



# ATTENDANCE MARKING AND GRADING (AMG) SYSTEM

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**Abstract**— This study outlines the various processes and strategies used to collect needs, design, implement and evaluate a project in the Attendance, Marking and Grading (AMG) system. Problems with the current college system have been identified and addressed. The goal of this project is to solve some of these issues and, as a result, provide value to the current system. All participants' claims were collected, and we developed specifications, samples, and research-based software design on the basis of them. The project is launched as a Django-based website (python). We used the AMG method to troubleshoot existing difficulties using various types of information and tools that we obtained along the route. To lock it at the conclusion of the system, such as the system layout and the front beacon. The program has also been put through its paces, with good results. As a result, the findings can be incorporated into the existing system to help it operate better and alleviate some of its issues.

**Keywords**— Attendance, Marking, Grading, Stakeholders, AMG, Django.

## I. INTRODUCTION

The New Education 2020 Policy recognizes the role of new technologies in teaching and learning and is a positive step towards maximizing the impact of education in India. In today's competitive world, with ever-increasing working hours and limited time, teachers need tools that help them manage their precious classroom time properly. Instead of focusing on teaching, instructors often follow rules, such as daily attendance. Being present and subscribing to files & professionals makes daily presence a normal student activity and takes up unnecessary study time. To overcome such inefficient processes, there are various software programs available to speed up the existing process and reduce manual labor. Attendance and Grading Program, Attendance or digital attendance platform is one of them, which can be used to automate daily routines in schools or colleges. Additionally, it helps to keep accurate records and generate summary reports of student attendance. The purpose of the AMG System is to allow the administrator of any organization the ability to edit and retrieve student personal information and to allow the student to maintain his or her latest profile. It will also help to keep all student records, such as their id, name, postal address, phone number, DOB, etc. So all student information will be

available in a few seconds. Overall, it will make Student Information easier for the administrator and students of any organization. Every organization, large or small, has challenges in overcoming and managing student attendance information, grade details, Continuous Internal Assessment (CIE), and more. Each college or school system has different needs for students, so we designed a special presence that is the AMG System that will be tailored to meet specific administrative requirements. This design will help you plan strategies and help ensure that your organization is equipped with the right level of information and detail for your future goals. In addition, for busy managers who are always on the go, our system has remote access capabilities, allowing you to control your employees anytime, anywhere. These systems will ultimately allow you to better manage your resources. The main objective of this project is to reflect the needs of the AMG system and to help any organization store and manage personal data. This is a comprehensive program designed from the ground up to meet the needs of the college while guiding its students. This integrated information management system integrates daily activities in a university environment as teacher management, grading and grading are the communication channels between students and teachers. This minimizes data errors and ensures that information remains up to date throughout the university. Provides a single data source to guide your processes and for all reporting purposes. It has a simple and intuitive user interface. This ensures that users spend less time learning the program and thus increase their productivity. Functional security features ensure the privacy of data and thus increase their productivity. As we all know, the school consists of different faculties, such as academic sciences, financial management, library, events management, etc. Today, the application and use of information technology is more and more than before, each department has its own computer system. And perform its own tasks. By having a central system, they can interact with their reputation system by having a valid username and password. The AMG program is a web-based program that allows us to access all information about college, staff, and students. This app provides a visual tour of the Campus. Here we will find the latest information about students and sticks. This AMG program is designed to assist students and the lectures of the institution with regard to subject information, courses, attendance, classes, assignments, marks, and timetables. It also provides support so that intelligence can also evaluate its daily



schedule, can load assignments, and notifications to students. Here the administrator will manage student accounts and skills, making a schedule.

## II. METHODOLOGY

This project employed a variety of design concepts and methods. According to concepts such as classification of concerns, software is separated into discrete operational modules that operate and integrate coding. Students, teachers, and administrators each have their own module in the software. Each module will be thoroughly covered.

### Student

A semester is assigned to each student, and performance determines a grade. Each class is divided into sections and contains a set of lessons. As a result, all students in this class will learn these lessons. To log in, each student is given their own username and password. They'll each have a unique viewpoint. These concepts are explained in detail.

