



A
PROJECT REPORT
ON
“Clinical Lab Management SYSTEM”

Submitted By,

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Mr.Dhumal Kedar Shivaji.

Under Guidance of

Prof.A.G.Jirange (M.C.A)

Submitted To,

SHIVAJI UNIVERSITY, KOLHAPUR

IN PARTIAL FULFILLMENT OF THE

BACHELOR OF SCIENCE COMPUTERSCIENCE
(Entire) CBCS-III

THROUGH,

THE PRINCIPAL

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE,
KARAD

YEAR: 2021-22

SHRI. SHIVAJI EDUCATION SOCIETY, KARAD

“Be One With The Downtrodden And the Underprivileged”



**YASHWANTRAO CHAVAN COLLEGE OF SCIENCE,
KARAD**

DEPARTMENT OF COMPUTER SCIENCE

CERTIFICATE

This is to certify that, **Mr. Yadav Abhishek Sunil & Mr. Dhumal Kedar Shivaji** has completed the project work entitled **“Clinical Lab Management System”** for the partial fulfilment of award of the degree **“Bachelor of Science Computer Science (B.Sc.CS. (Entire) CBCS- III)** of Shivaji University, Kolhapur for the academic year 2021-2022.

To the best of knowledge and belief this is their original work and not submitted earlier, anywhere for any purpose.

Date: / /2022

Place: Karad.

Prof.A.G.jirange

(Project Guide)

Examiner

Prof. A.A.Mulla

(Head of Department)

DECLARATION

We hereby declare that, the Industrial project entitled “**Clinical Lab Management System**” developed and submitted by me and under the guidance of **Prof. A. G. Jirange** is my original work.

Further we declared that we have not violated any of the provisions under copyright act

You're sincerely,

Mr. Yadav Abhishek Sunil.

Mr. Dhumal Kedar Shivaji.

Date: / / 2022

Place: Karad.

ACKNOWLEDGEMENT

We will take this opportunity to express our gratitude thank to all those people without whom this 'Project' would not have been succeeded. Every helping hand has their own special way contributed towards the success of this project.

We are very grateful to **Dr. S. B. Kengar**, Principal, Yashwantrao Chavan College of Science, Karad. We sincerely thank to **Prof.A.A.Mulla** HOD, Computer Science, Department and **Prof. A. G. Jirange** for their precious guidance, which enable us to complete our project successfully. Also we would like to express our thanks to all staff members and those who directly and indirectly supported us to complete this project.

Your Sincerely,

Mr. Yadav Abhishek Sunil.

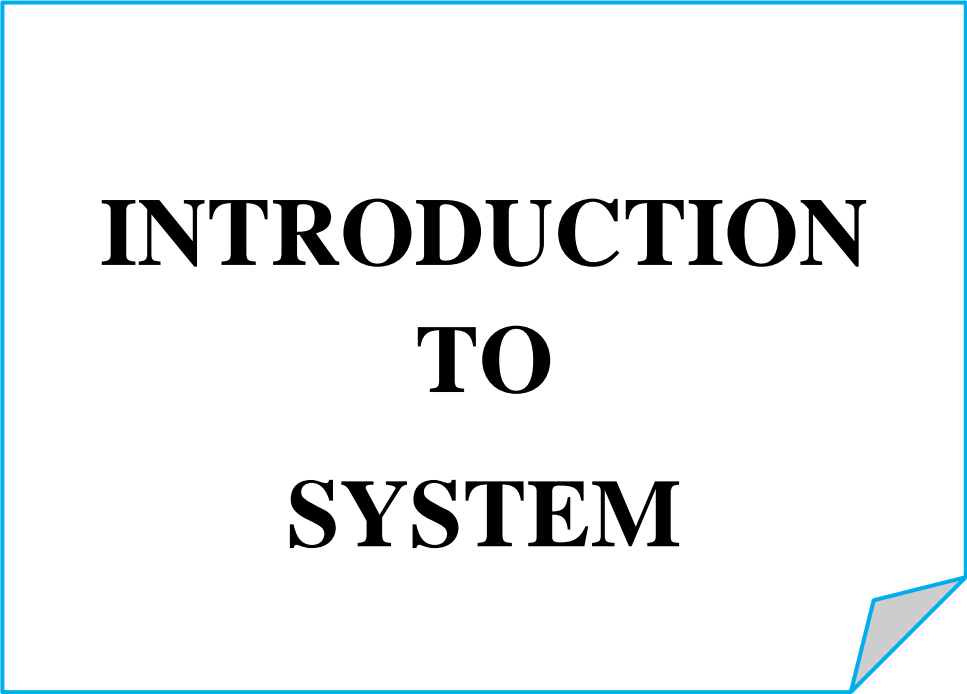
Mr. Dhumal Kedar Shivaji.

Date : / /2022

Place : Karad

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INTRODUCTION TO SYSTEM

INTRODUCTION TO SYSTEM

The “Clinical Lab Management System” is a project which aims in developing a computerized system to maintain all the daily work of Clinical Lab.

Clinical Lab Management System software has been developed to provide comprehensive software solution for the clinics. But there are clinics cannot afford to run such comprehensive system or may not be required due to the volume of work handled. Still to encourage such clinics to use computer for generating useful information to run the organization efficiently, we provide the following Software from which one can choose according to their requirement.

We developed this software application with a fully computerized method to manage all the data. At present all records are maintained manually. Overall this project of ours is being developed to help the Admin and other office staff to maintain the office in the best way possible and reduce the human efforts. Clinical Lab Management System can analysis the data that had been captured and come out with the analysis report

EXISTING SYSTEM

In the existing system of Clinical Lab form functions such as Patient Registration and Tests. At present all records are maintained manually. The existing system is not giving accurate results while doing transactions. It doesn't provide security, anyone can enter into the system and can do their own transactions. It is not flexible in generating reports.

Problems in Existing System-

1. It is not efficient in performing work of Clinical Lab.
2. It includes much manual process and time consuming.
3. It is not user friendly.
4. It uses Excel to maintain data.
5. It is not Generating Accurate Reports.
6. More man power .
7. Consumes large volume of paper work

To avoid all these limitations and make the working more accurately the system needs to be computerized.

NEED & SCOPE OF COMPUTER SYSTEM

Need of the system

- To Create Application For our Organization.
- To Provide Search Facility For Applicant
- To Generate Different Types of Reports.
- To manage large amount of user and data store in digital for long time.
- Display all details of Applicant

Scope of the system

- In future, we can do following enhancement in an existing System.
- Make an entire system online by developing web application
- Use quick notification alerts.
- Develop mobile app so that all user can easily interact with system.

