

SMART ERP SYSTEM

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Abstract- SMART ERP System is a system that deals with colleges` event management. As we can find that nowadays various events are being organized on college-level either technical or non-technical. Various systems are developed for organizing events. Different systems focus on different features like some have a focus on a variety of events to be organized, some focus on personalization of dashboards, and other features like a feedback system for both students and teachers, certification record, student registration record, fee payment system. But still, various organizations are unable to find or develop a system suitable as per their requirements or which contains all the features in one place and this is the reason that various institutions are still doing mostly tasks manually.

The main objective is to create an event management site that can organize a variety of events(like workshops, training, competitions, etc), all in one place. The admin or project coordinator can add any event with image and description. The teachers and admin are also allowed to update and delete the events. The student can register in any technical or non-technical event online itself. It also provides personal dashboards for faculties and students, to keep track of their participation in the events. Provide a feedback system for both students and teachers, certification record system, and student registration record system. To automate the fee payment system. To reduce the manual efforts done by the students and teachers. To make the process of organizing and participating in events a much easier task.

Since the website provides complete information which is accessible online from anywhere, therefore, no student would miss any important event and could also get informed about prerequisites, the benefits of taking part in the event and also know about the teacher who would be the instructor for any particular event, and then the student can easily register if he or she wants.

On the whole, the system should be able to reduce the efforts done by teachers and students to participate and organize events.

This system can be extended to organize events on the national level so the events being organized all over India could be organized using this system.

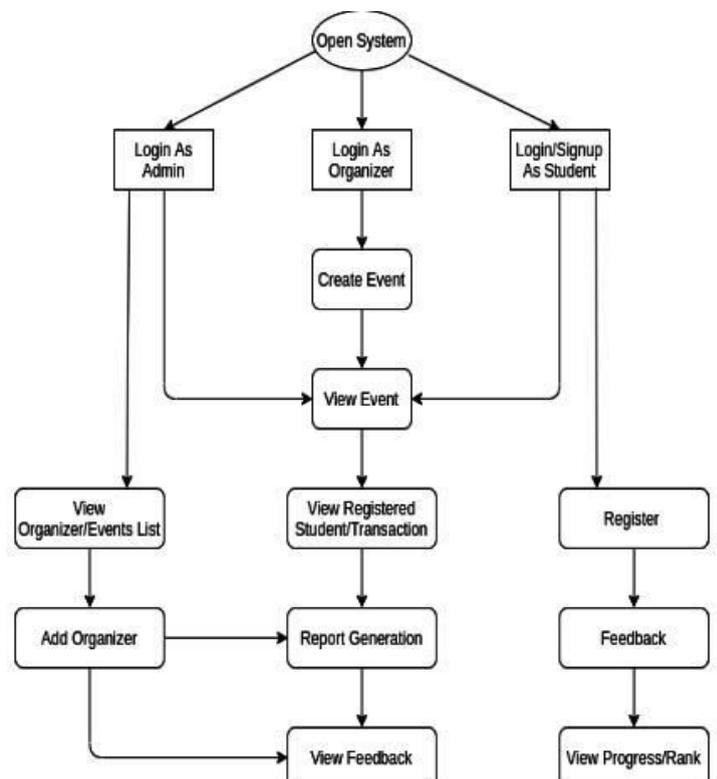
Keywords- College Event Organization, Events, Django

I. INTRODUCTION

The SMART ERP system has been developed to override the problems occurring in practicing the current system. This software is supported to eliminate and in some cases reduce the troubles faced by this existing system. No formal knowledge is needed for the user to use this system, thus it proves that it is user-friendly. This system can lead to error-free, secure, reliable, fast management, and organization of events. Also, the records related to any event, teacher, or student can be accessed any time easily, quickly, and without any data loss.

Information about any event can reach the students easily and several announcements are not required which easily gets missed by students due to which various students are unable to participate. This system would reduce the manual efforts done by teachers and students as well and make the event organization a much easier task.

II. WORKFLOW DIAGRAM





ER DIAGRAM

III. METHODS

An extensive literature review was performed. Related articles, web apps such as CodeChef, knowafest, and private institutions` websites, like AKG, KITE were taken into consideration. Peer Review and discussion with faculties also resulted as useful input.

