

Customizing Technologies For Business Ventures using Enterprise Resource Planning

Akash.Rajanna
M.Tech,Citech

Dr.Suresh.L
Principal,Citech

Abstract - Technology keeps growing every second, and even as we speak there are many different companies that come up with various ideas for the betterment of the society which play their specific role in their own respective domains. In this paper we focus the concept of Integrating technologies of Cloud and Application Building using the current mobile Operating system market leader "Android" in the educational sector . This Application bridges the gap between the Teaching Faculties and the students that are enrolled to a particular college for a specific course. This application helps to maintain a unique way to monitor the day to day activities of both the Faculty and the Students and also reduces a lot of redundant paperwork.

I. Introduction

Enterprise resource planning is a software which integrates, the most fundamental business processing functionality across different functional areas and business units, in a single software system. It generally consists of a single or multiple database and accessible through a unified interface and channel of communication.

These Channels of communication are generally using domains of Cloud computing or Big Data Analytics using tools such as Hadoop and Hive through the computational languages like Java, R or even Python , or through a customized application that can used on Smartphone's built using Android technology.

Enterprise resource planning implementation generally solves various types of business problems for various business sectors like the Business-To-Business or Business-To-Customer based on the requirement, or by customizing and integrating off-the-shelf enterprise software packages for various Individual; customers based on what they need and how it has to be implemented for their particular requirement. After building an Effective, efficient implementations the project can bring a customer good returns, improve implementation consultancies' profit margins, and sustain software vendor's growth.

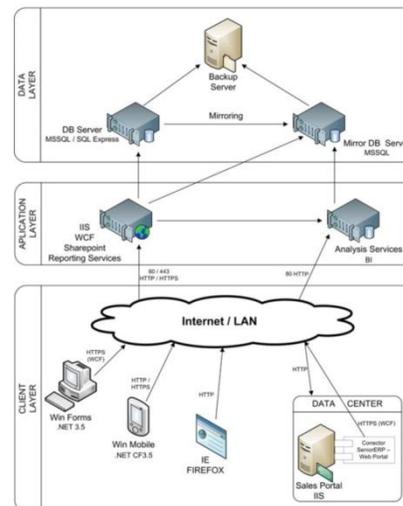
This paper represents a framework to investigate how we choose a particular domain for our ERP venture software selection criterion which show the software that are linked to software needed, information required and ERP success in the ERP implementing process.ERP systems are generally information systems applications that integrate information and information-based processes within and across functional areas in an organization.

To benefit from IT implementation, it is necessary that the intended level of usage of the technology is achieved. Here the concept of having a system that which is used to have a mutual integration of understanding between a the Academic faculties and the Students.

We Propose to build an application that is integrated onto the Smartphone's to ease various problems of faculties and to also bridge a gap between the students and the faculty.

II. Existing Model

The proposed model of the faculty and student already exists built on the Standard Direct Web architecture platform that is as illustrated below



This architecture has a three phased structure they are

I. Client

- II. Application
- III. Data

The client architecture generally involves the end users who use third party applications given to them on their Smartphone or computers based on their operating system. They use this browser software application to log into their respective domain by entering the domain name of requested web page.

The application layer generally uses the WCF (Windows Communication Foundation), IIS(Internet Information Server)7.0/7.5/8.0 which translates the requested domain address to IP translated address(Ipv4/Ipv6) and connects to the respective data server.

The final layer consists of the data servers which based on the requests and permissions enables the data transaction to take place between the user and the data server. It also keeps the back up by using Mirroring storage which duplicates the data transacted for every server.

III. Disadvantages of the Existing System

The existing system proves to be an efficient system but also comes with its set of disadvantages which are

I. Customization

While this is a potential advantage, it can just as easily become a disadvantage if handled incorrectly.

II. Direct Cost

This is by far the biggest disadvantage to ERP software. The up-front cost of the entire implementation process can be prohibitively high, especially for small-to-medium-sized businesses. This includes the full process of planning, testing, configuring and customizing the software as well as the cost of actual implementation

III. Indirect Cost

Financial cost is not the only associated expense with ERP implementation. Businesses must also take into account the opportunity cost of manpower and time necessary for a successful deployment.

Planning out a realistic timetable will give you a better idea of whether or not the cost is worth it for your company.

IV. Duplication Data

The issues of data having to copy the same data form one server to another may cause duplication if the same data is kept repeating as a request from the users and this data is over written in the back up drive causing Duplicate and redundant copies.

One Solution to this is by using a cloud storage server that uses De-Duplication mechanism software's such as Anti-Twin or using another cloud service providers that employ BaaS (Back-Up as a Service).

V. Portability

This problem occurs only to the back end servers during the shifting of the server nodes due to the lack of proxy's this period the availability of the service may not be provided.

