

VIRTUAL CAMPUS ASSISTANT APPLICATION (CampusMitra)

Dr.Shabina Sayed¹, Tanzil Ahmed Ansari², Hussain Mannan Dharwala³, Aamir Farook Dhanani⁴, Moiz Khan⁵.

Department of Information Technology Engineering, University of Mumbai.

shabina.sayed@mhssce.ac.com¹, tanzilworld@gmail.com²,

dharwala.hussain@gmail.com³, aamirdhanani94@gmail.com⁴, moizk044@gmail.com⁵

Abstract—The campus serves as an essential component of any college or university, encompassing numerous concerns, uncertainties, and inquiries that students may have regarding the current state of affairs within the educational institution. It is plausible that there may exist certain aspects or elements within the campus environment that are not favored or desired by students; however, there lacks a centralized mechanism to officially report such grievances to the relevant authorities. Issues such as inadequate infrastructure, unsanitary conditions, sexual harassment, hazing, and limited parking space prevail. Additionally, a significant number of students fail to peruse notice boards, consequently missing out on crucial information. Moreover, students undergoing stress and depression encounter difficulties when attempting to share their struggles with either their parents or friends. Hence, the establishment of a student facility where they can openly express their concerns and receive appropriate guidance is imperative. Consequently, the development of a companion Android application specifically tailored to cater to the needs of students is essential. This application would provide them with regular updates, notifications, and enable them to connect directly with relevant authorities in order to report issues and track the status of their reports. Furthermore, our objective is to create a user-friendly application that contains features specifically designed to cater to the needs of women, including the ability to share one's live location with trusted individuals. Additionally, the implementation of a Chabot capable of effectively communicating with students experiencing stress and depression is of utmost importance. [1][2][11]

Keywords: students; report; notice; campus; depression; issues; college; woman; Chabot; authority.

INTRODUCTION

As you know campus is the place where a student spends most of his/her college life creates memories good and bad. Now, what can make of a bad memory like there is no system for students to report and get status of their complaints regarding infrastructure of college, sanitation in bathrooms canteen classrooms, harassment by other student/faculties. To be able to report such issues and getting status of it will make one's life easier. Depression is real thing and we all know pressure every student face during exam and results, they cannot share everything with parents or friends what they need is someone who listens and give advice but counseling sessions is an expensive option. Institutes with huge campuses can be also an issue for students as they cannot find where to go, Internal navigation is the new idea which our app provides by giving directions from one place of the campus to other it is not been implemented anywhere else. In Today's world a student has Academics, practical, assignments, exams; result other outside stuff, our aim is to design an app which help a student at following points:

Reports will be generated by students and will receive status update until the problem is resolved.

- I. Female users will be able to send live location via SMS in case of emergency.

- II. Student facing harassment, depression can take help with our Chabot to get advice.
- III. Notification of notices will be sent to user to keep them updated.
- IV. Internal Navigation will guide user to places where they want to go in the campus.

I. RELATED WORK

Insufficient infrastructure has perpetually constituted one of the primary challenges encountered by learners, such as matters relating to cleanliness, electrical work, inadequate laboratory facilities, sexual harassment, and so forth, within any faculty, irrespective of the colleges it is affiliated with. A few universities and colleges have endeavored to address these issues, for example, Kolhan University, which has resolved to comprehensively tackle administrative, infrastructural, and educational deficiencies by personally inspecting all 23 constituent colleges. In 2011, Liberty University devised an application, enabling students to report any deficiencies concerning infrastructure, such as chairs, tables, lighting, or any other related concerns, wherein they can submit complaints via the application, subsequently ensuring that appropriate action is taken within the stipulated time frame. Similarly, in 2013, Maharashtra College developed an application, allowing students to report issues such as unsanitary toilets, inadequacy of books in college libraries, instances of teacher absenteeism, and the like. A Chabot is a computer program that simulates human conversation or chat through artificial intelligence. Generally, a Chabot interacts with a real individual; however, advancements are underway to develop applications where two chat bots can communicate with each other. Chat bots are employed in various applications such as e-commerce customer service, call centers, and internet gaming. These chat bots are typically limited to discussions pertaining to specific purposes and are not designed to engage in the entire spectrum of human communication. This will be beneficial for students who are experiencing depression or facing harassment as they can seek advice from these Chat bots.