IV. MOTIVATION

As we see nowadays the technology has advanced very much and so does the way of our doing work, the people have more technology and less time so everyone wants the work to be done at a faster rate with lesser efforts.

So with a system which can do several tasks on its own and can hence reduce the efforts done by teachers and students. It provides a user-friendly interface and a powerful data system which makes this system more useful. The data could be updated once and accessible to all anywhere at any time making the record-keeping process secure and affordable at the same time.

Nowadays applications and uses of information technologies have increased as compared to before, each of these individual departments has its own computer system to do their own functionalities. By having one main system they can interact with each other from their respective system by having a valid user id and password.

The main goal of the entire system is to provide a user-friendly interface and a powerful data system which makes this system more useful. The SMART ERP system computerized all the details of the college system which are updated by admin only can now be accessed by the students and faculties.

ERP on the college management system reduces most of the human work that was done earlier in managing the college events. Once the details are entered into the system by the authorized person then there is no need for other users to deal

with a separate section. Anyone having the authority can

maintain the records and reports. It is secure enough as per the user`s requirements. The main thing is that our system reduces the human efforts done manually.

V. RELATED WORK

A. CODECHEF.COM

It organizes training and competitions for students worldwide, and any student having an interest can participate in them online. Pros and Cons :

- *Personal dashboard available to keep track of events participated to date.
- *The option of online payment.
- *Certification record system available.
- *Registration and participation can be done by anyone worldwide.
- *No feedback system.
- *Less variety of events being organized.

B. KNOWAFEST.COM

It is an online platform that gives the liberty to organizations in India to organize the events and anybody can register and participate in them online. Pros and Cons :

- *It focuses on a variety of events and organizes them all over India.
- *Anybody can register and participate online.
- *No feedback system.
- *No personal dashboard to keep track of participated events.
- *No online fee record and certification record system.

C. COLLEGE EVENT ORGANIZER

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Event organizers create schedules for events using the android app interface and assign student volunteers at the time of schedule creation. The student registers online, for participation or coordinators. Event organizers can manage and update all the data related to events. College Event Organizer also provides facility to provide all information about all events which are being conducted. So that students remain properly informed regarding the events and can participate as per their interest.

VI. PROPOSED METHODOLOGY

The system consists of three actors:

- Organization(Admin)
- Faculty/Staff
- Student

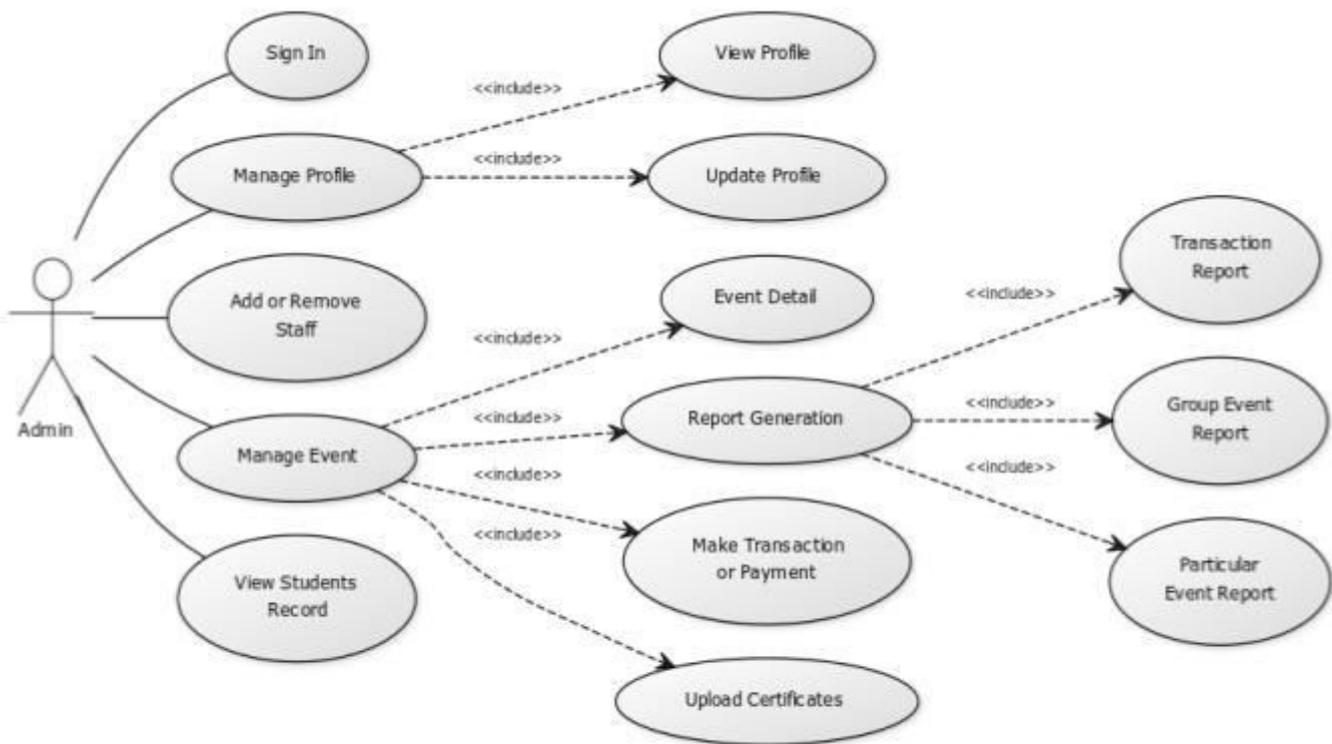
the number of seats present in each.

