

A Thesis Project/Dissertation
on
ERP on School Management System

*Submitted in partial fulfillment of the
requirement for the award of the degree of*

B. Tech (CSE)



(Established under Galgotias University Uttar Pradesh Act No. 14 of 2011)

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INDIA 12, 2021**



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CANDIDATE'S DECLARATION

I/We hereby certify that the work which is being presented in the thesis/project/dissertation, entitled “**ERP On School Management System** ”in partial fulfillment of the requirements for the award of the B. Tech. submitted in the School of Computing Science and Engineering of Galgotias, University, Greater Noida, is an original work carried out during the period of month, Year to Month and Year, under the supervision of Name... Designation, Department of Computer Science and Engineering/Computer Application and Information and Science, of School of Computing Science and Engineering , Galgotias University, Greater Noida

The matter presented in the thesis/project/dissertation has not been submitted by me/us for the award of any other degree of this or any other places.

Suryadev Vindeshwari , 18SCSE1010448

This is to certify that the above statement made by the candidates is correct to the best of my knowledge.

Supervisor Name

Designation

CERTIFICATE

The Final Thesis/Project/ Dissertation Viva-Voce examination of Suryadev Vindeshwari has been held on _____ and his/her work is recommended for the award of B. Tech.

Signature of Examiner(s)

Signature of Supervisor(s)

Signature of Project Coordinator

Signature of Dean

Date: November, 2013

Place: Greater Noida

Abstract

The main objective behind the ERP (Enterprise Resource Planning) is creating a central system while in traditional approach is to do a manual work in paper. It's very difficult to manage all the records on paper and also very difficult to analyze records in any departments. A manual work are to lengthy and its very time consuming for the any department.

So that needs a central system which gives all analysis reports in few time . With centralized system any member in department can schedule or perform a desired task . All departments can access data as per administration permission.

With this system different class or department can view or manage data easily.

➤ **Tools and Technology Used:**

For Designing UI :**HTML , CSS3 , Bootstrap 5.**

For Backend & Scripting : **Core PHP, AJAX**

➤ **Conclusion and Future Scope:** ERP is a system that integrates business functions by managing organizational data. It is the most reliable system for the management data transparency and visibility

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Introduction

Project on: Distributed ERP on School Management System

Title : ERP On School Management System

We aim to design a ERP in the area of School Management System using Frontend tools such HTML, CSS, JS and Core PHP for backend Scripting And PHP - myadmin for Database.

School ERP is a feature or a program on the Internet to communicate directly among Internet users who are online or who were equally using the internet. ERP allow users to connect through school management over internet on manage data over internet. Therefore, this Web application multi platform to be used by many users. This web application in the manufacture begins with the collection of school data that will be displayed in the web and mobile versions.

The most important features of School ERP are:

- ❖ Easy To manage huge amount of data .
- ❖ Easy To Manage Teachers , Students , Parents.
- ❖ Transparent Finance Management System.
- ❖ Easy to Access student or teacher Information.
- ❖ User Control Distribution.
- ❖ Timed Authentication portal Authorization.
- ❖ Help School to manage activities like Online Examination, Assessment.
- ❖ And Manage Defaulter Students And Student Fee Dues

- ❖ Communication Feature Between Students and Teachers.
- ❖ Hassle Free System . Reduce rate of data loss

To increase efficiency of managing the **School Activities** (Like Result Generation , ID Card generation and many academic activities). It can help to utilize and find a single data from the huge amount of data. Manage the information of **Student Examinations**. Editing, adding and updating of Student and Teacher Records is improved which results in proper resource management of **School ERP**.

1.2 Formulation Of Problem

Managing a high school and bringing together departments and campuses to achieve the mission is always a big challenge for school management.

Most common problems in school management:

- Paper Based Process
- Offline Fee Payment
- Subject Management
- Result Publishing/Generation
- Communication and Collaboration
- Timetable Management
- Student Performance Monitoring

Educational institutions are burdened by cumbersome paperwork and manual processes, and they find it difficult to maintain records on attendance, fees, admissions, transport, etc., and track the information they need. In Paper based process these all things are very hard to manage or utilize data .

