A Project Synopsis on

"STUDENT ATTENDANCE MANAGEMENT SYSTEM"

Computer Engineering

(Year 2022-2023)

Submitted the project in partial fulfilment of the requirement for the term work of **"Professional Communication and Ethics-II" of *Third Year Degree of Bachelor of Engineeering*.**

Submitted to

Department of Applied Science and Humanities

Theem College of Engineering

Betegaon-Chilhar Road(E), Tal. & Dist. Palghar.

Submitted by

Haider Bagasrawala	**05**
Abhisha Gharat	**13**
Aishwarya Golatkar	**14**
Omkar Lihe	**22**

Under the Esteemed Guidance of

Professor M. S. Balasubramani

(Department of Applied Science and Humanities)

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Haider Bagasrawala	**05**
Abhisha Gharat	**13**
Aishwarya Golatkar	**14**
Omkar Lihe	**22**

Students of **Third Computer Engineering** have completed and submitted their **"Technical Paper Writing presentation"** in partial fulfillment of the requirement for the term work of **"Professional Communication and ethics-II"** during the year 2022-23. The project work entitled **"Student Attendance Management System"** submitted in their 5th semester embodies their original and sincere efforts.

Prof. M. S. Balasubramani	**Dr. S. Riyaaazoddin**
(Project Guide)	**(Principal)**

Acknowledgement

We are eternally indebted to Professor M. S. Balasubramani for his continuous guidance and encouragement to complete our projects.

We wish to express our deep sense of gratitude to Professor K.N. Attarde for his guidance and useful suggestions which helped us in completing the project on time.

Thanks and appreciation to all the helpful people for their support that certainly helped us endeavours our project.

Thanks to you all.

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ABSTRACT

Student attendance management system deals with the maintenance of the student's attendance details. It is generates the attendance of the student on basis of presence in class. It is maintained on the daily basis of their attendance. the staffs will be provided with the separate username & password to make the student's status.

The staffs handling the particular subjects responsible to make the attendance for all students. Only if the student present on that particular period, the attendance will be calculated. The students attendance reports based on weekly and consolidate will be generated.

CHAPTER 1 : INTRODUCTION

AIM

"Attendance Management System" is software developed for maintaining the attendance of the student on the daily basis in the collage. Here the staffs, who are handling the subjects, will be responsible to mark the attendance of the students. Each staff will be given with a separate username and password based on the subject they handle. An accurate report based on the student attendance is generated here. This system will also help in evaluating attendance eligibility criteria of a student. Report of the student's attendance on weekly and monthly basis is generated.

OBJECTIVES

Analysis can be defined as breaking up of any whole so as to find out their nature, function etc. It defines design as to make preliminary sketches of; to sketch a pattern or outline for plan. To plan and carry out especially by artistic arrangement or in a skillful wall. System analysis and design can be characterized as a set of techniques and processes, a community of interests, a culture and an intellectual orientation. The various tasks in the system analysis include the following.

- Understanding application.
- Planning.
- Scheduling.
- Developing candidate solution.
- Performing trade studies.
- Performing cost benefit analysis.
- Recommending alternative solutions.
- Selling of the system.

Supervising, installing and maintaining the system. This system manages to the analysis of the report creation and develops manual entry of the student attendance. First design the students entry form , staff allocation and time table allocation forms. This project will helps the attendance system for the department calculate percentage and reports for eligibility criteria of examination . The application attendance entry system will provide flexible report for all students.

PURPOSE

Attendance Tracking In Real-Time :

A student attendance management system helps to track and store the attendance data in real-time. Besides student and staff attendance, the system also helps school admins in maintaining and tracking leaves applications, arrival & departure times, lunch breaks, and vacations of staff members & students.

Absence of Proxy Attendance

In many schools, especially the higher grades, students manipulate the daily attendance with proxies, buddy punching or tampering of records in a matter of concern. Using a biometric/RFID system with an attendance module makes it virtually impossible to fake attendance, as each individual's biometric information is unique.

This ensures that the attendance is accurate with no opportunity for student manipulation. It also improves the punctuality and the discipline of the students.

