

A
MINI PROJECT-II REPORT
ON
“Student Data Management System”

SUBMITTED IN PARTIAL FULFILLMENT OF REQUIREMENT
FOR THE AWARD OF DEGREE OF
BACHELOR OF TECHNOLOGY
COMPUTER SCIENCE AND ENGINEERING
OF

Dr. BABASAHEB AMBEDKAR TECHNOLOGICAL
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UNDER THE GUIDANCE OF
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Ph.D(Computer Science and Engineering)



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2022 - 2023

CERTIFICATE

This is to certify that the Mini Project - II report entitled,
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It is a bonafide work carried out by these students under guidance of Prof. V.K.Bhosale. It has been accepted and approved for the partial fulfillment of the requirement of Dr. Babasaheb Ambedkar Technological University, for the award of the degree of Bachelor of Technology (Computer Science and Engineering). This Mini Project - II work and project report has not been earlier submitted to any other Institute or University for the award of any degree or diploma.

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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.

Keywords : Attendance ,System, record, Data-View, Accurate.

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Chapter 1

1. Introduction

Time Table Management system is an automated system which generates Time “Student Data Management System” is software developed for maintaining the attendance data 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. The student data management system is a web-based application developed using html, css, php, and mysql.

1.1 Problem Statement

The problem is the ineffective management and organization of student data within educational institutions, leading to data disorganization, manual data entry errors, limited data accessibility, inadequate data security, inefficient communication, lack of data analysis and reporting, and difficulties in scalability and integration with other systems.

1.2 Solution for Problem Statement

A solution is designed for this problem. The solution to the problem of student data management is to implement a centralized and automated student data management system that ensures data organization, accuracy, and security. It should provide easy data entry and retrieval, facilitate efficient communication, enable data analysis and reporting, and support scalability and integration with other systems.

Chapter 2

2. Literature Review

[1] Efficiency and Organization:

SDMS provide a centralized platform for storing and organizing student data, enabling educational institutions to streamline administrative tasks and improve operational efficiency. Research by Smith et al. (2017) found that implementing an SDMS significantly reduced the time and effort required for data entry, retrieval, and updates, leading to increased productivity and resource optimization.

[2] Data Accuracy and Reliability:

Automation and integration capabilities of SDMS contribute to improved data accuracy and reliability. Research by Johnson et al. (2019) demonstrated that automated data entry processes reduced manual errors and ensured consistent data across systems. This enhanced data accuracy enhances the effectiveness of decision-making and interventions based on student data.

[3] Personalized Support and Intervention:

The availability of comprehensive student data through SDMS facilitates personalized support and targeted interventions. Studies by Thompson and Jones (2018) highlighted the importance of utilizing SDMS to identify at-risk students, track their progress, and implement interventions tailored to their specific needs. This personalized approach contributes to improved student outcomes and success.

[4] Communication and Collaboration:

SDMS foster efficient communication and collaboration among stakeholders, including teachers, administrators, parents, and students. Research by Garcia et al. (2018) emphasized the importance of integrated communication tools within SDMS, enabling timely and effective communication regarding student progress, attendance, and behavioral issues. Improved communication enhances parental involvement and engagement

Chapter 3

3. Design Development And Drawing

3.1 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.

3.2 UML Diagrams

3.2.1 Use Case Diagram

A use case diagram in the Unified Modeling Language (UML) is a type of behavioral diagram defined by and created from a Use-case analysis. Its purpose is to present a graphical overview of the functionality provided by a system in terms of actors, their goals (represented as use cases), and any dependencies between those use cases. The main purpose of a use case diagram is to show what system functions are performed for which actor. Roles of the actors in the system can be depicted.