(1.2.1) Required tools for Implementation/Designing UI :

This project is completely proposed as Web Application. Here are some required tools mentioned below :-

For Frontend and Marking Purpose	Backend Scripting / Database
HTML -> Marking Up The project	Scripting/Logic -> Core PHP
CSS3 -> Styling User Interface	Data fetching -> AJAX
Designing UI- > Bootstrap 5, JS	Database -> PHPmyadmin v7.0(SQL)
Server: Local host(XAMPP/WAMPP/LAMP)/ Cloud C-Panel To Implement or Provide Service to any School .	

Literature Survey / Project Design

Over the last 10-15 years, organizations have been in growing numbers, turning to ERP (Enterprise Resource Planning) systems to consolidate their information technology infrastructure, streamline business processes, and help them become more efficient and effective. The ERP software market has been very lucrative for both software developers as well as consultant firms. These systems are very large and complex, and as such, often require expert assistance for successful implementation . Indeed, existing ERP research has neglected the higher education sector worldwide, even though most universities have implemented or are in the process of implementing an ERP system . ERP systems tend to be very expensive, take a relatively long time to implement, and the massive task can sometimes take its toll on the staff tasked with its use and implementation . There is more pressure to change business processes than in the past. These pressures include the need for long-term cost reductions, increased customer demands, increased competition for students and potentially, more governmental regulations. While some short-term cost reductions such as hiring freezes and budget reductions have been implemented, Universities who have worked very hard to develop ERP curriculum are now in dilemma of evolving their curriculum to reflect the evolution of ERP systems and industry requirements . Institutes that are achieving the highest level of process performance use more than just ERP implementations to improve their business processes. They are achieving above – average results by combining the functionality of ERP with the analytical capabilities of business intelligence tools and the self-service capabilities of the Web. And they are using these technologies to link transitions end-to-end and across departments . It has become extremely difficult to understand how to securely configure an ERP system and the myriad of products purchased to integrate with it—products like report generators, data warehouses, learning management systems, imaging systems, portals, and others . The overhead of managing access and authorization roles—for both the ERP and third-party software integrated with the ERP—is huge. Institutions said they had backed off from using role based security because the overhead of managing it was just too high .

Knowledge management challenges in ERP implementation

The simultaneous implementation of ERP and knowledge management systems in organisations implies some sort of challenges. While ERP systems are meant to increase the organisational efficiency by enhancing the information processing capability of the enterprise knowledge management initiatives aim at mobilising the knowledge through organised knowledge repositories of explicit knowledge and communities of practice as a means of sharing and creating tacit knowledge, having their overall focus on improving innovation capabilities by increasing flexibility. Zakari and Ahmad (2012) in the paper identify two major areas of concern regarding the management of knowledge in their study: managing tacit knowledge, and issues regarding the process-based nature of organisational knowledge viewed through the lens of organisational memory. The competitive advantage of organisation arises from its capabilities in internalising and integrating the adopted processes with the existing knowledge paradigms and harmonising the new system and the organisational culture towards getting the most out of the implementation effort. Sedera and Gable (2010) presented the research model, illustrating the hypothesised relationship between knowledge management (KM)-competence and enterprise system (ES-success) and argued that the higher the organisation's level of ES-related KM-competence, the higher will be the level of success of the enterprise system. Consistent with the literature reviewed they argue that the four knowledge management phases (i.e. creation, transfer, retention, and application) are distinct yet interrelated, with competence in each phase contributing to overall KM-competence in the organisation. Oztemel et al. (2011) proposed effective automated knowledge management systems including agent-based approaches, such as strategic enterprise resource management (SERM) together with active knowledge management models such as enterprise knowledge management model (EKMM) as well respective supporting systems in order to be intelligent enough in own operations. SERM is capable of handling corporate level strategic planning, traditional ERP systems, technology management, customer relationship management (CRM) as well as performance monitoring. EKMM on the other hand is designed to handle the corporate knowledge in a systematic ways in order to assure that the right knowledge becomes available to the right person at the right time. Neto and Morais (2013) propose a new approach to support the transference of the knowledge related to the software process to workers that need it. The proposed approach will support the software requirements engineering through the creation of an agent-based model to assist the development of intelligent agents that can realise the

knowledge needs, interact with the information systems and support executing the software developer tasks. Table summarizes the literature review on knowledge management challenges in ERP implementation with remarks