Instant Notification To Parents

The integration of the student attendance management system allows schools to track attendance and absenteeism using biometric data. This data is in real-time and the software can send automated emails and messages to the parents to notify them immediately if their child fails to make it to class.

SCOPE

This project is basically an online web application which means this software can be accessed online by all registered faculty member and admin. So it makes easier to task easier. All the attendance taken by the faculty is stored directly on central data server. Admin can view updated reports in real time. There is no need of separately update any record. Admin can also email students attendance record to the students. So this project is very useful for any institute for managing student attendance record.

PROJECT DEFINITION

This project is aimed to replace the traditional method of the attendance management system. This project is developed mainly to administrate student's attendance. The purpose of the project entitled "Student Attendance Management System" is to develop a computerized attendance system that is user-friendly, simple, fast, and cost-effective. It deals with the collection of student's information, class and subject details, etc. Traditionally, it was done manually. The main function of the system is to register and store student details and retrieve these details as and when require.

PROBLEM STATEMENT

The Existing system is a manual entry for the students. Here the attendance will be carried out in the hand written registers. It will be a tedious job to maintain the record for the user. The human effort is more here. The retrieval of the information is not as easy as the records are maintained in the hand written registers. This application requires correct feed on input into the respective field. Suppose the wrong inputs are entered, the application resist to work. so the user find it difficult to use.

PROPOSED SYSTEM

To overcome the drawbacks of the existing system, the proposed system has been evolved. This project aims to reduce the paper work and saving time to generate accurate results from the student's attendance. The system provides with the best user interface. The efficient reports can be generated by using this proposed system.

Advantages of Proposed System

- It is trouble-free to use.
- It is a relatively fast approach to enter attendance
- Is highly reliable, approximate result from user
- Best user Interface
- Efficient report

CHAPTER 2 : LITERATURE SURVEY

Paper 1 : Arulogun O, Olatunbosun A, Fakolujo O, Olaniyi O. RFID-based student's attendance management system. Int J Sci Eng Res. 2013;4(2):1–9.

In recent years, there have been rise in the number of applications based on Radio Frequency Identification (RFID) systems and have been successfully applied to different areas as diverse as transportation, health-care, agriculture, and hospitality industry to name a few. RFID technology facilitates automatic wireless identification using electronic passive and active tags with suitable readers. In this paper, an attempt is made to solve recurrent lecture attendance monitoring problem in developing countries using RFID technology. The application of RFID to student attendance monitoring as developed and deployed in this study is capable of eliminating time wasted during manual collection of attendance and an opportunity for the educational administrators to capture face-to-face classroom statistics for allocation of appropriate attendance scores and for further managerial decisions.

Paper 2 : Kassim M, Mazlan H, Zaini N, Salleh MK. Web-based student attendance system using RFID technology. In IEEE; 2012. p. 213–8.

This paper describes the development of a student attendance system based on Radio Frequency Identification (RFID) technology. The existing conventional attendance system requires students to manually sign the attendance sheet every time they attend a class. As common as it seems, such system lacks of automation, where a number of problems may arise. This include the time unnecessarily consumed by the students to find and sign their name on the attendance sheet, some students may mistakenly or purposely signed another student's name and the attendance sheet may got lost. Having a system that can automatically capture

