LABTRUST-ANDROID APPLICATION FOR PATHOLOGY LABORATORY

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Abstract - *Currently, in India, many of the documents issued by government or non-government entities are in physical aspect. this means anytime a individual should share the document with workplace to avail any service, an attested photo copy either in physical form or on scanned form is shared. Use of real copies of document creates huge smash in terms of manual verification, paper storage, manual audits, etc., induce high cost and inconvenience.[1] This creates problem for various agencies to verify the authenticity of these documents, thus, creating alternative for usage of false documents/certificates. additionally, lack of strong identity of the owner that's attached to those documents, it is easy to misuse someone else's document. Considering this scenario and case study this can be an improved applied to all or any or any the medical test reports which might be changed in to paperless test report which might store and utilized in near future or are often share with requester or the doctor for analysis. So, the proposed system is to style and development of medical test report online locker and sharing system where patient and pathology lab can create an e-communication and sharing of test report in digital format and pathology lab can make it available or sharable to patient over the mobile or web platform. this fashion it'll save patient time and resources and even patient can share this digital test report with doctors over mobile so doctor can suggest further plan of action rather expecting very long time just to check the report from doctor. this fashion mobile platform is often extended to have easy search of obtainable pathology labs nearby and to know more about it.*

Keyword: Digital pathology, medicine, e-communication, sharing report, digital locker.

1. INTRODUCTION

Digital India aims to rework India into a knowledge-driven economy. it's an ambitious program and aims to transfer good governance to citizens by synchronized and coordinated engagement with both Central government &State government. Delivery of service through e-Governance represents a drastic change and therefore the keys to confirm that the correct skills are made available for various stakeholders across the implementation scale. This shift requires considerable increases of capacities for creating, conceiving and delivering projects geared toward transforming existing systems. this needs knowledge of domain in addition as technical and techno-commercial-legal capabilities in numerous levels of presidency officials. Above all, it requires a basic change within the viewpoint. And functioning of presidency, so it becomes citizen-key instead of process-key. The key vision areas under the Digital India program are to "Provides allocable private space on a public cloud" and to "compute all documents and records of the citizens and make them available on a actual basis".[2] This suggests that "arrange citizens with easily available to a split table private space on a public cloud can greatly facilitate process redesign through paperless processes. Documents are often issued in verifiable electronic format, made available in various e-Document safe; citizens can digitally store their documents in any of their preferred digital locker, so share them with various agencies without the requirement to physically submit them. This mechanism of 'e-Document archive' and 'Digital Lockers' will greatly improve the citizen benefit and guide in paperless transactions across the complete ecosystem of public services. of these must be with due user documentation, consent, audits, and other security best practices. This easy accessibility to the digital resources confirms that citizens aren't asked to supply government documents or certificates, which are already available with some department/institution of the govt, in physical form. Individuals should have a straightforward thanks to provider their consent electronically and share various documents when availing a service. this whole environment of e-report safe and Digital Lockers for examine record via a typical set of ability APIs is together covered under this 'Digital Locker Technology Framework'.

2. Technology Used

2.1 Android Studio:

Android Studio is also defined as integrated development environment (IDE) for Android development application. [4] Android Studio uses a emulator, Gradle-based build system, etc. to run the program. Android Developer include various testing and debugging. Versions of Android Studio are adaptable with some Apple, Windows and Linux operating systems. With run for Google Cloud Platform and Google app integration, Android Studio offers developers a well-stocked toolkit for creating Android apps or other projects, and has been an integral part of Android development since 2013.

2.2 .Net Programming Language:

The .Net framework is a s/w development form developed by Microsoft for running and service that it uses. The framework was creating an application, which would run on the Windows Platform. The first version of the .Net framework was released in the year 2002.The .Net framework can create both - Form-based and Web-based applications. Web services can be used to developed using .Net framework. It also supports various programming languages such as Visual Basic etc. So developers choose and select the language to develop the required application.