<i>Sr. no.</i>	<i>Authors</i>	<i>ERP selection process proposed</i>	<i>Remarks</i>
1	Zakari and Ahmad (2012)	Identified two major areas of concern regarding the management of knowledge in this specific type of project: managing tacit knowledge, and issues regarding the process-based nature of organisational knowledge viewed through the lens of organisational memory.	The three dimensions of knowledge to be considered are project management, business and technical knowledge. Future work through case study to establish the concept.
2	Sedera and Gable (2010)	Conceptualises, operationalises and validates the concept of knowledge management competence as a four-phase multidimensional formative index. The study results demonstrate a large, significant, positive relationship between knowledge management competence and enterprise systems success.	Further research is warranted, focusing on identification of potential theory to explain the strong positive relationship observed. Further testing in multiple industry sectors having ERP System suggested
3	Oztemel et al. (2011)	Automated knowledge management systems proposed including agent based approaches such as SERM together with active knowledge management models such as EKMM as well respective supporting systems in order to be intelligent enough in own operations.	More research requires to be done to develop a set of criteria for the assessment revising the existing sub-criteria.
4	Neto and Morais (2013)	A new approach to support the transference of the knowledge related to the software process to workers that need it.	The research work can be adapted for any other phase of the software process and also during ERP realisation phase pertaining to developments.

Organisations are under constant pressure from customers, shareholders, and suppliers to continuously improve and make better products quickly and efficiently. Competing in a dynamic environment and meeting global challenges requires agility. Successful companies must be able to respond quickly and cost-effectively to change. Organisations need to convert their industries into responsive, demand-driven, profit-making enterprises by optimising their operations. Their competitive advantage and ultimate survival depend

on the use of extended information system applications and/or technology. This has led to an increasing interest among vendors to improve future ERP-systems to support the end-customer organization even better using emerging technologies. The emerging technologies will introduce new levels of process flexibility, improve the transparency of ownership costs, and accelerate the speed of process execution. Below is a brief introduction of each of the above listed extended information system applications and/or technology. Literature review on ERP implementation challenges 399 Through exhaustive literature survey the following emerging technologies are identified in report by Hammerman (2011):

- Software as service (SaaS) – and, more broadly, cloud computing – represents an alternative deployment model that is much more predictable. SaaS or cloud deployment models will change application economics.
- Mobile technology including devices, software, networks and product distribution channels is evolving at breakneck pace. The potential of mobile applications to transform business processes hinges not only on the speed and convenience of mobility itself, but also on the unique capabilities of the devices to sense, respond to, deliver and capture information in real time.
- Package configuration tooling that is flexible, graphical and model-based – no coding required – is evolving and will become a way to differentiate between packaged application suppliers. Building out these capabilities may prove challenging, given the high degree of flexibility, variability and adaptability built into business process modelling (BPM) services.
- Platform-as-a-service (PaaS), a set of rapid application development tools for extending apps to the cloud, disrupts the notion of ‘build versus buy’ in applications. Instead of build versus buy, the application platform will enable ‘buy plus build’. Standard functionality plus PaaS extensibility means that ERP and other complex applications can be more effectively aligned with business requirements.
- Elastic application platform (EAP) are emerging as an application platform that automates the elasticity of transactions, services and data, delivering high

availability and performance using elastic resources. EAPs will deliver faster performance and be more cost-effective to use. Organisations will efficiently manage high volumes of transaction and internal data and will also draw insight from the vast data resources that exist in public and industry domains.

- Social communication networks in the consumer world are forcing application suppliers to harness this technology within, or alongside, business applications. In the near term – the next one or two years – social collaboration will sit alongside enterprise applications, as only a few enterprise application suppliers will harness it successfully in the context of enabling business processes. Effective use of social collaboration in enterprise applications and business processes will take several years to mature, eventually becoming a relatively ubiquitous and standardised feature.
- Mobile technology is being leveraged to enhance timely transaction handling and data collection, as well as access robust tools for management decision making in supporting SCM, ERP and complimentary systems. Not only must internal application requirements address the mobility needs of its users, but interaction with external entities (e.g. suppliers) must be considered, as well.