Furthermore, a considerable percentage of women in India have encountered assault at some point in their lives. The causes and reasons for these assaults and the failure to effectively eradicate them have been extensively analyzed. In response, applications for women's safety have been developed, such as the Nirbhaya: Be Fearless app, introduced in 2014, which provides women with a genuine sense of security. This app utilizes GPS-based geo-fencing technology, enabling users to alert their friends and family members when they leave or enter a designated area. Another noteworthy feature of the app is the "unsafe area alert," which notifies the user when they enter an area marked as unsafe for women. Most importantly, the app includes a power button, which, when tapped, immediately sends an SOS message to emergency contacts previously entered by the user.

Women Security is yet another safety app for women. A standout feature of this safety app is that it can work even without internet connectivity. Through its voice record option, the app records audio strips of 45 seconds each which can be sent to emergency contacts via email or text (if offline). This app can help provide evidence of assault, if unfortunately; the user's safety is compromised. One good initiative is by Delhi Police and that app is very good too. Trakie connects your dear ones to you on real time basis. You can track their movement, know their exact locations, their speed while travelling, battery % of their mobile phones and simultaneously you can chat with your contacts including the one being tracked. The features allow you to remain aware of the security of your dear ones. The app is very convenient and easy to use, consumes very less mobile space. The app is not just for security but for facilitating reaching exact locations, hotels, offices etc. in new locations, first time visits, facilitating delivery of goods at your place and many others. Anti-Ragging MHRD is an existing application which is used to generate the report and accordingly action will be taken. In accordance with the orders, UGC (University Grants Commission), Govt. of India has developed this web portal. This portal will contain 1. Undertaking confirmed by each student and his/her parents or guardians, which will then be stored electronically and

will contain the details of each student. 2. Record of registered complaints received and the status of the action taken. The aim of the portal is to eliminate ragging in all its forms from universities, deemed universities and other higher educational institutions in the country. This will be achieved by preventing its occurrence and punishing those who indulge in ragging, in accordance with the Supreme Court Regulations002E.

II. PROPOSED WORK

Our proposed idea is an application that will help to solve the problems faced by a student such as Sanitation, Security, Electrical Work, Civil Work, Ragging, Sexual Harassment Our app is not only restricted to these problems. Here, we are addressing the overall issues that the students face. The student just needs to report such problems on the app. Our App will consist of a dashboard that will show all thereported Problems which will be publicly accessible. The app will have a different login for the problem administrators this module will store the reported problems. Problem Administrators will also have an interface to update the status of the reported problems, to view pending/all complaints reported to them, to change status of complaint with remark. Once status of complaint is changed, an email/SMS is sent to the user who reported the problem.

Our app will notify the user in case of new notices such as Technical news, information about campus placement, exam Information. Also, it consists of some additional features such as a map for navigation which will be helpful for new students to get the directions to classrooms and different venues in the campus. The teacher can insert his or her time table in the app. In case of a particular lecture or practical, the teacher will be notified via the App. ^{[1][2][4][5][8][9]}

The Block Diagram of the ProposedSystem is given below:

