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MYPAL-A Fingertip Technology Using Cloud Computing

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Abstract: the myPAL app is a hotel app that will be active on the guest phone once he/she enters the checks-in number and thereafter the guest can avail all the information regarding the facilities provided by the hotel. Guest can request for any services communicating directly to the respective department in the hotel. It provides the full scalability, reliability, high performance and relatively low-cost feasible solution as compared to dedicated infrastructures.This communication and access to hotel services will be disconnected automatically from the guest phone once the guest checks out from Hotel. It is developed in visual studio 2015 and powered by SQL server 2014. As the data is stored at cloud so the data is completely secured. It also artificial intelligence features that are voice recognition. This feature will be a benefit for those who have a problem in speaking. They will directly connect to the app and can avail all the services of hotel and guest can view all real-time services and promotions.

Keywords: Service at Your Fingertip, Cloud Data Storage, Reliable Product, Artificial Intelligence, Trust.

I. INTRODUCTION

myPAL is an app that can be used in hotels to provide services to the customer. This app will be used by guest once he checks into a hotel and instead of asking the services from front desk he directly uses the services from the myPAL app by just clicking into the corresponding outlet. He will be able to use all the serviced which is offered by the customer with less time and with maximum output. This will work only when he is in a hotel and it will disconnect only as soon as he exits from the hotel. This app can also be used by visually impaired people as it has a voice recognition feature that is inbuilt. myPAL is an administrative application is a web application developed in.NET. It controls all mobile clients and their active integrations. It is developed in visual studio 2015 and powered by SQL server 2014.

BENEFITS (Advantages)

myPAL has numerous advantages. Some of them are listed below:

1. myPAL will remove the dependency of reception and front desk for any order – Reduce approx. 20% turnaround time.
2. Gust can view all the real-time detail about services/promotions. Guest has 360^0 views of all the services.
3. Reduce turnaround time of each request and reduce the effort of the hotel staff. Approx. 5-8 mins in each request.
4. Improving guest experience
5. Increase customer loyalty and guest satisfaction.

A. CHARACTERISTICS OF MYPAL-A SERVICE TIP TECHNOLOGY

1. **Cloud storage**

Cloud Computing [1] provides us a means by which we can access the applications as utilities, over the Internet. It allows us to create, configure, and customize applications online. It offers online data storage, infrastructure, and application. The term **Cloud** refers to a **Network** or the **Internet**. In other words, we can say that Cloud is something, which is present at the remote location. Cloud can provide services over a network, i.e., on public networks or on private networks, i.e., WAN, LAN or VPN. Applications such as **e-mail, web conferencing, customer relationship management (CRM),** all run in the cloud.

The cloud makes it possible for users to access information from anywhere anytime. It removes the need for users to be in the same location as the hardware that stores data. Once the internet connection is established either with wireless or broadband, the user can access services of cloud computing through various hardware. This hardware could be a desktop, laptop, tablet or phone.

Cloud computing comprises of 2 components ―the front end and the back end. The front end includes client's devices and applications that are required to access the cloud. And the back end refers to the cloud itself. The whole cloud is administered by a central server that is used to monitor client's demands.

2. **Artificial intelligence-A voice recognition**

   This feature is added for visually impaired and for those who have problem in speaking the local language, For use with computers, analog audio must be converted into digital signals. This requires analog-to-digital conversion. For a computer to decipher the signal, it must have a digital database, or vocabulary, of words or syllables, and a speedy means of comparing this data with signals. The speech patterns are stored on the hard drive and loaded into memory when the program is run. A comparator checks these stored patterns against the output of the A/D converter. In practice, the size of a voice-recognition program's effective vocabulary is directly related to the random access memory capacity of the computer in which it is installed. A voice-recognition program runs many times faster if the entire vocabulary can be loaded into RAM, as compared with searching the hard drive for some of the matches. Processing speed is critical as well because it affects how fast the computer can search the RAM for matches.