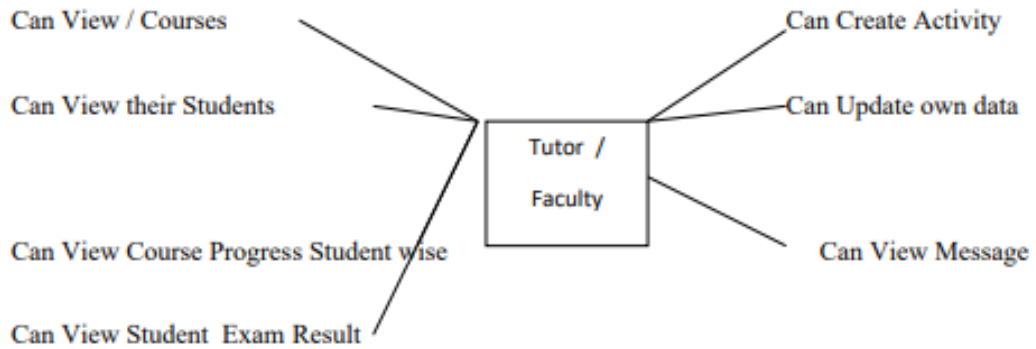
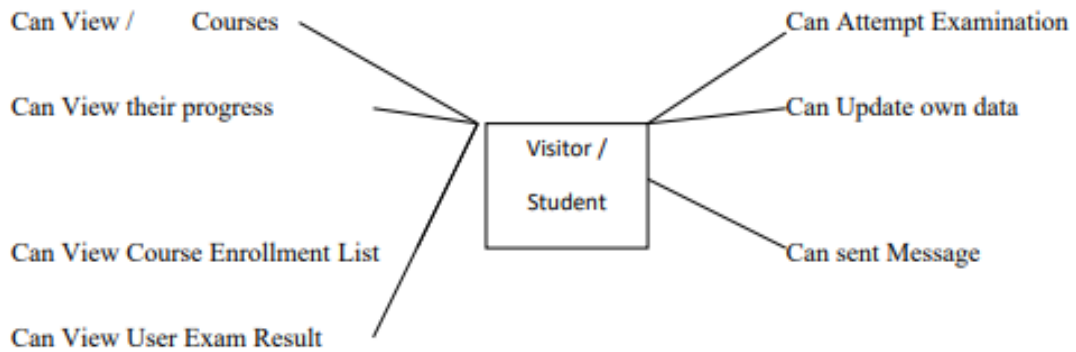
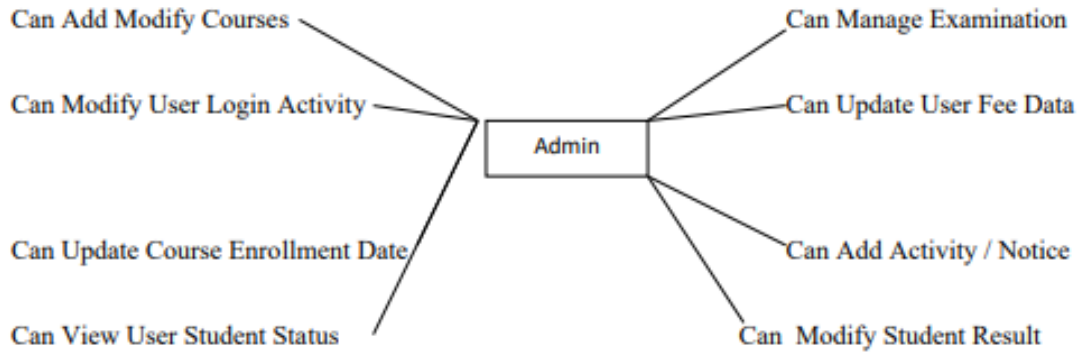
Hammerman (2011) reports trends for next five years to shape the future of enterprise applications and ERP that will introduce new levels of process flexibility, improve the transparency of ownership costs, and accelerate the speed of process execution. As outlined in recent research from Forrester, seven technologies will drive this transformation: SaaS, mobile, BPM, usability by making these apps user-friendly and adding advanced analytics capabilities, PaaS, social networks, and elastic computing. 400 S. Ranjan et al. This research work is very useful in our work as we have incorporated future technology trends also in our ERP selection framework. Martens (2013) analyzed that many ERP vendors debuted product or fleshed out their strategies for SaaS ERP in 2012 and further developments are set for future with focus SaaS ERP, SaaS offering in hybrid harmony with on-premises ERP, PaaS and infrastructure-as-a-service (IaaS) strategies. Given the success of SaaS CRM and HCM, SaaS financials seems the next area likely to resonant with a larger set of

enterprise customers. Addo-Tenkorang and Helo (2014) proposed ERP-SaaS model and attempts to propose industrial systems solution value-adding benefits including: low preliminary and anticipated ongoing costs, faster implementations and value-adding, affordable ownership cost, greater reliability, improved support, reduced IT complexity and improved business motivation. Further research and case study will establish the proposed solution and will be very relevant to industries keen on achieving competitive advantage of their supply chain network as well as R&D both in the industry and academia.

