



Lab Data Management System

Project Work - 2

Topic : Medilab

Project By:

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Under The Guidance of :



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ABSTRACT

Medilab is a diagnostic lab that has implemented the “**LAB DATA MANAGEMENT SYSTEM**” to maintain its records of most of the aspects carried out in the laboratory such as appointments, emergency facilities, and many more.

INTRODUCTION



- Medilab is a diagnostic lab that has implemented the “LAB DATA MANAGEMENT ” to maintain its records of most of the aspects carried out in the laboratory such as appointments, emergency facilities, and many more



This web application is developed in such a way that it can be fitted to any of the devices such as desktops, laptops, tablets, hence it is a responsive web application.



- This project is general purpose “Web Application” that can perform several tasks such as enquiring facilities service for the patients. And for the doctors and management a separate authentication portal is provided, from which two authentications are availed, one of the admins to manage and supervise the lab records by updating their reports through online or offline also.

Objective of this Project



- ☐ To provide an online platform to the patients to get the appointments.
- ☐ To provide the user-friendly environment
- ☐ The management can easily supervise the system and have a good control over each and every records.
- ☐ To make it easy to use for everyone.
- ☐ To work fast and accurate.
- ☐ To be time efficient.

Users

✓ Management/Admin

- a. Manages and supervises the doctors.
- b. Supervises the patient records.
- c. Supervises the emergency cases and ambulance bookings.
- d. Views the signup and logs.
- e. Read the contact forms.
- f. Manage the subscription E-mails for any enquiry and checkups.
- g. Can delete and edit some of the entries

✓ Doctors

- a. Views the appointments.
- b. Attends the emergency cases.
- c. Treats the patients in the scheduled time.

✓ Patients/End Users

- a. Views the hospital system.
- b. Gets email subscription.
- c. Gets ambulance booking service
- d. Gets online appointment scheduling
- e. Can contact the management
- f. Can write a mail
- g. Can directly call
- h. Gets 24X7 services
- i. View the services offered
- j. Can view and access the google map

Advantage



- Easy to use.
- User-friendly
- Attractive
- Anyone can understand the concepts of hospital.
- Minimized data-entry.
- Saved a lot of paper work.
- Saves lot of time.
- Reduced risk of accuracy.
- Minimized effort and time.
- Fast processing time.
- Email subscription
- Google map
- Can directly call from the site
- Can directly write mail to the management

System Requirements

Software & Hardware

System Requirements

Processor	Ram	HDD/SSD	Device
<i>I3 or Higher</i>	<i>2GB or Higher</i>	<i>120Gb Standard</i>	<i>Laptop / Desktop / Tablet / Cell-Phone</i>

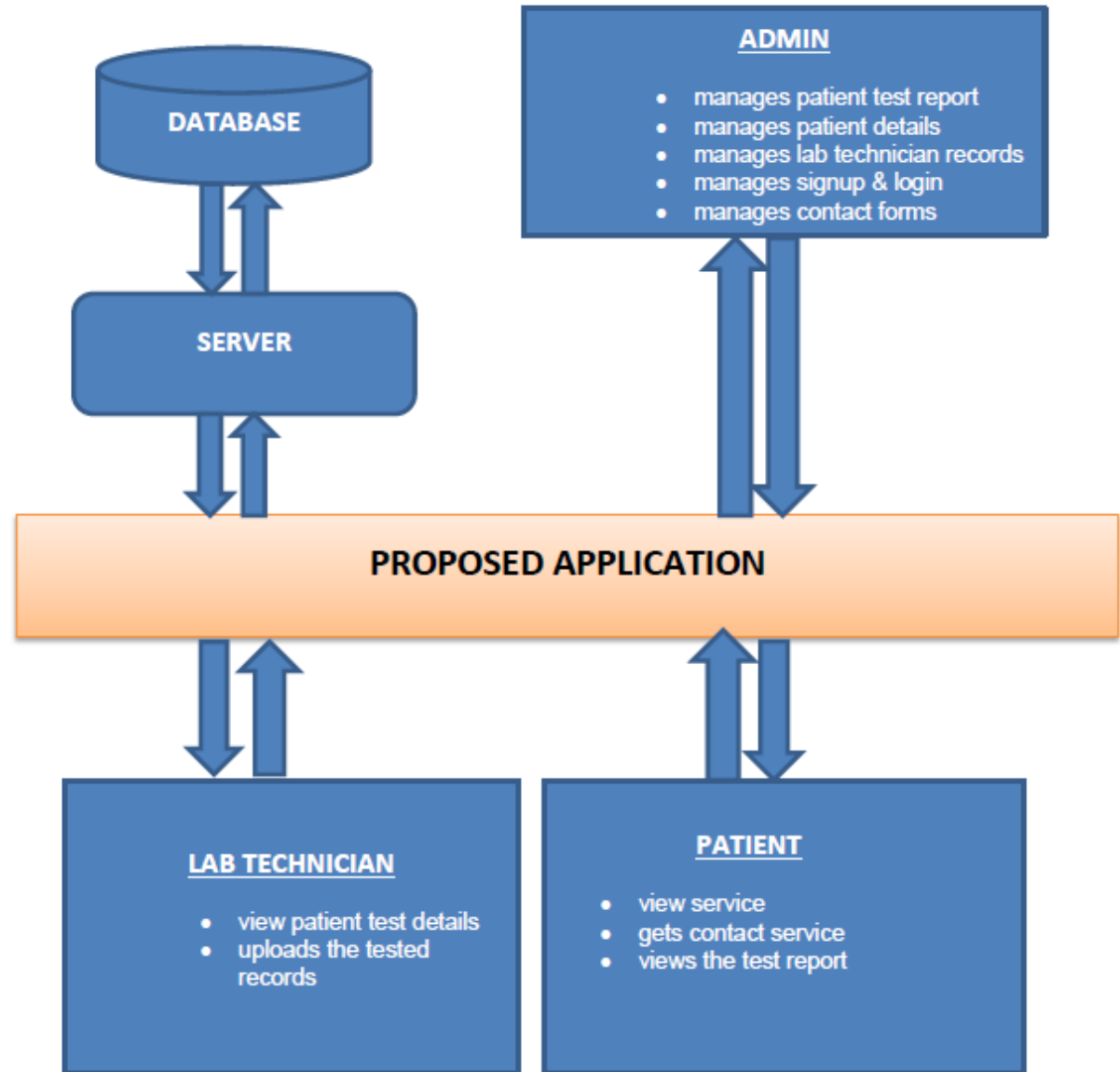
Basic Requirements

Hardware requirements

Frontend	Backend	Server Side	OS	IDE	Local Server
<i>Bootstrap [HTML, CSS]</i>	<i>MySQL</i>	<i>PHP</i>	<i>Windows 7 & Higher</i>	<i>Microsoft VS Code</i>	<i>XAMPP</i>

