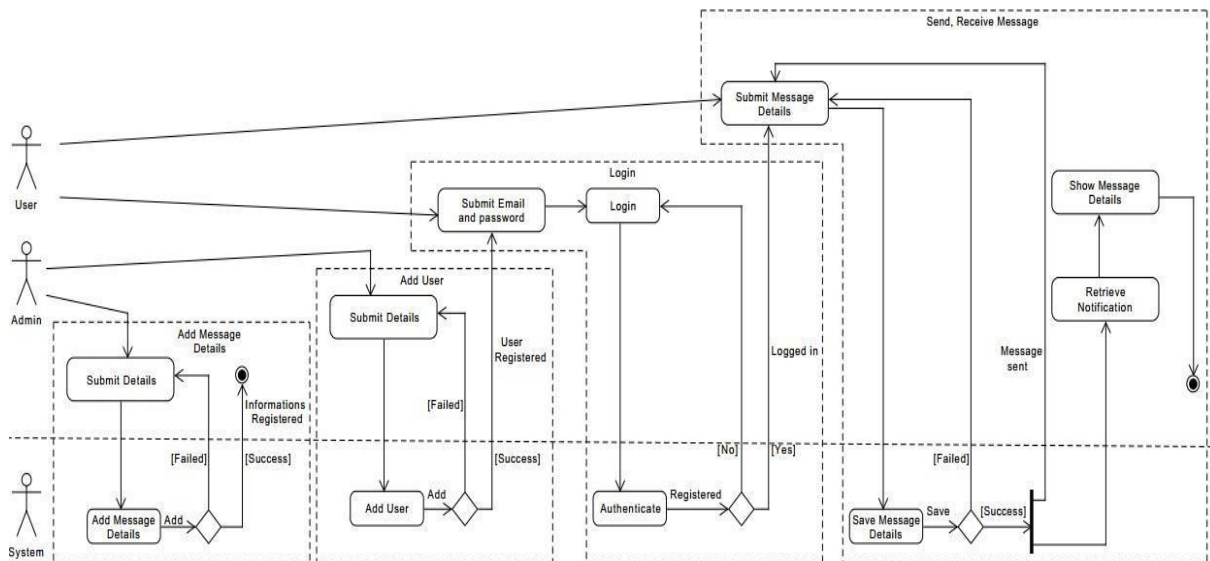


Fig. 2: Dormitory Management System Activity

Figure 2 show that in case of a problem the students will go to the "Sections of Student Buildings", and give him all details of the issue Like (the problem, Location room id of the bloc), then the "Sections of Student Buildings" will send an alert to the Service Units.

Database Design:

Websites and apps are both proposed platforms. The front-end code for the website was built using HTML, CSS, and Bootstrap. Google Scripts and JavaScript are used for backend development. Databases are used with Firebase. While Java and XML are used to construct mobile apps. Android Studio 3.4 is the tool utilized. As show in fig.2. The Rules and Regulations demonstrate this.

Admin{ id_Admin, name_Admin, password_Admin}

Section1{ id_Sec1, name_Sec1, password_Sec1, function_Sec1} Section2{ id_Sec2, name_Sec2, password_Sec2, function_Sec2} Section3{ id_Sec3, name_Sec3, password_Sec3, function_Sec3}

Section4_M{ id_Sec4_M, name_Sec4_M, password_Sec4_M, function_Sec4_M } Section4_G{ id_Sec4_G, name_Sec4_G, password_Sec4_G, function_Sec4_G} Problem{ id_Problem, location, building, room_id, bloc, type_problem} Message{ id_Message, #, id_sender, #id_receiver, #id_Problem}