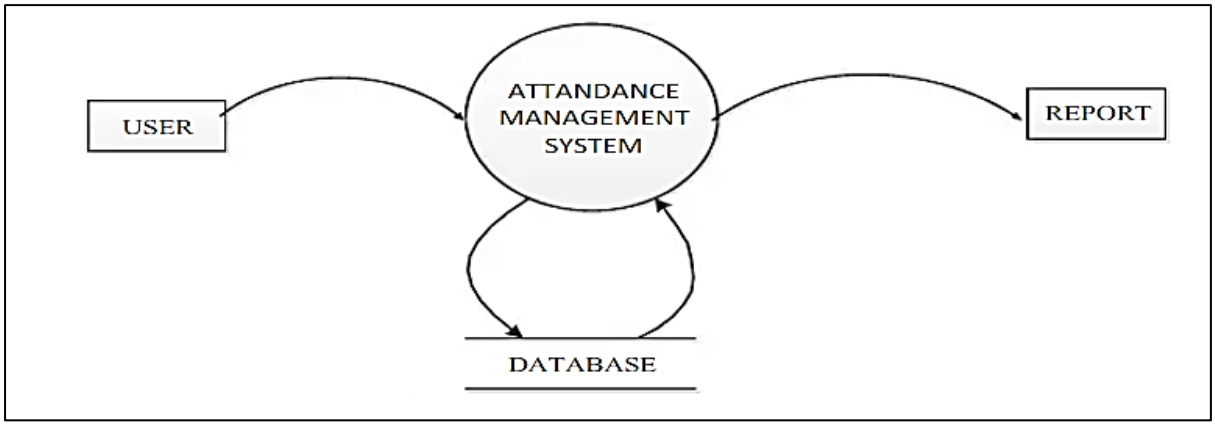
student's attendance by flashing their student card at the RFID reader can really save all the mentioned troubles. This is the main motive of our system and in addition having an online system accessible anywhere and anytime can greatly help the lecturers to keep track of their students' attendance. Looking at a bigger picture, deploying the system throughout the academic faculty will benefit the academic management as students' attendance to classes is one of the key factor in improving the quality of teaching and monitoring their students' performance. Besides, this system provides valuable online facilities for easy record maintenance offered not only to lecturers but also to related academic management staffs especially for the purpose of students' progress monitoring.

Paper 3 : Benyo B, Sodor B, Doktor T, Fördős G. Student attendance monitoring at the university using NFC. In IEEE; 2012. p. 1–5.

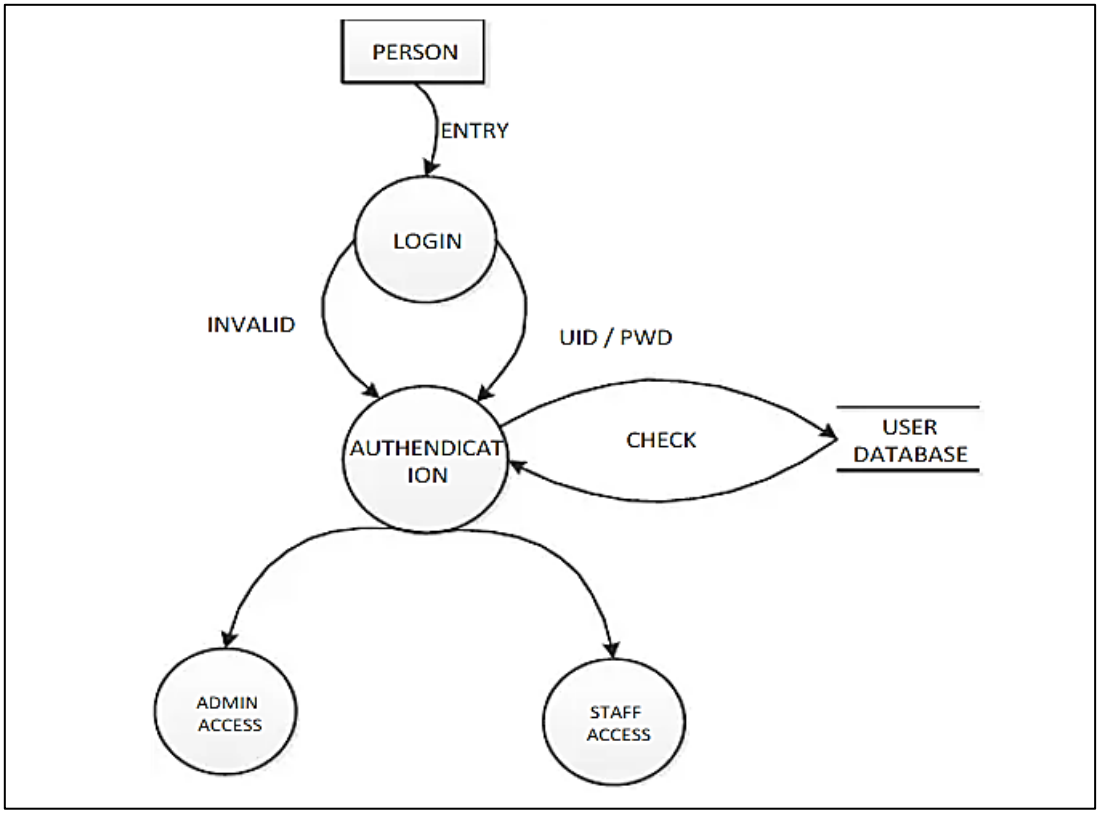
There are several complex business processes in the higher education. As the number of university students has been tripled in Hungary the automation of these task become necessary. The Near Field Communication (NFC) technology provides a good opportunity to support the automated execution of several education related processes. Recently a new challenge is identified at the Budapest University of Technology and Economics. As most of the lecture notes had become available in electronic format the students especially the inexperienced freshman ones did not attend to the lectures significantly decreasing the rate of successful exams. This drove to the decision to elaborate an accurate and reliable information system for monitoring the student's attendance at the lectures. Thus we have developed a novel, NFC technology based business use case of student attendance monitoring. In order to meet the requirements of the use case we have implemented a highly autonomous distributed environment assembled by NFC enabled embedded devices, so-called contactless terminals and a scalable back office. Beside the opportunity of contactless card based student identification the terminals support biometric identification by fingerprint reading. These features enable the implementation of flexible and secure identification scenarios.