ORGANIZATION PROFILE

AK CLINICAL LAB

Name:- Shri Abhi Yadav & Kedar Dhumal.

Address:- Karad Masur Road, Vidyanagar

Tal: Karad, Dist: Satara

Maharashtra 415110

Contact No:-9923325682

PROPOSED SYSTEM

PROPOSED SYSTEM

The front-end development tool is C#.Net which allows to build the master entries. The back end code was done with fully MY SQL. The C#.Net is easy to use, universal and efficient.

The back end database development tool used as MYSQL .it is able to handle large amount of data while maintaining data integrity and provides a number of management and data distribution function. This two development tools are powerful and a good interface for development.

The aim of proposed system is to develop a system of improved facilities. The proposed system can overcome all the limitations of the existing system. The system provides proper security and reduces the manual work. The existing system has several disadvantages and many more difficulties to work well. The proposed system tries to eliminate or reduce these difficulties up to some extent. The proposed system will help the user to reduce the workload and mental conflict.

To overcome problems in the existing System a new Lab services “Clinical Lab management system” is proposed after study of system. the system serves most appropriate information to suitable person at any given time. Proposed system we are going to develop in C# as Front End and MySQL Server as Back End, with following objectives.

Facilities ease of operation-

- Ensure data integrity and security.
- Less manpower.
- Generate accurate reports.
- Accurate handling in multiple details of multiple clients.

OBJECTIVES OF SYSTEM

The objectives of this project are:

The main objective is to provide security, authority conclusion and further privacy and also is any unauthorized person cannot destroy or get information.

- To provide easier and efficient way for completion of LAB work.
- Have a good user interface.
- Issue of Patients.
- Issue of Tests.
- Booking Slot for New Patient Test.
- Book Variety of Tests.
- Payment of Tests.
- LAB's Forms Facilities ease of operation.
- Ensure data integrity and security.
- Less manpower.
- Generate accurate reports.
- To overcome problem faced in manual system.

REQUIREMENT ENGINEERING

The software requirements are description of features and functionalities of the target system. Requirements convey the expectations of users from the software product. The requirements can be obvious or hidden, known or unknown, expected or unexpected from client's point of view. The process to gather the software requirements from client, analyze and document them is known as requirement engineering. Requirement Engineering is the process of defining, documenting and maintaining the requirements. It is a process of gathering and defining service provided by the system. The goal of requirement engineering is to develop and maintain sophisticated and descriptive "System Requirements Specification" document

REQUIREMENT GATHERING

If the feasibility report is positive towards undertaking the project, next phase starts with gathering requirements from the user. Analysts and engineers communicate with the client and end-users to know their ideas on what the software should provide and which features they want the software to include. It is related to the various ways used to gain knowledge about the project domain and requirements. The various sources of domain knowledge include customers, business manuals, and the existing software of same type, standards and other stakeholders of the project. The techniques used for requirements elicitation include interviews, brainstorming, task analysis, prototyping, etc. Elicitation does not produce formal models of the requirements understood. Instead, it widens the knowledge domain of the analyst and thus helps in providing input to the next stage.

SOFTWARE REQUIREMENT SPECIFICATION

A System Requirements Specification (SRS) (also known as a Software Requirements Specification) is a document or set of documentation that describes the features and behaviour of a system or software application. It includes a variety of elements that attempts to define the intended functionality required by the customer to satisfy their different users. In addition to specifying how the system should behave, the specification also defines at a high-level the main business processes that will be supported, what simplifying assumptions have been made and what key performance parameters will need to be met by the system. Depending on the methodology employed (agile v s waterfall) the level of formality and detail in the SRS will vary, but in general an SRS should include a description of the functional requirements, system requirements, technical requirements, constraints, assumptions and acceptance criteria. Each of these is described in more detail below:

- **Functional And System Requirements**

This section usually consists of a hierarchical organization of requirements, with the business/functional requirements at the highest-level and the detailed system requirements listed as their child items.

- **Technical Requirements**

This section is used to list any of the "non-functional" requirements that essentially embody the technical environment that the product needs to operate in, and include the technical constraints that it needs to operate under. These technical requirements are critical in determining how the higher-level functional requirements will get decomposed into the more specific system requirements.

- **System Qualities**

This section is used to describe the "non-functional" requirements that define the "quality" of the system. These items are often known as the "ilities" because most of them end in "ity". They include such items as: reliability, availability, serviceability, security, scalability, maintainability. Unlike the functional requirements (which are usually narrative in form), the system qualities usually consist of tables of specific metrics that the system must meet to be accepted.

- **Constraints And Assumptions**

This section will outline any design constraints that have been imposed on the design of the system by the customer, thereby removing certain options from being considered by the developers. Also this section will contain any assumptions that have been made by the requirements engineering team when gathering and analysing the requirements. If any of the assumptions are found to be false, the system requirements specification would need to be re-evaluated to make sure that the documented requirements are still valid.

- **Acceptance Criteria**

This section will describe the criteria by which the customer will "sign-off" on the final system. Depending on the methodology, this may happen at the end of the testing and quality assurance phase, or in an agile methodology, at the end of each iteration. The criteria will usually refer to the need to complete all user acceptance tests and the rectification of all defects/bugs that meet a pre-determined priority or severity threshold

SYSTEM ANALYSIS

SYSTEM ANALYSIS

After analysing the requirements of the task to be performed the next step is to analyse the problem and understand its context. The first activity in the phase is studying the existing system do the is to understand the requirements and domain of the new system. Both the activities are equally important, but the first activity basis of giving the functional specification sand then successful design of the proposed system. Understanding the properties and requirement sofa new system is more difficult and requires creative thinking and understanding of existing running system is also difficult, improper understanding of present system an lead diversion from solution.

➤ Analysis model

The model that is basically being followed is the Water Fall Model which states that the phases are organized in a linear order. First of all the feasibility study is done .Once that part is over the requirement analysis and project planning begins . If system exists one and modification and addition of new module is needed, analyse is of present system can be used as basic model. The design starts after the requirement analysis is complete and the coding begin after the design is complete. Once the programming is completed, the testing is done.

In this model the sequence of activities performed in as software development project are: -

- ❖ Requirement Analysis
- ❖ Project planning
- ❖ System design
- ❖ Detail design
- ❖ Coding
- ❖ Unit testing
- ❖ System integration & testing

Here the linear ordering of these activities is critical. End of the phase and the output of one phase is the input of other phase. The output of each phase is to be consistent with the overall requirement of the system. Some of the qualities of spiral model are also incorporated like after the people concerned with the project review completion of each of the phase the work done.

