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Recruiting App - A Custom App development in Cloud

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Abstract
Cloud Computing is one of the upcoming Internet based technology. It is been considered as the next generation computing model for its advantages. It is the latest computational model after distributed computing, parallel processing and grid computing. This paper presents about cloud computing technology, platforms, its advantages, Force.com platform and The Recruiting Application developed using cloud and Force.com platform. As cloud provides tremendous benefits it is said that cloud computing will provide the next generation of computing services.

Keywords: Cloud Computing, Internet, Technology

1. Introduction
Relining is a process of resurfacing of a denture with new base materials to make it fit more accurately. While rebasing is a process of replacing the entire denture base material with new material. Relining is indicated when there is resorption of the ridge and denture lack retention and stability. It is for refitting of the impression surface. Rebasing is indicated when there is discoloration of denture base or porosity of denture base. Reline is defined as the procedure used to resurface the tissue side of a denture with new base material, thus producing an accurate adaptation to the denture foundation (GPT-8).

2. Literatu Review
Cloud Computing is a technology where the computer resources like hardware and software are provided as a service over the internet. The information used is stored on computers somewhere else instead of local PC and can be accessed from anywhere at any time [2].
Due to this, the shifting of business applications from traditional softwares to cloud has increased tremendously. Traditional business applications are very expensive and complicated. The hardware and software required to run them are daunting. A whole team of experts is needed to install, configure, test, run, secure, and update them. With cloud computing, all these headaches are automatically eliminated because one need not require managing the hardware and software—experienced vendor like force.com handles this responsibility [3].
Cloud computing does not have any definition which is commonly accepted yet. The five important features of cloud computing given by the National Institute of Standards and Technology (NIST) are self-service on-demand, resource pooling, broad network access, rapid expansion, and measured service [4].
Cloud-based applications cost less. With a cloud app, we just need to open a browser, log in, do the customization, and start to use it. It is seen that some of the world's largest companies have shifted their applications to the cloud with salesforce.com after rigorously testing the reliability and security of their infrastructure.
A number of terminologies like SaaS (Software as a Service), PaaS (Platform as a Service) and IaaS (Infrastructure as a Service) have come up with the evolution of cloud computing. The concept of cloud based services is hierarchically built from bottom to top in the order of IaaS, PaaS and SaaS [5, 6]. Virtualization is such a technology that goes hand in hand with the concept of cloud computing. It is this technology that complements cloud services specially in the form of PaaS and SaaS where one physical infrastructure contains services or platforms to deliver a number of cloud users simultaneously. Security in cloud is anytime good than other traditional systems [6].

Clouds gives tremendous benefits for both individuals and enterprises such as configurable computing resources, service flexibility and economic savings, any-where any-time accessibility, on-demand scalability, multi-tenancy, resource sharing, outsourcing, etc. The software upgrades, licenses, and maintenance from its customers, etc is all done by the cloud and user need not to worry about it [2].

3. Cloud Computing Platforms

The platform in the cloud, is making the delivery of application functionality even more interesting. Increasingly, apps running in the cloud are more platform-oriented and less like websites, meaning they are emerging like Application Programming Interfaces (APIs), programming models and code libraries. Considered together, these new kinds of development technologies could be used as platforms to run apps in the cloud. The cloud computing platforms provide tools that allow developers to use functionalities that are existing and create something new out of it. As these platform tools are accessible over the Internet free of cost instead of any instalment on a local machine, the developers need not to worry about the logistics of putting together an executable to be installed on a user's machine. Anyone can access the app with a Web browser.

4. Force.com Platform

One of the leading and most popular platform for creating and deploying next-generation cloud apps is Force.com. Here one can completely concentrate on creating apps. There are no servers or softwares to buy or manage. These apps run on a very secure service backs up data automatically.

4.1 Features

1. Force.com platform has gained the trust of more than 100,000+ companies which also includes many industry leaders. The no. of apps that they've built is almost 220,000+ that run in accredited, world-class data centers with backup, failover, disaster-recovery, etc.
2. One can build one's own personal social network. Force.com includes pre-built components for feeds, profiles, conversations, updates, and file sharing. All components are available through REST APIs that can be easily integrated into any custom app.

4.2 Benefits of Force.com Platform

4.2.1 Data-Centric Apps

Force.com platform allows building data-centric apps. An application which consists of such information as in database or XML file is a data-centric application. These data-centric apps can be found anywhere like in small desktop databases like Microsoft Access or FileMaker and even in large and complex systems. Data-centric apps make it easy to control, access, and manage data. Therefore it proves beneficial for building and hosting applications in Force.com platform.

4.2.2 Collaborative Apps

The platform allows multiple users to access it simultaneously. Therefore it enables one to build collaborative apps. A collaborative app is an application with data and services that are shared by multiple users in different locations. The traditional applications required to be installed on a machine and then accessing them from distance was difficult. But Collaborative apps are the apps which can be accessed from anywhere at any time using a web browser. This helps teams to work together on activities like creating a software or product, managing a project, etc.

The platform also provides with security for a user's access to different data.

The workflow rules can be used to automatically assign tasks, update data, or send e-mail alerts when certain business events occur, such as the creation of a new record or a change in the value of a record field.

The approval processes can be used to set up a sequence of steps necessary for a record to be approved, including who must approve it at each step. Collectively, these features provide a framework for sharing apps.

4.3 The Technologies behind Force.com Platform

4.3.1 A Multitenant Architecture

A multitenant architecture is such a architecture in which all users can use and share the same infrastructure and the same version of the Force.com platform. The best part of this architecture is its upgrades are automatic and are released simultaneously for all users. Thus there is no headache of buying and maintaining hardware and software. The applications will always have the recent updates installed.

The applications build using this architecture cost less and are easy to deploy. The platform's multitenant architecture also impacts how developers use the platform to create new applications.