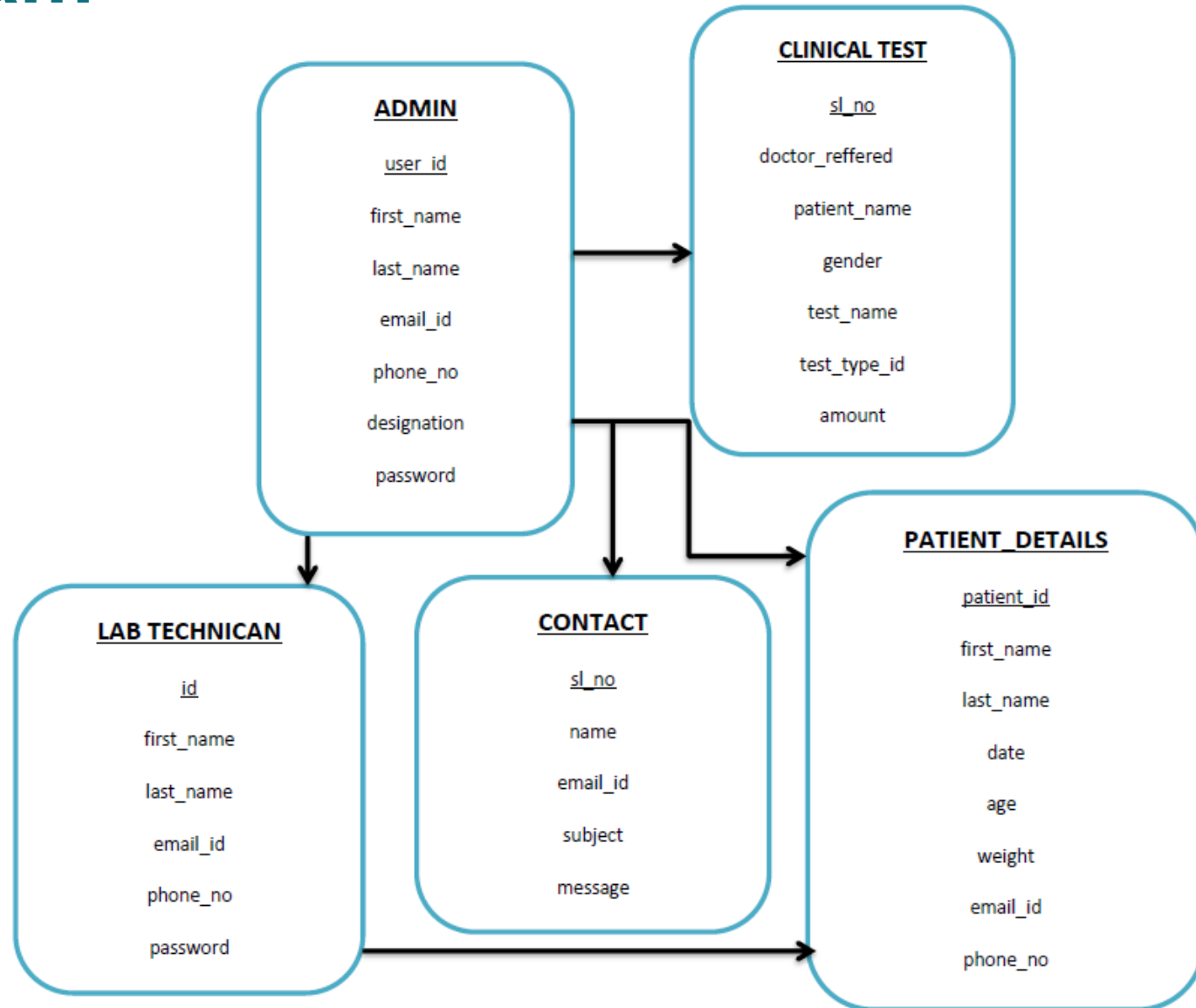
Basic Requirements

Architecture Diagram



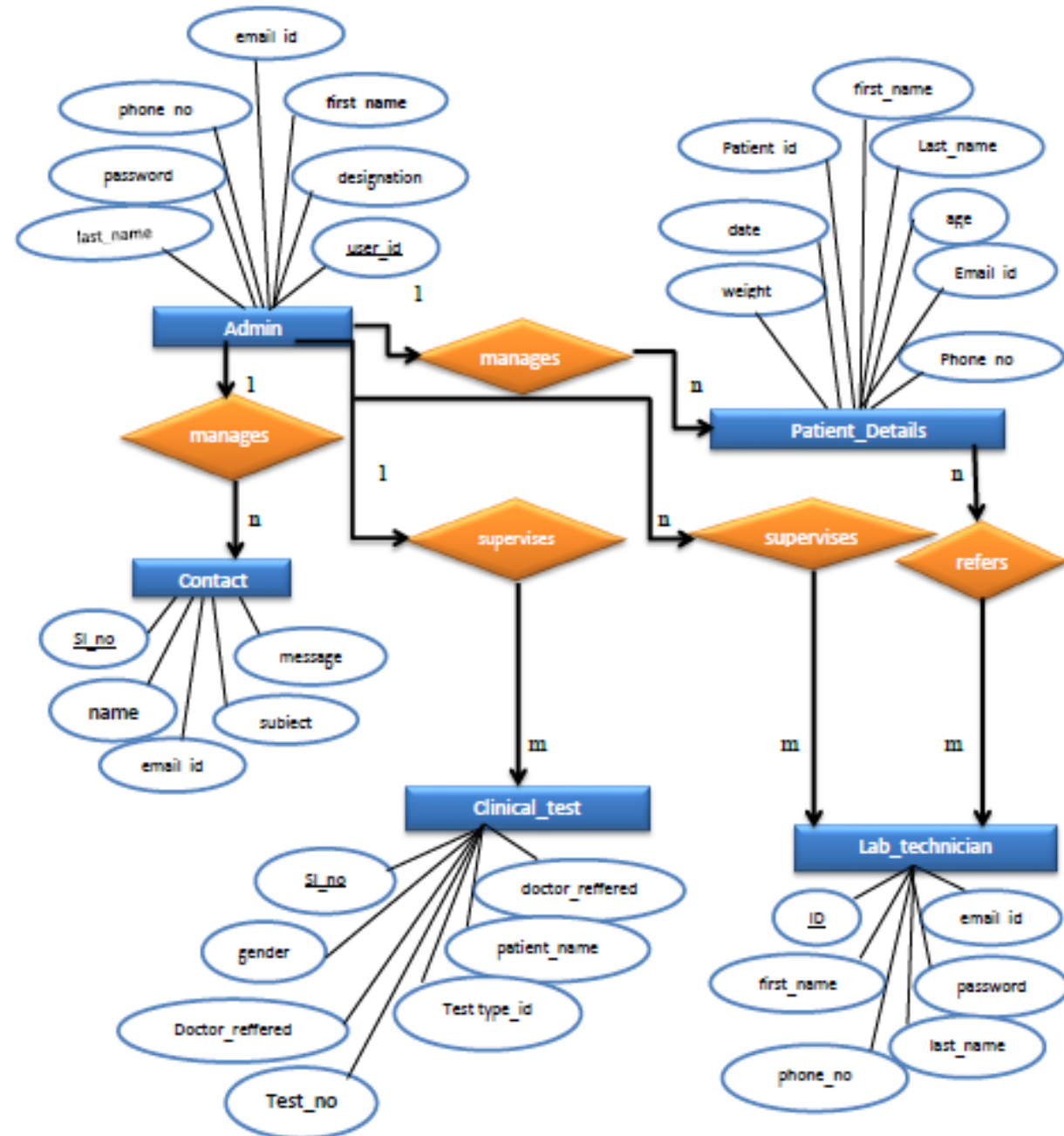
Database-Diagram

3.2. DATABASE DIAGRAM



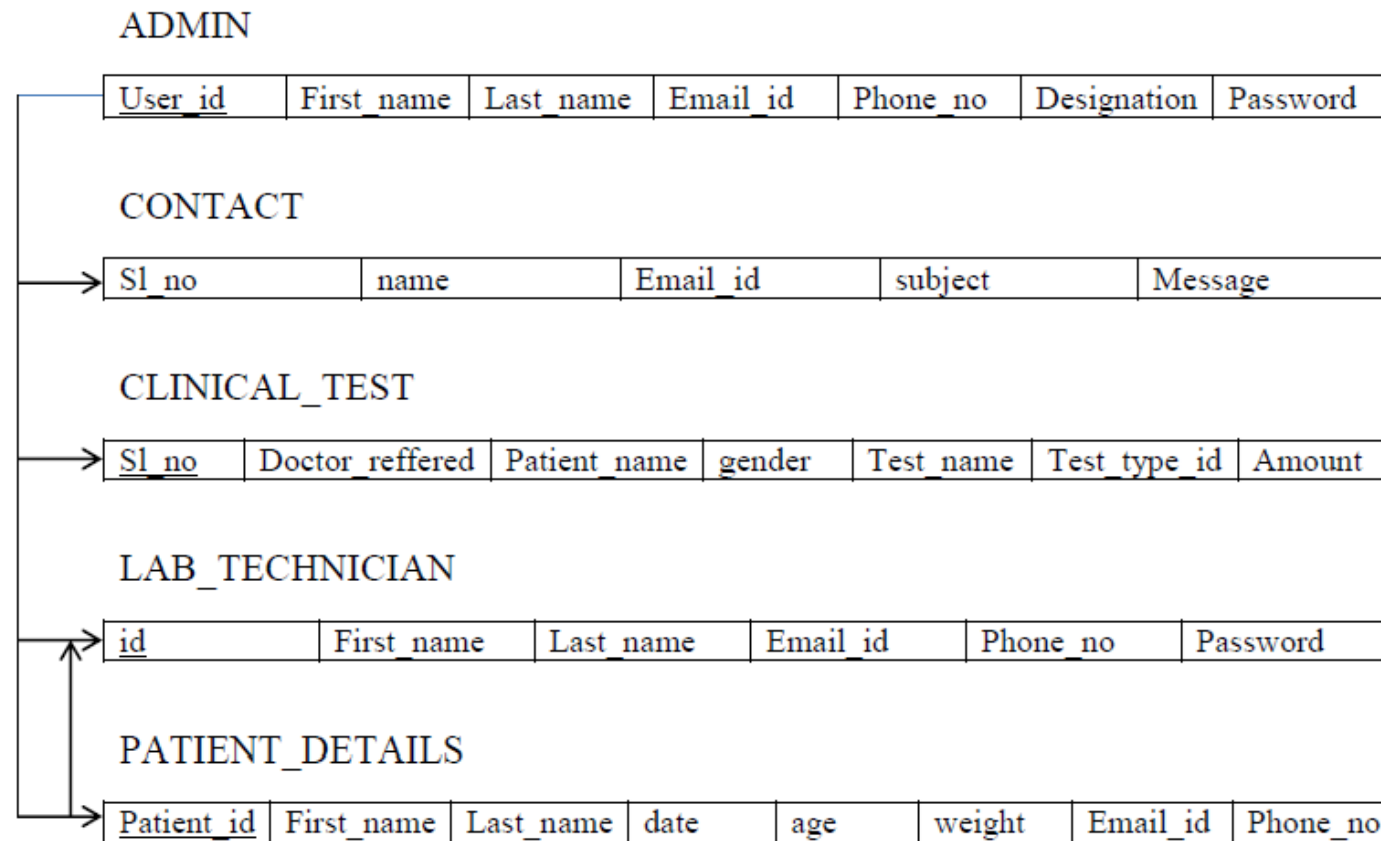
ER-Diagram

3.1. ER DIAGRAM



Schema Diagram

3.3. Translation of ER diagram to relational schema



Tables used in the project

ADMIN

COLUMN	TYPE
User_id	Bigint(250)
First_name	Varchar(200)
Last_name	Varchar(200)
Email_id	Varchar(200)
Phone_no	Bigint(200)
Designation	Varchar(200)
password	Varchar(200)

CLINICAL TEST

COLUMN	TYPE
Sl_no	Bigint(250)
Doctor_reffered	Varchar(200)
Patient_name	Varchar(200)
Gender	Varchar(200)
Test_name	Varchar(200)
Test_type_	Varchar(200)
amount	Varchar(200)

CONTACT

COLUMN	TYPE
Sl_no	Bigint(250)
Name	Varchar(200)
Email_id	Varchar(200)
Subject	Varchar(200)
message	Varchar(200)

PATIENT_DETAILS

COLUMN	TYPE
Patient_id	Bigint(250)
First_name	Varchar(200)
Last_name	Varchar(200)
Date	Date
Age	Bigint(200)
Weight	Varchar(200)
Email_id	Varchar(200)
Phone_no	Varchar(200)

LAB TECHNICIAN

COLUMN	TYPE
id	Bigint(250)
First_name	Varchar(200)
Last_name	Varchar(200)
Email_id	Varchar(200)
Phone_no	Varchar(200)
password	Varchar(200)

SIGNUP

COLUMN	TYPE
Sl_no	Bigint(250)
First_name	Varchar(200)
Last_name	Varchar(200)
Email_id	Varchar(200)
Create_password	Varchar(200)
Confirm_password	Varchar(200)

REPORT

COLUMN	TYPE
Sl_no	Bigint(250)
First_name	Varchar(200)
Last_name	Varchar(200)
Gender	Varchar(200)
Test_name	Varchar(200)
Test_id	Varchar(200)
Date	Date
Time	Time
Test1	Varchar(200)
Result1	Varchar(200)
Units	Varchar(200)
Standards1	Varchar(200)
Bio_ref1	Varchar(200)
methodology	Varchar(200)

Implementation and Issues

Implementation is the stage of project where the theoretical design is turned into a working system. It can be considered to be the most crucial stage in achieving a successful new system gaining the users confidence that the new system will work and will be effective and accurate. It primarily concerned with user training and documentation.

Conversion usually takes place about the same time the user is being trained or later. Implementation simply means convening a new system design into an operational one.

If the implementation is not carefully planned and controlled. It can create confusion.

Implementation includes all those activities that take place to convert from the existing system to the new system. The new system may be totally new. Proper implementation is essential to provide a reliable system to meet organization requirements. The process of putting developed system in actual use is called system implementation. This includes all those activities that takes place to convert from the old system to the new system.