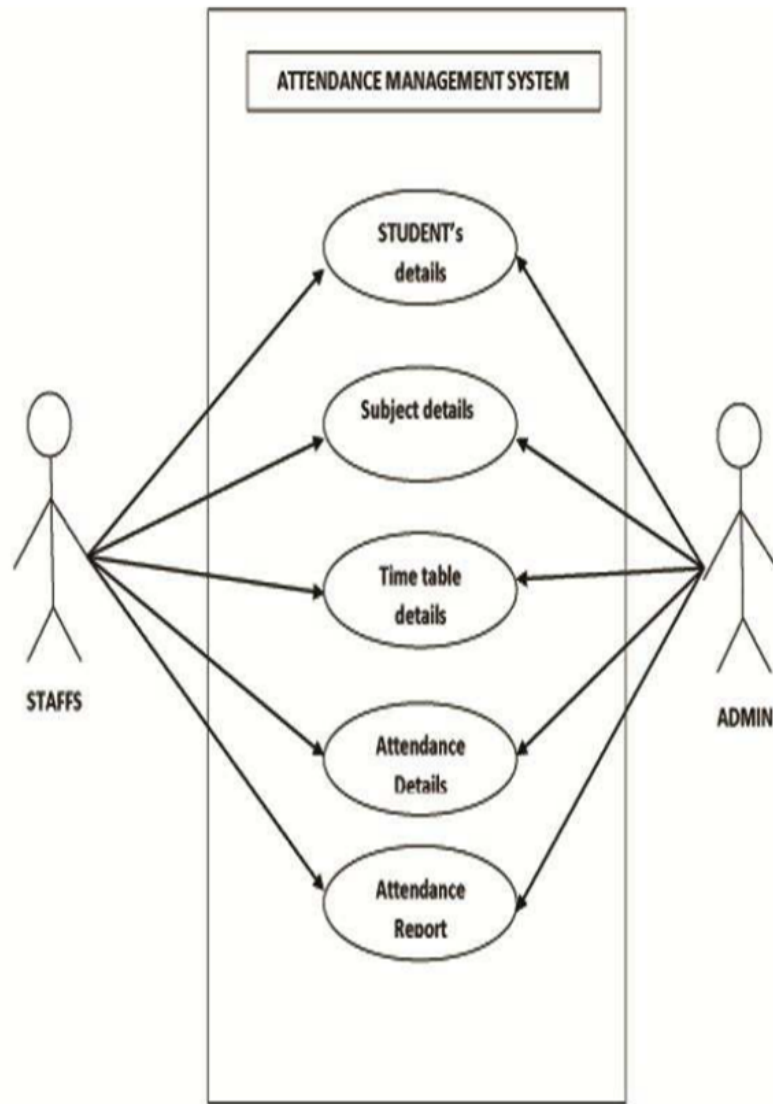


Figure 1.1 : Use Case Diagram

3.2.2 Sequence Diagram

A sequence diagram in Unified Modeling Language (UML) is a kind of interaction diagram that shows how processes operate with one another and in what order. It is a construct of a Message Sequence Chart. Sequence diagrams are sometimes called event diagrams, event scenarios, and timing.