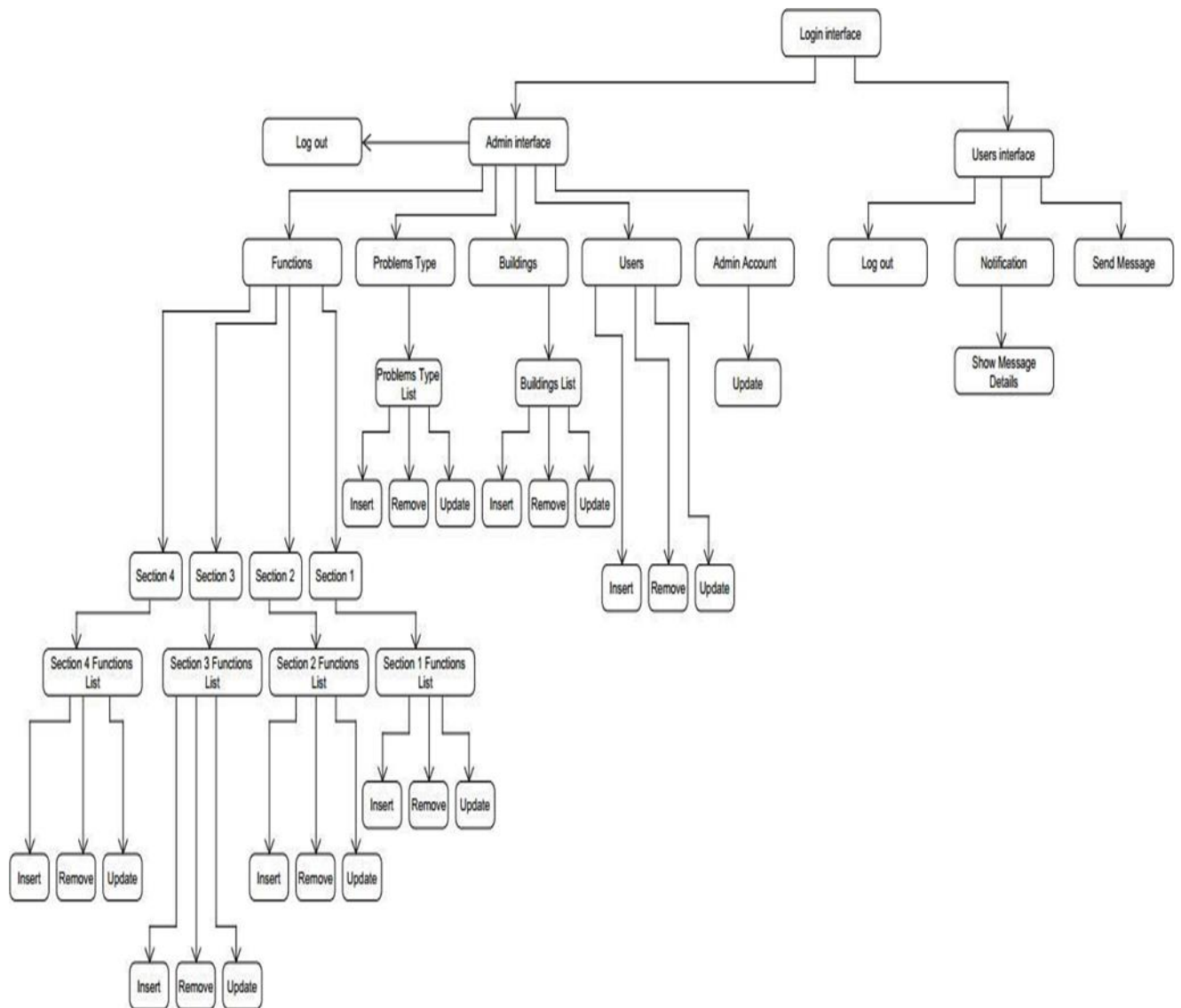


Fig. 3: Interfaces

The Service Units will choose the type of problem and then send stuff to fix it, once the problem is fixed they will write a full report which contains (the duration to send a stuff, time to fixed, equipment used), then they will send it to direct supervisor.

Tab. 1: Users

Table no:	1	
Table Name:	Users	
Table Description	Contains usernames, passwords and emails of all the users in the system.	
Seq. no	Column name	Column description
1	User name	User name
2	Email	Email
3	Password	Password
4	Designation	Admin/student/employment
5	Section	Section which admin inserted it
6	Function	Admin/co advisor

Fig. 3: Insert user page

Tab. 2: Problem details

Table no:	2	
Table Name:	Problem details	
Table Description	Contains type of problem, date, building details and receiver details.	
Seq. no	Column name	Column description
1	Username	Username
2	Type problem	Type of problem which user faced it.
3	Problem description	Problem description
4	Building details	Place of user in the dormitory
5	Section	Section which admin inserted it
6	Function	Admin/co advisor
7	Date	Date and time of the problem

Fig. 4: Insert Problem page

IMPLEMENTATION

DCMS Home Page

This is the Information Administration Framework's home page. The exchange conversation themes are also included on this page. Staff who are in the classroom but are not present can log in here.

