

**Student Tracking System (RFID)**

**FINAL YEAR PROJECT**

**PHASE-I**

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**FINAL YEAR PROJECT PHASE-I DOCUMENTATION**

**STATEMENT OF SUBMISSION**

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**ABSTRACT**

### This project introduces an RFID-based Student Tracking Management System, a technological innovation poised to redefine safety, security, and communication in educational settings. The system addresses the core concerns of ensuring safe student arrivals and promoting regular class attendance through the integration of RFID technology. By facilitating real-time attendance tracking and providing instant alerts to parents, the system strives to revolutionize the educational experience. Key objectives include automating attendance records, improving communication channels, and ensuring compliance with data protection regulations, collectively fostering a secure and efficient educational environment.

### Motivated by the imperative to enhance student safety during commutes and promote academic regularity, the RFID system streamlines administrative processes, strengthens security protocols, and instills a sense of accountability among students. Functional requirements encompass user authentication, RFID tag management, and immediate parental notifications, while non-functional considerations prioritize scalability, reliability, and user-friendly interfaces. This project aspires to not only meet the immediate needs of educational institutions but also anticipate future challenges, providing a comprehensive solution that contributes to improved student outcomes.

### With a focus on security features, including robust access control, data encryption, and comprehensive audit trails, the RFID-based Student Tracking Management System aims to establish a secure framework for managing student information and ensuring campus security. Through its innovative approach, this project represents a significant step toward creating an educational ecosystem that is not only efficient and secure but also fosters enhanced communication between stakeholders.

**DEDICATION**

"We dedicate this project to our parents and teachers who have always been our source of inspiration and support throughout our academic journey. Their unwavering love and encouragement have been the driving force behind our success. This project would not have been possible without their constant guidance and support.

We would also like to express our gratitude to our supervisor, **"SIR WAHID AKRAM"**, for their valuable guidance, support, and encouragement throughout the project. Their expertise and knowledge have been instrumental in shaping this project.

We would like to thank all the people who have helped us in completing this project, whether through direct or indirect support, for their contributions. We hope this project will be as useful to them as it was to us during the development process.

Lastly. We would like to thank Allah Almighty for giving us the strength and knowledge to complete it successfully."

**ACKNOWLEDGMENT**

It is by the Grace of Allah Almighty, the Lord and Creator of this Universe, whose power and glory all things are accomplished. We would also like to pay special thanks to His Prophet. (P.B.U.H) who is forever a beacon of guidance and knowledge for humanity as a whole. We are deeply grateful to Allah Almighty for making it possible for us to complete this project and overcome all the difficulties faced during the course of this project.

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We are also grateful to all the people who supported us throughout the project, whether through direct or indirect support, for their contributions. Their support and encouragement meant a lot to us and helped us complete this project successfully.

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**Contents**

[**Chapter 1: Introduction to the Problem** 1](#_bookmark0)

* 1. [Introduction 2](#_bookmark1)
  2. [Executive Summary 2](#_bookmark2)
  3. [Purpose 3](#_bookmark3)
  4. [Motivation and Challenges 3](#_bookmark3)
  5. [Objective 3](#_bookmark4)
  6. [Problem Statement 3](#_bookmark3)
  7. Proposed solutions 3
  8. [Comprehensive Competitive Analysis 3](file:///D:\Study\Semester%207\FYP\FYP%20Phase%201\Working\Student%20Tracking%20System%20(1).docx#_bookmark3)
  9. [Project Plan 3](file:///D:\Study\Semester%207\FYP\FYP%20Phase%201\Working\Student%20Tracking%20System%20(1).docx#_bookmark3)

[**Chapter 2: Software Requirement Specification** 7](#_bookmark8)

* 1. [Introduction 8](#_bookmark9)
     1. [Introduction 8](#_bookmark10)
     2. [Purpose 8](#_bookmark11)
     3. [Intended Audience 8](#_bookmark12)
     4. [Scope 9](#_bookmark13)
     5. [Definition, acronyms and abbreviation 9](#_bookmark14)
     6. [Product Perspective 9](#_bookmark16)
     7. [Assumptions and Dependencies 10](#_bookmark17)
     8. [Overview 10](#_bookmark18)
     9. [Functional Requirements 11](#_bookmark19)
     10. [Non-Functional Requirements 13](#_bookmark21)

[**Chapter 3: Use Case Analysis** 15](#_bookmark22)

* 1. [Aggregated Use Case Diagram 16](#_bookmark23)
  2. [Visitor Use Cases 17](#_bookmark25)
     + 1. [Use case Registration 17](#_bookmark26)
       2. [Use case Check Updates 18](#_bookmark29)
       3. [Use case Receiver Contact Donor 19](#_bookmark32)
       4. [Use Case Posting Request 20](#_bookmark35)
       5. [Use Case Receiver matching request with donor 21](#_bookmark38)
       6. [Donor Receiving Notifications 22](#_bookmark41)
       7. [Receiver make meetup or appointment with donor 23](#_bookmark44)
       8. [Blood Donation History 24](#_bookmark47)
       9. [User will give feedback 25](#_bookmark50)
       10. [Donor Eligibility Screening 26](#_bookmark53)