Software Testing

- The process of executing a system with the intent of finding errors can be defined as testing. It can also be defined as the process that defines as the process that defines, isolates, subjects to rectification of defects, and so that the customer satisfaction is reached at last with assurance of the system is free from defects.
- Software testing is a very important element of the quality assurance and it represents the SRS, designing, coding and implementation of the system proposed.

Test Cases

Admin Login

INPUT	RESULT	CONCLUSION
LOGIN TYPE: email & password <ul style="list-style-type: none">• admin email_id;userinput <ul style="list-style-type: none">• password;user input	Admin is allowed to access the clinical test records, & supervise the staff	Admin has to give the register email_id and password in order to access the system ,if either email_id or password is wrong an error method is displayed

Technician Login

INPUT	RESULT	CONCLUSION
LOGIN TYPE: email & password <ul style="list-style-type: none">• admin email_id;userinput <ul style="list-style-type: none">• password;user input	Admin is allowed to access the clinical test records, & supervise the staff	Admin has to give the register email_id and password in order to access the system ,if either email_id or password is wrong an error method is displayed

User Login

INPUT	RESULT	CONCLUSION
LOGIN TYPE: email & password <ul style="list-style-type: none">• admin email_id;userinput <ul style="list-style-type: none">• password;user input	Admin is allowed to access the clinical test records, & supervise the staff	Admin has to give the register email_id and password in order to access the system ,if either email_id or password is wrong an error method is displayed

CONTACT

INPUT	RESULT	CONCLUSION
1.name;user input 2.email_id;user input 3.subject;user input 4.message;user input	Records should be uploaded or saved successfully and a popup box will show “your message has sent”	User contact details are saved successfully if call the fields are entered otherwise an alert message is displayed.

ADD PATIENTS TEST DETAILS

INPUT	RESULT	CONCLUSION
<ul style="list-style-type: none">• Doctor Referred: user input• Patient Name(First/Last): user input• Gender: choose from the list• TestName: choose from the list• TestID: choose from the list• Amount: choose from the list	<p>After filling the required data and ticking on in the confirmation box.</p> <p>Lab technician is proceeded to the step 2 to fill the patient details to carry out the lab test, taken/opted by the patient.</p>	<p>Lab technician has to fill the details of patient in order to to do/proceed next step.</p>

ADD PATIENTS DETAILS

INPUT	RESULT	CONCLUSION
<ul style="list-style-type: none">• First Name: user input• Last Name : user input• Date: choose from the list• Age: user input• Weight: user input• Email ID: user input• Phone Number: user input	<p>After filling the required data and ticking on in the confirmation box.</p> <p>Lab technician is proceeded to the step 2 to fill the patient details to carry out the lab test, taken/opted by the patient.</p>	<p>Lab technician has to fill the details of patient in order to to do/proceed next step.</p>

Report

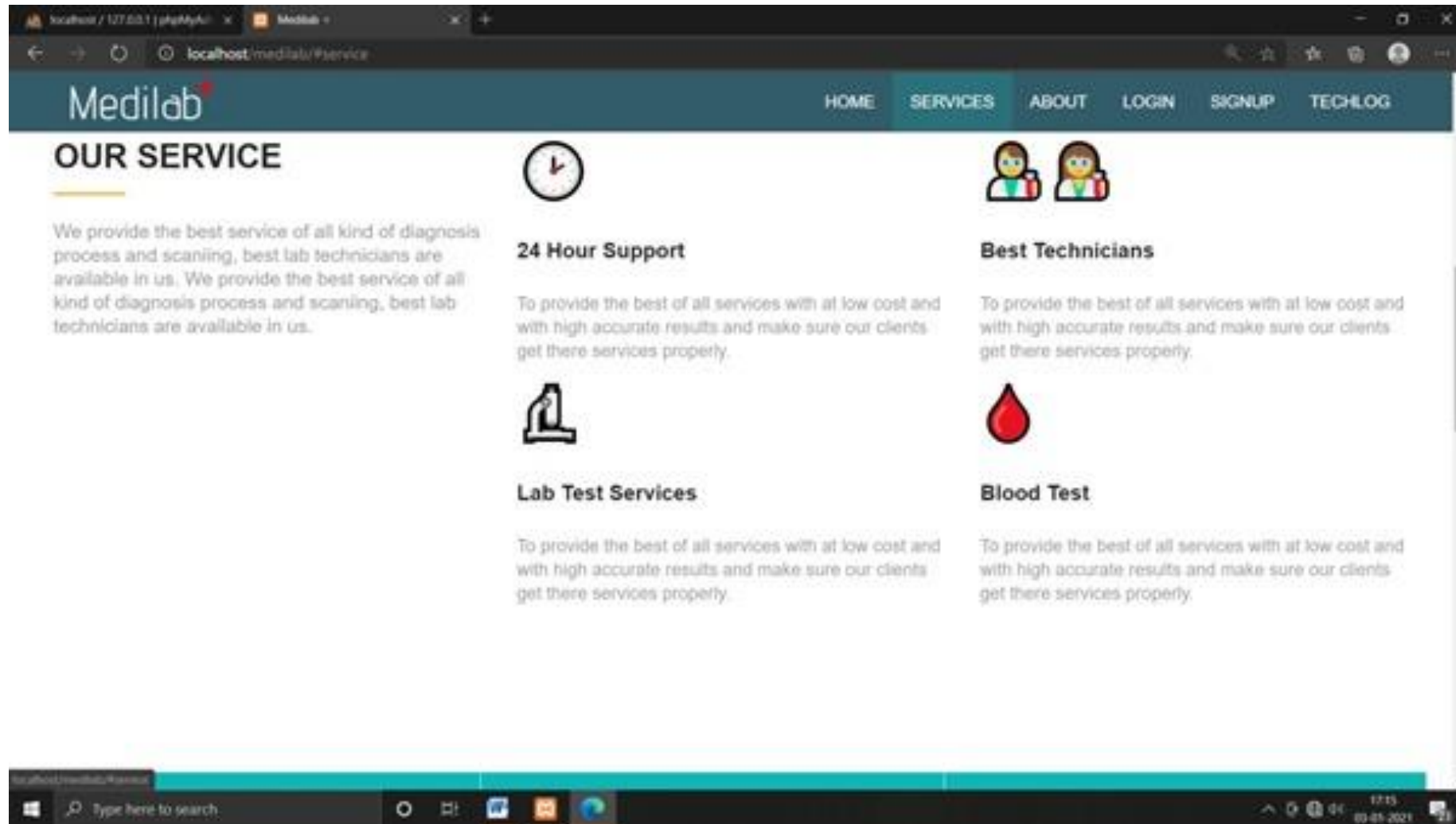
INPUT	RESULT	CONCLUSION
<ul style="list-style-type: none">• SI no: user input• First name: user input• Last name: user input• Gender: choose from the list• Test name: choose from the list• Test ID: user input• Date: choose from the list• Time: choose from the list• Test1: choose from the list• Result1: choose from the list• Units: choose from the list• Standards1: user input• Bio refl: user input• Methodology: user input	<p>After filling the required data and ticking on in the confirmation box. Lab technician will get a confirmation message that the report is successfully uploaded.</p>	<p>Lab technician has to fill the details of patient in order to to do/proceed next step</p>