FACT FINDING TECHNIQUES

In system under consideration during development phase following methods are adopted.

A key part of feasibility is gathering information about the present system. The analyst knows what information to gather to make of it.

Questionnaires :-

It allow sanely collect information from a group of individuals who may or may not be using the system thus resulting sometimes in irrelevant data & data redundancy.

Interviews:-

Analysts use interview to collect information from individuals who they considers should be the sources ,who are current users of the existing system .The analyst should have a face conversation with the users & administrator of the system & fixed set of question sis prepared.

Record Review:-

Consisting of analyzing the previous operations in the company & fore casting the new futures schemes. Record include table name, date &time creation, user login etc.

Observation :-

If information is not collected from the other fact-finding method, then observation method is used. In this method analyst to observes flow of documents, way the process is carried out steps followed person involved etc.

FEASIBILITY STUDY

Feasibility study is a process of evaluating the deciding factors to check whether proposed system is feasible or not. Feasibility is the measure of a how beneficial or practical the development of an information system will be to an organization. The feasibility study is carried out in the following aspects.

1. Technical Feasibility
2. Operational Feasibility.
3. Economic Feasibility.

1. Technical Feasibility:

The technical feasibility study carried out for the system determined whether the planned system could be developed & designed in the organization using the existing technology, the technical evaluation also determines whether the existing system can be upgraded to use the new technology & whether the organization has the expertise to use it. The organization is already well Equipped with required hardware & software.

2. Operational Feasibility :

Operational feasibility ends at checking if the system will help the user to work in more efficient & accurate manner through all routine operations. The system is made to be comprehensive in nature, using a full menu driven system & appropriate user informative messages & warnings to avoid work of error & facilitate data integrity & consistency. On the contrary, the workload on the user will be lessened to a great extent, as the system is aimed at taking care of the complex procedures & automatic calculations. Thus the system is operationally feasible.

3.Economical Feasibility :

While considering economical feasibility, it is checked in points like performance, information & outputs for the system. Economic of the system looks at the financial aspects of the projects. It determines whether the system is economical feasible, in other words it determines whether the investment that goes into the implementation of the system is recoverable. As the hardware & software are already available & no investment is to be made in that direction, the only cost involved is that of implementing the system.



SYSTEM DIAGRAM

SYSTEM DIAGRAM

Data Flow Diagram (DFD)

✚ Zero level (Context Level Diagram):

