

SURVEY OF DEVELOPMENT OF AN AUTHENTICATED AND OPTIMIZED EXAM HALL ACCESS SYSTEM

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ABSTRACT:-

Seating Arrangement of scholars all through examinations is distributed. Students face difficulties as they want to scrounge for his or her examination corridor numbers and seating arrangement while they're wits end. An innovation which could resource the scholars discover their examination halls and seats could be welcoming and without a doubt rewarding. This poject —RFID BASED EXAM HALL MAINTENANCE SYSTEM, provides a modernized approach of exam hall management. It's feasible for a pupil to identify the actual exam corridor from the alternative hall, when they swipe RFID card for the duration of a card reader positioned there. This allows them to spot the floor or get directions to their respective halls without delays. the card reader is supplied at the doorway of the building, if the scholars enters wrongly a buzzer alarm triggers , in any other case the gap range is displayed on the LCD, connected to controller.

INTRODUCTION:-

Nowadays exam processes are time ingesting since it's far of write and ahead type. The traditional way of preparing and photocopying the seating arrangements creates a large number and consumes student's time in discovering their hall and seat wide variety, in particular when it comes to universities that accommodate huge wide variety of students. This paper brings out a treatment for this by means of incorporating RFID era to the current examination methods. RFID [Radio Frequency Identification] era is being extensively used in many applications. RFID is part of Automatic Identification and Data Capture [AIDC] technology. They are just like bar code. RFID module in particular include an interrogator that works as a transceiver and tags which can either be lively or passive ones. The interrogator reads the statistics in tags using radio frequency and additionally provides strength relying on type of tags. Reader communicates with the tag and take a look at it with the database for matching tag and password supplied and if confirmed as true, the LCD module connected will show the corresponding hall wide variety and seating arrangement, otherwise the get entry to is denied.

RFID (Radio Frequency Identification) era is an emerging generation, utilized in a wide range of applications, is a member inside the own family of Automatic Identification and Data Capture (AIDC) technology which is fast and reliable way for identification of objects. The RFID is composed of two foremost components: The Interrogator (RFID Reader) which transmits and gets the sign and the Transponder (tag) that is attached to the object. In an RFID [16]

gadget, RFID tags are "interrogated" by way of an RFID reader. The tag reader generates a radio frequency "interrogation" communicates with the tags. The reader additionally has a receiver that captures a respond sign from the tags, and decodes that signal. The reply signal from the tags reflects, the tag's statistics content. The reply signal is created as passive "backscatter" An RFID tag consists of a miniscule microchip and antenna. The RFID alone has numerous application however when is spliced with microcontroller the limits expands in addition. RFID is of 3 types. They are:

1. Passive (using no battery)
2. Active (with an on-board battery .

Battery assisted passive "BAP" (with a small battery on board that is activated whilst inside the presence of an RFID reader) Passive RFID tags are used in our paper as they're low-cost with an appreciable variety. The utility needs ought to be cautiously decided and tested with admire to the attributes that RFID and other statistics series technologies can offer. Where RFID is identified as a contender similarly considerations should be made in recognize of software environment, from an electromagnetic standpoint, standards, and legislation regarding use of frequencies and strength levels. But not one of the systems never attempted to develop a device aiding exam corridor seating arrangement

LITRATURE REVIEW:-

Santa Kumar Chaki et al., proposed a new Radio Frequency Identification (RFID) and Wireless Sensor Network (WSN) are two crucial wi-fi technologies that

have type of packages and provide unbounded destiny potentials. However, RFID and sensor networks nearly are under increase in comparable way. Integration of RFID and wi-fi sensor networks draws little attention from studies community. In this paper, RFID gadget, Zigbee Module and GSM Communication are discussed firstly. Few existing systems and proposed gadget were as compared in terms of generation and implementation of RFID and GSM integration for distinct kinds of utility. Proposed system was described in information in terms of development of a person interface machine[1].

A. Dammak, A. Elloumi, and H. Kamoun et al., advanced a core era, RFID technology has been increasingly extensively used with the improvement of Internet of Things. But in current RFID applications, there is a key trouble ready to be solved. That is, a way to make the reader read better? For this problem, we propose a method for optimizing the placement of passive UHF RFID tags. Firstly, a relative ideal check surroundings has been built. And then, for each area of the label attached on the field, change the space among the box and the antenna alongside a set direction. For each distance, take a look at the read rates. In this way, study the read price trend of each tag role which is modified with the space between the antenna and the box. Finally, we come to a preferred end on a way to determine the preferred region of a RFID tag[2].

M. Ayob and A. Malik et al., proposed The purpose of this paper is to give how we design and enforce a Metal mounting Tag for passive UHF RFID for opposed environments. This improvement is a challenge for an Electrical Energy distribution organization that needs to music his property which include: MVA Transformers, Public illumination and a few accessories[3].

E.K.Burke, B.McCollum, and P.McMullan et al., This paper gives a compact slotted microstrip patch antenna for RFID packages. The antenna is designed to operate at 2.forty-2.45 GHz the usage of the Computer Simulation Technology (CST) software. The proposed antenna is designed and fabricated the use of Flame Retardant four, FR4 substrate with the design specification dielectric constant (ϵ_r) of 4.5 and thicknesses (d) of 1.6mm. In order to minimize the size of the microstrip patch antenna, the proposed antenna contains extra slotted shape attached within the reflector of FR-four substrate. The new Compact Slotted Microstrip Patch Antenna (CSMPA) lessen by way of 50% from its traditional size for 2.forty GHz microstrip antenna operated frequency antenna. The antenna produces profits of 2.5 dB at 2.415 GHz with the overall size of antenna approximately $35 \times 26 \times 1.6$ mm.

seven mm. Simulation and optimization of the provided CSMPA produced an awesome consequences which suitable for RFID applications[4].