- **Student information:** Each student has access to only their own personal data. This information includes their name, phone number, address, and other personal details. They can also view their signed-up for and completed courses, as well as their grades.
- **Attendance information:** Each study will have a list of participants. This contains the number of classes they attended as well as the proportion of time they spent in each of them. It will be marked as red if the percentage of participation is less than a specified threshold, such as 75%, otherwise it will be shown as green. In addition, each lesson will include a clever notion of the day's presence that reflects the day and scenario. The information will be displayed in the form of a calendar.
- **Marks information:** For each subject, there will be five events and a semester-end exam. The AMG programme will be given points for each of these aspects.

### Teacher

Special classes are assigned to every teacher in the department. Logging in will require the teacher's login and password. The teachers' differing viewpoints are described in the following paragraphs.

- **Information:** Teachers will have access to data on the subjects and courses that they are responsible for. Credits and a summary of the programme are included in the course description. Faculty, semester, class, and student roster information are all included in each class's information. Teachers will also have access to information from their students and other teachers.
- **Attendance:** Individual students' attendance can be added and organized by teachers. Attendees will be given a list of students in each class and will be able to drop in at any time during the day. Next to each student's name will be two radio buttons, one for attendance and the other for absence. Additional classes will also be available. For

individual student or for the entire class, teachers can make all learners present.

- **Marks:** Teachers can give 5 points for each subject, and each subject can only be viewed by one individual at a time. In the event of a change, they also have the option of modifying the marks. Reports can be generated, including report cards for all grades and student averages.

### Administrator

Teachers can give 5 points for each subject, and each subject can only be viewed by one individual at a time. In the event of a change, they also have the option of modifying the marks. Reports can be generated, including report cards for all grades and student averages.

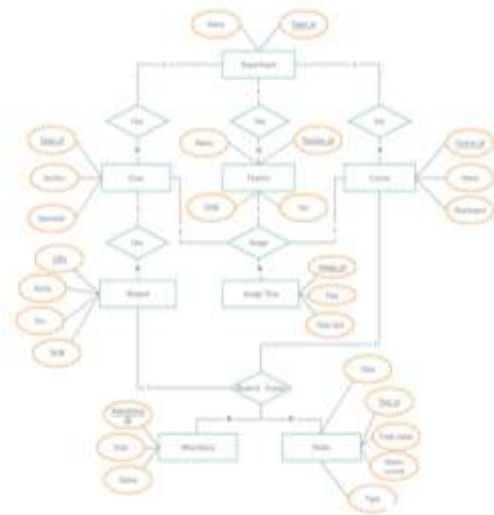


Fig. 1. Entity Relationship diagram of AMG system.

## III. MODELLING AND ANALYSIS

### Architectural design

To reflect the programme design, AMG software necessitates an architectural design. A set of hardware and software components as well as platforms for constructing a software development framework are described in this article. There are several built-in system components that run the program. A connector will facilitate collaboration, communication, and collaboration between components. AMG software is designed for computer programming. Shows a data-centric architectural style.

### Architectural style

In the AMG College software, the website stores data for all students, skills and profiles updated, added, deleted or changed. Therefore, it reflects the data-centric architectural style. In this structure, different components interact with the shared data store. Relatively independent and shared data structure access components.

The sections are:

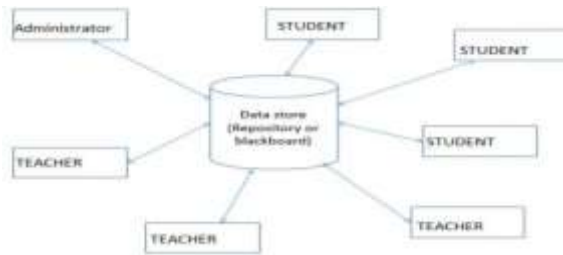


Fig. 2. Entity Relationship diagram of AMG system.

- **Central data:** Also known as a data warehouse or data warehouse, whose task is to provide the ability to permanently store data. Represents the current state. Maintain detailed student information, attendance and skills daily, salaries for all skills, etc.
- **Data accessors:** The data backup is one of the components, also known as the client. Data summarization works in a central data warehouse, performs statistics, and can return results. Includes students, skills, and supervisors. Students request access to the repository database and receive service requests. Members can access data from memory. Admin can add or remove customers.
- **Interface:** The data warehouse and the client working with the data on the web server are linked by the interface. One client's success is unrelated to the success of others. They are lonely. This database structure improves integrity. This means that existing components can be replaced and new client components can be added to the building without the permission or concern of other clients. Removal of additional students and skills may be done without the consent of other students and skills.