Check List before and after procurement of ERP System the desired features to be checked before implementing ERP system in Higher Education are as follows:

- Have you found that you can encrypt and decrypt the data which institution desired to without affecting the performance of the system?
- Have you found that you can put check on as many fields as desired without degrading performance?
- Do you feel that creating duplicate records during data entry is not so easy as to cause concern about the integrity of the data?
- Have you found that the systems the vendor provides to avoid the creation of duplicate records work well and are not so cumbersome or so detrimental to system performance that your institution declined to use them?
- Do you find it relatively easy to deactivate access to the system for a user? [5]
- Have you found that the hardware, software and network accesses used currently may fulfill the requirement for more than decade?
- Have you found that this system will work with myriad product of other vendors?
- Do they provide any training and maintenance part of the systems implemented in Institutes?
- Do they provide advance level-up gradation with new policies, Technology and challenges adopted by the management of Institutes?
- Do the vendors go for customization of ERP system as per the need of Institutions with different environments?

DFD Diagram :



Benefits of implementing ERP systems

- Improved management decision making
- Ease of expansion/growth and increased
- Increase productivity
- Headcount reduction
- Improves access to accurate and timely information
- Enhances workflow, increases efficiency, and reduces reliance on paper
- Tightens controls and automates e-mail alerts
- Provides user-friendly Web-based interfaces
- Streamlines processes and eases adoption of best business practices
- Establishes a foundation for new systems and integrates existing systems
- An ERP system creates a single version of the truth because everyone uses the same system.
- Knowledge Sharing
- Increases revenue
- Reinforces accountability and transparency
- Individual data security
- Interaction and collaboration with third Party for business.

Project Design

We design this project after reviewing all the school problems . If any schools runs or manage their all the activities it hard to manage data with 100% scalability.

And due to natural disaster all the physical data can be lose and it can ruin school student's data .And Advantages of this Project is To Save all the school information over cloud with 24/7 availability , 100% scalable.

And any one of in School member who is authorized by the admin can add/modify/remove any service .And all this can be completely monitored by admin or Principal.

We use here Unique PHP inbuilt encryption methods to convert critical information and then send it to server and by chance if anyone got information from Database that information is not understood by human.

Admin	Teacher	Student	Management
Can register Any User	View Students Details	View/Update Their Details	Person with limited function access
Can Update Authorization	View their timetable	See their Class Timings	---
Can Add/Assign Subjects	Can Manage activities for their subjects.	See activities/assessments added by teacher	
Distribute Permission for Marks Entry	Enter All Class marks for their assigned sub.	See their marks uploaded by teacher	

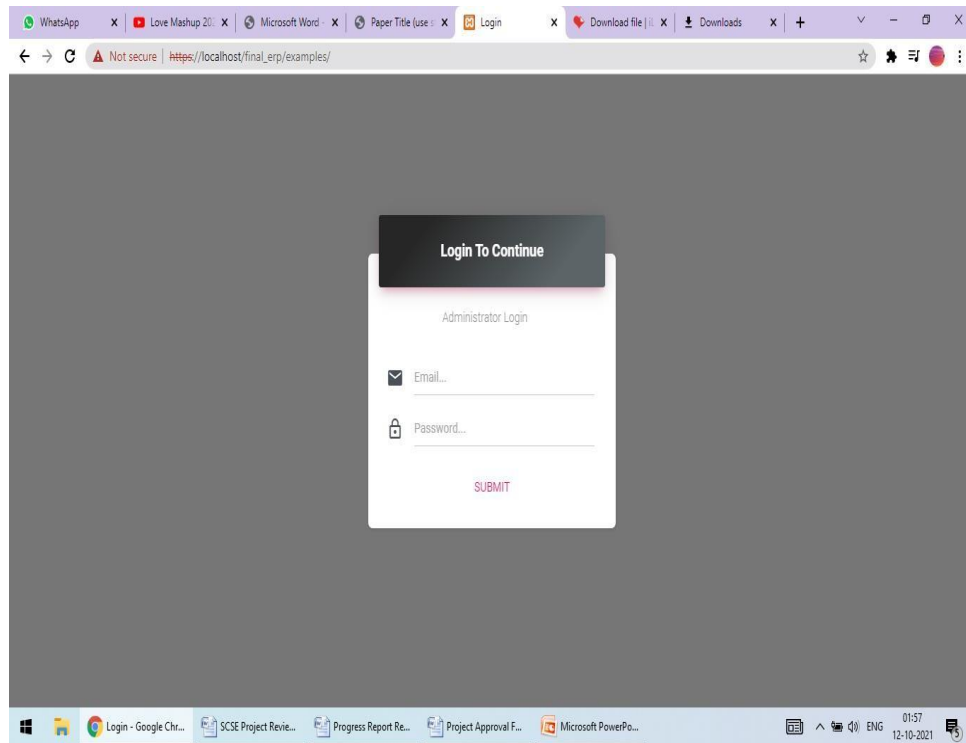
Publish / Update Examinations Details	Update Results if found any wrong entry	View Published Result	
Attendance Update/View	Mark Attendance	View their attendance on student portal	
Utilize and manage school data	Download Student performance report	-----	