Diagram 1

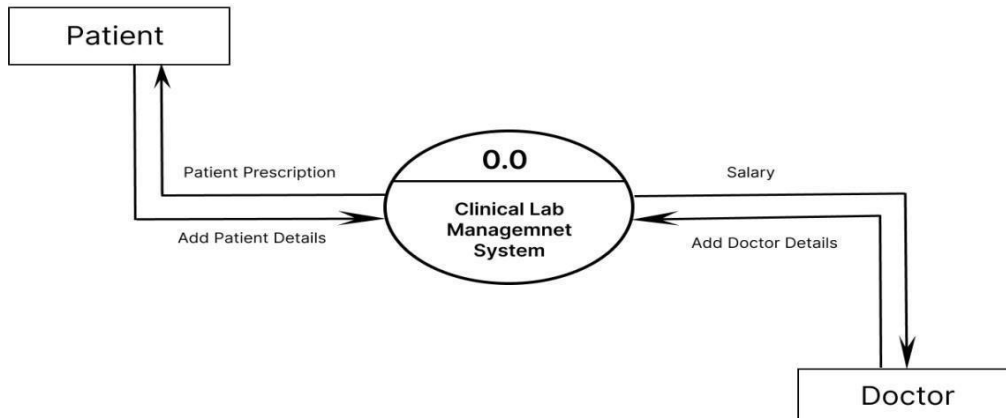


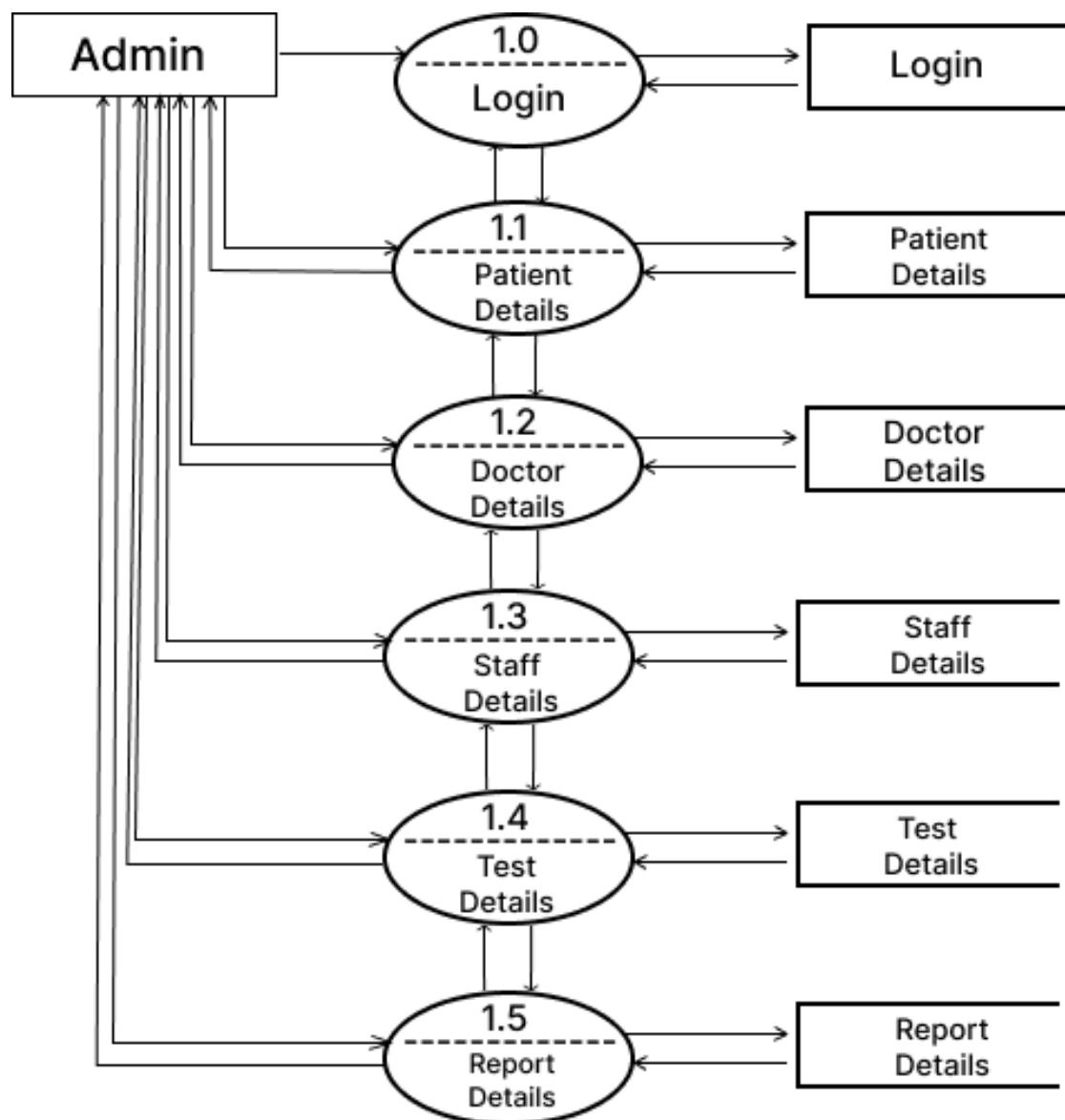
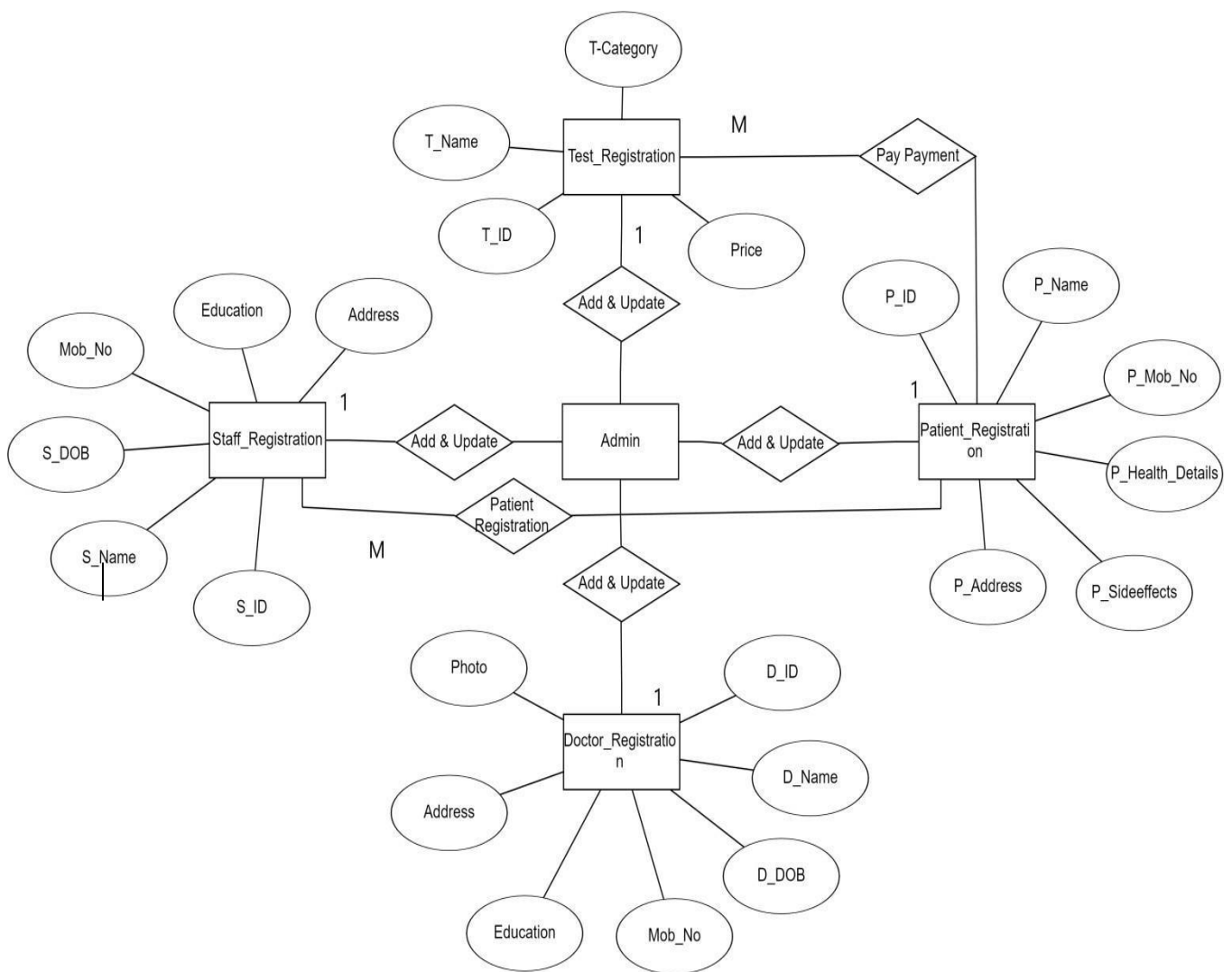
Diagram 2**First Level Diagram:**

Diagram 3

Entity Relationship Diagram (ERD)





SYSTEM DESIGN

DATABASE DESIGN

Table Name:- Login

Description:- It Store Login Information.

dbo.Login: Table(...agement_System_DB) X

Column Name	Data Type	Allow Nulls
Username	nvarchar(10)	<input type="checkbox"/>
Password	nvarchar(10)	<input type="checkbox"/>
		<input type="checkbox"/>

Table Name:- Staff Details

Description:- It Store Staff Details.

dbo.Staff_Detail:...agement_System_DB) X

Column Name	Data Type	Allow Nulls
S_ID	int	<input type="checkbox"/>
S_FName	varchar(50)	<input type="checkbox"/>
S_MName	varchar(50)	<input type="checkbox"/>
S_Surname	varchar(50)	<input type="checkbox"/>
S_FullName	varchar(50)	<input type="checkbox"/>
S_Dob	date	<input type="checkbox"/>
S_Age	int	<input type="checkbox"/>
S_Gender	varchar(10)	<input type="checkbox"/>
S_Education	varchar(50)	<input type="checkbox"/>
S_Post	varchar(50)	<input type="checkbox"/>
S_MobNo1	decimal(10, 0)	<input type="checkbox"/>
S_MobNo2	decimal(10, 0)	<input type="checkbox"/>
S_AadharNo	decimal(12, 0)	<input type="checkbox"/>
S_EmailID	nvarchar(50)	<input type="checkbox"/>
S_Address	nvarchar(50)	<input type="checkbox"/>
S_District	varchar(50)	<input type="checkbox"/>
S_State	varchar(50)	<input type="checkbox"/>
S_Country	varchar(50)	<input type="checkbox"/>
S_Pincode	decimal(6, 0)	<input type="checkbox"/>
S_ShiftTime	varchar(50)	<input type="checkbox"/>
S_RegBy	varchar(50)	<input type="checkbox"/>

Table Name:- Test Details

Description:- It Store Test Details.

dbo.Test_Detail: T...agement_System_DB) X			
	Column Name	Data Type	Allow Nulls
▶	T_ID	int	<input type="checkbox"/>
	T_Category	varchar(50)	<input type="checkbox"/>
	T_Name	varchar(50)	<input type="checkbox"/>
	T_Lo_Range	int	<input type="checkbox"/>
	T_Up_Range	int	<input type="checkbox"/>
	T_Unit	nvarchar(50)	<input type="checkbox"/>
	T_Price	int	<input type="checkbox"/>
	T_Description	nvarchar(50)	<input type="checkbox"/>
	T_Reg_Date	date	<input type="checkbox"/>
			<input type="checkbox"/>

Table Name:- Patient Test.