#### IV. EXPERIMANTS AND RESULTS

##### Login

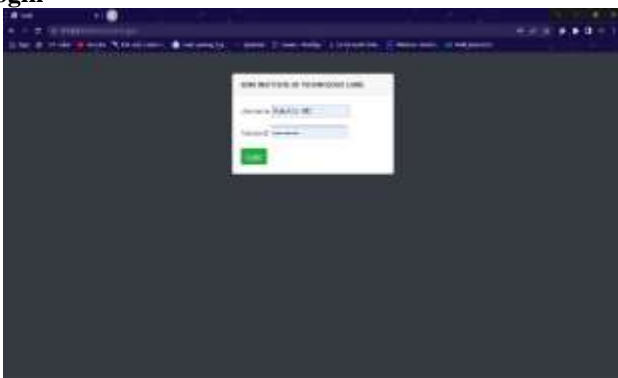


Fig. 3. Login Page.

Each college teacher is given a unique username and password by the administrator. The username is their teacher ID and a separate password is also assigned. The teacher may change the password later.

##### Homepage

After successful login, the student is given a homepage with their main categories, student attendance, marks, timeline and reports. In the attendance category, the teacher can include the number of different students on class days. There are tutoring arrangements and tracking/arranging attendance of each student. In the grading section, teachers can grade 3 internal exams, 2 events and 1-semester exam for each learner. They can also modify each entered tag. The timetable includes the lessons given by the teacher each day and the time in the form of a table. Finally, the teacher can make a report for each assigned class.

##### Attendance

A list of all the classes that the teacher is responsible for is available. As a result, three actions are provided in each class. On this page, courses or classes are sorted by list. At first, all scheduled courses will be listed from the beginning of the semester to the current date. Therefore, if there is a class scheduled for today, it will automatically appear at the top of the list. A date will be highlighted in red if it is present, and green if it is not. Classes can also be canceled, which will turn the day yellow. When it appears, it displays a list of pupils in that class, with two options next to them. These options are present as radio buttons or not. All nodes are marked as existing and the teacher simply moves to the missing students.

##### Extra Class

If a teacher misses class, they may enter the classroom. When entering an additional class, teachers simply specify the date and enter each student's attendance. After submitting an additional class, it will appear in the course's list of classes and therefore can be edited.

##### Student Attendance

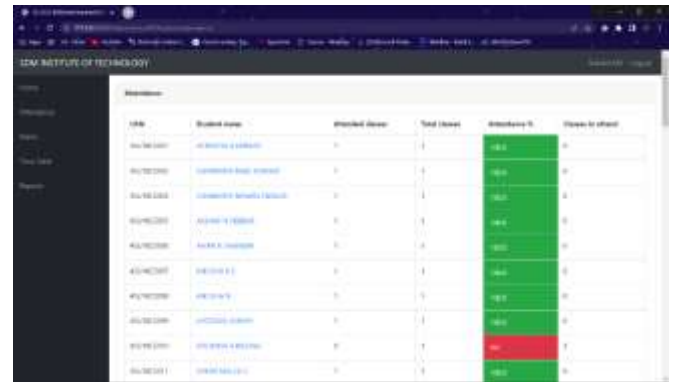
In a given class, the teacher can view the attendance status of the student list. Number of courses taken, total number of courses offered and percentage of participants indicated. If the student's attendance rate is less than 75, it will be displayed in red. Therefore, teachers can easily find out the list of students who are not eligible for the exam.

##### Student Attendance Details

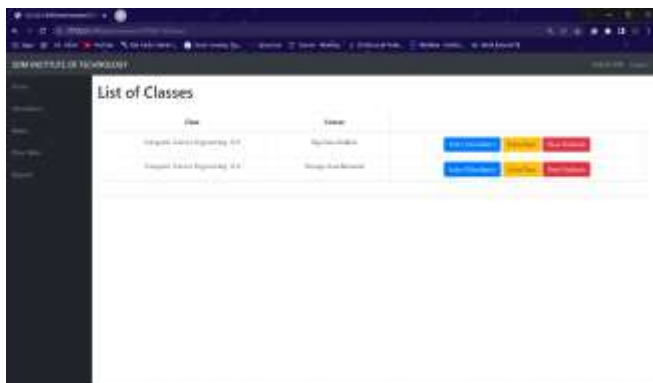
Teachers can view attendance details for all individually assigned students. In other words, in all classes conducted, it will indicate whether this student is present or not. Teachers can also adjust attendance for individual learners by modifying the attendance of each ongoing class.