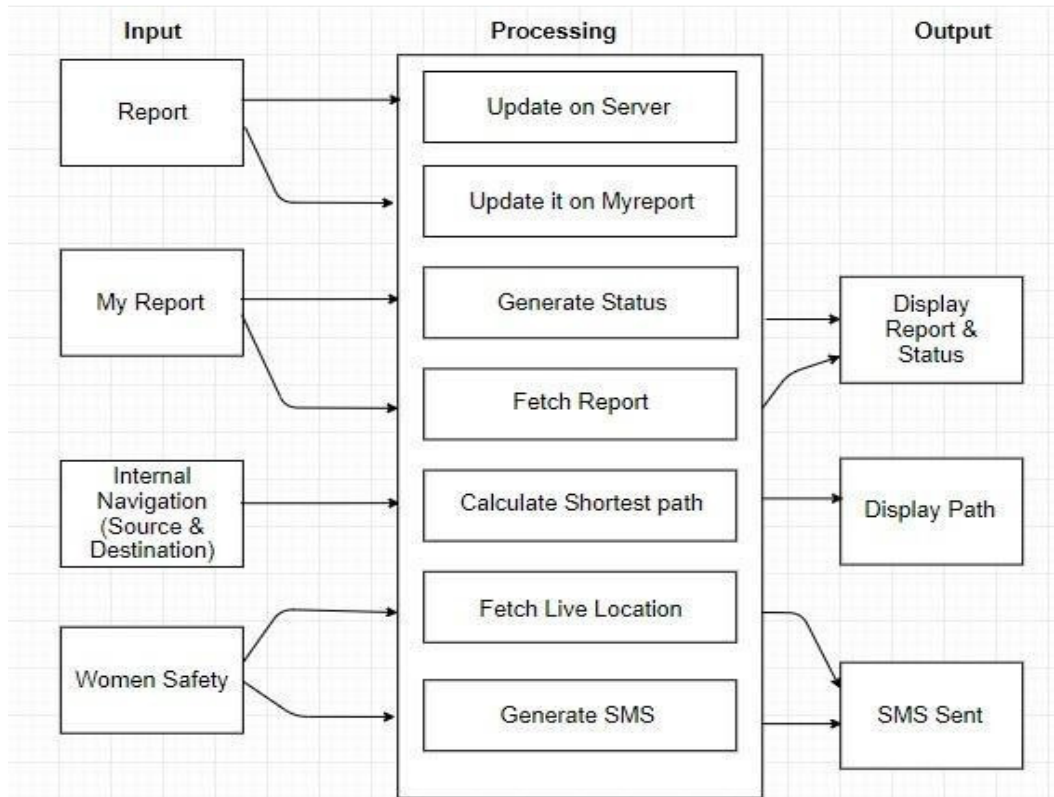


Figure1: Block Diagram of the ProposedSystem^[7]

As shown in figure 1 the block diagram consists of the following blocks:

Report an Issue: It is an Input in our system where user will report issues regarding department, college and personal concerns they are coming across at college, Processing in this block will be that our system will update the report on our servers and also on My Reportpage where user can check the Status of their complaint.^[9]

My Report: As soon as user clicks on My Report our system generates the status and display the report as well current status which will be updated by the admin in the system.^[3]

Internal Navigation: It Is the Algorithm design by us it is not been implemented anywhere before, Input will be source and destination, Shortest distance will be calculated and path will be displayed to the user.^[7]

Woman Safety: It is a major concern over the country to prevent any incident in the campus, all the female user can access the Live Location feature where they can give phone numbers of their friends and family as input and application will fetch its current location and generate an inbuilt SMS and send it to the input numbers.^[11]

III. MODEL OF APPLICATION

^[7] The model of the application **Design** by us is shown in figure. It is made using Android Studio SDK

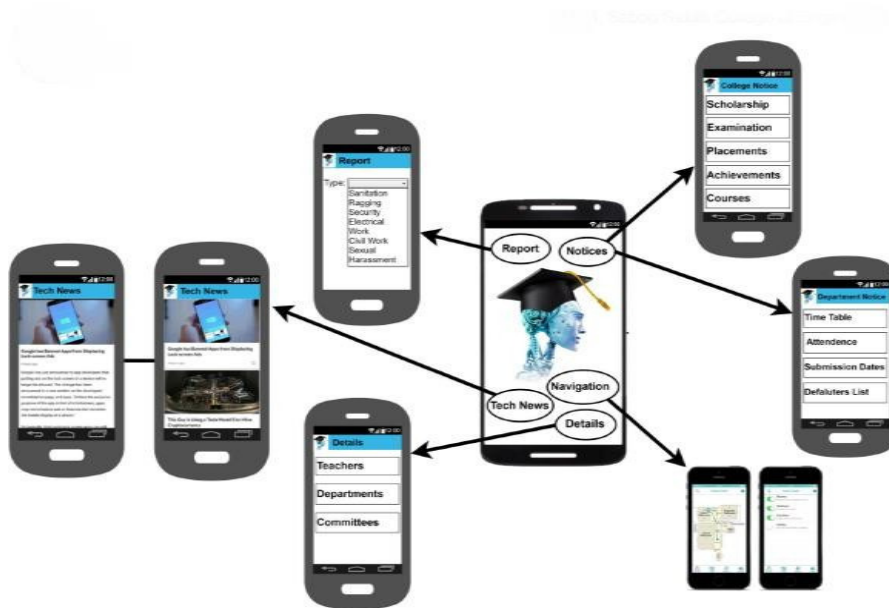


Figure 2:Model of the application Design

IV. RESULT AND DISCUSSION

We have visited different portals in the past using different techniques. The advantages and disadvantages of different portals implemented before is as explained below. Over the years due to advancement of the technology, various portals are used to generate the report and work on that accordingly.