CHAPTER 3 : PROJECT METHODOLOGY

Data Flow Diagram :

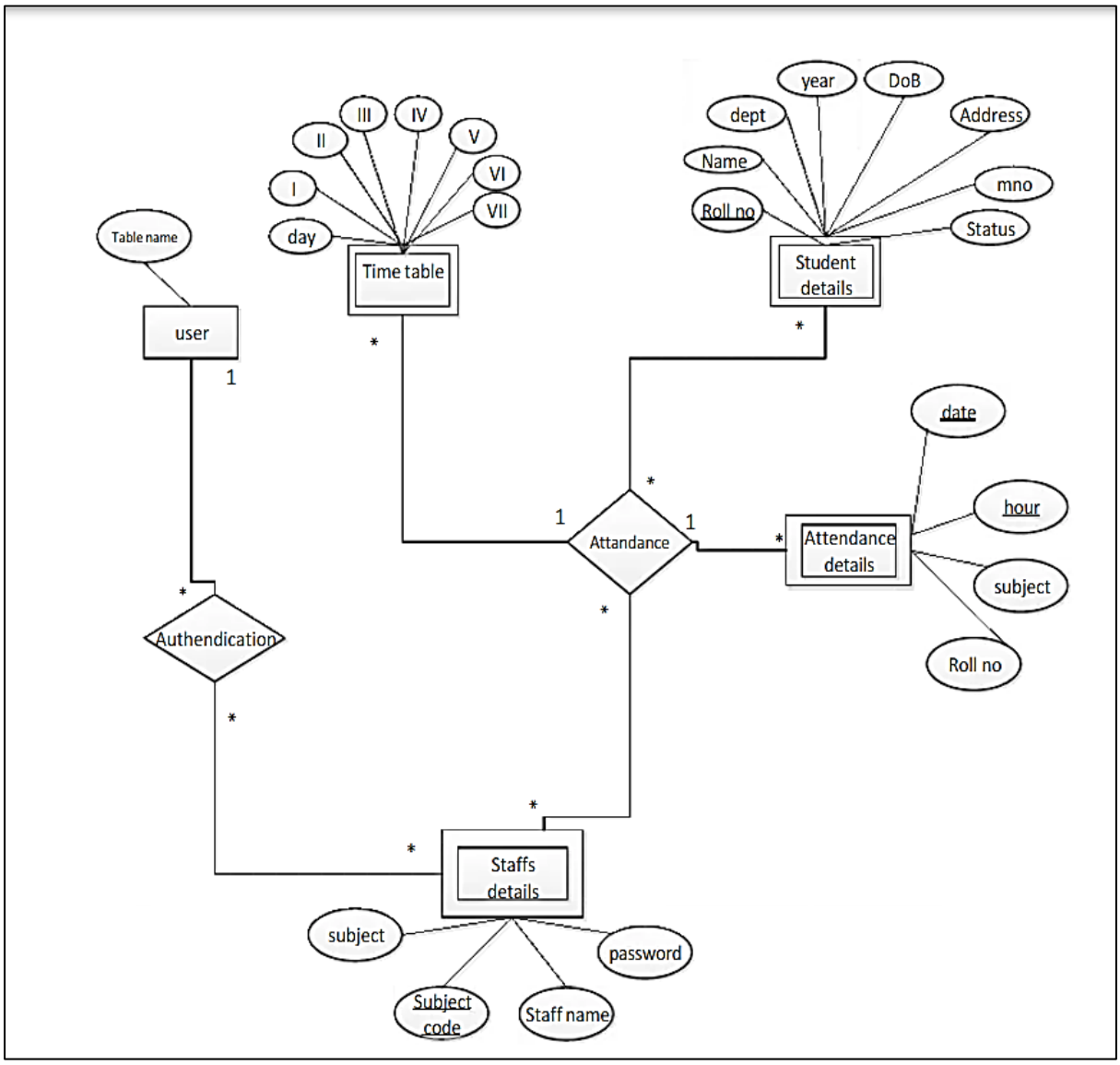