- **Report:** There will be an option to generate different types of reports, according to organization needs.
- **Registrations:** It contains information about the event and transactions for a particular student.
- **View Student Details:** It shows the information about the student and shows their interest area.
- **Staff / Faculty:** Only Admin have access to Add or Remove the Staff / Faculty member.

B. Faculty / Staff:

This module mainly work on,

- **Profile:** Personal detail of the Faculty is present.
- **Create Event:** There is an option to create events.
- **Report and Transactions:** There is an option to make the transaction and download the registration record in each event.
- **Attendance:** There is an option to mark the attendance of students.
- **Feedback:** Faculties/staff give feedback to the management regarding students' performance.
- **View Student Details:** The teacher can see any student's detail.



ADMIN USE CASE DIAGRAM

A. Organization (Admin):

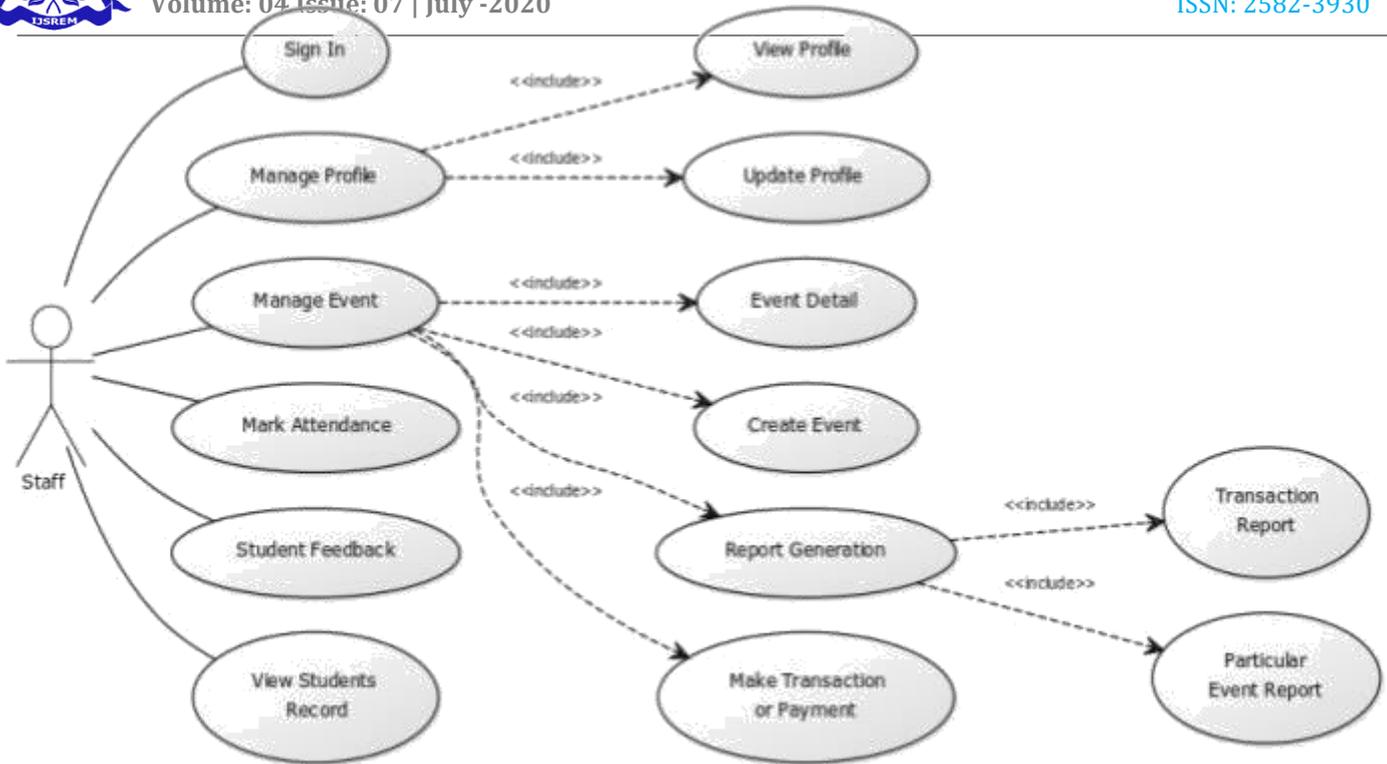
This module work on,

- **Profile:** This provides personal details of the Admin.
- **Event:** This contains information about the number of events or courses offered by the Organization and