Screenshots

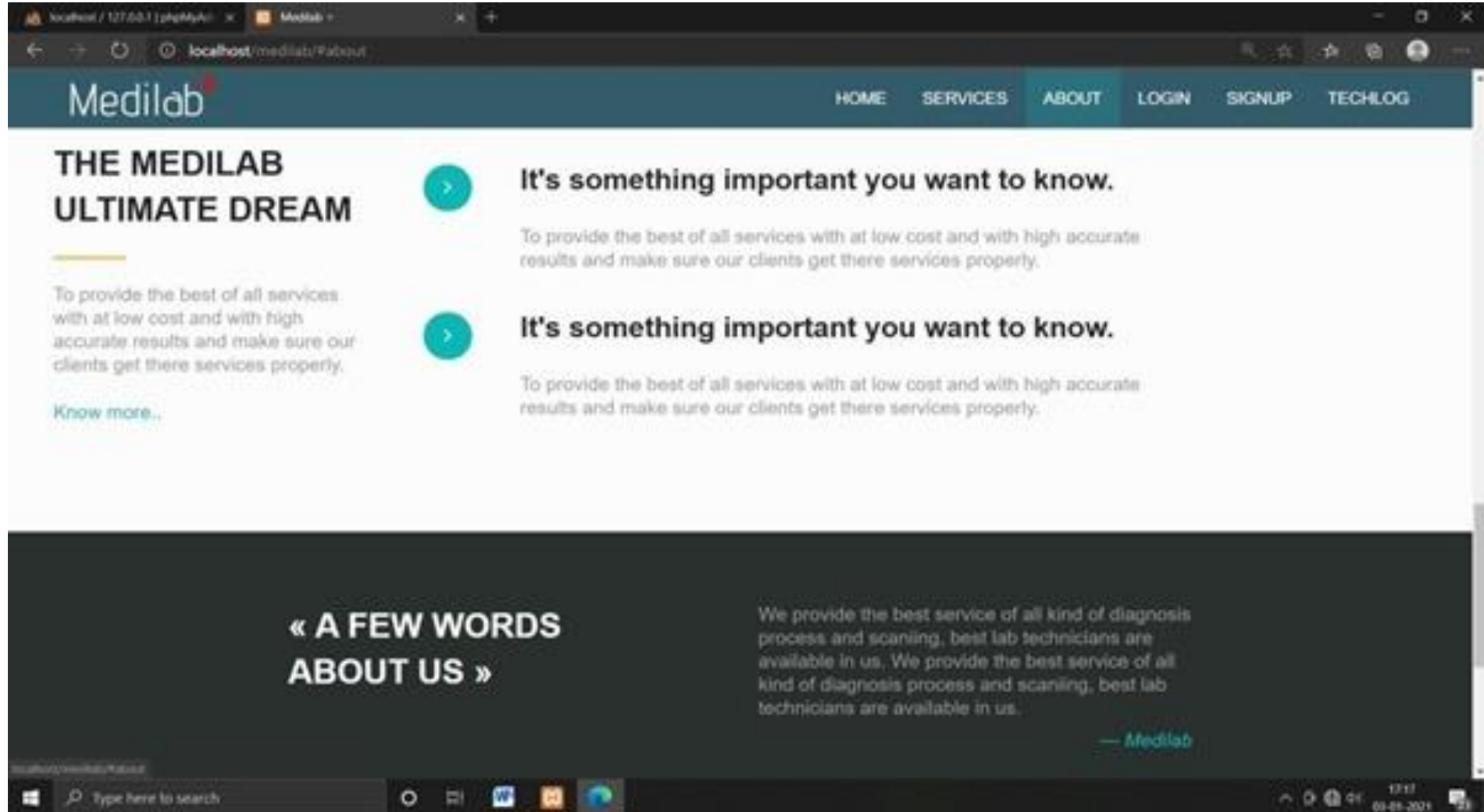
Home screen




Services offered page



About Us



Patient Sign up form



The screenshot shows a web browser window with the URL `localhost/medilab/signup.html`. The page features a background image of laboratory glassware. A semi-transparent white form titled "Create Account" is centered on the page. The form includes the following fields and buttons:

- Create Account** (Section Header)
- First Name** (Text input field)
- Last Name** (Text input field)
- Email Address** (Text input field)
- Create Password** (Text input field)
- Confirm Password** (Text input field)
- Signup** (Blue button)