Description:- It Stores Patient Test.

dbo.Patient_Test:...agement_System_DB) X			
	Column Name	Data Type	Allow Nulls
▶	P_ID	int	<input type="checkbox"/>
	P_Test_Name	varchar(MAX)	<input type="checkbox"/>
			<input type="checkbox"/>

Table Name:- Patient Details.

Description:- It Store Patient Details.

Primary key:- P_ID

dbo.Patient_Details (Clinical_Lab_Management_System_DB) X			
	Column Name	Data Type	Allow Nulls
PK	P_ID	int	<input type="checkbox"/>
	P_FName	varchar(50)	<input type="checkbox"/>
	P_MName	varchar(50)	<input type="checkbox"/>
	P_Surname	varchar(50)	<input type="checkbox"/>
	P_FullName	varchar(50)	<input type="checkbox"/>
	P_DOB	date	<input type="checkbox"/>
	P_Age	int	<input type="checkbox"/>
	P_Gender	varchar(50)	<input type="checkbox"/>
	P_AadharNo	decimal(12, 0)	<input checked="" type="checkbox"/>
	P_Address	nvarchar(50)	<input type="checkbox"/>
	P_MobNo1	decimal(12, 0)	<input type="checkbox"/>
	P_MobNo2	decimal(12, 0)	<input checked="" type="checkbox"/>
	P_EmailId	nvarchar(30)	<input checked="" type="checkbox"/>
	P_RefBy	varchar(50)	<input type="checkbox"/>
	P_RegBy	varchar(50)	<input type="checkbox"/>
	P_Allergy	nvarchar(50)	<input checked="" type="checkbox"/>
	P_AllergyName	nvarchar(50)	<input checked="" type="checkbox"/>
	P_Sideeffects	nvarchar(50)	<input checked="" type="checkbox"/>
	P_Total_Test	int	<input type="checkbox"/>
	P_Fees	money	<input type="checkbox"/>
	P_Discount	float	<input checked="" type="checkbox"/>