Merits of the Proposed System

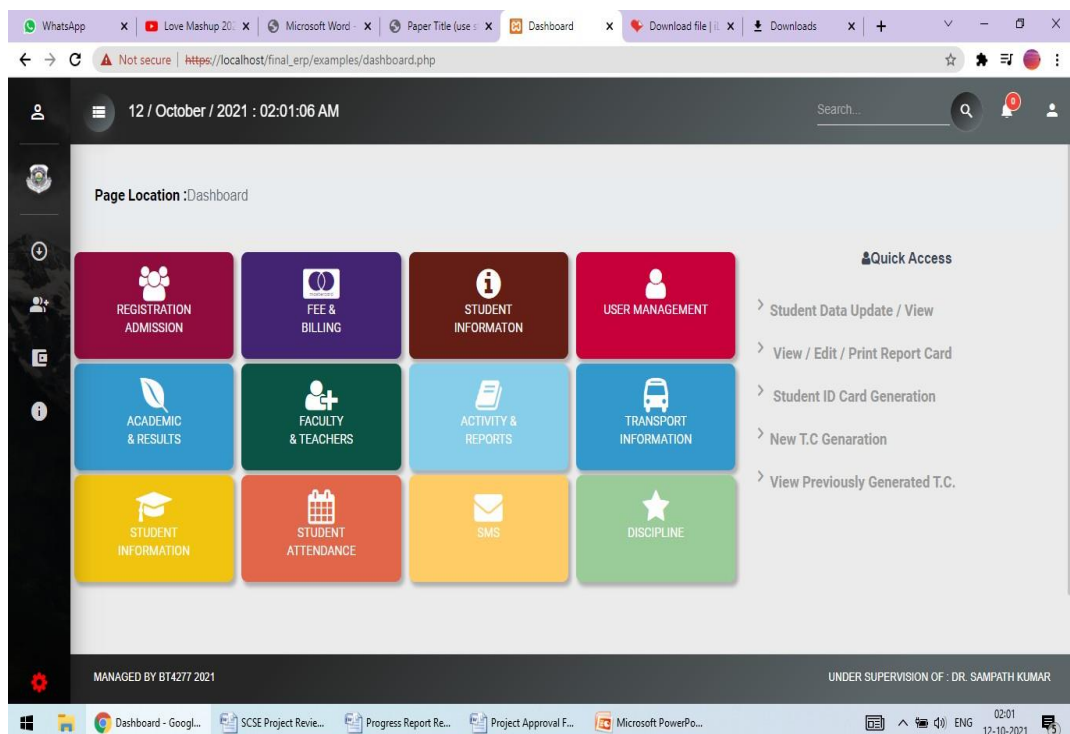
1. Reduce Data Loss
2. Increase Students Performance
3. Easy to Collaborate Parents/Teachers /Students/Principal.
4. Easy to manage results
5. Performance Monitoring
6. Complete Report
7. Easy to manage user information
8. User Control distribution
9. Timed login System