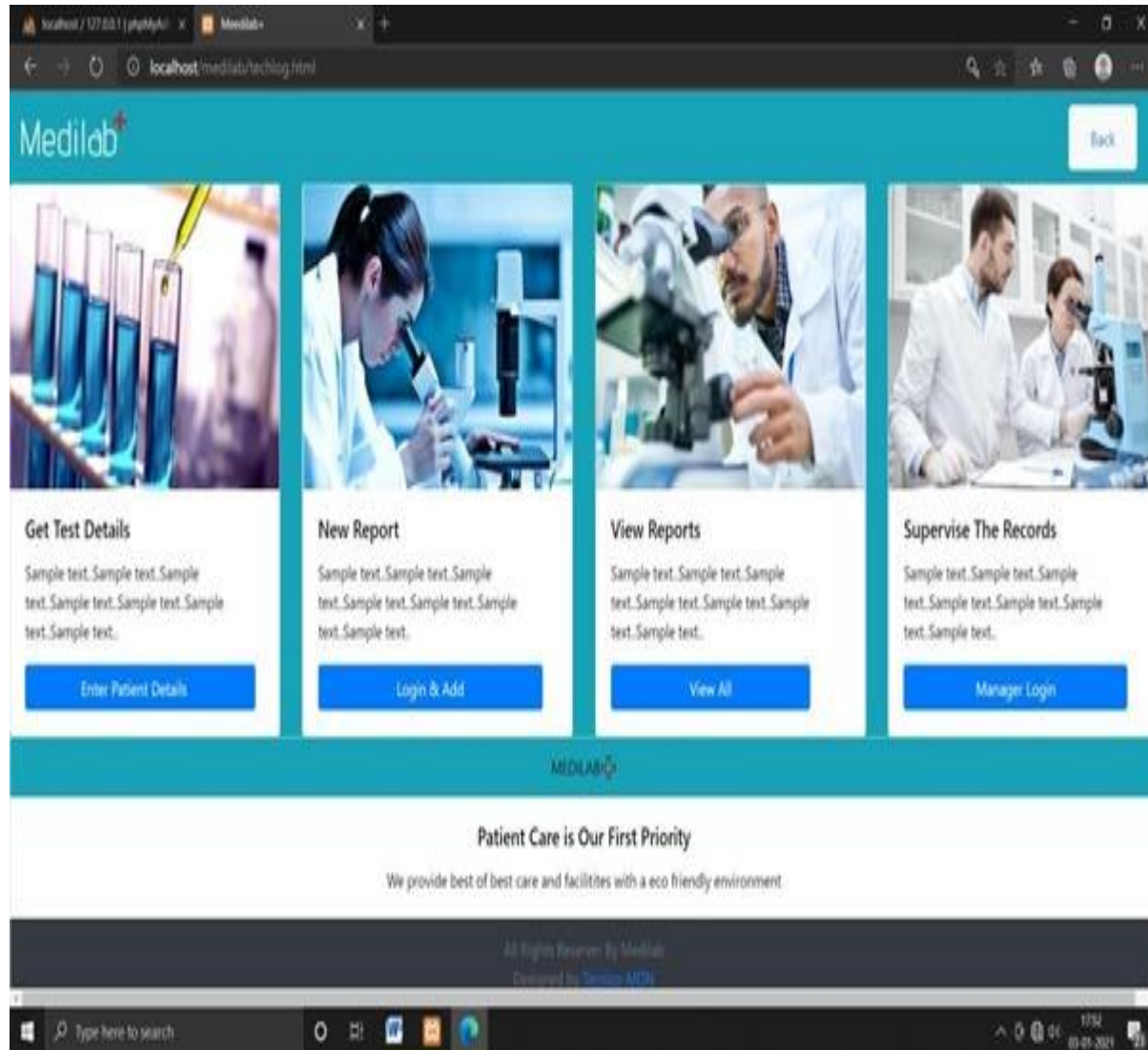
Patient login form



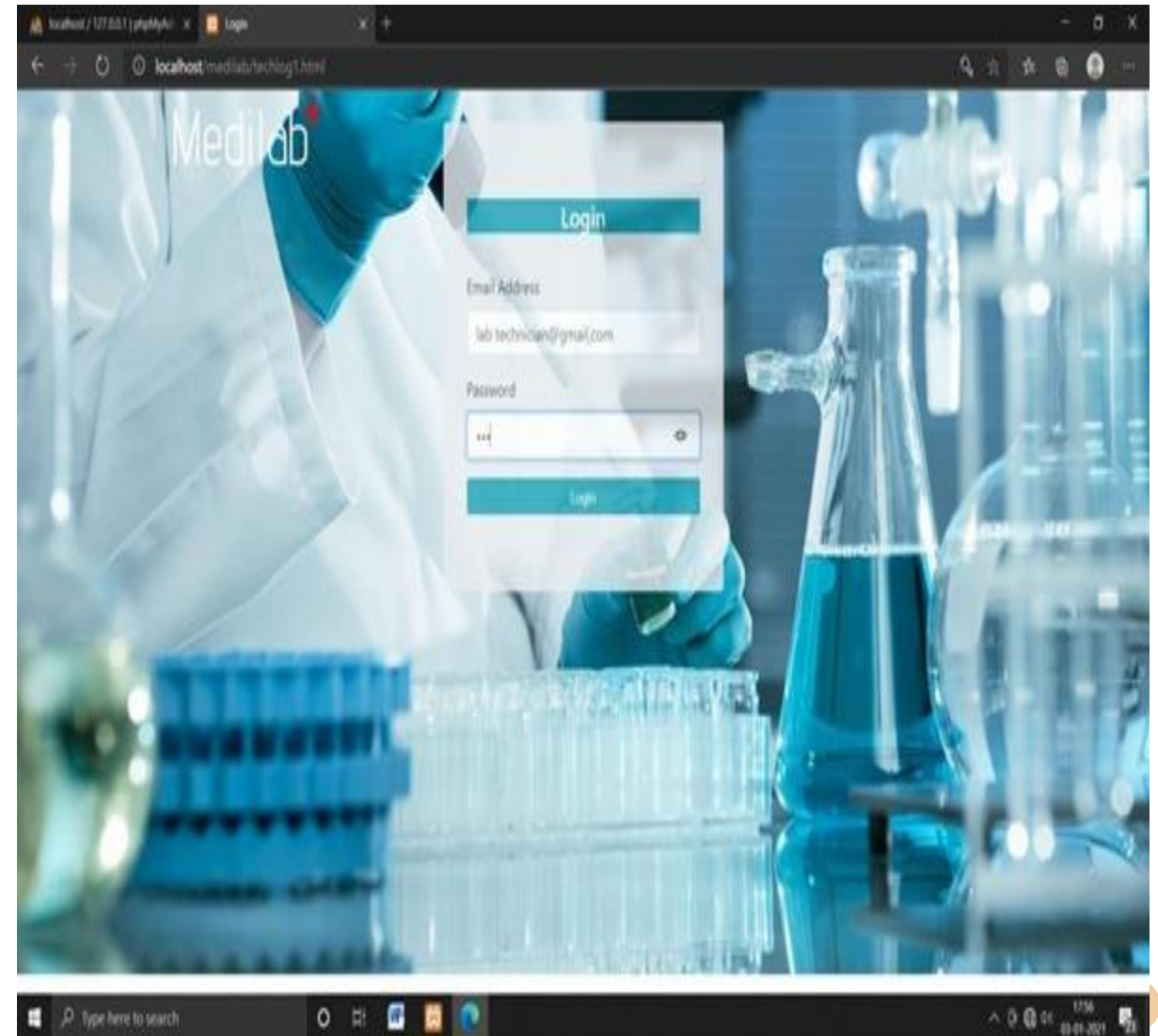
The screenshot shows a web browser window with the URL `localhost/medilab/login.html`. The page features a background image of a person in a lab coat holding a test tube. A semi-transparent white form titled "Login" is centered on the page. The form includes the following fields and buttons:

- Login** (Section Header)
- Email Address** (Text input field, containing `patient@gmail.com`)
- Password** (Text input field, masked with dots)
- Login** (Blue button)
- Not yet regesterd..?** (Text link)
- Register here** (Blue button)