C. Student:

This module work on,

- **Profile:** This provides the personal details of the

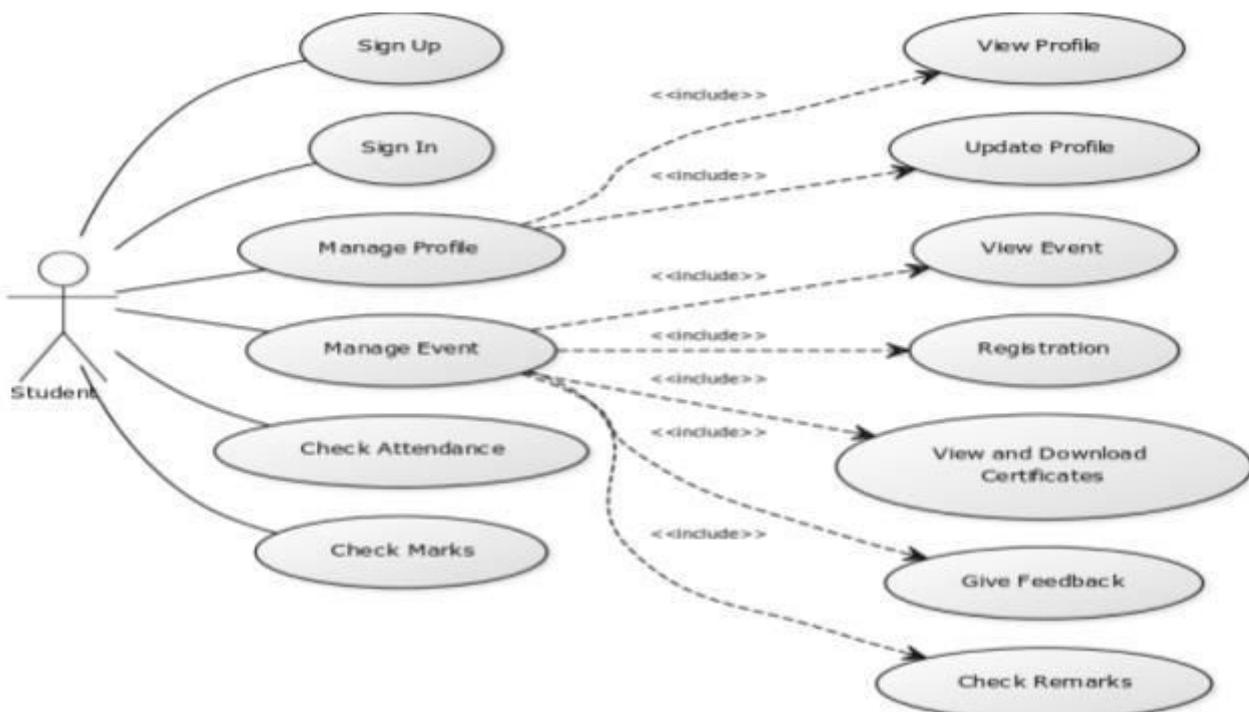


FACULTY USE CASE DIAGRAM

student.

- **Attendance:** This shows the attendance of students.
- **Marks:** This shows the internal/external marks of a respected student.
- **Certificate:** Shows their certificate with download option if any certificate is provided by the Organization.

- **Feedback:** Students give their feedback to the management.