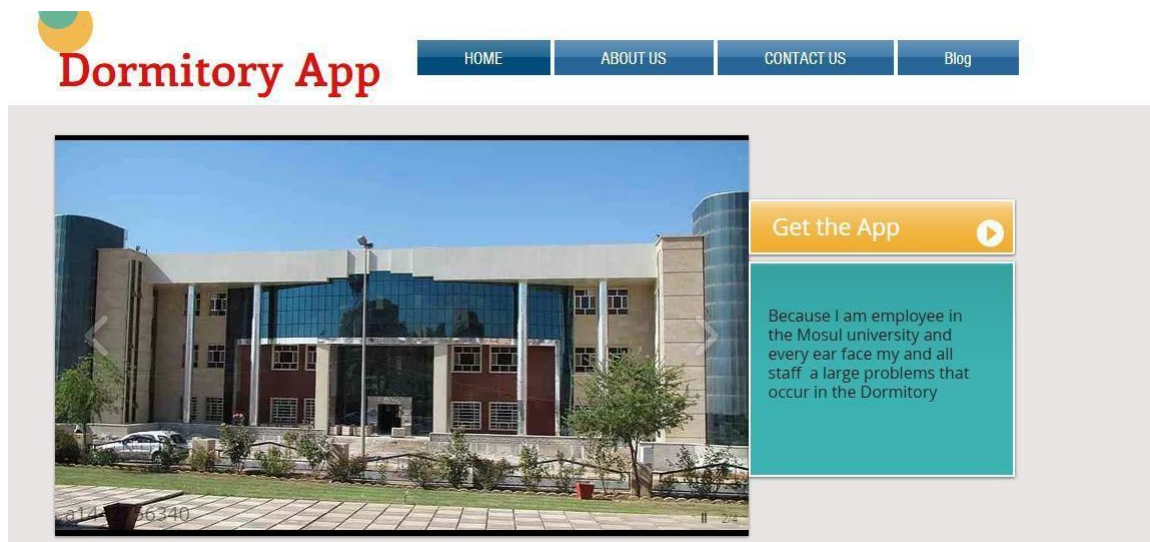


Fig. 5: DCMS Home

ABOUT DCMS

The Knowledge Dormitory University Management System is described on this screen.

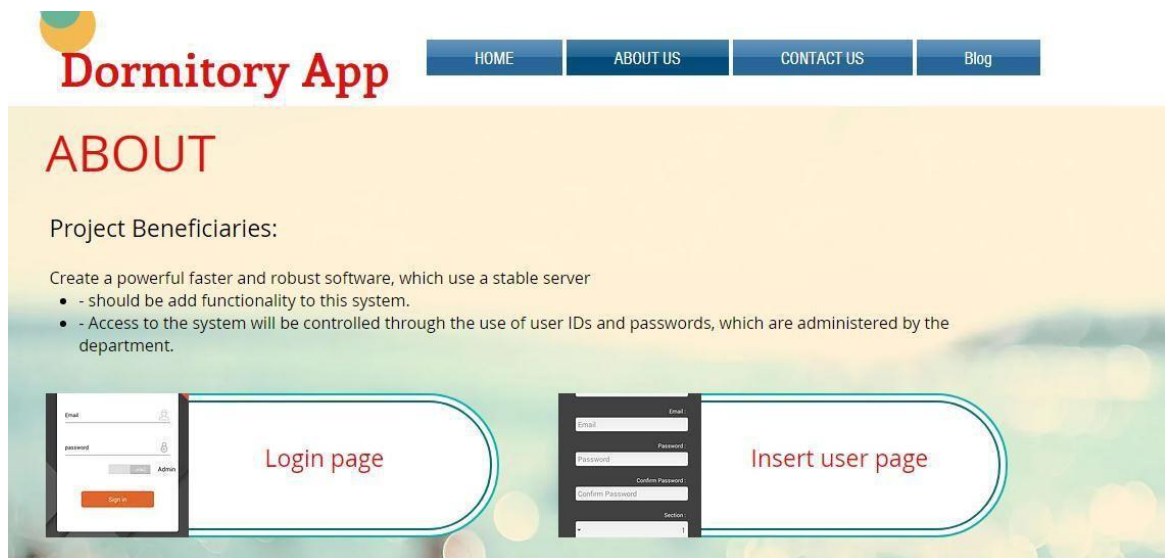


Fig. 6: About DCMS

CONTACT US

The user can send messages for administrator using this page.



Fig. 7: Contact Us

BLOG

This screen gives Some articles about the dormitory college Management System.



Fig. 8: Blog

9. CONCLUSION

This study provided a detailed illustration of the grounds administration benefit system's outline, administration, and graph between the administrator and customer. In order for the students to contribute to the dormitory manager's fulfillment. The elite of understudies' residence administration data system is especially crucial today as web technology continues to advance and improve the work effectiveness of school staff dormitory administrators and residence overseers for the wise understudy dorm administration. It can offer students insightful and useful avenues for inquiry, as well as the school residence chairman favorable comprehension of the dorm management by the students, which can make the relating work in an appropriate way and strategic alteration, with the goal that the students can increase the residence overseer's satisfaction. This paper utilized the Android platform to not only benefit from the sophisticated ground plan of the modern school but also to enhance the framework's durability by making its operation more entrenched and straightforward.

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