DFD level 0 (Fig:3.1)



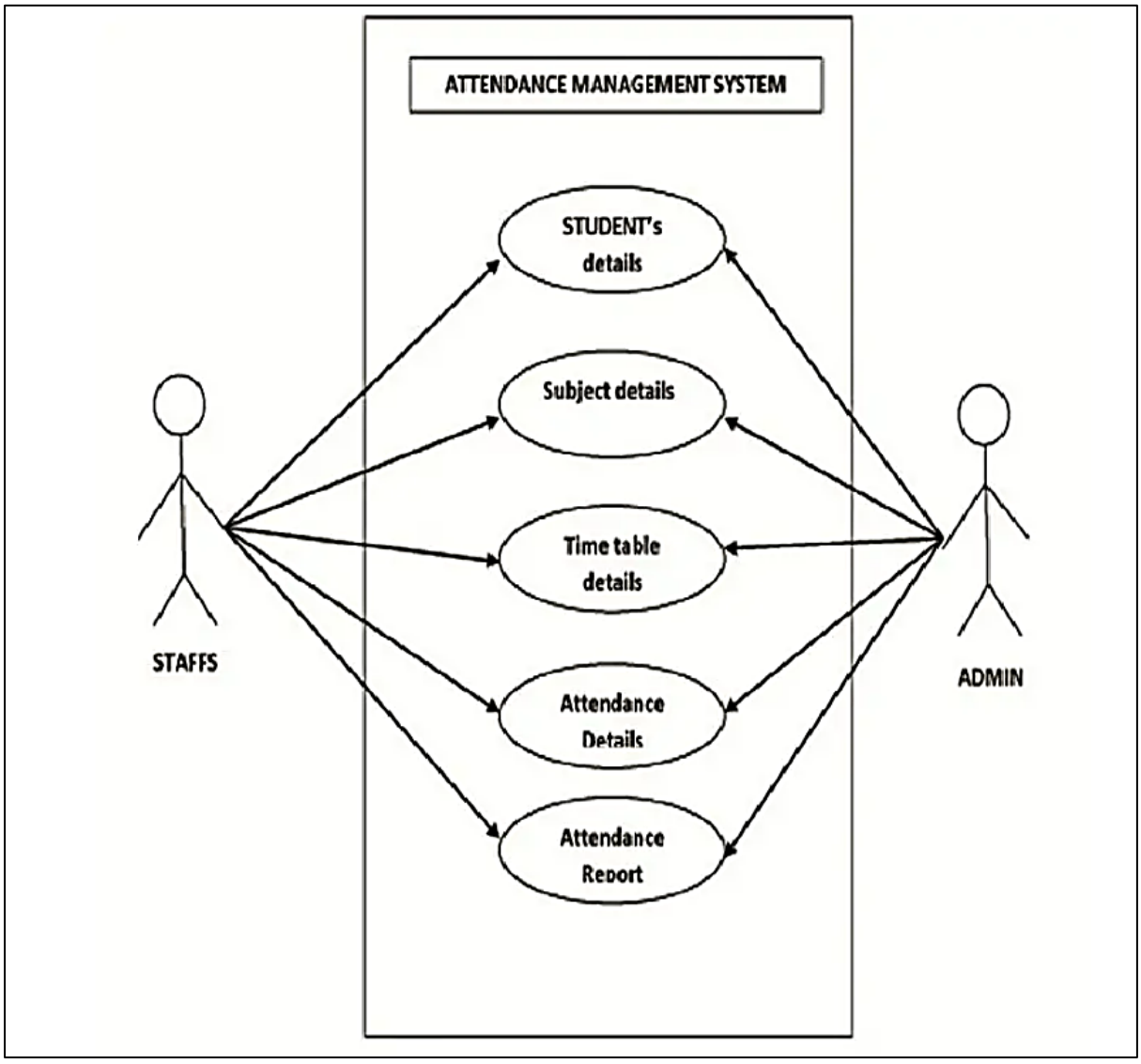
DFD level 1(Fig:3.2)