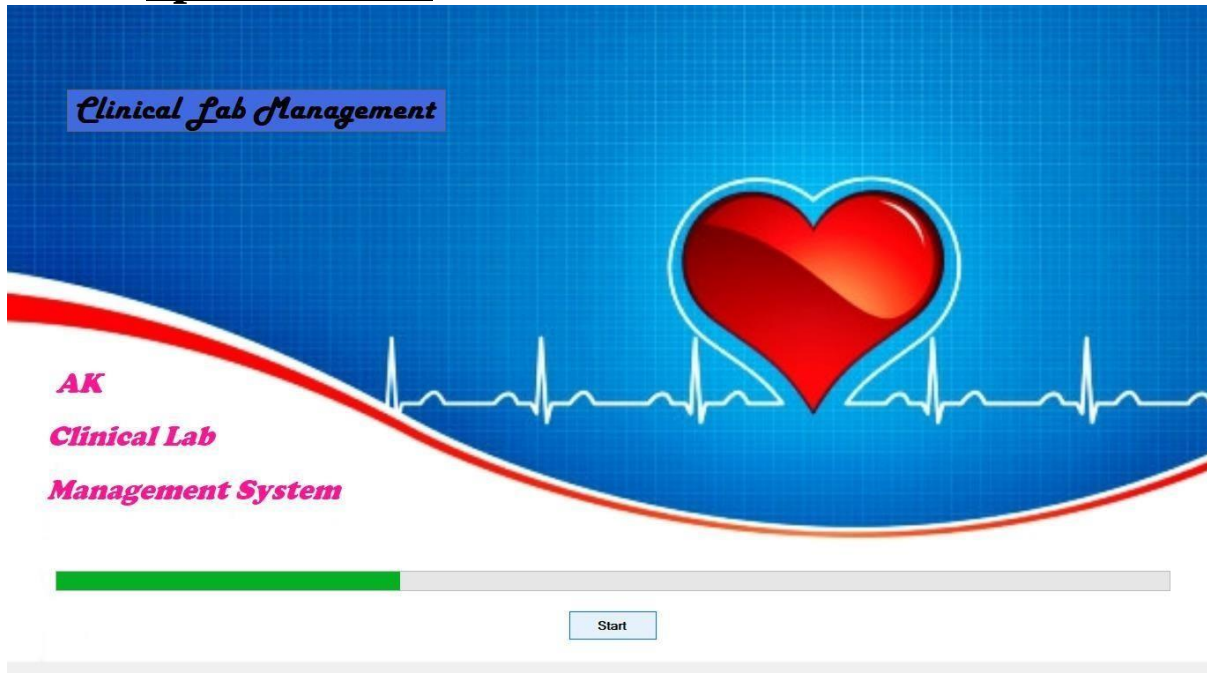
Table Name :- Doctor Details

Description:- It Store Doctor Details

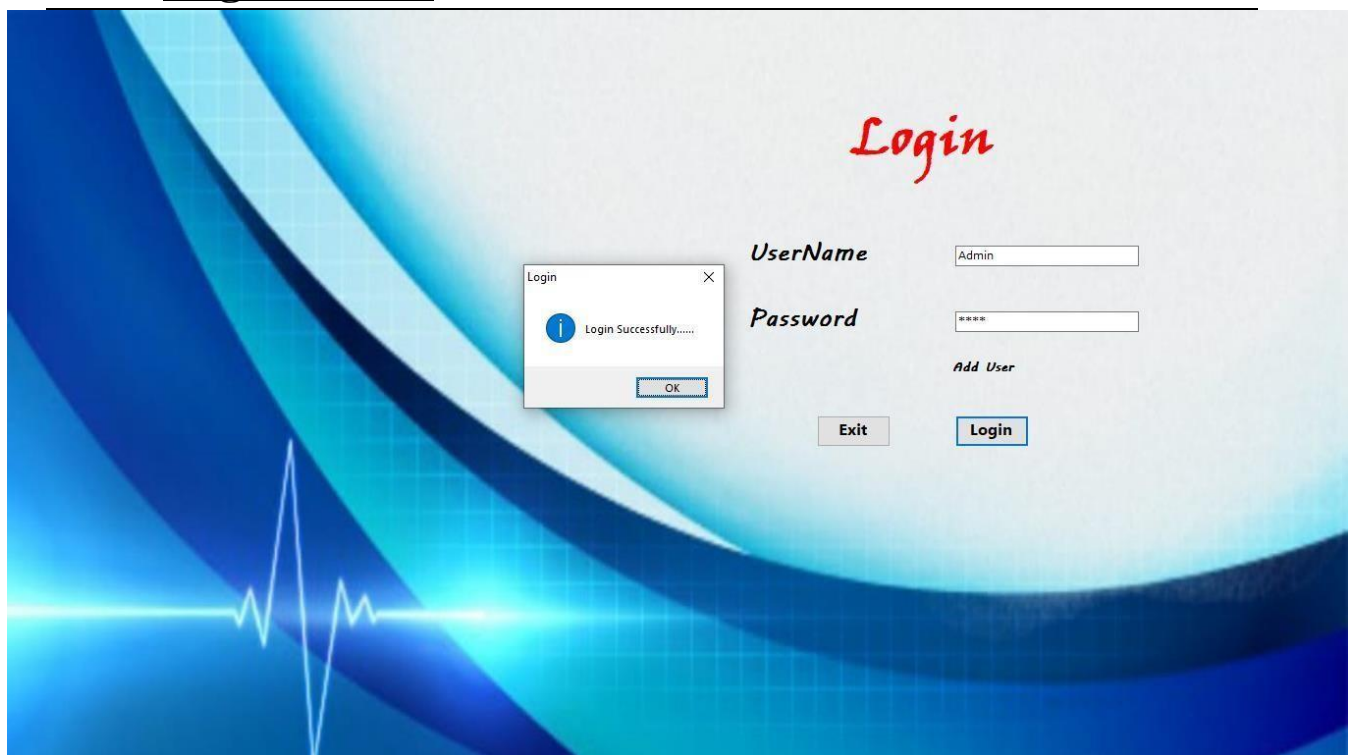
dbo.Doctor_Detail...gement_System_DB) X			
	Column Name	Data Type	Allow Nulls
▶	D_ID	int	<input type="checkbox"/>
	D_FName	varchar(50)	<input type="checkbox"/>
	D_MName	varchar(50)	<input type="checkbox"/>
	D_Surname	varchar(50)	<input type="checkbox"/>
	D_FullName	varchar(50)	<input type="checkbox"/>
	D_DOB	date	<input type="checkbox"/>
	D_Age	int	<input type="checkbox"/>
	D_Gender	varchar(10)	<input type="checkbox"/>
	D_Degree	varchar(30)	<input type="checkbox"/>
	D_MobNo1	decimal(10, 0)	<input type="checkbox"/>
	D_MobNo2	decimal(10, 0)	<input checked="" type="checkbox"/>
	D_AadharNo	decimal(12, 0)	<input type="checkbox"/>
	D_EmailID	nvarchar(50)	<input type="checkbox"/>
	D_Address	nvarchar(50)	<input type="checkbox"/>
	D_District	varchar(50)	<input type="checkbox"/>
	D_State	varchar(50)	<input type="checkbox"/>
	D_Country	varchar(50)	<input type="checkbox"/>
	D_Pincode	decimal(6, 0)	<input type="checkbox"/>
	D_RegBy	varchar(50)	<input type="checkbox"/>
	D_RegDate	date	<input type="checkbox"/>
	D_Image	image	<input type="checkbox"/>

INPUT/OUTPUT DESIGN

Splash Screen




◆ Login Screen



Main Entry Form

AK Laboratory


Username

Dashboard

Patient

Doctor

Test

Staff

History

Report

Log Out

AK Clinical Lab Management System

AK CLINICAL LAB" Near Fork Infosystem, Karad, Maharashtra Open 24 hours

Earning
0.0
Status Update On last 28 days


Todays Patient
000
Status Update On last 28 days

Todays
000
Status Update On last 28 days

Todays Test
000
Status Update On last 28 days

Patient Form

AK Laboratory


Username

Dashboard

Patient

Doctor

Test


Staff


History


Report

Log Out

Patient



New Patient Registration


Patient Record


Update Patient

Doctor Form

AK Laboratory


Username

Dashboard

Patient

Doctor


Test


Staff


Report

Log Out

Doctor



New Doctor Reagistration


Doctors Record


Update Doctor

Test Form

AK Laboratory


Username

Dashboard

Patient

Doctor

Test

Staff


History


Report


Log Out

Test


Test Dashboard Acces Only Admin


Add New Test


Update Test


Test Record


Staff Form

AK Laboratory



Username

- Dashboard
- Patient
- Doctor
- Test
- Staff**
- History
- Report
- Log Out


Staff



Add New Staff



View Staff Record



Delete/Update Staff

Doctor Registration Form

Doctors Registration

Back

Doctors Registration

29-05-2022 22:41:33

Primary Details

Doctor ID

103

First Name

Snehal

Middle Name

Sanjay

Surname

Renushe

Print Name On Form

Dr. Snehal Sanjay Renushe

DOB

22-03-2001

Age

21

Gender

☐ Male
 ☒ Female

Degree/Education

MBBS

Address Details

Phone

Mobile 1

7896541236

Mobile 2

9874563214

Phone No

987456321547

Email ID

snehal@gmail.com

City

Karad

District

Sangli

State


Maharashtra

Country

India

Pincode

415110



Browse

Registered By :

Kedar Dhumal

Register

View

Clear

Close

◆ Patient Registration Form

Patient Registration

Back **Patient Registration** 29-10-2021 12:44:08

Primary Details

Patient ID: 101
 First Name: Suraj
 Middle Name: Hanmant
 Surname: Patil
 Print Name On Form: Suraj Hanmant Patil
 DOB: 10-05-2001 Age: 21
 Gender: ☒ Male ☐ Female

Test Name :-

☒ 2D Eco
☒ 4D Scan
☒ Adenosine Deaminase Test
☐ Alberts Test
☐ Allergy Test
☐ Biopsy
☒ Blood Test
☒ Skin Text