2.3 Java:

Java is a broadly used programming language exactly designed for use in the distributed environment of the internet.[5] It is the most popular programming language for Android smartphone applications and is also among the most recommend for the development of edge devices and the IOT. Java is object-oriented. Java was designed to have aspect of the C++ programming language, but is simpler to use and enforces an object-oriented programming model. Java can be used to create applications that may run on a single computer or be share out among servers and clients in a network. It can also be used to build a small application module for use as part of a web page.

2.4 Firebase:

Firebase is a technology that allows you to create web applications without server-side programming, making development faster and easier. It supports Web, iOS, OS X and Android clients. Apps that use Firebase can use and control data without thinking about how data is stored and synchronized across different instances of the application in real-time. Working with Firebase from a developer's perspective is a wonderful benefit, as they are the core technology of development. Firebase gives you service like analytics, databases, messaging and crash reporting so you can move quickly and focus on your users.

3. Problem Definition:

Previously, the patient's record was managed and maintained annually by the lab attendant. The customers were not able to book the appointment from home as per their comfort or availability. Also, it may be possible that the customer is not familiar with the lab location and they don't know the exact location of lab. The management of data and reports of patients was difficult to maintain manually since it leads to wastage of time and efforts. Also, there can be mistakes while managing such a huge and important data manually. The lab trust has been developed to override the problems prevailing in the practicing manual system. This software is supported to remove and, in some cases, reduce the suffering faced by this existing system, moreover this system is designed for the particular need of the company to carry out operations in a smooth and useful manner.

Aim and Objective:

- ➢ Our aim is to provide maximum resources at one place at one time.

- ➢ The patient has no longer have to wait for the information to be passed on manually rather they can get information anywhere just by our application.

- ➢ It will save time and make the patient process faster. Our project will help patient to find information for pathology location.

- ➢ This application will be designed in a way which will make their work comfortable.

4. Proposed System:

In order to overcome all the above issue proposed system is to design and implementing the digital locker of all medical reports which may accessible through right channel of authentication and sharable with doctors. The following figure depicts the Digital Locker Landscape. Citizens, Issuers, Requestors and Digital Locker are the main components. Digital Locker links various issuer repositories using a set of APIs. The plan will be developed in the following modules described below.

Module 1 (creating user interface):

This module is a frontend that facilitates information for pathology to user of different categories which are represented using tabs, navigation bar etc.
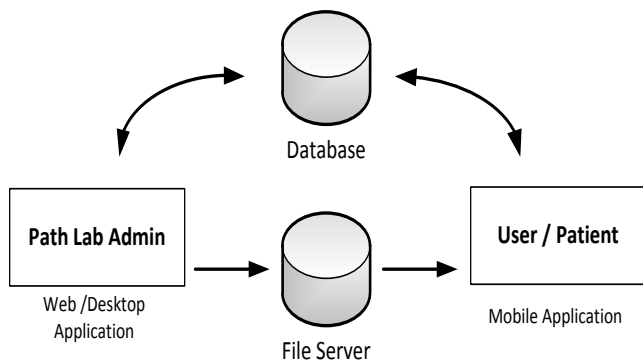
This module is the middle end where the link between all the pages and link between the tables and buttons will be established in the form of tables which show the details of patient who has get appointment online.

Module 3 (database creation):

This module is the backend where the database is developed for the project consisting of different tables for login, patient details etc.

Figure 3: Flow of Module1

Module 2 (link between pages and database):