[**Chapter 4: Design** 27](#_bookmark56)

* 1. [Activity Diagrams 28](#_bookmark57)
     1. [Login 28](#_bookmark58)
     2. [User Profile 28](#_bookmark60)
     3. [Donor Registration 29](#_bookmark62)
     4. [Real Time Updates 29](#_bookmark64)
     5. [Request Creation 30](#_bookmark66)
     6. [Matching Donor 31](#_bookmark68)
     7. [Donor Notification 32](#_bookmark70)
     8. [Appointment Scheduling 33](#_bookmark72)
     9. [Donor History 34](#_bookmark74)
     10. [Donor Eligibility 35](#_bookmark76)
  2. [Sequence Diagrams 36](#_bookmark78)
     1. [Profile Creation 36](#_bookmark79)
     2. [Donor Registration 37](#_bookmark81)
     3. [Real Time Updates 38](#_bookmark83)
     4. [Request Creation 39](#_bookmark85)
     5. [Matching Donor 40](#_bookmark87)
     6. [Donor Notification 41](#_bookmark89)
     7. [Appointment Creation 42](#_bookmark91)
     8. [Donor History 43](#_bookmark93)
     9. [User Feedback 44](#_bookmark95)
     10. [Donor Eligibility 45](#_bookmark97)
  3. [Collaboration Diagrams 46](#_bookmark99)
     1. [User Registration 46](#_bookmark100)
     2. [Donor Registration 46](#_bookmark102)
     3. [Real Time Updates 47](#_bookmark104)
     4. [Blood Request Creation 47](#_bookmark106)
     5. [Matching Donor 48](#_bookmark108)
     6. [Donor Notification 48](#_bookmark110)
     7. [Appointment Creation 49](#_bookmark112)
     8. [Donor History 49](#_bookmark114)
     9. [User Feedback 50](#_bookmark116)
     10. [Donor Eligibility 50](#_bookmark118)
  4. [Complete Entity Relationship Diagram 51](#_bookmark120)
  5. [Data Dictionary against ERD Diagram 52](#_bookmark122)
     1. [Receiver 52](#_bookmark123)
     2. [Appointment 52](#_bookmark125)
     3. [Donor 53](#_bookmark127)
     4. [Donation History 53](#_bookmark129)
     5. [Request 54](#_bookmark131)
     6. [Blood Bank 54](#_bookmark133)
     7. [Accept Blood 55](#_bookmark135)
     8. [Store Blood 55](#_bookmark137)
     9. [Blood 56](#_bookmark139)
  6. [Logical Schema 57](#_bookmark141)
  7. [Deployment Diagram 58](#_bookmark142)
  8. [Component Diagram 59](#_bookmark144)
  9. [State Transition Diagram 60](#_bookmark146)

4.10 Architecture Diagram………………………………………………………………………..61

**Tables**

[Table 2.1 Definitions, Acronyms, and Abbreviations 9](#_bookmark15)

[Table 2.2 Functional Requirement 13](#_bookmark20)

[Table 3.1 User case registration 17](#_bookmark28)

[Table 3.2 Use case check updates 18](#_bookmark31)

[Table 3.3 Use case receiver donor 19](#_bookmark34)

[Table 3.4 Use case posting request 20](#_bookmark37)

[Table 3.5 Use case receiver matching request with donor 21](#_bookmark40)

[Table 3.6 Donor receiving notification 22](#_bookmark43)

[Table 3.7 Receiver make meetup or appointment with donor 23](#_bookmark46)

[Table 3.8 Blood donation history 24](#_bookmark49)

[Table 3.9 User will give feedback 25](#_bookmark52)

[Table 3.10 Donor eligibility screening 26](#_bookmark55)

[Table 4.1 Receiver 52](#_bookmark124)

[Table 4.2 Appointment 52](#_bookmark126)

[Table 4.3 Donor 53](#_bookmark128)

[Table 4.4 Donation history 53](#_bookmark130)

[Table 4.5 Request 54](#_bookmark132)

[Table 4.6 Blood bank 54](#_bookmark134)

[Table 4.7 Accept blood 55](#_bookmark136)

[Table 4.8 Store blood 55](#_bookmark138)

[Table 4.9 Blood 56](#_bookmark140)

**Figures**

[Figure 3.1 Aggregated use case diagram 16](#_bookmark24)

[Figure 3.2 Use case registration 17](#_bookmark27)

[Figure 3.3 Use case check updates 18](#_bookmark30)

[Figure 3.4 Use case receiver donor 19](#_bookmark33)

[Figure 3.5 Use case posting request 20](#_bookmark36)

[Figure 3.6 Use case receiver matching request with donor 21](#_bookmark39)