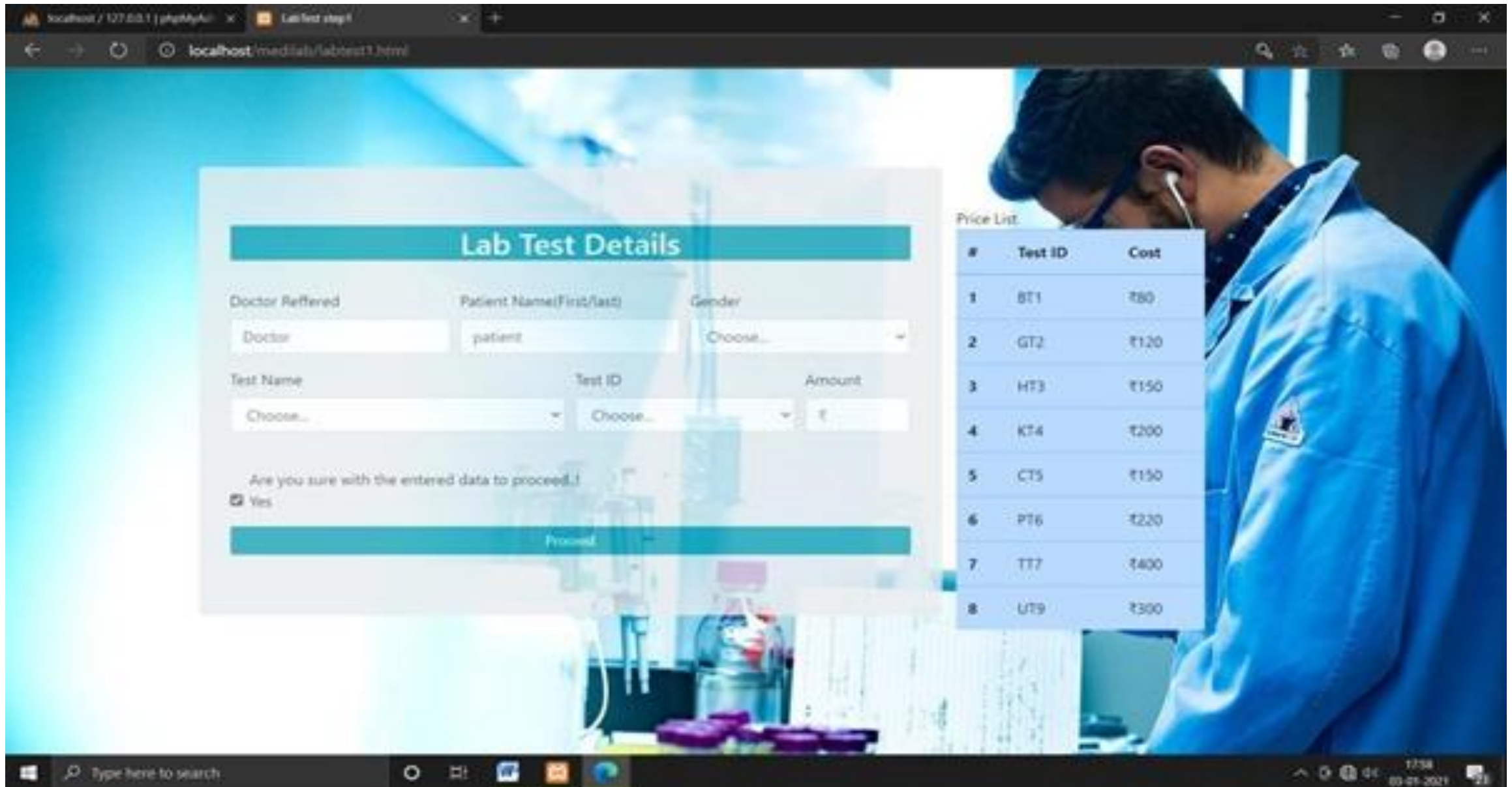
Lab technician login



Enter Patient details



Lab test details



The screenshot shows a web browser window with two tabs: 'localhost / 127.0.0.1 | phyMyApp' and 'Lab test step1'. The address bar shows 'localhost/medlabs/labtest1.html'. The main content area features a 'Lab Test Details' form and a 'Price List' table. The form has fields for 'Doctor Referred' (text input with 'Doctor'), 'Patient Name(First/last)' (text input with 'patient'), 'Gender' (dropdown menu with 'Choose...'), 'Test Name' (dropdown menu with 'Choose...'), 'Test ID' (dropdown menu with 'Choose...'), and 'Amount' (text input with '₹'). Below the form is a confirmation message 'Are you sure with the entered data to proceed..!' and a 'Yes' checkbox. A 'Proceed' button is at the bottom of the form. The 'Price List' table has columns for '#', 'Test ID', and 'Cost' and lists 8 items.

#	Test ID	Cost
1	BT1	₹80
2	GT2	₹120
3	HT3	₹150
4	KT4	₹200
5	CT5	₹150
6	PT6	₹220
7	TT7	₹400
8	UT9	₹300

Patient info

localhost / 127.0.0.1 | phpMyAdmin x Labtest step2

localhost/medilab/labtest2.html

Patient Info

First Name Last Name Date

patient patient dd-mm-yyyy

Age weight

Email_ID Phone Number

patient@gmail.com

Are you sure with the entered data to proceed.!

☒ Yes

Proceed

Displaying Patient details

localhost / 127.0.0.1 | phpMyAdmin

Displaying the Created Report

localhost/medilabs/service.php

Displaying the Patient Details

Sl.no	Doctor referred	Patient name	Gender	Test name	Test type id	Amount	Patient_ID	First name	Last name	Date	Age	Body Weight	Email id	Phone_no
1	Dr Khari	Test1	Male	Blood Test	BT1	80	1	Test1	testqq	2020-12-28	21	75	test1@gmail.com	9898989898
2	Dr Jhon	Test2	Female	Kidney Testing	K14	200	2	Test2	testwe	2020-12-28	22	65	test2@gmail.com	4567891235
3	Dr Chinmayi	Ramya	Female	Blood Test	BT1	80	3	Ramya	Marjunath	2020-12-30	30	50	ramya@gmail.com	7896541235
4	Dr.Kishan	Rishik S	Male	Thyroid Tests	TT7	400	4	Rishik	S	2020-12-30	35	68	rishik@gmail.com	7514965824
5	Dr.Kishan	Chaitra Vinay	Female	Cholesterol Test	CT5	150	5	Chaitra	Vinay	2020-12-30	27	70	chaitra@gmail.com	7512349875
7	Dr.Chinmayi	Anitha Venugopal	Female	Urinalysis Tests	UT8	300	7	Anitha	Venugopal	2020-12-31	45	75	anitha@gmail.com	8547256984
9	Dr.Chinmayi	Samanth T	Male	Blood Test	BT1	80	9	Pooma	Chandra	2021-01-01	24	78	pooma@gmail.com	6364380621

The Report will be generated within next 12 hours, Please Be Patient till the report is uploaded.

You can view your report through our website after login

Fill New Form

Add Report

Logout

Type here to search

1800 80 80 2021

Add Report Details

The screenshot displays a web browser window with the address bar showing 'localhost / 127.0.0.1 | phpMyAdmin' and 'AddLabTests'. The page URL is 'localhost/medilab/addrepo.html'. The main content is a 'Lab Test Details' form. The form has a teal header bar with the title 'Lab Test Details'. Below the header, there are two main sections: 'Patient Info' and 'Tests'. The 'Patient Info' section contains fields for 'First Name', 'Last Name', 'Gender' (a dropdown menu), 'Test Name' (a dropdown menu), 'Test ID' (a dropdown menu), 'Date' (a date picker), and 'Time' (a time picker). The 'Tests' section contains a table with columns: 'Test1', 'Result', 'Units', 'Standards', 'Biological Reference', and 'Methodology'. Below the table, there is a confirmation checkbox labeled 'Are you sure with the entered data?' and a 'Save' button. The background of the form is a blurred image of a person in a white lab coat working at a computer.

Lab Test Details

Patient Info

First Name:

Last Name:

Gender:

Test Name:

Test ID:

Date:

Time:

Tests

Test1	Result	Units	Standards	Biological Reference	Methodology
<input type="text"/>	<input type="text"/>	<input type="text" value="Choose..."/>	<input type="text" value="Choose..."/>	<input type="text"/>	<input type="text"/>

Are you sure with the entered data?