3. Computing in a social environment

Another major characteristic of myPAL technology is that it has a significant impact on the social environments, in which it is used, any introduction of a ubiquitous computing environment implies the introduction of sensors, which irrevocably have an impact on the social structure, no matter how unobtrusive they seem to be; Imagine, for example, that our residence is outfitted with all kinds of sensors to provide information to a ubiquitous computing system. Are we going to allow neighborhood police station to be able to monitor which room we currently occupy (as indicated by the alarm system's motion detectors) and how much alcohol we are consuming (as inferred from our food inventory system)? There are also policy questions: Who owns the data from a ubiquitous computing system? How can we avoid making people feel like they are in information panoptical? Can one subpoena the data collected by ubiquitous computing systems? Since the answer is probably yes, there might be demand for ubiquitous computing systems in which the raw sensor data cannot be accessed at all, but processed inferences from the data, such as "burglar entry," better understand Cloud computing, the US To National Institute of Science and Technology (NIST) define it as: "Cloud computing is a model for enabling ubiquitous, convenient, on-demand network access to a shared pool of configurable computing resources (e.g., networks, servers, storage, applications, and services) that can be rapidly provisioned and released with minimal management effort or client and service provider interaction. This cloud model promotes the availability and is composed of five essential characteristics, three service models, and four deployment models".

II. PROBLEM STATEMENT

My research is based on the problems that are faced by the customer when he visits any hotel. The problem faced by the customer the way he got the services for e.g.: - if he wants to give order for food then he will call at the reception then they will call the concerned department then the concerned department will take the order and then it will proceed further. The main objective of this research is to remove the intermediate members and the customer directly contact to the concerned department and his order will be processed fastly. So we can understand the problem in various steps:-

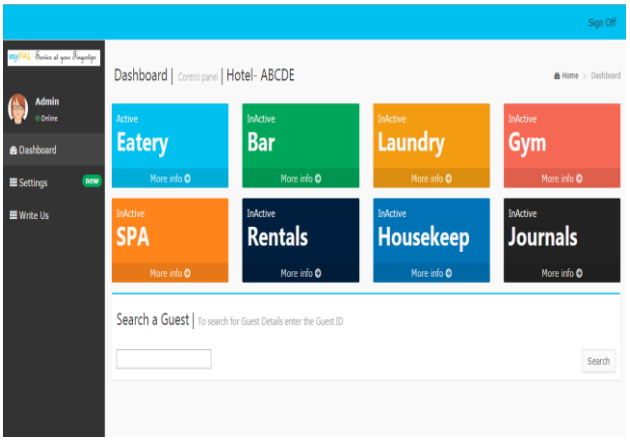
1. When a guest wants something…
2. He calls the operator / front desk, which sends the request to the corresponding outlet.
3. Outlet itself finds the right staff member to make the delivery
4. The staff member is notified, sent the guest details, and timelines
5. After making the delivery, front desk service is updated, and also the guest profile can be updated

- So overall we can say that more team involvement, more process more time. Less guest satisfaction. Low visibility of services.

III. MYPAL-AN ADMINISTRATIVE APPLICATION

The administrative application is a web application developed in .NET . It controls all mobile clients and their active integrations.

It is developed in visual studio 2015 and powered by SQL server 2014.