Entity Relationship Diagram :



(Fig:3.3)

Use Case Diagram :



(Fig:3.4)

CHAPTER 4 : REQUIREMENT ANALYSIS

FEASIBILITY STUDY:

Feasibility analysis begins once the goals are defined. It starts by generating broad possible solutions, which are possible to give an indication of what the new system should look like. This is where creativity and imagination are used. Analysts must think up new ways of doing things- generate new ideas. There is no need to go into the detailed system operation yet. The solution should provide enough information to make reasonable estimates about project cost and give users an indication of how the new system will fit into the organization. It is important not to exert considerable effort at this stage only to find out that the project is not worthwhile or that there is a need significantly change the original goal. Feasibility of a new system means ensuring that the new system, which we are going to implement, is efficient and affordable. There are various types of feasibility to be determined. They are,

Economically Feasibility:
Development of this application is highly economically feasible. The only thing to be done is making an environment with an effective super vision. It is cost effective in the sense that has eliminated the paper work completely. The system is also time effective because the calculations are automated which are made at the end of the month or as per the user requirement.

Technical feasibility:
The technical requirement for the system is economic and it does not use any other additional Hardware and software. Technical evaluation must also assess whether the existing systems can be upgraded to use the new technology and whether the organization has the expertise to use it. Install all upgrades framework into the .Net package supported windows based application. this application depends on Microsoft office and intranet service , database. Enter their attendance and generate report to excel sheet.

Operational Feasibility:
The system working is quite easy to use and learn due to its simple but attractive interface. User requires no special training for operating the system. Technical performance include issues such as determining whether the system can provide the right information for the Department personnel student details, and whether the system can be organized so that it always delivers this information.

HARDWARE REQUIREMENTS (Minimum Requirement)

Minimum RAM:-
1GB

Hard Disk:-
128 GB

Processor:-
Intel Pentium 4(1.50 GHZ) or above

SOFTWARE REQUIREMENTS (minimum Requirement)

Operating system :
Windows XP

Front_Design:
VB.Net version 10.0 ,.NET framework 4.0

Front-End Language :
Visual basic

Back-End :
Oracle 10g

Back-End Connectivity:
ADO.net

CHAPTER 5 : CONCLUSION

PROJECT OVERVIEW :

- Attendance Management System basically has two main modules for proper functioning.
- Admin module is has rights for creating any new entry of faculty and student details.
- User has a rights of making daily attendance, generating report.
- Attendance report can be taken by given details of student details, date, class.

SCOPE FOR FUTURE DEVELOPMENT :

The project has a very vast scope in future. The project can be implemented on intranet in future. Project can be updated in near future as and when requirement for the same arises, as it is very flexible in terms of expansion. With the proposed software of database Space Manager ready and fully functional the client is now able to manage and hence run the entire work in a much better, accurate and error free manner.

The following gare the future scope for the project.

- Discontinue of particular student eliminate potential attendance.
- Bar code Reader based attendance system.
- Individual Attendance system with photo using Student login.

CONCLUSION :

To conclude, Project Data Grid works like a component which can access all the databases and picks up different functions. It overcomes the many limitations incorporated in the attendance.

- Easy implementation Environment
- Generate report Flexibly

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Benyo B, Sodor B, Doktor T, Fördős G. Student attendance monitoring at the university using NFC. In IEEE; 2012. p. 1–5.