[Figure 3.7 Donor receiving notification 22](#_bookmark42)

[Figure 3.8 Receiver make meetup or appointment with donor 23](#_bookmark45)

[Figure 3.9 Blood donation history 24](#_bookmark48)

[Figure 3.10 User will give feedback 25](#_bookmark51)

[Figure 3.11 Donor eligibility screening 26](#_bookmark54)

[Figure 4.1 Login 28](#_bookmark59)

[Figure 4.2 User 28](#_bookmark61)

[Figure 4.3 Donor registration 29](#_bookmark63)

[Figure 4.4 Real time updates 29](#_bookmark65)

[Figure 4.5 Request Creation 30](#_bookmark67)

[Figure 4.6 Matching donor 31](#_bookmark69)

[Figure 4.7 Donor notification 32](#_bookmark71)

[Figure 4.8 Appointment Scheduling 33](#_bookmark73)

[Figure 4.9 Donor history 34](#_bookmark75)

[Figure 4.10 Donor Eligibility 35](#_bookmark77)

[Figure 4.11 Profile creation 36](#_bookmark80)

[Figure 4.12 Donor registration 37](#_bookmark82)

[Figure 4.13 Real time updates 38](#_bookmark84)

[Figure 4.14 Request creation 39](#_bookmark86)

[Figure 4.15 Matching donor 40](#_bookmark88)

[Figure 4.16 Donor notification 41](#_bookmark90)

[Figure 4.17 Appointment Creation 42](#_bookmark92)

[Figure 4.18 Donor history 43](#_bookmark94)

[Figure 4.19 User feedback 44](#_bookmark96)

[Figure 4.20 User Eligibility 45](#_bookmark98)

[Figure 4.21 User Registration 46](#_bookmark101)

[Figure 4.22 Donor registration 46](#_bookmark103)

[Figure 4.23 Real time updates 47](#_bookmark105)

[Figure 4.24 Blood request creation 47](#_bookmark107)

[Figure 4.25 Matching donor 48](#_bookmark109)

[Figure 4.26 Donor notification 48](#_bookmark111)

[Figure 4.27 Appointment creation 49](#_bookmark113)

[Figure 4.28 Donor history 49](#_bookmark115)

[Figure 4.29 User feedback 50](#_bookmark117)

[Figure 4.30 Donor Eligibility 50](#_bookmark119)

[Figure 4.31 Complete entity relationship diagram 51](#_bookmark121)

[Figure 4.32 Deployment diagram 58](#_bookmark143)

[Figure 4.33 Component diagram 59](#_bookmark145)

[Figure 4.34 State transition diagram 60](#_bookmark147)

**Chapter 1: Introduction to the Problem**

* 1. **Introduction**
  2. **Executive Summary**

In response to the critical needs within the educational landscape, our project introduces a Student Tracking System via RFID technology, redefining safety, security, and communication within educational institutions.

**Safe Arrival Assurance:** Our RFID system guarantees parents' peace of mind by instantly notifying them when their child enters the university premises. This ensures the safety of students during their daily commute.

**Promoting Class Attendance:** Equally significant is our commitment to fostering academic regularity. Parents receive immediate alerts if their child misses a class, encouraging a culture of unwavering academic commitment.

This transformative system combines RFID technology for real-time attendance tracking with seamless parental communication, enhancing overall student safety, attendance, and educational outcomes. It is a progressive step towards an efficient, secure, and communicative educational environment.

* 1. **Purpose**
  2. **Motivation**

Enhancing student safety during commutes and promoting regular class attendance are paramount concerns. The RFID student tracking system streamlines attendance, improves parental communication, and strengthens campus security. It also provides valuable attendance data and ensures data privacy compliance.

Efficiency is optimized through resource allocation, emergency notifications, and parental engagement, creating a safer and more accountable educational environment for our students.

* 1. **Objective**
* **Enhance Safety:** Ensure the safety of students during their daily commute.
* **Promote Attendance:** Encourage regular class attendance.
* **Streamline Tracking:** Automate attendance recording.
* **Improve Communication:** Facilitate seamless communication with parents or guardians.
* **Enhance Security:** Monitor and record student movements for security.
* **Provide Data Insights:** Analyze attendance patterns for decision-making.
* **Ensure Compliance:** Comply with data protection and privacy regulations.
* **Boost Efficiency:** Optimize resource allocation and operational efficiency.
* **Enable Emergency Response:** Notify relevant parties during campus emergencies.
* **Encourage Parental Engagement:** Involve parents in their child's education through real-time updates.
  1. **Problem Statement**

In the realm of university education, there arises a compelling need for an RFID-based student tracking management system. The system is designed to address two paramount concerns.

* **Ensuring Safe Arrival**: Alerting parents when students enter, ensuring peace of mind.
* **Promoting Class Attendance:** Notifying parents of missed classes, encouraging regularity.
  1. **Proposed Solution**
  2. **Comprehensive Competitive Analysis**
  3. **Project Plan**