Address Details

Aadhar Number: 369874521455
 Address: Vihe

Contact Details

Mobile 1: 9877486363 Mobile 2: 3689875214
 Phone: 9877486363
 E-Mail ID: Suraj@gmail.com

Patient Health

Allergy: ☒ Yes ☐ No
 Name: Pollen Allergy
 Sideeffects: Spox

Payment

Total Test: 5
 Fees: 1871 Discount: 5 %
 GST: 0 Total Amount: 1778
 Paid By: ☒ Cash ☐ Check ☐ Online
Amount 1778

Status

Payment Status: ☒ Paid ☐ UnPaid
 Remark:

Referred By: Dr Akash Kank (Main Doctor)

Registered By: Kedar Dhumal Dr. Name: Dr. Chaitanya Hanamant Khairmode **Save** **Clear** **Close**

Save Patient Register Successfully... OK

Staff Registration Form

Staff Registration

Back **Staff Registration** 29-05-2022 22:47:12

Primary Details

Staff ID: 106
 First Name: Abhi
 Middle Name: Sunil
 Surname: Yadav
 Print Name On Form: Abhi Sunil Yadav
 DOB: 11-05-2002
 Age: 20
 Gender: ☒ Male ☐ Female
 Education: BCS
 Post / Position: Lab Assistant

Address Details

Phone: Mobile 1: 9511278745 Mobile 2: 9875321478
 Aadhar No: 951236574698
 Abhi@gmail.com
 Karad
 Satara State: Maharashtra
 Country: India
 Pincode: 415210
 Shift Time: ☒ Morning ☐ Afternoon ☐ Night

Registered By : Kedar Dhumal **Register** **View** **Clear** **Close**

Saved Staff Added Successfully... OK

Add New Test Form

Add New Test

29-10-2021 22:45:04

Back

Add New Test

Test Details

Test ID: 9

Test Category: Body

Test Name: Brain

Lower Range: 0

Upper Range: 0

Unit: 0

Price: 500

Description: No

Add Close

T_ID	T_Category	T_Name	T_Lo_Range	T_Up_Range	T_Unit	T_Price	T_Description	T_Reg_Date
1	Allergy	Allergy Test	0	0	10	292	Allergy Test	29-10-2021
2	Allergy	Skin Test	0	0	0	200	Allergy Test	29-10-2021
3	Blood	Blood Test	10	40	56	250	Blood Test	29-10-2021
4	Eco	2D Eco	0	0	0	1120	Eco	29-10-2021
5	Scan	4D Scan	0	0	0	30	Scanning	29-10-2021
6	Null	Adenosine Dea...	0	0	0	271	Adenosine Dea...	29-10-2021
7			0	0	0	185	Alberts Test	29-10-2021
8			0	0	0	360	Biopsy	29-10-2021

Added

Test Added Successfully

OK

Update & Delete Doctor Form

Update Doctor Details

29-05-2022 22:44:34

Back

Update & Delete Doctor

Primary Details

Doctor ID: 103 Search Clear

First Name: Snehal

Middle Name: Sanjay

Surname: Renushe

Print Name On Form: Dr. Snehal Sanjay Renushe

DOB: 22-03-2001

Gender: ☒ Male ☐ Female

Age: 21

Degree/Education: MBBS

Address Details

Phone: Mobile 1: 7896541236

Mobile 2: 9874563214

Char No: 987456321547

Mail ID: snehal@gmail.com

Address: Pune

District: Sangli State: Maharashtra

Country: India

Pincode: 415110

Updated

Doctor Details Update Successfully...

OK

Update Close

Update & Delete Staff Form

Update And Delete Staff Details

✕

Back

Update & Delete Staff

29-10-2021 12:44:08

Primary Details

Staff ID

106

Search

Clear

First Name

Abhi

Middle Name

Sunil

Surname

Yadav

Print Name On Form

Abhi Sunil Yadav

DOB

11-05-2002

Age

20

Gender

☒ Male
 ☐ Female

Education

BCS

Post / Position

Lab Assistant

Address Details

Phone

Mobile 1

9511278745

Mobile 2

9875321478

Mobile No

951236574698

Email ID

Abhi@gmail.com

Address

Karad

District

Satara

State

Maharashtra

Country

India

Pincode

415210

Shift Time

☒ Morning
 ☐ Afternoon
 ☐ Night

Update

View

Close

Updated

Staff Details Update Successfully...

OK

Staff Record Form

frm_Staff_Record

✕

Back

Staff Record

29-10-2021 12:44:08



Staff ID

106

Search

Clear

Name

Abhi Sunil Yadav

Gender

Male

DOB

11-05-2002

Post

Lab Assistant

Address

Karad

Shift Time

Morning

Mobile No 1

9511278745

Mobile No 2

9875321478

Aadhar No

951236574698

S_ID	S_FName	S_MName	S_Surname	S_FullName	S_Dob	S_Age	S_Gender	S_Education	S_Post	S_MobNo1	S_MobNo2	S_AadharNo	S_Email
101	Kedar	Shivaji	Dhumal	Kedar Shivaji Dh...	23-09-2001	20	Male	bcs	Manager	7083218832	7083218832	352005405862	kedar...
102	Chaitanya	Hanmant	Khaimode	Chaitanya Hanm...	13-01-1998	0	Male	BCS	Assistant	7896541236	9874631456	852369874123	jashd...
103	Abhi	Sunil	Yadav	Abhi Sunil Yadav	26-04-2002	20	Male	BCS	Opretor	2587413698	3698521478	852369874123	kajhd...
104	Rutuja	Rajendra	Palekar	Rutuja Rajendra ...	26-02-1979	43	Female	MSc CS	Manager	1236547955	5555555555	879632145788	karfa...
105	Snehal	Sanjay	Renushe	Snehal Hadal	22-11-2019	2	Horor	MCA	Assistant	7412853965	7896321458	789654123025	nonce...
106	Abhi	Sunil	Yadav	Abhi Sunil Yadav	11-05-2002	20	Male	BCS	Lab Assistant	9511278745	9875321478	951236574698	Abhi@...



IMPLEMENTATION

IMPLEMENTATION

Implementation is the carrying out, execution, or practice of a plan, a method, or any design, idea, model, specification, standard or policy for doing something. As such, implementation is the action that must follow any preliminary thinking in order for something to actually happen.

In an information technology (IT) context, software or hardware implementation encompasses all the post-sale processes involved in something operating properly in its environment, including analyzing requirements, installation, configuration, customization, running, testing, systems integrations, user training, delivery and making necessary changes. The word "deployment" is sometimes used to mean the same thing.

