



“Review on Student Automation System”

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Abstract

Student Automation System provides a simple interface for maintenance of student details. It can be used by educational institutes or colleges to maintain the records of students easily. The creation and management of up-to-date information regarding a students' academic career. It is critically important in the university as well as colleges. It tracks all the details of a student from the day one to the end of the course that means it deals with all student information. This can be used for all reporting purpose. It carry details like Complete semesters, years, coming semester year curriculum details, exam details, project, final exam result and all these will be available through a secure, online interface embedded in the college's website. It will have, batch execution details, students details, the various academic notifications for students updated by the college administration. It facilitate us to explore all the activities happening in the college and different reports and Queries can be generated based on vast options related to students, batch, course, faculty, exams, semesters, certification and even for the entire college.

Introduction

The Student Automation System utilizes for user authentication, displaying information for an individual's duties, this system Secured database & regular maintenance.

All data is stored securely on SQL servers managed by the college admin. This system provides a simple interface for the maintenance of student information and we save your money with less involvement of workforce it is used by educational institutes or colleges to maintain the students record easily.

Student Automation System deals with student details, curriculum batch details and other resources.

There are custom search capabilities to aid in finding student information and working on student records. Our project will have the databases of courses offered by the

college under all levels of graduation or main streams related to student details, fees details, students' contact details in all aspects.

In this system Different reports and Queries can be generated based of vast options related to students, batch, course, semesters and category and even for the entire college. A Student Automation System (SAS) is designed to help for management of student details. it collect the lot's of information to maintain the data in system (SAS).

Viewing student data, managing admission and, managing details, university, semester, faculty, category and for examination, block allocation, subject management , result and related issues are made simple and easy.

Automation System

Automation or automatic control is the use of various control systems for operating equipment such as machinery, processes in



factories, boilers and heat treating ovens, switching on telephone networks, steering and stabilization of ships, aircraft and other application with minimal or reduced human intervention. Some processes have been completely automated.

The biggest benefit of automation is that it saves labor, however, it also used to save energy and to improve quality, accuracy and precision.

Automation has been achieved by various means including mechanical, hydraulic, pneumatic, electrical, electronic devices and computers, usually in combination. Complicated systems, such as modern factories, airplanes and ships typically use all these combined techniques.

Types of Automation

1. Discrete control (on/off)

One of the simplest types of control is on-off control. An example is the thermostats used on household appliances. Electron mechanical thermostats used in HVAC may only have provision for on/off control of heating or cooling systems. Electronic controllers may add multiple stages of heating and variable fan speed control, Sequence control, in which a programmed sequence of discrete operations is performed, often based on system logic that involves system states. An elevator control system is an example of sequence control.

2. Continuous control

The advances type of automation that revolutionized manufacturing, aircraft, communications and other industries, is feedback control. Which is usually continuous and involves taking measurements using a sensor and making calculated adjustments to keep the measured variable within a set range?

The main advantages of Automation are

- Increased throughput or productivity.
- Improved quality or increased predictability of quality.
- Improved robustness (consistency), of processes or product.
- Increased consistency of output.
- Reduced direct human labor costs and expenses.

Student information system

A student information system (SIS), student management system, school administration software or student administration system is a management information system for education establishments to manage student data. Student Information Systems (often abbreviated as SIS systems) provide capabilities for registering students on courses, documenting grading transcripts and results of student test and other assessment scores, build student schedules, track student attendance, and manage many other student-related data needs in a school. A SIS should not be confused with a learning management system or virtual learning environment, where course materials, assignments and assessment tests can be published electronically.

Web Based Student Information Management System

Student Information Management System (SIMS) provides a simple interface for maintenance of student information. It can be used by educational institutes or colleges to maintain the records of students easily. The creation and management of accurate, up-to-



date information regarding a students' academic career is critically important in the university as well as colleges. Student information system deals with all kind of student details, academic related reports, college details, course details, curriculum, batch details, placement details and other resource related details too. It tracks all the details of a student from the day one to the end of the course which can be used for all reporting purpose, tracking of attendance, progress in the course, completed semesters, years, coming semester year curriculum details, exam details, project or any other assignment details, final exam result and all these will be available through a secure, online interface embedded in the college's website. It will also have faculty details, batch execution details, students' details in all aspects, the various academic notifications to the staff and students updated by the college administration. It also facilitate us explore all the activities happening in the college, Different reports and Queries can be generated based on vast options related to students, batch, course, faculty, exams, semesters, certification and even for the entire college.

Home Automation System (HAS)

Automation of the surrounding environment of a modern human being allows increasing his work efficiency and comfort. There has been a significant development in the area of an individual's routine tasks and those can be automated. In the present times, we can find most of the people clinging to their mobile phones and smart devices throughout the day. Hence with the help of his companion – a mobile phone, some daily

household tasks can be accomplished by personifying the use of the mobile phone. Analyzing the current smart phone market, novice mobile users are opting for Android based phones. It has become a second name for a mobile phone in layman terms.

Home Automation System (HAS) has been designed for mobile phones having Android platform to automate an 8 bit Bluetooth interfaced microcontroller which controls a number of home appliances like lights, fans, bulbs and many more using on/off relay. This paper presents the automated approach of controlling the devices in a household that could ease the tasks of using the traditional method of the switch. The most famous and efficient technology for short range wireless. Communication- Bluetooth is used here to automate the system. The HAS system for Android users is a step towards the ease of the tasks by controlling one to twenty four different appliances in any home environment.

Keywords – Home Automation System, Android, Microcontroller, Bluetooth, Mobile Phone, Appliance

Railway Automation Idea And Motivation

The theme of the project idea is to automate the railways. The train with the GPS module on board can be made to follow a specified path. This would enable us to free the railways not just by the use of driver but will also enable us to provide real time train tracking system. There is a base station where the train movement will be mapped on a screen. Also, that will be the place from where instruction set, for the movement of the train, will be generated and sent to the train. The motivation



for the project came from the lack of control over railways in India as we hardly get to know the exact position of the train while standing at the station. The way Metro implements modern techniques to control the railways inspired us to design a system for the complete railway system of India.

Industrial Automation

Industrial automation deals primarily with the automation of manufacturing, quality control and material handling processes. General purpose controllers for handling processes include Programmable logic controllers, standalone I/O modules, and computers. One trend is increased use of Machine vision to provide automatic inspection and robot guidance function; another is a continuing increase in the use of robots. Energy efficiency in industrial processes has become a higher priority.

Semiconductor companies like Infineon Technologies' for example found in motor control, general purpose pumps, fans and ebikes to reduce energy consumption and thus increase efficiency.

Conclusion

- Student Automation System reduces the man power required and it provides accurate information always.
- Information of all year's student gathered can be saved and can be accessed at any time. Management can get the required information without delay.

- Helpful to perform paperless work and manage all data.
- Provides easy, accurate, unambiguous and faster data access.

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