A

Synopsis

on

Automation of the Pathology

Submitted by

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ABSTRACT

The Automation of the pathology is designed for any pathology lab to replace their existing manual, paper-based system. The new system is to control the following information: patient information; room availability; staff and operating and patient invoices. These services are to be provided in an efficient, cost-effective manner, with the goal of reducing the time and resources currently required for such task.

A significant part of the operation of any pathology lab involves the acquisition, management, and timely retrieval of great volumes of information. This information typically involves; patient personal information and medical history, staff information, staff scheduling and various facilities waiting lists.

All of this information must be managed in an efficient and cost wise fashion so that an institution's resources may be effectively utilized Automation of the pathology will automate the management of the Pathology Lab making it more efficient and error free. It aims at standardizing data, consolidating data ensuring data integrity and reducing inconsistencies.

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Introduction

Documenting the assembly, maintenance use and troubleshooting of a system as complex as a pathology system is a difficult task. A single system might combine proprietary hardware, custom operating systems and software, commodity personal computers, and pen and paper. Describing these highly varied components are one function of voting system documentation. But it is not only automation of the pathology system technology that is heterogeneous; so are pathology systems users, and the environments in which the systems are used. Pathology lab officials, administrative workers, and others often need guidance from documents in order to administer or use a pathology lab. In addition, pathology laboratory system certification—the process by which a system is approved for use in state— demands evidence that a laboratory system complies with one or more sets of standards or guidelines.

Documentation provides the details that certification bodies need to evaluate the System. Taken as a whole, automation of the pathology system documentation must explain the system in several ways to meet the needs of these multiple audiences.

As the modern organizations are automated and computers are working as per the instructions, it becomes essential for the coordination of human beings, commodity, and computers in a modern organization. Many big cities where the life is busy needs the transaction of the goods within few minutes of time. So, this online information recorded by the distributor helps him to complete this task within the time.

The administrators and all the others can communicate with the system through this project, thus facilitating effective implementation and monitoring of various activities of the automation of the pathology Software.

Technologies / Software Requirements

- **Operating System :** Windows 7 and Above
- **Programming language:** JavaScript
- **Web-Technology:** HTML, CSS
- **Front-End:** Bootstrap
- **Back-End:** SQL Server 2008 R2
- **Web Server:** IIS

Hardware requirement / Hardware Used

- Pentium-IV(Processor).

- 256 MB Ram

- 512 KB Cache Memory

- Hard disk 140 GB

- Microsoft Compatible 101 or more Key Board

Modules Description

Admin Panel

- **Secure Login and Logout**
- **Dashboard**
  - Display the summary of lists.
- **Test List Management**
  - Add New Test
  - List All Tests
  - View Test Details
  - Update Test Details
  - Delete Test Details
- **Appointment Management**
  - List All Appointment
  - View Appointment Details
  - List Appointment's Test Details
  - List Appointment's Update History Details
  - Update Appointment's Status
  - Upload test Result/Report
  - Download Prescription
  - Download Test Result
  - Delete Appointment/Test Records
- **Registered User List Management**
  - List All Registered User
  - View Registered User Details
  - Delete Registered User Details
- **Manage User List (CRUD)**
- **Manage Account Details/Credentials**
- **Manage System Information**

User-Side

- **Secure Login and Registration**
- **Appointment Management**
    - Booked an Appointment
    - List All Appointment
    - View Appointment Details
    - List Appointment's Test Details
    - List Appointment's Update History Details
    - Cancel Booked Appointment
    - Download Prescription
    - Download Test Result
    - Delete Appointment/Test Records
- **List All Test Result**
- **Download Test Result**
- **Manage Account Details/Credentials**
- **Logout**

Reports / Outputs

Dashboard *(User-Side)*

This Automation of the pathology has an **Admin Panel** where the Lab's management can Booked Appointments, check the pending Appointments, Approved Appointments and Final test reports. This side of the system requires an **admin** or **staff** user credential in order to access the features and functionalities.

Appointment Details *(User-Side)*

In this Automation of the pathology has the appointments details of the patients where the Lab's management can update the records, upload the patient's lab testing results. This side of the system requires an **admin** or **staff** user credential in order to access the features and functionalities. The patients can register their accounts easily and book a lab testing appointment on their side.

Test Result List Page *(User-Side)*

In this Automation of the pathology has an **Admin Panel** where the Lab's management can update the records, upload the patient's lab testing results. This side of the system requires an **admin** or **staff** user credential in order to access the features and functionalities. They can list all of their appointment records with the diagnostic lab and also, they can check the updated status of their results and download their lab test results.

Admin Dashboard *(Admin-Side)*

This Automation of the pathology has an **Admin Panel** where the Lab's management can update the records, upload the patient's lab testing results. This side of the system requires an **admin** or **staff** user credential in order to access the features and functionalities. The patients can register their accounts easily and book a lab testing appointment on their side. They can list all of their appointment records with the diagnostic lab and also, they can check the updated status of their results and download their lab test results.

Booked Appointment List *(Admin-Side)*

In this Automation of the pathology has an **Admin Panel** where the Lab's management can update the records, upload the patient's lab testing results. This side of the system requires an **admin** or **staff** user credential in order to access the features and functionalities. They can list all of their appointment records with the diagnostic lab and also, they can check the updated status of their results i.e, approved or pending lab test results.

Conclusion

The package was designed in such a way that future modifications can be done easily. The following conclusion can be deduced from the development of the project.

- ➢ Automation of the entire system improves the efficiency.
- ➢ It provides a friendly graphical user interface which proves to be better when compared to the existing system.
- ➢ It gives appropriate access to the authorized users depending on their permissions.
- ➢ It effectively overcomes the delay in communications.
- ➢ Updating of information becomes so easier.
- ➢ System security, data security and reliability are the striking features.
- ➢ The System has adequate scope for modification in future if it is necessary.

How to serve the society (If applicable)

This application avoids the manual work and the problems concern with it. It is an easy way to obtain the information regarding the various travel services that are present in our System.

Well, I and my team member will work hard in order to present an improved website better than the existing one's regarding the information about the various activities. Still, we found out that the project can be done in a better way.

Primarily, In this system patient login and then go to reception. By using this patient will send request for consulting the doctor. Reception will set the date for doctor appointments. After that doctor see his appointments and see the patients, surgeries also done via reports.

The next enhancement is, we will develop online services. That mean, if patient have any problems he can send his problem to the doctor through internet from his home, then doctor will send reply to him. In this patient have some login name and password.

The next enhancement is, we will developed the book appointment section for the old-age patients those who are not able to went the pathology to have the checkups. That means, we will try to give those patients home delivery sample collections via booking the appointments sections.

Gantt Chart (In terms of weeks)

	WEEK 1	WEEK 2	WEEK 3	WEEK 4	WEEK 5	WEEK 6	WEEK 7	WEEK 8	WEEK 9	WEEK 10	WEEK 11	WEEK 12
Requirement analysis and feasibility check	■	■	■									
Designing			■	■	■	■						
Coding						■	■	■	■	■		
Testing and maintenance										■	■	■