In the year 2014, the Nirbhaya: Be Fearless application was introduced. This application enables individuals to safeguard women, children, and their loved ones in any emergency situation through the simple act of clicking a button. BeFearless© is an android application designed for emergencies that can swiftly transmit a distress call or emergency message to a designated contact or group when a woman or any other individual is confronted with an emergency scenario.

Correct Location, Information and Communication, with and from the app is dependent upon the basic hardware/software requirements, like - Active Data plan, SMS plan, minimum talk time and active GPS functionality.

In the year 2017, Anti-Ragging-MHRD, a new application was made. In this application, we need to register and after that we will get the copy of undertaking then we will get Online anti-ragging complaint will be generated. And after that we can check the status of our complaint.

Looking at all the advantages and disadvantages of the system implemented in the past we have proposed our idea. Our system will try to overcome the disadvantages of the previous system and will be able to help the user at the best possible level.

V. IMPLEMENTATION

^[5] Our App's **Main Screen**; Students can navigate where ever they want based on their requirement like if they want to make a report on college infrastructure or any personal problem, they facing in college etc.

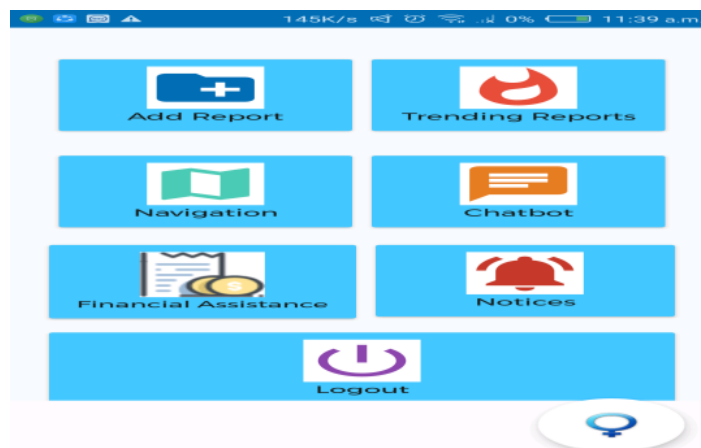


Figure3:Main screen

After this, they need to describe the problem category and describe the problem how they face it and if possible, they can add Snaps of it and they need to mention date and time they face. This would help us to generate a perfect Report with all the details provided and maintain a record. We

would try to add extra feature i.e. sending a report copy of their status to them as a pdf file via email or send a link to mobile number to the one who has filed the complaint, this is only initialized if they request a copy for their record purpose.



Figure 4: Complain screen

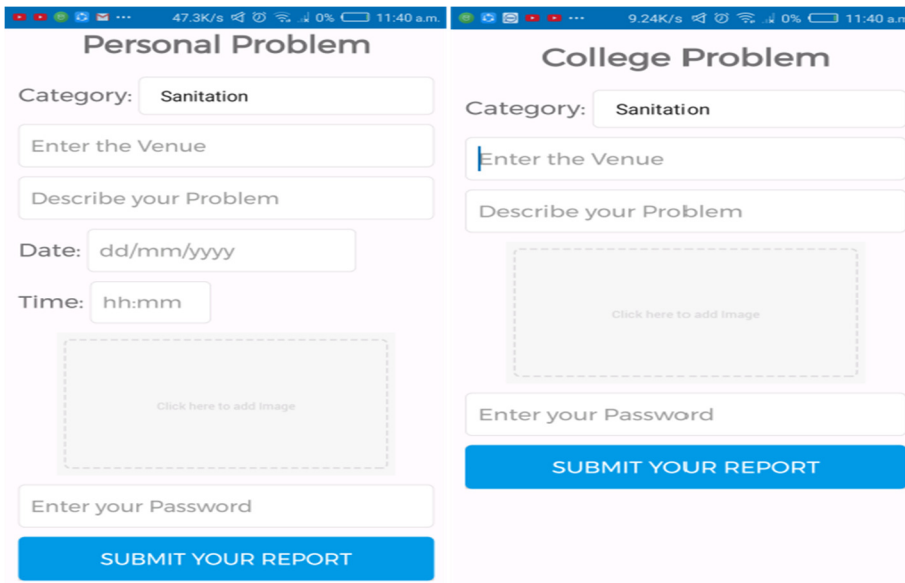


Figure 5,6: Complain category

They can view their and other Reports as well

BACKEND

[6] Our Backend System where all the Reports and others students' data are stored, uploaded by other students and can see the status of each Report whether it is completed or under process.