This can also be overcome by employing various cloud infrastructure Management providers that give the availability of data via proxy servers even when the main servers are down for maintenance.

IV. Proposed System

The current scenario of ERP emphasizes on the software architectures that help focus on bettering the ability to overcome problems that were faced in the predecessor architecture. The following trend of technologies are used to build the latest ERP model architectures are

- I. Enterprise Cloud Computing Architecture
- II. Big Data Architecture for CRM and ERP.
- III. Application Building on Android operating system for ERP based on the operation and requirement.

The following paper illustrates the concept of building an application for Optimizing and Streamlining Teaching Process using an application that runs on Android technology.

Application on smart phones is the current trend that ruled the past decade by simplifying the concept of doing the basic activities such as shopping for groceries or ordering food from a restaurant in a single click thereby minimizing effort or the buyer and ease of tracking and handling by the seller and also reducing the usage of paper thereby creating a eco friendly environment.

The Application is built by carefully observing the drawbacks of the pre-existing domain and to build a concept that overcame most of the disadvantages and proved more simple to use by providing a user friendly interface.

The concept here is to gap the bridge between the Faculty and Students as well as the parents and to build a mutual understanding relationship between them so as to make the students overcome their greatest fears and their problems in academics and make them excel in their respective chosen domain of interest.

Our Application her focuses on A service-oriented architecture (SOA) in which application components provide services to other components via a communications protocol, typically over a network. The application when compared to the web architecture is more lightweight and simple to use and provides a better look and feel to the simulated environment. The application architecture is a blend which uses the technologies such as cloud, Web service and finally Server maintained repository and the net which should be flexible to be portable to any device that uses the android working platform.

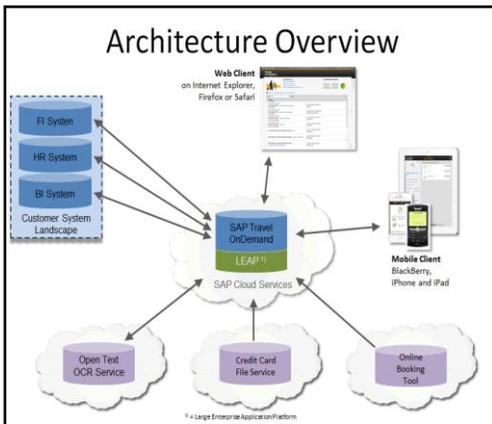


fig: cloud/web based application

The application is flexible that it can be run on any version of android even after updating the current version of the Android platform the application is made compactable to work on the predecessor platform or an update will be given to make it compactable for the current version.

The application would consist of three tires which mainly concentrate on

- I. Faculty
- II. Students

III. Parents

The Faculty domain would consist of 2 different dashboard where the first one would only be for faculty and the other for students. Updating the faculty dashboard would be visible only to the staff and if updated to the student dashboard then it can be visible to both the Student tire dashboard as well as the parents. The Login is used to differentiate between the faculty and student login. The students and parents can only view the dashboard to see the details of the ward uploaded by the faculty.

This would have better interaction between both the student and faculty this also reduces redundant paperwork and thereby making a eco friendly green campus. The main advantages of having a web/cloud application are the following

Benefits of Cloud Infrastructure versus Cloud Applications		
Cloud Infrastructure	<ul style="list-style-type: none"> Scalable Pay for use Reduced IT costs 	<ul style="list-style-type: none"> Scalable Pay for use Reduced IT cost Access from anywhere No client software Remote access with no VPN Easy to maintain Cross platform compatibility Faster to implement Involve everybody
Standard Infrastructure	Business as usual	<ul style="list-style-type: none"> Access from anywhere No client software Remote access with no VPN Easy to maintain Cross platform compatibility
	Standard Application	Cloud / Web Application

Conclusion

Organizations like a college need a concrete and concise picture when they have decided to build an application using an ERP system. The given application for college would have a better impact on the ecosystem and on the college by ensuring the better relationship in between the faculty and the student:

figure: Benefits of Cloud/web Technology

References

- [1] Celeste See Pui Ng, Guy Gable & Taizan Chan An ERP Maintenance Model.2002
- [2] Harris Wu and Lan Cao Community Collaboration for ERP Implementation.2009
- [3] W.-H. Tsai, P.-L. Lee, Y.-S. Shen, C.-C. Yang The relationship between ERP software selection criteria and ERP success. 2009
- [4] Qingshan Deng, Xin Jin, Aihua Yin, Baodong Tu Design of Teaching System of Compound ERP Talents.2010
- [5] Shruti Nagpal , Sunil Kumar Khatri, Ashok Kumar Comparative Study of ERP Implementation Strategies.2015
- [6] R. Govindaraju, R.T. Salajar, D.R. Chandra, I. Sudirman, Acceptance and Usage of ERP Systems: The Role of Institutional Factors in ERP Post-Implementation.2015.