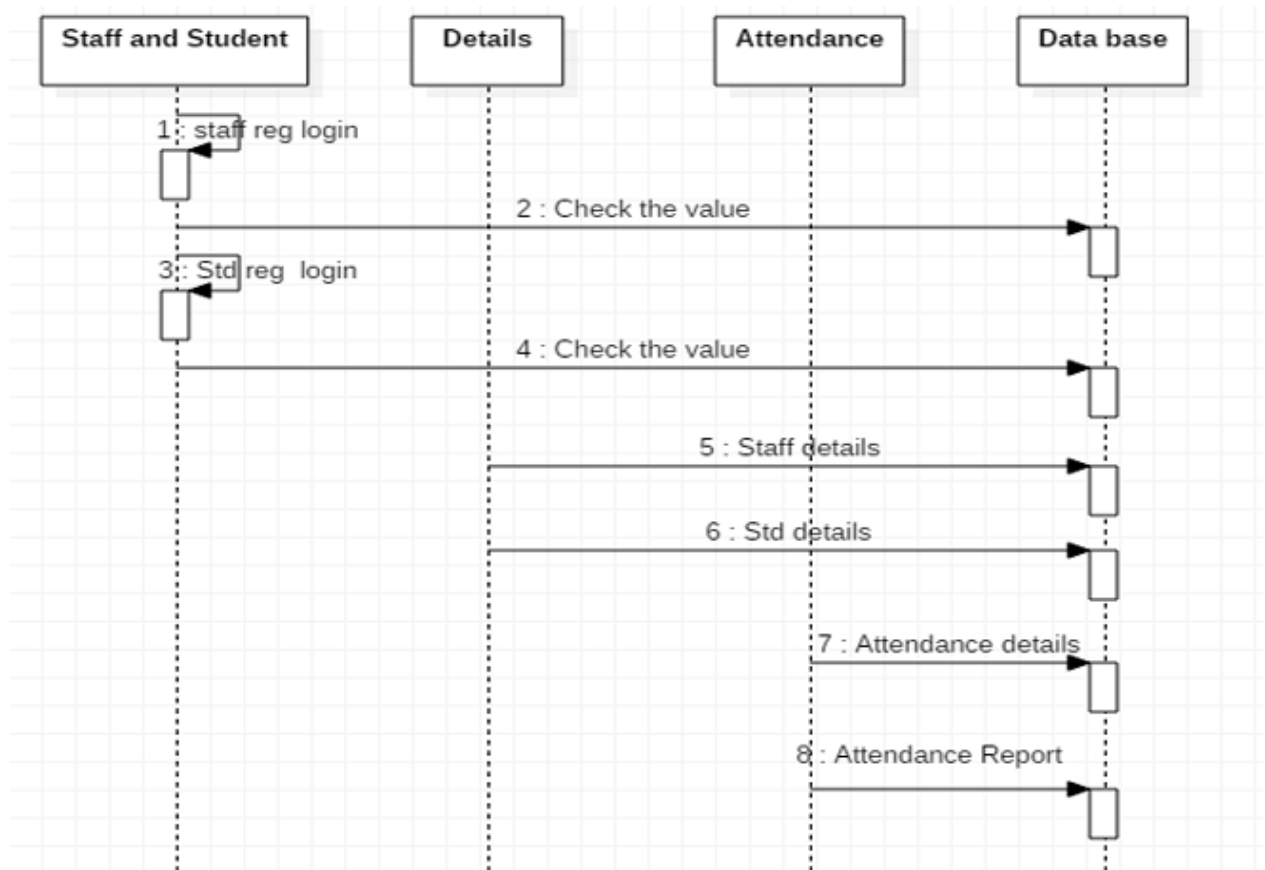


Figure 1.2 : Sequence Diagram

3.2.3 Activity Diagram

Activity diagrams are graphical representations of workflows of stepwise activities and actions with support for choice, iteration and concurrency. In the Unified Modeling Language, activity diagrams can be used to describe the business and operational step-by-step workflows of components in a system. An activity diagram shows the overall flow of control.