- **Remarks:** Shows their remarks given by the teachers according to their performance.



STUDENT USE CASE DIAGRAM

***Hardware Requirements:**

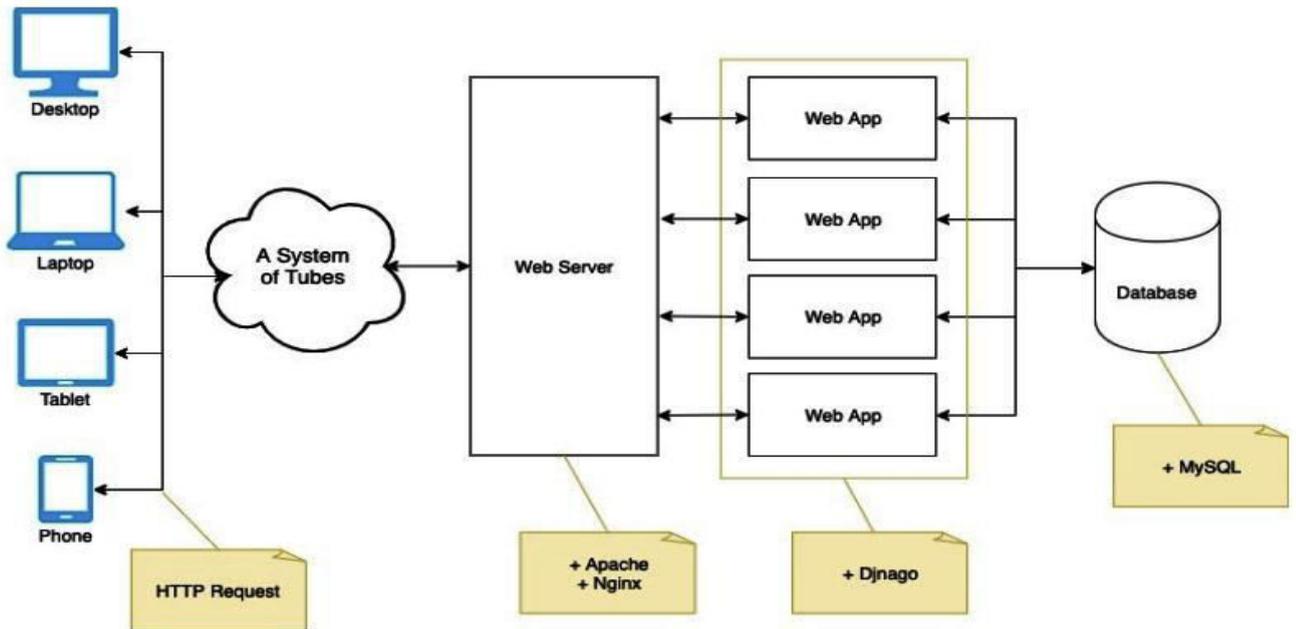
To be able to run the system, the minimum requirements of the hardware for this system are:

- CPU 2.0 GHz or above
- 8 GB RAM min
- Storage 50 GB min

***Software Requirements:**

To be able to run the system, the minimum requirements of the software for this system are:

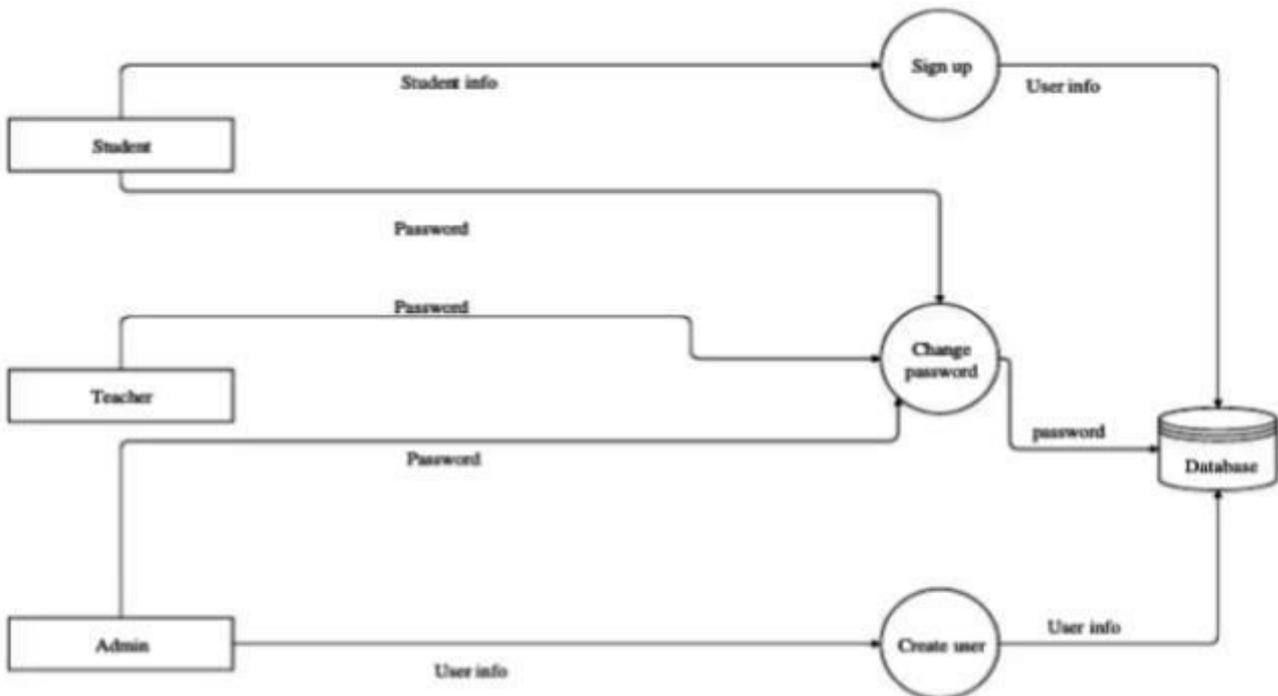
- OS: Ubuntu
- Framework: Django 2.2
- Web Server: Nginx / Apache HTTP Server



SYSTEM DESIGN

- Good Internet Connectivity
- The hardware used must have a competent firewall to secure the data in the system.

- Database: MySQL
- Language: Python 3.x
- Tools: PyCharm, Sublime, and FileZilla



AUTHENTICATION DATA FLOW DIAGRAM

- WYSIWYG editor: CKEditor Ecosystem
- Other: GitHub
- SSL Certificate
- One Email Account

VII. FEATURES

- Easy access to find out the details
- Organize a variety of events
- Automate the fee payment system
- Safe and secure data or information and files
- Lowering the task weight
- Increasing efficiency
- Better control
- Real-time reports
- Better student relations
- Good user interface
- Feedback System
- Certification records
- Expandable

VIII. CONCLUSION

Although there are various online platforms they lag one or other features which somewhere is important for either students or teachers. Therefore additional features like personal dashboards, variety of events, online payment, and feedback system are mandatory to be added as per the survey.

After interaction with faculties and students, this “Smart ERP System” appears useful for both teachers and students since it provides useful features and is accessible from anywhere worldwide.

The use of Django and python makes the system more secure and reliable and could be used by many people at a time. The use of bootstrap gives a more user-friendly experience and no prior knowledge is required to use the system and it could be extended for implementation on the national level hence also has future scope.

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