# Improved Features in Integrated Smart Campus System

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## Abstract

*In recent days of science and technology are improved in all fields.  People goes smarter and look for handy solutions on their mobile phones. The Integrated Smart Campus is an mobile as well as web application. It uses smart phones of android platform and web services on computer systems. In this paper an improved features of integrated smart campus system that develops the educational environment and the overall management level of educational institutions is presented. The Improved features has been constructed based on Android development Platform using javas cript and web applications which provides better improvement and more feasible solution to the smart institutions. Moreover this system helps in QR code gate pass, providing online fees payment , live bus tracking, maintaining the separate profile and details of staff and students records, income and expense analyse and other features in one touch and swipe.*

**Keywords -** *Smart Campus, Integrated system, e-campus, App development*

## I. INTRODUCTION

Integrated Smart Campus system is the product of the modern development of the Android platform and mobile application technology. The Ideas of the system can be designed by based on mobile application development and web application techniques. The development of an application that provides a smart and easy way for the execution of of several academic operations to provide students and parents with information regarding complaints, any placement activities, general notices, and important notices regarding all departments .It also provides multiple features so that they can have all the academic things and information at one location.Improved features of mobile application can meet the requirement of information management for the educational institutions. Improved android mobile application is proposed and implemented to improve the standard of the educational institutions.

## II . LITERATURE SURVEY

[1] Smart Campus Using Android based Smart Phone., International Journal of Trend in Research and Development, Volume 3(2), ISSN: 2394-9333.

Authors :Sruthi&Manikandan

The advances of rising technologies have broadened the means still because the applications of the web. With good property, physical objects area unit networked and can gain the flexibility to speak to every different. Constructing good field supported the IOT associate degreed cloud computing technology is an inevitable trend. However there are units several problems need to be excellent. One in all the queries is that the commanding style isn't excellent. The designer ignores to dig deeply the worth of knowledge resources, in order that the resources area unit tough to be shared. Moreover, the answer of education cloud isn't excellent, and faculties attach additional importance to workplace management than teaching and analysis. The vision of "The net of the objects and forms a sensible setting in order that folks can like the IoT revolution.

[2] Research on the Application of Smart Campus Construction under the Background of Big Data., 2017 2nd International Conference on Computer, Network Security and Communication Engineering (CNSCE 2017) ISBN: 978-1-60595-439-4

Authors: Feng-ling WANG

With the rapid development of big data, Internet of Things and cloud computing, the construction of smart campus has become the main trend of campus construction. Based on the theory of big data and smart campus, this paper introduces the current situation and defects of smart campus data analysis, the research on the status and construction of smart campus, analyzes the methods and methods of smart campus construction overall structure of higher education analysis and construction. It has a positive significance for the higher level of teaching management and service.

[3] The Design and Implementation of Smart Campus System., Manuscript submitted March 13, 2016; accepted July 13, 2016. doi: 10.17706/jcp.12.6.527-533

Authors: Tianping Bi &Xuemei Yang

To improve the educational environment and the comprehensive management level of the universities, the smart campus system has been constructed based on BIM (Building Information Modeling) and 3DGIS (Geographic Information System) platform in this study. Using Autodesk Revit software to build model relied on BIM technology and Skyline software to design the spatial database relied on 3DGIS technology. A 3D visualization campus information system called smart campus was constructed, which provides feasible solutions for constructing smart campus

[4] A Review on Smart Campus using IoT., International Journal of Innovative Research in Computer and Communication Engineering., Vol. 5, Issue 3, March 2017.

Authors:Snehal K. Dixit & S.M. Kulkarni

Today is a new era of computing technology i.e. Internet of Things (IoT). IOT can be termed as a "universal global neural network" in the cloud which connects various things. Internet is a revolutionary invention, it has always been transforming itself into some or other new kind of hardware and software which makes it irresistible for anyone. Nowadays the communication is in the form of human-human or human-device. But the future of internet i.e. IoT promises a machine-machine type of communication. The IoT is a system comprising various devices or systems which are intelligently connected which interacts and communicates with other machines, environments, objects and infrastructures. With the areas like business, transportation, medicine, energy, agriculture and others, the Internet of Things also finds a major implication in education. A university campus can be considered as the ideal place for the creation of a smart environment. The aim of the hereby paper is to describe a new concept called Smart University by providing a comprehensive overview of the IoT scenario and reviews its enabling technologies and the sensor networks.

## III. EXISTING SYSTEM

The Existing system had a more manual work. There will be lack of automation and to gathering whole records of campus. More Maintainers is required. All these require more employment.There would be lack of follow-ups and coordination. As the system is manual, the chances of errors are more. There may be chance to happen selection process to occur at more than one place, with regard to the existing system it would be hilarious to maintain records on venue, batches etc.,. Taking existing system keen on deliberation, it can be found that the student has to regularly interact with the office personally, concise on the necessities they anticipate and so on.

*Disadvantages of Existing System:*

- In existing System, there is no tracking facilities.
- No online fees payment facilities.
- Lack of special features like QR code based gate pass, income/expense Analyst.