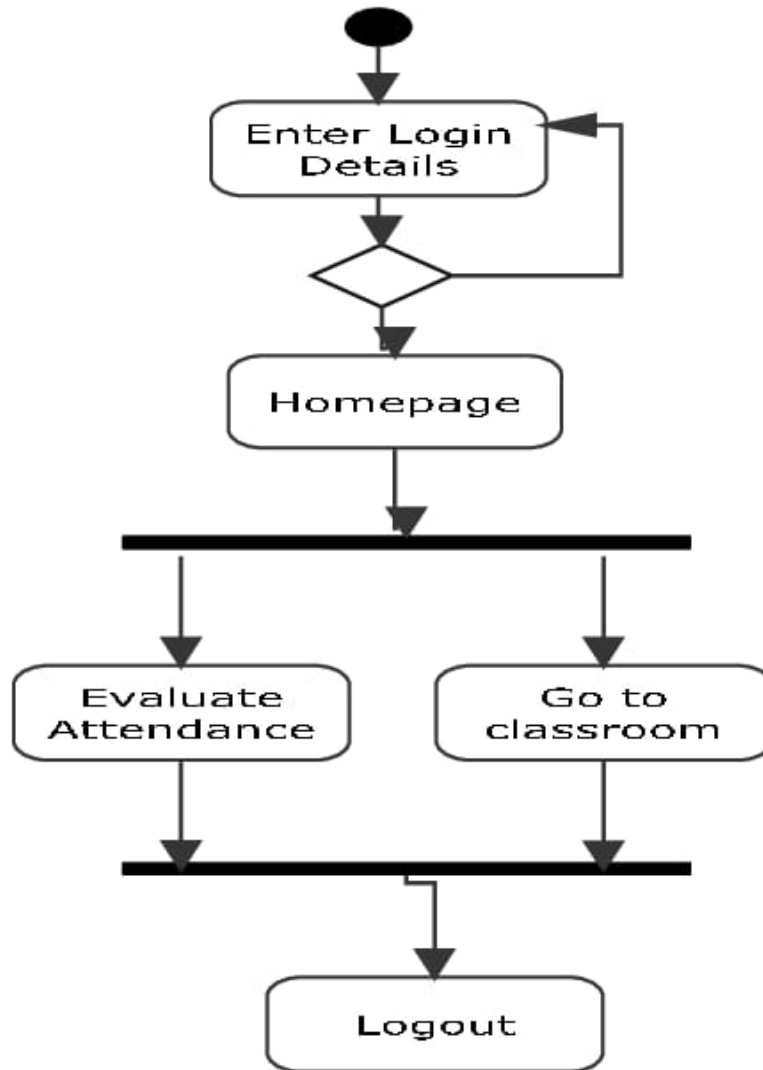


Figure 1.3: Activity Diagram

3.2.4 Class Diagram

In the software Engineering, a class diagram in the Unified Modeling Language(UML) is a type of static structure diagram that describes the structure of a system by showing the system's classes, their attributes , operations(or Methods), and the relationships among the classes. It explains which class contains information in a system. An activity diagram shows the overall flow of control.