4.3.2 A Metadata-Driven Development Model

The Force.com platform uses a metadata-driven development model to help app developers become more productive in putting apps together. It means that—that the forms, tabs, and links which are the basic functionality of an app —are defined as metadata in a database rather than being hard-coded in a programming language. Therefore with the help of metadata-driven development, the app developers work at a much higher level of abstraction. Also they are free from the handling of low-level system details which the platform does automatically. At the same time, Force.com platform developers can also leverage advanced features that the platform provides by default.

4.3.3 APIs

The platform's metadata-driven development model allows app developers to quickly build a lot of functionality with tools provided by the platform; however, sometimes app developers want to modify the actual data in an app and use third-party services to create more customized app behaviours. To do this, they can use a number of APIs to integrate with the platform. The core set of APIs include Force.com SOAP API and REST API, the Bulk API, Streaming API, and Metadata API. These APIs provide straightforward, powerful, and open ways to programmatically access the data and capabilities of any app running on the platform. They allow programmers to access and manipulate apps from any server location, using any programming language that supports Web services, like Java, PHP, C#, or .NET.

4.3.4 Apex

Salesforce.com has introduced the world's first cloud computing programming language, Apex. Apex, whose syntax is similar to Java, the most popular programming language for Web apps, runs on the Force.com platform

servers. Apex is specifically designed for building business applications to manage data and processes within the larger context of the Force.com platform [1].

4.3.5 Visual force

For the success of any great business application, it requires a great user interface which should be easy to use and understandable. It should match exactly for the tasks, users, and devices the application serves. Visual force is one such framework for creating such user interfaces. It allows to create any type of interface design to be built and delivered in the cloud. Visual force enables to build such user interfaces which can increase or even change the look and feel of Force.com platform or replace it with a completely unique style and set of sophisticated interactions. Because Visual force markup is ultimately rendered into HTML, designers can use Visual force tags alongside standard HTML, JavaScript, Flash, or any other code that can execute within an HTML page on the platform.

4.3.6 The AppExchange Directory

The final piece of technology that differentiates the Force.com platform from other platforms is the AppExchange. The AppExchange is a Web directory where apps built on the Force.com platform are available to salesforce.com customers to browse, demo, review, and install. Developers can submit their apps for listing on the AppExchange directory if they want to share them with the community.

5. Study of Existing Job Providing Applications

Currently websites like naukri.com, timesjob.com, monsterindia.com, etc are available where one can apply for jobs. Mobile apps of some are available. Jobs can be searched locationwise, fieldwise, industry wise, etc.

These are the job portals where companies are subscribed to them and the candidates apply for jobs through them. These websites act as mediator between the company and the candidates. The company then selects some of the candidates who fit into their criteria and these job portals inform those candidates and the candidates are called for further process.

But they have some limitations which are-

1. There is no interaction between the employees of company and the applying candidates.
2. This is limited only to search, view & apply for jobs.
3. There is no reviews generation about the candidate's performance.
4. No report generation about candidate result.

6. Proposed System-Recruiting Application development in Cloud

Like many companies that have grown rapidly, they have been experiencing a few growing pains, especially in its Human Resources department. Recruitment and hiring of employees is a very important part for any company. The HR dept currently uses MS Word and Excel to manage recruiting and hiring process for new employees. Applications such as Excel and Access just don't cut it anymore. Complex Spreadsheets and databases can slow the server down, but there is better way that is simple and powerful. Development of an application for recruiting candidates for the company will allow it to move away from the Microsoft Word documents and Microsoft Excel spreadsheets that it has traditionally used, to an application that's available on demand.

Thus this "Recruiting App" will be beneficial for hiring of candidates in company thus saving manual efforts and time.

This Recruiting App will be developed in Cloud with force.com platform using Visual Force framework and Apex language

7. Working of Recruiting App

Firstly the candidates looking for the job will register to this app. With any job position available in company the HR will post it on the app. The candidate can search for appropriate jobs and upload their resumes. Based on the resumes first round of short listing candidates will be done. The information of candidates in the resumes will be extracted through the system and will be checked if it fits in the criteria set by the company. This extraction of information from the resumes will be done using the workflow rules, validation rules and SOQL (Salesforce Object Query Language).

The candidates who satisfy the criteria are notified through automatic email-alerts.

The candidates will be called for interview. Based on interview, final selection of candidates will be done and HR will display their results through the app. Based on their results reports will be generated and candidates can check their status, reviews of recruiters about them, etc on the app.

The Recruiting App will also have Google Map Integration which will help candidates find exact location of company and where the branches of company are located. It will also be useful to company through which they can find how many candidates are applying from which city, etc.

8. Advantages of the Recruiting App

1. The biggest advantage is, it is a cloud based application. So the app acquires all the cloud benefits.
2. This App is built on Force.com i.e. cloud platform. Therefore it also inherits Force.com platform's benefits stated above.
3. Through this app the candidates will get reviews of the recruiters which will help them to improve.
4. Through a feature called CHATTER, candidates can get updates like change in location, etc.
5. Direct interaction between employees of company & candidates is now possible through this app.
6. This app also provides Automatic Report generation about candidate reviews, hired positions, etc.

9. Conclusion

This paper presents different concepts about cloud computing and its platforms which is a recent technology in present world. It is a development trend in near future. This technology provides us with an infinite capability of computing, huge memory, fast micro processor, high-speed network, reliable system architecture etc. The paper also describes about the leading Force.com platform for creating and deploying next generation cloud apps and its benefits. Also tells about how using this platform and cloud technology proves beneficial for developing the Recruiting Application. This application aims at reducing manual efforts and time of the company by making the recruitment and hiring procedure automated and also proves useful to the candidates searching for jobs.

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