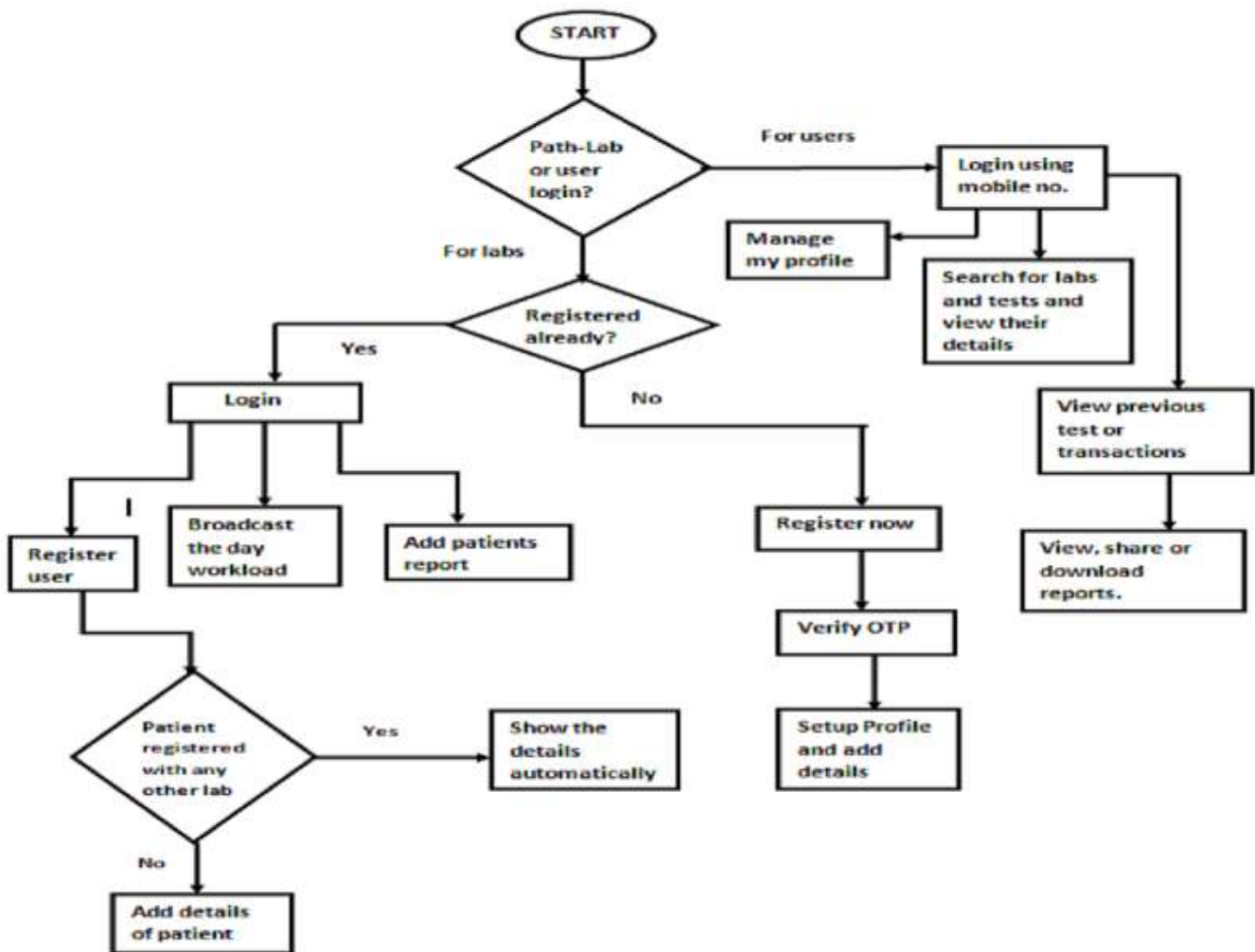**5. Implementation Details:**

5.1 Diagram:

Figure 5: Flow of Admin Login

6. Conclusion:

We are concluding with the statement that we've got projected an application ahead specified the work becomes easier and faster for the patient likewise as doctor. LabTrust module will be utilized in any pathology center to book a test for customer. Patient are supplied with the date at which the test is conducted. For any quite checkups, a customer can visit pathology and find this checkup done. Admin can accept or reject or set to pending the booked test. Account may be created consistent with the tests booked by customers. Lab artisan can perform the test for the customer. On approving the test requests, the records for all similar lab tests for diagnosis are created. Professional will be assigned within the diagnosis and set the diagnosis done. Other useful details for diagnosis report will be entered. Facility of mail notification on favor of test request and reminder mail notification before the test request date. Facility to download a report of test request and therefore the report containing the results of lab tests.

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