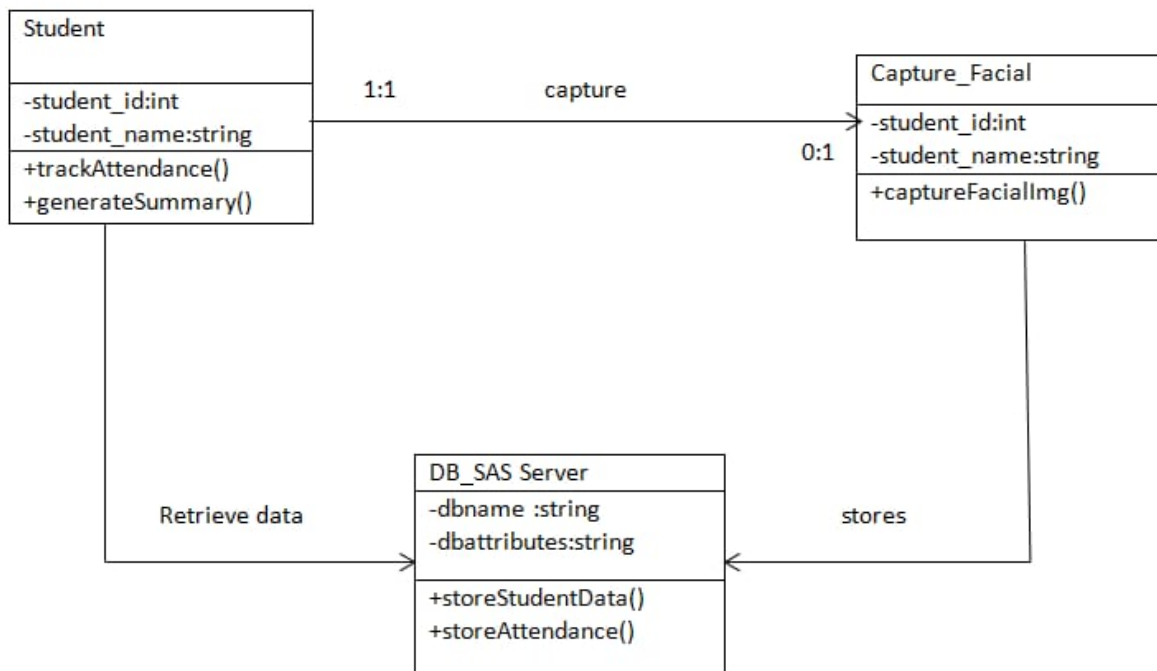


Figure 1.4 : Class Diagram

3.2.5 Data Flow Diagram

The DFD is also called as bubble chart. It is a simple graphical formalism that can be used to represent a system in terms of the input data to the system, various processing carried out on these data, and the output data is generated by the system. In a system, an activity diagram shows the overall flow of control.

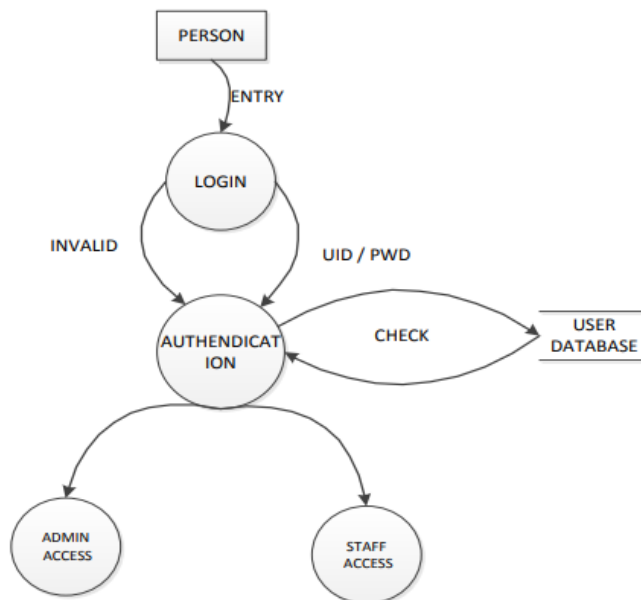
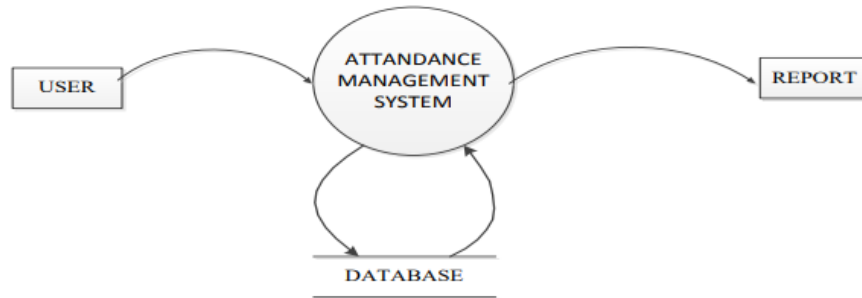


Figure 1.5 : Data Flow Diagram

Specifications:

Hardware: -

Ram - 8GB, Processor - i5(intel), Hard Disk - 500GB

Software: -

Operating System - Windows

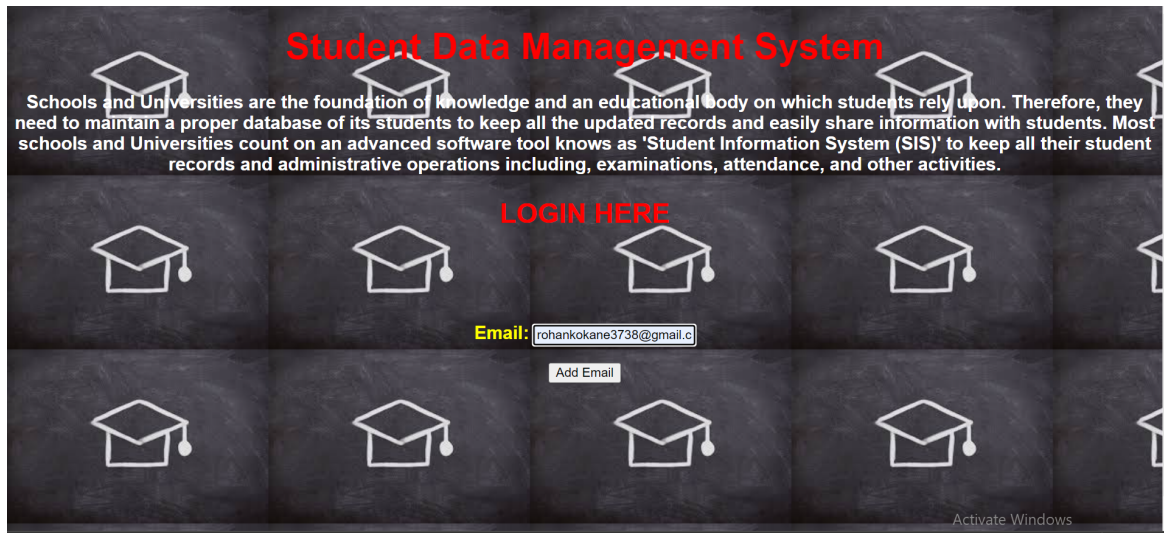
Tools: -

VS code, XAMPP

System:

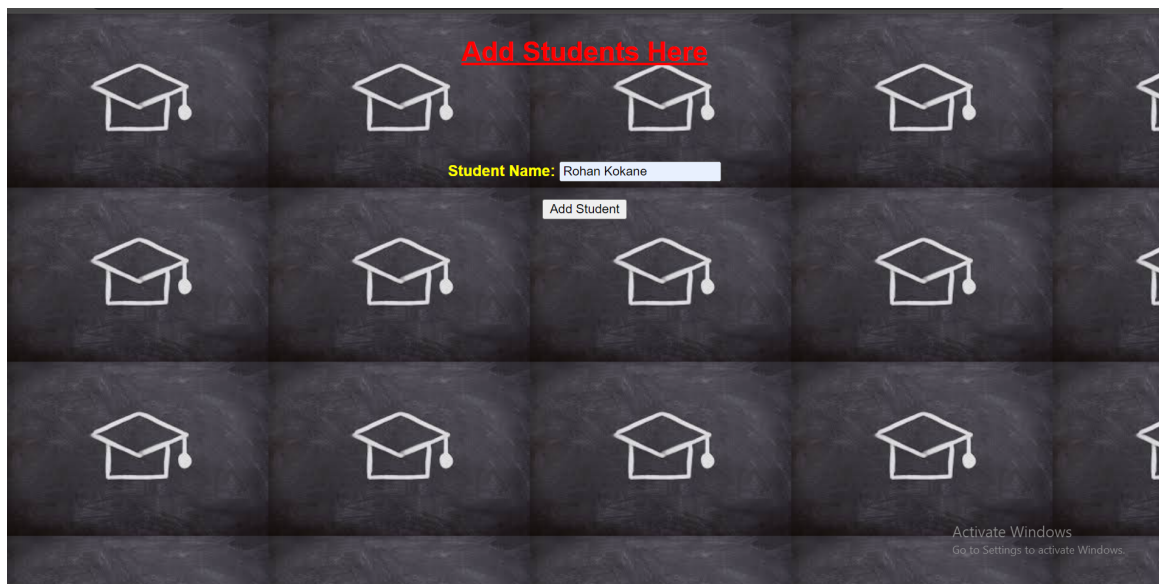
Login Page:

This is the initial page of the application. we can add data by clicking on the login on this page.



Add Student:

After clicking on the add student button we can add the student.



Add Student Attendance:

We can filling attendance of student in this page. In this page P for present , A for absent, L for leave, H for holidays.