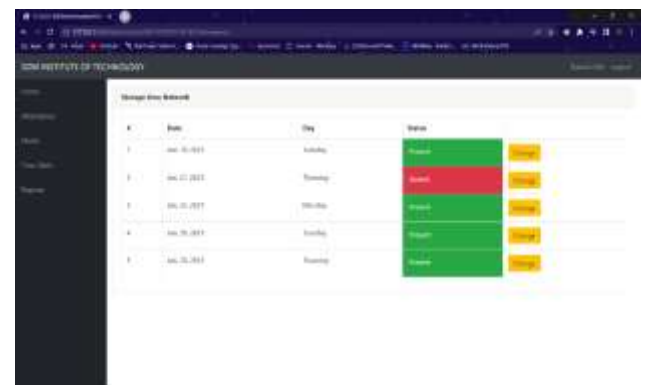
(a)



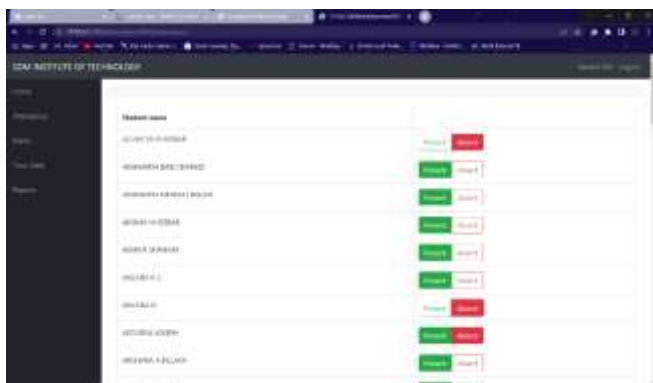
(e)



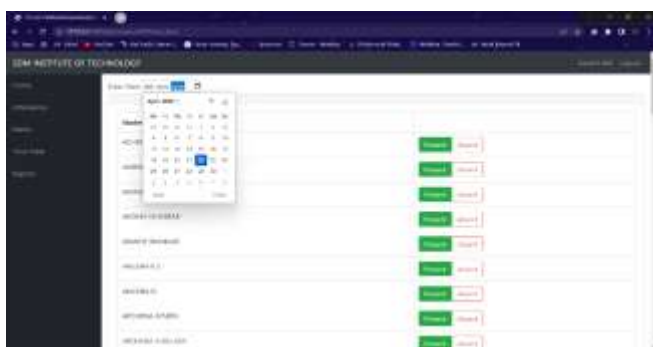
(b)



(f)



(c)



(d)

Fig. 4. (a) Teacher interface (b) List of classes (c) Student attendance sheet (d) Extra class attendance (e) Student attendance details (f) Individual student attendance details

## V. CONCLUSION

Making Use of Existing Resources Finding record information might be difficult, and there is no simple solution to back up student and staff records. The existing system suffers from a similar lack of automation. Our program's purpose is to reduce staff workload while also saving time. AMG System is a project that addresses issues specific to a company. It provides the reader with a lot of information and is quite straightforward to use. Based on their profile and function in the system, the AMG programme offers users with appropriate information. The goal of this project is to overcome challenges that the university system encounters on a regular basis. A major problem in maintaining and managing work with the manager is being overcome. Before that, it was difficult to keep a schedule and stick to daily routines. But by creating this web application, admin can enjoy the work, easily and save valuable time. Usage time is reduced and manual statistics are not included, reports can be returned whenever the user requests it. Use work efficiently, share effectively, and deliver accurate results. Storage will simplify user operations. Hence, an improved system will be helpful to the manager by making his task easier. This programme provides



automatic approvals, eliminating the need for human intervention. It is possible to monitor and control it from a distance. This cuts down on the amount of work that must be done. It is constantly up to date. The data gathered each year is saved and accessible at any time. The repository's data assists managers in making well-informed decisions that result in correct outcomes. User actions will be made easier thanks to the storage. As a result, a better system will benefit the manager by making his job easier and producing accurate results. User actions will be made easier thanks to the storage.

#### VI. REFERENCE

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