☒ Yes

Save

Report Generated

localhost / 127.0.0.1 | phpMyAdmin x Displaying the Clinicaform Report x

localhost / medilab / service2.php

Reports Generated

Sl no	First_name	Last Name	Gender	Test Name	Test_ID	Date	Time	Test1	Result1	Units	Standards1	Bio_ref1	Methodology
1	Test1	testiqj	Male	Blood Test	BT1	2020-12-30	09:26:00	Hemoglobin	13	g/dL	is <	Hb	Arterial Sampling
2	Test2	testaw	Female	Kidney Testing	KT4	2020-12-30	09:33:00	GFR	70	%	is <	Glomerular Filtration Rate	ACR-GFR
3	Ramya	Marunath	Female	Blood Test	BT1	2020-12-30	14:55:00	WBC	11500	millions/cumm	is >	proctitis	CDC
4	Rohik	S	Male	Thyroid Tests	TT7	2020-12-30	16:39:00	TSH	5	pg	is >	TSH	series of blood test
5	Chitra	Vinay	Female	Cholestrol Test	CT5	2020-12-30	19:43:00	cholestral test	140	mg/dl	is =	total cholestral	blood test
6	Aritha	Venugopal	Female	Urinalysis Tests	UT8	2020-12-31	22:43:00	urine	100	mm	is >	urinary tract infections	urine
7	Poorna	Chandia	Male	Blood Test	BT1	2021-01-01	12:51:00	blood test	5000	cells/cumm	is =	WBC	series of blood test
8	Samarth	T	Male	Blood Test	BT1	2021-01-03	18:07:00	Blood test	10000	mg/dl	is =	WBC	series of blood test
9	Samarth	T	Male	Blood Test	BT1	2021-01-03	18:07:00	Blood test	10000	mg/dl	is =	WBC	series of blood test

The Report generated here is clear and accurate.

You can get the hardcopy of the Test Report in the Report counter in our MEDILAB

Fill New Form

Add Report

Logout

Type here to search

18/12 00:44:2021

Patient Login to Report



View Lab Report



Enter Valid Patient ID

localhost / 127.0.0.1 | phpMyAdmin

Medilab

HOME SERVICES LAB-REPORT ABOUT CONTACT LOGOUT

Enter Patient ID

Generate

CONTACT US

Contact Info

SJM Institute of Technology
Chitradurga, Karnataka 577-601

medilab@gmail.com

+91 7899279622

+91 6362654822

Having Any Query! Feel free to contact us 😊

Your Name

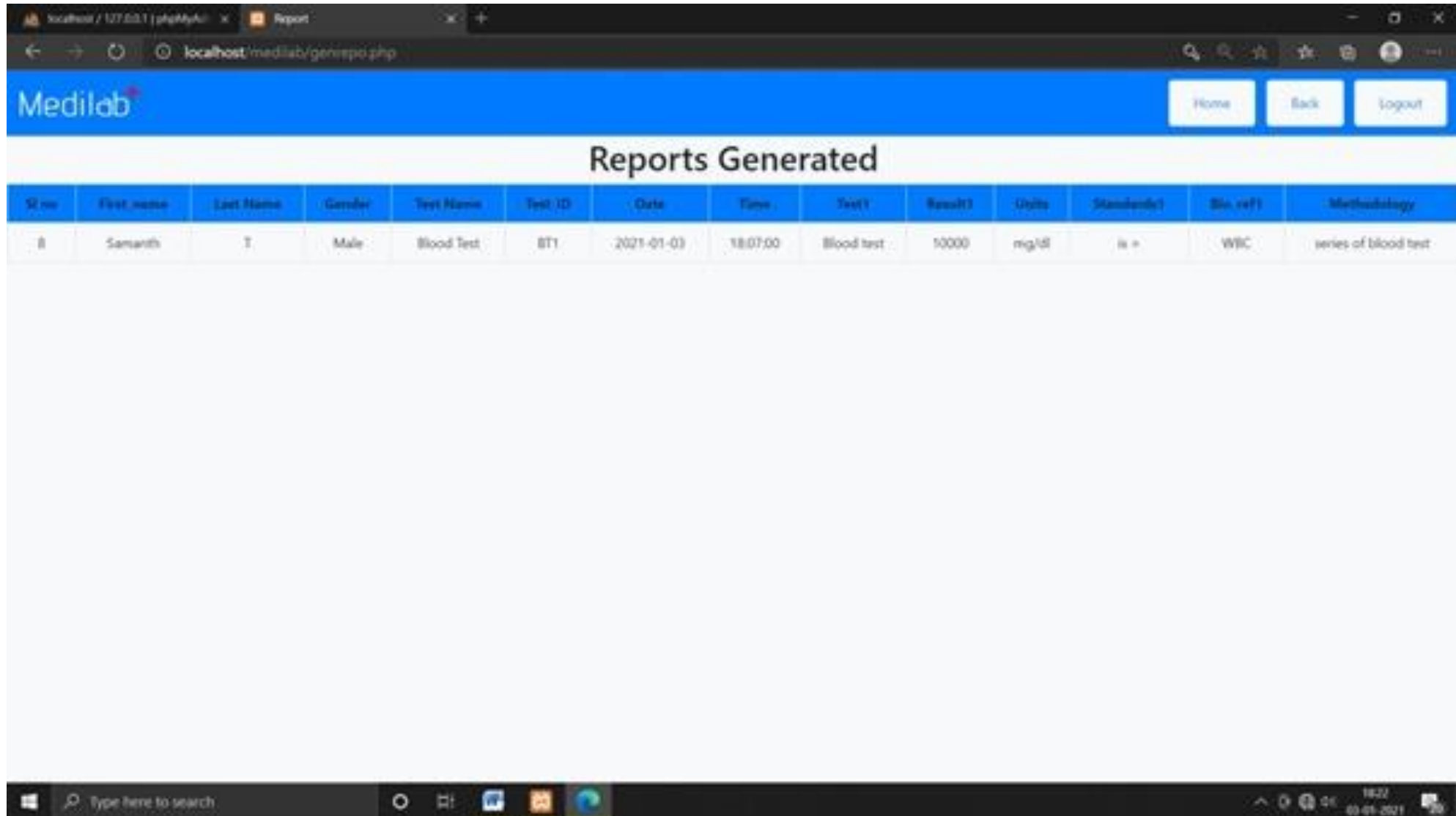
Email ID

Subject

Message

Send

Reports Generated



Sl no	First name	Last Name	Gender	Test Name	Test ID	Date	Time	Test1	Result1	Units	Standards1	Bio ref1	Methodology
8	Samarth	T	Male	Blood Test	BT1	2021-01-03	18:07:00	Blood test	10000	mg/dl	is +	WBC	series of blood test

Conclusion

- The “LAB DATA MANAGEMENT” is a database management system adopted by the lab named “MEDILAB” to have a general-purpose web application in which both the laboratory staff and the clients/patients can get the benefit from it.
- It is developed in such a way that the patients can book an appointment online through our website where as well can get the ambulance service, where as the doctors can view their appointment schedules and above all, the hospital management can easily supervise and maintain the records of doctors, patients, emergency service, email subscriptions and contact forms and have complete control over it.
- This project is an attempt to provide a platform for the users and the service providers to save time and maintain accuracy with reduced paperwork and time and to provide the details of the service provider to the client, so that they can understand and learn about the facilities provided by the service provider (Hospital).

References

- <https://www.w3schools.com>
- <https://www.eduonix.com>
- <https://fonts.google.com>



THANK YOU!