Working of project

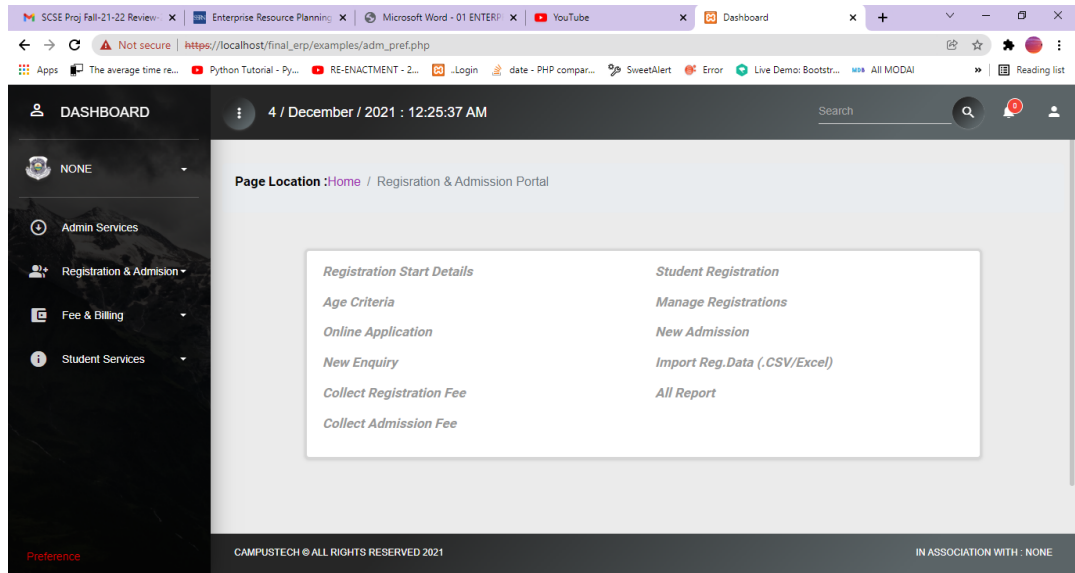
Few Screens of Implementation :
Administrator Login Screen ::



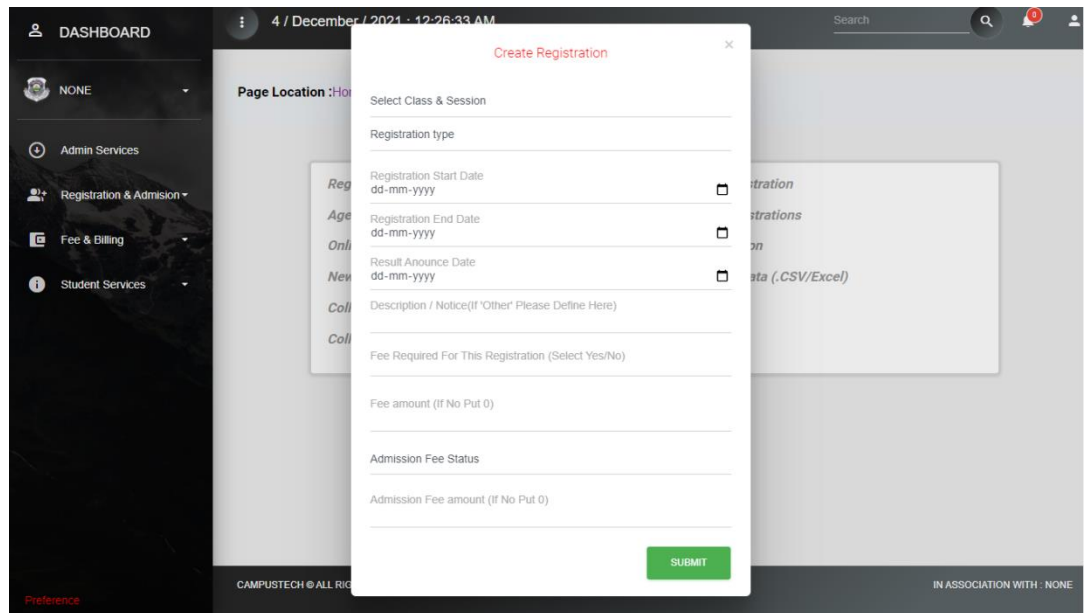
Admin Dashboard :- Running
On Localost -XAMPP



Student Registration Menu



Modal View:



Grid View Of Implemented Screens

Student Registration Form

All Active/Closed Registration Note: Only Academic Registration Will be listed Here