## IV. PROPOSED SYSTEM

The proposed system of integrated smart campus is improved with more features. It can be available in both mobile and web application. The proposed system provides the improved features like online fees payment, bus tracker, QR code gate pass, online attendance, income and expense analyst. This application will connects the users with more improved manner.
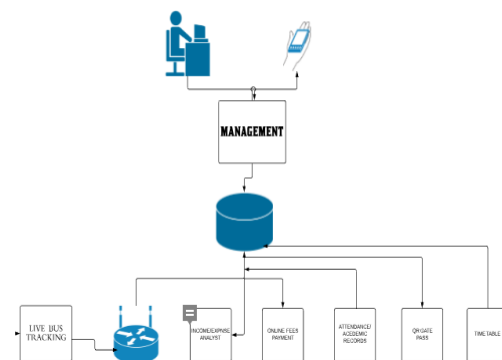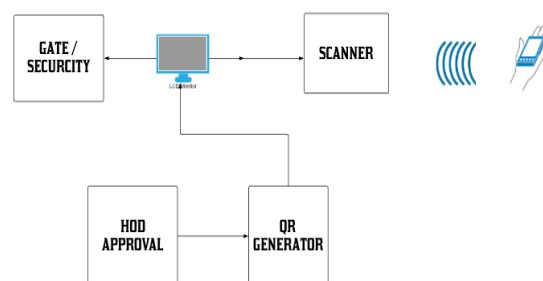


**Fig.1 System Architecture**



**Fig.2 Layout of QR Code Gate Pass**

## V. SYSTEM DESIGN

Figure 1&2 depicts the design of the Smart Campus system. The following modules with their specific functionalities provide added advantage to the system.

### A. QR code gate pass:

QR code gate pass can be access provide by the head of the departments. It is an easy process to send the code to the students to cross the gate. The security of the gate had a specific monitor for accessing the gate pass through the scanner of the mobile application.

### B. Payment features:

Overall fee structure of a class and individual fee structure is available for everyone. Fee payment amount and due date is notified timely. Payment Gateway feature is also added for making online fees payment facility.

### C. Income/expense analysis:

Calculation of the income/expense can be easily viewed by specific panel. Monthly Reports will saved to the database automatically.

### D. Bus tracker:

The global positioning system (GPS) can be installed in every bus belongs to the institutions.so, we able tracking the current location of the bus and to find out the exact status of the bus.The management and parents will check the location of the bus through mobile application.

## VI. SAMPLE SCREENSHOTS
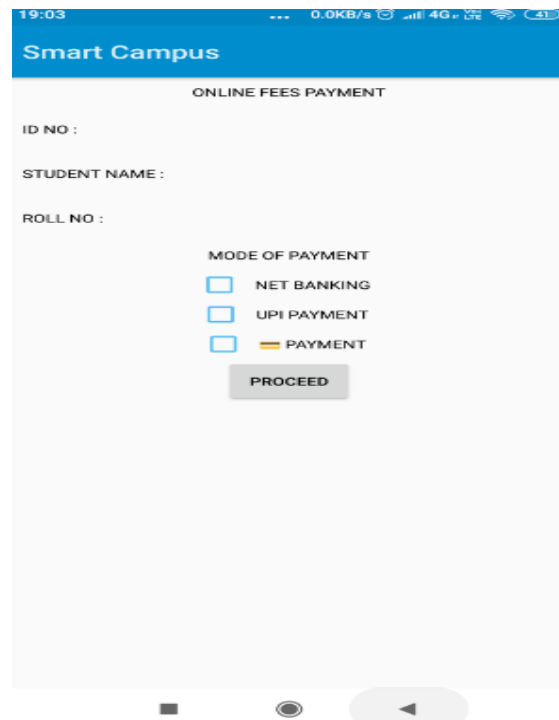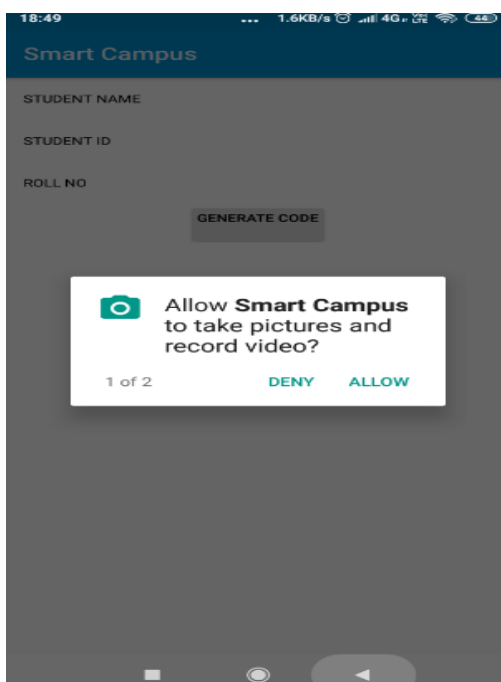


## VII. CONCLUSION

The world has gone mobile and every people wanted everything through their mobile phones and its applications. The android development and web development applications are efficient for information management and reduce their works. It helps to monitoring the children's activities and their academic performance. The development can be reliable and it easy to access with a handy device.

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