T. Prabnarong and S. Vasupongayya et al., In this work, a passive UHF RFID machine for capacitive sensor applications is provided. The layout of the base station and the passive RFID tag is explained. The tag includes an inductively-fed, meandered dipole antenna and an IC that consists of the remote powering, conversation, and sensor interface circuitry. The rectifier within the tag is a surprisingly efficient differential rectifier with self threshold cancellation. A low-electricity, all-digital, PLL-based totally sensor interface is used to study the differential capacitive sensor on the tag. The pulsewidth modulated sensor records is despatched to the base station by backscattering. The base station is applied the use of discrete components with a customized patch antenna. The mirrored image from the tag antenna underneath distinctive loading situations is measured inside the anechoic chamber. The whole device is measured and it is shown that the sensor value can be read from the base station. The tag chip is implemented in 0.18 μm UMC CMOS process[5].

S.Vasupongayya, W.Noodam, and P.Kongyong et al., This is proposed the dual band published omnidirectional antenna for RFID packages at 2.45GHz. This antenna is made up from the double U-stubs and meander collinear structure. The antenna is primarily based on the microstrip type of antenna. The return loss of the proposed antenna at 2.45GHz is -10.61dB and the bandwidth is 122MHz. The advantage that has been completed for this proposed antenna is 3.798dB[6].

M.N.M. Kahar and G. Kendall et al., the suggestion to put in force a high-speed train in Brazil, the frequency variety of 5.5 MHz (in 902 MHz) could be used for the verbal exchange device of these railroads; consequently the frequency range in which the UHF RFID system presently works need to be modified. This paper compares the spectral range of the RFID system used nowadays, with the future scenario, for example, after the spectral modification variety and it analyzes whether or not there might be a overall performance degradation in the reading fee of RFID structures currently established[7].

M. Hegland, J. Garcke, and V. Challis et al., is proposed near-field (NF) programs, stacked UHF RFID tags are recognised to be less readable than the stand-alone tags. It is likewise intuitively recognised that ζ vulnerable spots ζ exist whilst more tags are stacked together, particularly when the tags are placed closer to

every other. However, ζ susceptible spots ζ in NF-RFID had not been theoretically analyzed inside the past, nor had the phenomena been quantitatively measured. In this paper, we show that the ζ susceptible spots ζ are particularly the consequences of mutual coupling between the tag antennas in NF, we additionally reveal that the profiles of the weak spots are strongly determined by using the separation between tags, and they're not monotonically dispensed alongside the stack, i.E., weakest spots are not necessarily at the a long way cease or the center of the stack. To affirm our analysis, EM device simulation and lab measurements are conducted, the consequences from theoretical calculation, simulation and experiments agree with each different nicely[8].

S. Mathew and L. Ginsberg et al., is developed Passive radio-frequency identity (RFID) tags are broadly used due to its financial price and exceptional performance. So a ways, passive RFID tags are usually carried out to identify certain objects, such as underground pipe identity under buried conditions. However, there is lack of take a look at on the application of buried tags for further application. In this paper, the performances of buried RFID tags are studied to expand a flooding caution machine primarily based on RFID tag array for energy facility consisting of energy stations. In this study, the corresponding signal power acquired via the RFID reader is evaluated whilst the RFID tags are buried with the aid of seven substances respectively. The effects show that flood warning detector may be constructed the usage of passive RFID tag array and reader[9].

Ludger Wobmann et al., is advanced a Firstly, because of the characteristics of the traveler attractions, galleries and museums in China, a scientific RFID Application Platform for the excursion and exhibition area is presented on this paper. This systematic RFID Application Platform can efficaciously assist the implementation of four regular RFID utility subsystems simultaneously. These 4 utility subsystems can offer intelligent offerings respectively for 4 standard utility fields which might be ticket management, self-assist navigation, visit course recording and tracing, as well as intensity monitor and guidance. Secondly, to make use of the present resources as lots as possible, say, make use of the existing animal records management device in the Beijing Zoo as plenty as possible, we gift a mechanism for the systematic RFID Application Platform to integrate the prevailing systems to the systematic RFID Application Platform. This mechanism integrates the existing system to the systematic RFID Application Platform by using the use of the Distributed Application Integration Framework.

The statistics between the Platform and the prevailing system is exchanged via information proportion and trade platforms (DXS, DXA). Lastly, we gift a discussion of the implementation of the systematic RFID Application Platform, by using taking the implementation of the platform inside the Beijing Botanical Garden and the Beijing Zoo as software instances. The open architecture of the systematic RFID Application Platform lets in deployment of numerous packages and integration of existing resources of information[10].

Though a whole lot of works are being carried out, there may be a scope for improvement on this field. Artificial intelligence and gadget learning techniques are being extensively utilized in all programs like medical, day after day access structures, conversation structures etc.. [11-14]. The proposed work can be improvised by applying device-learning techniques.

CONCLUSION

This studies solves considered one of the big problems of centralized examination system by using presenting a chain of algorithms. This will reduce a large variety of workload that have to be given by the employees before examination to prepare an exam seating association plan. Also this may reduce the hazard of mismanagement during examination like not having seats for all college students, overlapping of multiple college students in the equal seat, not having proper distance between college students with same question sets, etc. Although the system does now not offer the optimum end result for worst case like very huge column size with very much less students however it's far very powerful for massive amount of college students and seats. This gives good result whilst the range of students and seats are equal. In destiny we will attempt to clear up those problems.

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