Sr.No	For Class	Session	Start Date	Description	Result	Fee	Status/-Closed
1	LKG	(2025 / 2026)	2021-10-16	NONE	2021-10-22	998	NOT ALLOWED
2	12th	(2021 / 2022)	2021-10-15	NONE	2021-10-22	500	NOT ALLOWED
3	10th	(2021 / 2022)	2021-10-09	NONE	0000-00-00	150	NOT ALLOWED
4	8th	(2021 / 2022)	2021-10-08	NONE	2021-10-30	150	NOT ALLOWED
5	8th	(2021 / 2022)	2021-09-09	NONE	2021-10-02	100	NOT ALLOWED
6	3rd	(2021 / 2022)	2021-09-07	NONE	2021-10-02	500	NOT ALLOWED
7	9th	(2021 / 2022)	2021-08-25	NONE	2021-08-27	0	NOT ALLOWED
8	11th	(2021 / 2022)	2021-08-25	NONE	2021-08-27	0	NOT ALLOWED

Application For - 6th Required Fee Amount - 100

Personal Details

First Name Middle Name Last Name

Category dd-mm-yyyy Select Religion Select Gender

Contact Details

Father Name Title Mother Name

Father Mobile Street/locality

Address

City State ZIP Code

Prev-School/Other

School Name School Address

Score/Percentage Blood Group

Email Student Address

Student Information & Fee Collection

Registration ID:

Student Name:

Father's Name:

Mother's Name:

Previous School:

Date of Birth:

Status:

Fee Status:

Select Date:

Mode Of Payment :-
 Cash (On Campus)

Page Location : Home / Fee Dashboard / Fee Setting / Preference

Fee head (Add To Class)

Admission Fee Collection Pop-up

Fee Preferences / Setting

None, CHUPPEPUR, CHHATARIPUR, VARANASI, U P 221003

Contact : 7845218754
WEBSITE :- NONE

Fee Head Add

Select Class

SELECTED CLASS 9TH

Select Fee Head

Select Fee Type / Head

Fee Type

Mar Apr May June July Aug Sept Oct Nov Dec Jan Feb Total

Pay Typ

Fee Structure Setup Page

Dashboard - Google Chrome
 Not secure | https://localhost/final_erp/examples/fee_ddsh.php

NONE ,
 CHUPPEPUR , CHHATARIPUR, VARANASI , U P 221003

Contact : 7845218754
 WEBSITE :- NONE

Search Student / Scan RFID Card

Enter Student Registration Number Enter Student Date of Birth Select Class To Enlist All Student

REGISTRATION ID / RFID DD-MM-YYYY SELECT CLASS SEARCH / VALIDATE

Student Information

Registration ID : 2 Class NUR

Student Name: ASHOK KRS MAURYA Admission Status : Admission Colpleted

Father Name: KASHI NATH Reg. Date : 2021-08-21

Mother Name: MRS sdf Transport Status : Applicable

Selected Month For Bill May

Amount	Fee Type	Prvious Year Due / Previous Month Due
Total :	Billing Month : May	Due Details
		Total Amount Due Amount Description Action

BT4277_RPT - Micro... internship Data Login - Google Chr... Dashboard - Googl... Dashboard - Googl... Untitled - Paint

ENG 16:53 18-12-2021

Fee Collection Page

CONCLUSIONS

The benefits and impact provided by ERP systems need rigorous evaluation. Before and after implementing ERP system in organization check list like functional and non-functional specification should be prepared for the readiness. The ERP systems should provide micro-level decision making analysis for the top management of organization. Most existing evaluation studies are focused on implementers' specific groups and not vendors or consultants specific groups. The evolutionary nature of ERP usage should be increased from individual – collaboration – business partners – assist in a organization for Enterprise Edition. Customization of ERP systems should be minimal which will help for successful implementation; more customization affects the structure of ERP systems which will increase the project time, ruin schedules, introduce new bugs into the system, and make the upgrade to the vendor's new released software harder. There is lot of scope for the researchers were they contribute on before and after ERP system implementation check list preparation and evolutionary nature of ERP system usage as Enterprise Edition for Organizations. More literature review articles are expected in coming days as the field is becoming more mature in the integration of emerging technologies such as social media, mobility, analytics and cloud, together called SMAC. Even though we have presented through this work challenges faced with respect to perspectives of technology selection, change management, knowledge management, and emerging technologies, more review of articles on ERP implementation challenges can be explored for wider perspectives. The ERP research area is diverse and very broad. The field of ERP will certainly continue to mature and even more in the emerging technologies. Many whitepapers on emerging technologies and ERP implementation have been identified which seems to be interesting to both the researchers, businesses and industrial organisations as they are potential areas for future research. Development of a ERP technology selection framework will also be attempted to balance the modern age corporate aspects like risk mitigation, integrating

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