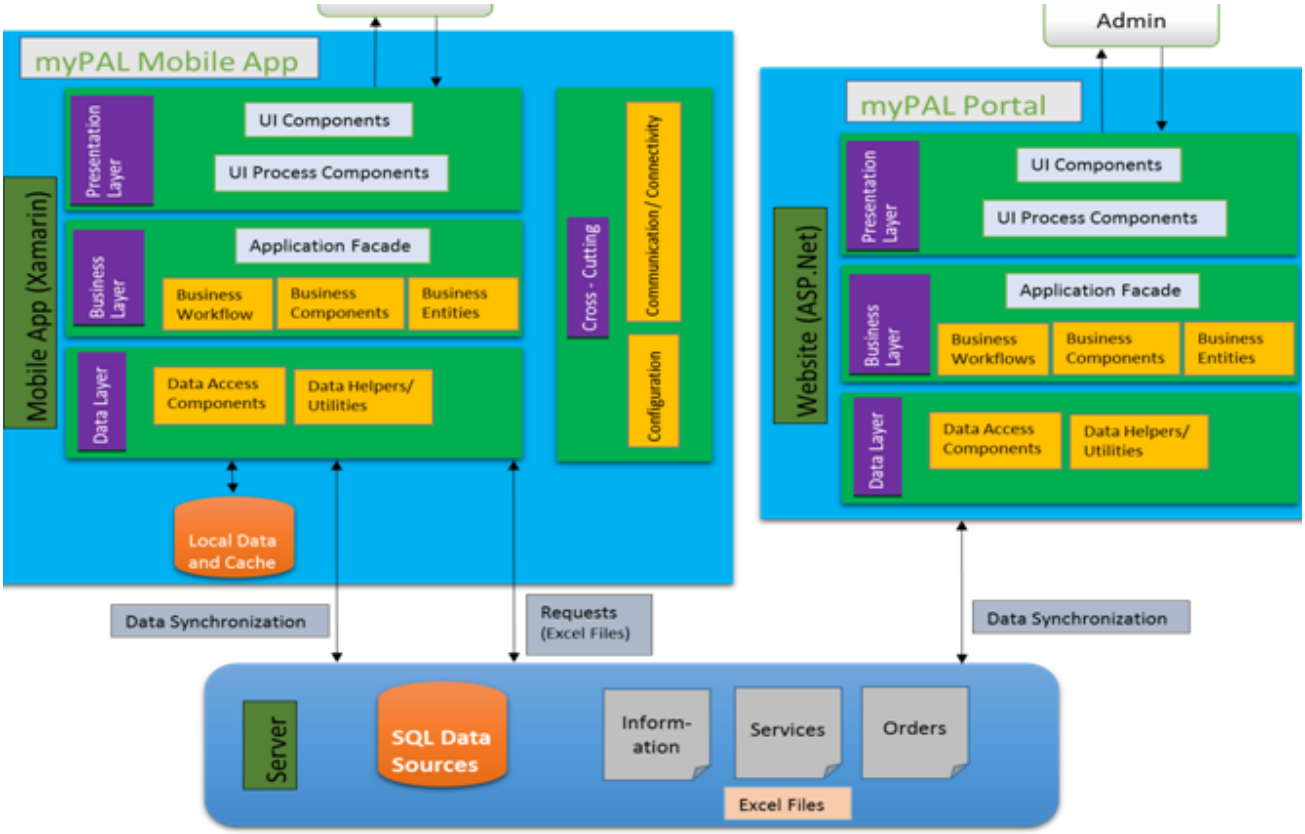
IV. MYPAL ARCHITECTURE

myPal Architecture has divided unto two main parts.

- myPAL Mobile App
- myPAL Portal

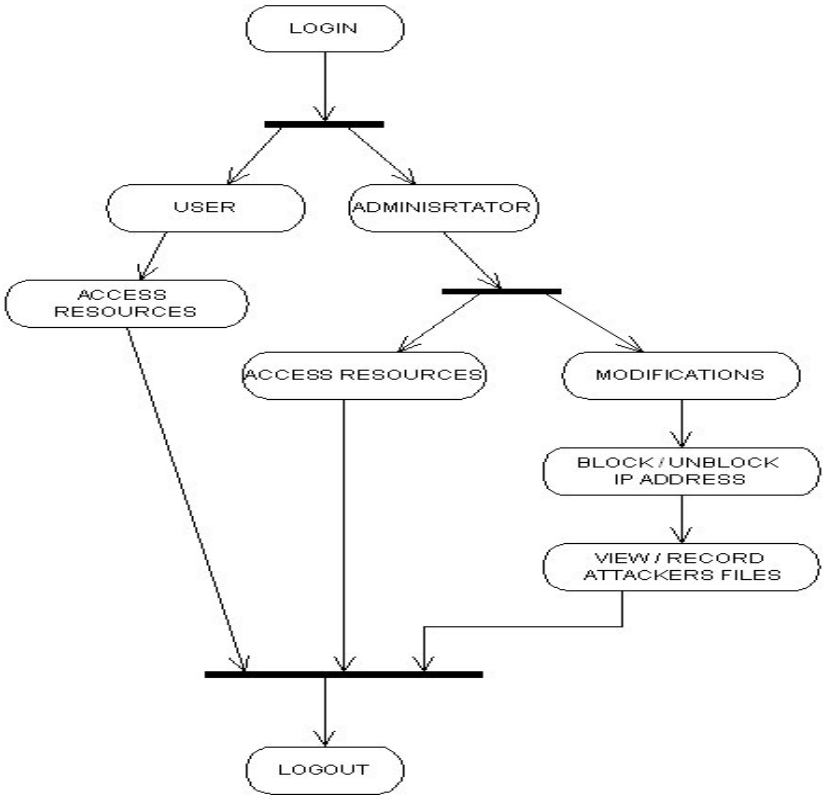
Both parts integrated to SQL db in the background.