Add Students Attendance Here

Student Name	P	A	L	H
KUMBHAR ADITYA LALASO				
PATEL AMAAN ASHPAK				
SAYYAD AMAN YUSUF				
LOHAR ANIKET MARUTI				
PAWAR DIPANJALI BHARAT				
SHINDE GAURAV PRAVIN				
YEWALE JANHAVI SAMBHAJI				
AWAGHADE KIRAN PRAMOD				
NIKAM KRUNAL ANIL				
SHAIKH MOHAMMADGAUS ANWARALI				
SHINDE NAMRATA PRAKASH				
WALUGADE NEHA NARAYAN				
JAMBHALE NETRA RAMCHANDRA				
KATKAR PRAYAS PRADIPRAO				
GUJAR PRERANA SHANKAR				
KOUJALGI RASHMI SANTOSH				
PAWAR ROHIT SANJAY				
KAVADE RUTUJA RAJENDRA				
GANDHALE SAKSHI PRAKASH				
JADHAV SEJAL NILESH				

Student Attendance View Sheet:

In student attendance view sheet we can see the student attendance data in monthly and weekly purpose.

Names	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri
KUMBHAR ADITYA LALASO	P	P	H	H	P	A	P	P	P	P	H																			
PATEL AMAAN ASHPAK	P	P	H	H	A	P	P	P	P	H																				
SAYYAD AMAN YUSUF	P	P	H	H	A	P	P	P	P	H																				
LOHAR ANIKET MARUTI	P	P	H	H	P	P	P	P	P	H																				
PAWAR DIPANJALI BHARAT	P	P	H	H	P	P	P	P	P	H																				
SHINDE GAURAV PRAVIN	P	A	H	H	P	P	P	P	P	H																				
YEWALE JANHAVI SAMBHAJI	P	P	H	H	P	P	P	P	P	H																				
AWAGHADE KIRAN PRAMOD	P	P	H	H	P	P	P	P	P	H																				
NIKAM KRUNAL ANIL	A	P	H	H	A	P	P	A	P	H																				
SHAIKH MOHAMMADGAUS ANWARALI	P	P	H	H	A	P	P	P	P	H																				
SHINDE NAMRATA PRAKASH	P	P	H	H	P	P	P	A	P	H																				
WALUGADE NEHA NARAYAN	P	A	H	H	P	P	P	P	P	H																				
JAMBHALE NETRA RAMCHANDRA	P	P	H	H	P	P	P	P	P	H																				
KATKAR PRAYAS PRADIPRAO	P	P	H	H	P	P	P	P	P	H																				
GUJAR PRERANA SHANKAR	P	P	H	H	P	A	P	P	P	H																				
KOUJALGI RASHMI SANTOSH	P	P	H	H	A	A	P	P	P	H																				
PAWAR ROHIT SANJAY	A	P	H	H	A	P	P	P	P	H																				
KAVADE RUTUJA RAJENDRA	P	A	H	H	A	P	P	P	A	H																				
GANDHALE SAKSHI PRAKASH	P	P	H	H	P	P	P	P	P	H																				
JADHAV SEJAL NILESH	P	P	H	H	P	P	P	P	P	H																				
BARGE SHIVAM ANIL	P	P	H	H	P	P	P	P	P	H																				
BABAR SHUBHAM DATTATRAY	P	P	H	H	P	A	P	P	P	H																				
GHARGE SIDDHARTH SHANKAR	P	P	H	H	P	A	P	P	P	H																				
KENJALE SMITA SANDESH	P	P	H	H	P	A	P	P	P	H																				
CHAUDHARI SONIYA MAHENDRA	P	P	H	H	P	P	P	A	P	H																				
BHISE SUSHAMA PANDURANG	P	P	H	H	P	P	P	P	P	H																				

This is the Student Attendance View Sheet.