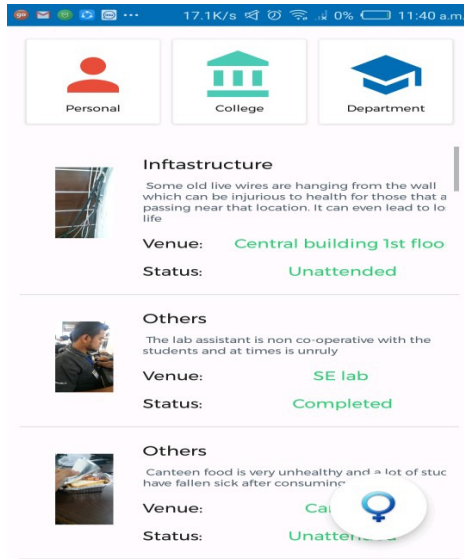


Figure7: Blackened

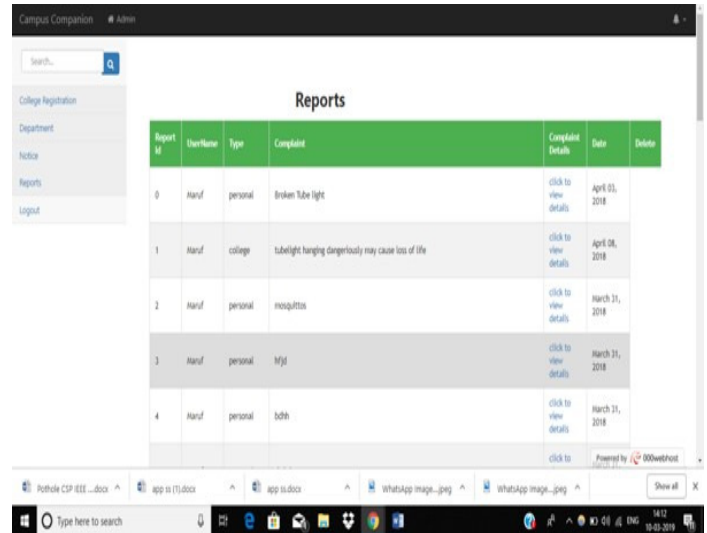


Figure 8: Reports

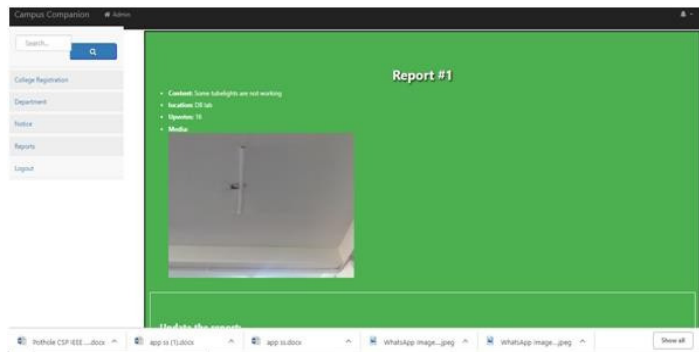


Figure9: upload Pics

2] Also there is small icon on every page of our Application. That's the **emergency button**, if they students is in danger or facing some serious issues, they can long press the button and a message of **"HELP"** will be send to 3 contacts of their which they selected with their LIVELOCATION.

VI. APPLICATION

The applications of Campus Companion are given below:

- i This application is used to generate a report of the issue which are faced by the students such as- Infrastructure, Sanitization, Ragging and Harassment, etc. which will be helpful in resolving the problem.

[3]

ii Apart from the above usage this Application can also be used for Women Security, Internal Navigation, Chabot etc. ^[7]

VII. CONCLUSION

Students facing the problems in college campus are one of the major issues. They are the future of our society. The designed application is economical and user friendly and very useful. They can manage the report efficiently. With the development of technology day to day work has been eased for college administrator along with student. Otherwise, student will just report the issue from one cabin to another.

VIII. FUTURE SCOPE

More features can be added to the existing system or modify the existing feature like Internal Navigation of College Campus, Women security in terms of sending their location to nearby Police Station. Parent can track the status of their child about their academics and full college information in the application itself. It can become an official application for the institution. ^[10]

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