Student Performance Tracking System

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ABSTRACT

In recent years, the education sector has witnessed an increased demand for data-driven decision-making to improve student learning outcomes. A student performance tracking system is a software tool that collects and analyzes data on students' academic performance, attendance, and behavior to provide teachers, administrators, and parents with valuable insights into student progress. This aims to explore the design, development, and implementation of a student performance tracking system, its benefits, and challenges.

Introduction

In traditional classrooms, teachers have relied on anecdotal evidence, intuition, and subjective assessments to monitor student progress. However, with the advancement of technology, data-driven decision-making has become more accessible, allowing teachers to identify areas where students struggle and adjust teaching strategies accordingly.A student performance tracking system can collect, store, and analyze data from various sources to provide comprehensive information about student performance. This information can help teachers personalize instruction, identify learning gaps, and provide timely feedback to students.

It is a web application that will contain all of the student's records, such as attendance, academics, and extracurricular activities so that no effort of the student is wasted, and when it comes time to produce the results, the application will automatically produce the insights and assist the teacher in producing the results.

Literature Survey

1. Manual Work :

In this method the teachers need to keep the record of the whole thing i.e. attendance , marks and all other records .

This method leads to a lot of manual work and a huge amount of paper gets wasted for maintaining the records.

2. Attendance system :

In this method the user keeps the record of the attendance record of the student using a computerized method . But the record of the marks and all other things need to be kept manually .

This method reduces the manual work to a slight extent but the information gets scattered and needs to be managed .

3. Student Performance Tracking System :

This is the one platform solution for all the needs of the faculty. All the records of the attendance marks , and all the other required records.

The friendly user interface is easy to use and understandable .

Proposed Solutions

A student performance tracking system offers several benefits, including improving student learning outcomes, identifying at-risk students, and enhancing communication between teachers, administrators, and parents. The system can provide real-time insights into student performance, allowing teachers to intervene early and provide targeted support to struggling students. The system can also identify patterns of behavior that may be impacting student performance.

The project is basically a web application which keeps track of the attendance, academics and extracurricular activities records of the student and provides every record in an effective and hassle free way.

The system can be broken down into following components :

1. The Administrator Panel :

The administrator will be able to add student and teacher Administrator will be the authority who will decide the marks weightage and assign the teachers to the particular class .

2. The Teacher Panel :

The teacher will be able to see all the student list under him/her and provide them the marks of the subject to which they are assigned by the administrator.

3. The Student Panel :

The student will be able to see his/her data regarding attendance and marks.

Implementation

A high-level Python web framework called Django facilitates quickly creating safe and dependable websites. Since it is a full-stack framework, all essential functionalities are provided by default rather than as separate modules. Django, created by professional programmers, handles many of the difficulties associated with web programming, allowing you to concentrate on developing your app without having to recreate the wheel.

Student Performance Tracking System is basically a web application built using the django framework . To provide the levels of control and prevent the misuse of the facilities provided the system is divided into different levels of controls.

The system also tends to bring the transparency and promote student to bring out their hidden talent in extra curricular activities,

Conclusion

In conclusion, a student performance tracking system can provide valuable insights into student progress and support data-driven decision-making in education. The system offers numerous benefits, including improved learning outcomes, identifying at-risk students, and enhancing communication between stakeholders. However, implementing such a system requires careful consideration of data privacy, technical issues, and change management strategies. With proper planning and execution, a student performance tracking system can be a powerful tool for supporting student learning and success. There will be less paper work, and the student will be aware of his/her records and rating and will be able to improve them prior to the results.

Future Scope

The future scope of student performance tracking system is promising as technology continues to advance and education systems increasingly rely on data-driven decision-making. This application can be extended out as Artificial intelligence and machine learning: AI and machine learning can be used to analyze vast amounts of data and identify patterns that may be difficult for humans to detect. This technology can help personalize instruction and provide targeted support to students based on their individual needs and strengths.

References

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