Chapter 4

4. Timeline of Project

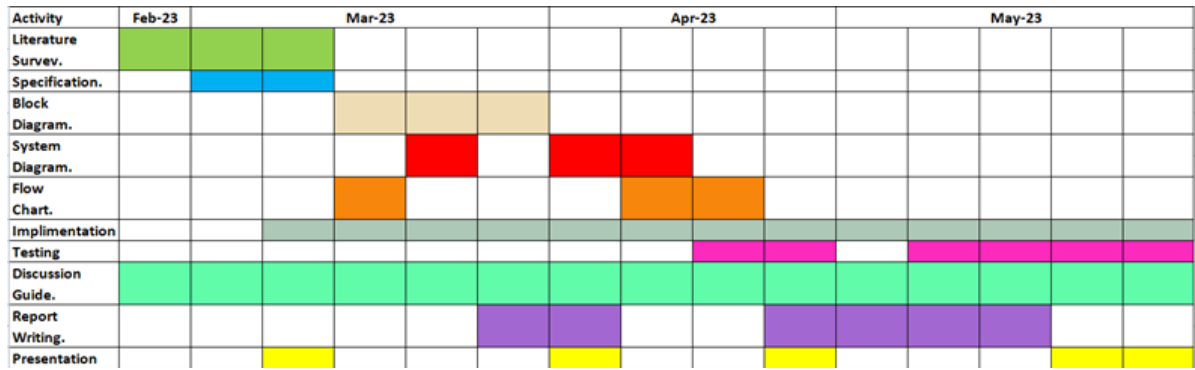


Figure 4.1: Gantt Chart

Chapter 5

5. Testing And Evaluation

The purpose of testing is to discover errors. Testing is the process of trying to discover every conceivable fault or weakness in a work product. It provides a way to check the functionality of components, sub-assemblies, assemblies and/or a finished product. It is the process of exercising software with the intent of ensuring that the Software system meets its requirements and user expectations and does not fail in an unacceptable manner. There are various types of test. Each test type addresses a specific testing requirement.

5.1 Unit Testing

Unit testing involves the design of test cases that validate that the internal program logic is functioning properly, and that program inputs produce valid outputs. All decision branches and internal code flow should be validated. It is the testing of individual software units of the application. It is done after the completion of an individual unit before integration. This is a structural testing, that relies on knowledge of its construction and is invasive. Unit tests perform basic tests at component level and test a specific business process, application, and/or system configuration. Unit tests ensure that each unique path of a business process performs accurately to the documented specifications and contains clearly defined inputs and expected results of the software so that only the end-user experience can be tested.

5.2 Integration Testing

Integration tests are designed to test integrated software components to determine if they actually run as one program. Testing is event driven and is more concerned with the basic outcome of screens or fields. Integration tests demonstrate that although the components were individually satisfactory, as shown by successfully unit testing, the combination of components is correct and consistent. Integration testing is specifically aimed at exposing the problems that arise from the combination of components.

5.3 System Test

System testing ensures that the entire integrated software system meets requirements. It tests a configuration to ensure known and predictable results. An example of system testing is the configuration oriented system integration test. System testing is based on process descriptions and flows, emphasizing pre-driven process links and integration points.

5.4 White Box Testing

White Box Testing is a testing in which the software tester has knowledge of the inner workings, structure and language of the software, or at least its purpose. It is used to test areas that cannot be reached from a black box level.

5.5 Black Box Testing

Black Box Testing is testing the software without any knowledge of the inner workings, structure or language of the module being tested. Black box tests, as most other kinds of tests, must be written from a definitive source document, such as specification or requirements document, such as specification or requirements document. It is a testing in which the software under test is treated, as a black box .you cannot “see” into it. The test provides inputs and responds to outputs without considering how the software works.

Chapter 6

6. Conclusion

In conclusion, implementing a comprehensive student data management system addresses the challenges faced in managing and organizing student information within educational institutions. By centralizing data, automating processes, ensuring data security, improving communication, enabling data analysis, and supporting scalability and integration, the system enhances efficiency, accuracy, and data utilization. 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.

Future Scope

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 are the future scope for the project.

Chapter 7

7. References

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