- myPAL DB



V. EXPERIMENTAL RESULT

After finding the problems that are faced by the guest in the hotel is the delay in service. So myPal- A fingertip technology will solve the problem and provide more flexibility to the customer as all the services are based on real time and have 360view to all the services. **myPAL** will remove the dependency of reception and front desk for any order – Reduce approx. 20% turnaround time. The implementation can be understood by an activity diagram.



VI. CHALLENGES TO CLOUD

Although cloud computing is not a new concept for hotels, this sector has been slow in adopting the technology. The key concerns are that such deployment models could lead to an environment sprawl and a lack of control in terms of change management. This can further lead to security risks, reliability issues and a lack of effective business continuity planning. A lack of core application solutions has delayed the process further. From the public cloud standpoint, the issues are around regulation, location, liability, and recoverability in the cloud. These are some of the reasons that have slowed down the adoption and deployment of cloud computing and rather led most hotels to start building mini 'private' infrastructure clouds. To reduce this risk, the management of the infrastructure that underpins these computing environments needs to move away from complex IT provisioning requests to the presentation of a series of standardized services. Reaching this state is the beginning of the journey to the cloud. Concerns about the external cloud and rebuttals to them notwithstanding, hotels have evolved technologies, which virtualized the IT infrastructure within an enterprise, to deliver IT as a service to internal users, calling it the internal or private cloud. The five main challenges of the hotel cloud:

1. **Security and compliance:** maintain at all times the security of data. Hotels need to demand stringent safety measures from suppliers and ensure new applications meet the latest and most rigorous security standards. Service Level Agreements (SLAs) are a must.
2. **Reliability**: Ensure that applications and data are always available in the event of a natural disaster or an unpredictable event. Hotels need to have stringent SLAs in place, complete with guarantees, end-game scenarios, and remedies if a provider fails to meet service levels.
3. **Cloud management:** achieving visibility and measuring performance are harder to do, especially if, as seems likely, large hotels will source cloud services from several providers and use them for both internal – or private – and external, or public, services. This could result in a hotel having to handle multiple security systems and the need to ensure all parts of their business can communicate with each other and where necessary with clients. I Increased use of various technology infrastructures and a mix of different cloud environments internally and externally mean hotels will need to develop fully-fledged cloud management platforms. They will be a necessity to ensure hotels can fully realise the cost savings and flexibility benefits of cloud computing.
4. **Interoperability**: hotels will need to ensure data and applications can be moved across cloud environments from a number of providers. They should look to develop a single interface and management layer that can work across different platforms internally and externally.

5. **Regulation:** the rules governing the cloud vary from country to country. Many countries' data protection laws impose constraints on where data is kept, limiting take-up. This is why the EC's move to regulate the cloud is welcome.

VII. CONCLUSION & FUTURE SCOPE

In this thesis, we investigated the problem of intermediate people that are involved during a process and hence the problem is faced by the customer. To ensure the correctness of users' data in cloud data storage, we proposed an effective and flexible distributed scheme with explicit dynamic data support, including block update, delete, and append. We rely on erasure-correcting code in the file distribution preparation to provide redundancy parity vectors and guarantee the data dependability. Trust and security have prevented businesses from fully accepting cloud platforms. To protect clouds, providers must first secure virtualized data center resources, uphold user privacy, and preserve data integrity. The new feature is also added for the visually impaired that is voice recognition through which impaired people can also interact with the app. By using this app it will ensure that if fewer people involved during the process it will create maximum satisfaction to customers and customer can able to view all the services.

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