For an implementation process to be successful, many tasks between different departments need to be accomplished in sequence. Implementation of a system but the failure of many implementation processes often stems from the lack of accurate planning in the beginning stages of the project due to inadequate resources or unforeseen problems that arise

SYSTEM REQUIREMENTS

Software Requirements

- | | |
|------------------------|--------------------|
| ▪ Programming Language | C#.Net |
| ▪ Operating System | Windows 7/8/10 |
| ▪ IDE | Visual Studio 2010 |
| ▪ Database | MySQL Server 8 |
| ▪ Reporting | SAP Crystal Report |

Hardware Requirements

- | | |
|---|--|
| <input type="checkbox"/> Processor | Intel Core i5 10 th Genration |
| <input type="checkbox"/> RAM | Min 8GB |
| <input type="checkbox"/> Hardware Devices | Keyboard with Mouse |
| <input type="checkbox"/> Hard Disk | Min 1TB Hard Disk or above |
| <input type="checkbox"/> Display | Standard Output Display |

USER GUIDELINE

Splash Form:

This Form Perform the main execution of my system.

Login Form:

This form perform Authorization of my system.

Main Form:

In these form Perform the all details fetch to my system.
After Login you will find following menus.

Main Form Menus:

❖ Patient:

Patient These Forms display the New Patient & Details Of

➤ Doctor:

This Form display All about Information of
Doctors.

➤ Tests:

This Form display All about Information of Allergies &
Test.

❖ Staff:

This form contains the Staff details.

❖ Reports:

It generated the all reports of our related details and records.

- Doctor Report
- Test Report
- Staff Report

❖ Security: -

This menu contains the Lock application and backup & restore.

➤ Lock Application:

This option is used for security purpose.

➤ Backup and Restore: -

This form is used for database backup and restore

❖ Account: -

This menu contains the information related to login accounts.

➤ New User: -

This form is used for adding new user.

➤ Change Password: -

This form is used to change the password.

➤ Remove User: -

Using this form admin can remove the any user.

❖ Help: -

This menu contain the about system option.

➤ About System: -

This form contains information about system.

❖ Utilities: -

This menu contains basic utilities like Calculator, Notepad, Microsoft office etc.

❖ Exit: -

This menu contains the log out and shut down options for exit.

SYSTEM MODULES

The system is proposed to have the following modules:

- **Patient module:-**
- **Doctor module:-**

1. Patient module:-

It is responsible to issue New Patient to applicant and manages their track and collect their fee.

2. Doctor module:-

It is responsible to issue Adding New Doctor to applicant and manages their track and collect their fee. It also books appointment and notify to applicant for same.

INTRODUCTION TO VISUAL STUDIO IDE

Microsoft Visual Studio is an IDE made by Microsoft and used for different types of software development such as computer programs, websites, web apps, web services, and mobile apps. It contains completion tools, compilers, and other features to facilitate the software development process. Visual Studio has been around for over 20 years. Its first version was Visual Studio 97. Since then there were a lot of different versions, the current one is Microsoft Visual Studio 2019.

The Visual Studio IDE (integrated development environment) is a software program for developers to write and edit their code. Its user interface is used for software development to edit, debug and build code.

❖ **Most important highlights are:-**

- tools and editor enhancements for working with Profiles, Lambdas, and Streams.
- Native C++ apps for IOS, Android and Windows devices. Share common code in IOS, Android and Windows Libraries by using C++ for cross-platform development.
- .Net ME Embedded 8 support.
- Mobile apps for IOS, Android and Windows in C# and F# by using Xamerian.
- Improved integration with Entity and MVC.

MYSQL SERVER

MySQL is Fast easy-to-use RDBMS being used for many small and big businesses. MySQL I developed Marketed and supported by MySQL AB, Which is Swedish company MySQL is becoming so popular because of many good reasons –

- MySQL is released under an open source license. So you have nothing to pay to use it
- MySQL is very powerful program In its own right. It handles a large subset of the functionality of the most expensive and powerful database packages
- MySQL uses a student of the well-known SQL data Language.
- MySQL works on many operation systems and with many languages including PHP, PERL, C, C++, JAVA, etc.
- MySQL works very quickly and works well even with large data sets.
- MySQL is very friendly to PHP, the most appreciated language for web development.
- MySQL supports large databases up to 50 million rows or more in a table.
- The default file size limit for a table is 4GB but you can increase this to theoretical limit 8 million TB.
- MySQL is customizable. The open-source GPL license allows programmers to modify the MySQL software to fit their own specific environment.



OUTPUTS

SCREENS AND REPORTS

Doctor Report

frm_Doctor_Report

Doctor Report

Show Report button1

1 / 1

SAP CRYSTAL REPORTS

Main Report

29-05-2022

Department of Medical Laboratory Sciences
Jomo Kenyatta University of Agriculture and Technology

ID	Full Name	Degree	Mobile No	Address
101	Dr. Kedar Shivaji Dhumal	BCS	7896321458.00	Vihe
102	Dr. Chaitanya Hanamant Khairmode	BCS	9874593333.00	Karad

Current Page No.: 1 Total Page No.: 1 Zoom Factor: 100%

◆ Test List

frm_Test_Report

Test Report

Show Report button1

1 / 1

SAP CRYSTAL REPORTS

Main Report

29-05-2022

Department of Medical Laboratory Sciences
Jomo Kenyatta University of Agriculture and Technology

ID	Test Name	Test Lower Range	Test Upper Range	Test Price
1	Allergy Test	0	0	292
2	Skin Test	0	0	200
3	Blood Test	10	40	250
4	2D Eco	0	0	1120
5	4D Scan	0	0	30
6	Adenosine Deaminase Test	0	0	271
7	Alberts Test	0	0	185
8	Biopsy	0	0	360

Current Page No.: 1 Total Page No.: 1 Zoom Factor: 100%

Staff List

frm_Staff_Report

Staff Record

Show Report Back

SAP CRYSTAL REPORTS

Main Report

29-05-2022

ID	Full Name	Post	Mobile No	Address	ShiftTime
101	Kedar Shivaji Dhumal	Manager	7083218832.00	Karad	Morning
102	Chaitanya Hanmant Khairmode	Assistant	7896541236.00	Karad	Afternoon
103	Abhi Sunil Yadav	Opretor	2587413698.00	sjsjdb	Morning
104	Rutuja Rajendra Palekar	Manager	1236547955.00	Umbraj	Afternoon
105	Snehal Hadal	Assistant	7412853965.00	kadegav	Morning
106	Abhi Sunil Yadav	Lab Assistant	9511278745.00	Karad	Morning

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CONCLUSION AND SUGGESTIONS

CONCLUSION

The project titled as “Clinical Lab Management System” is a Desktop based application. This Project Is developed using C#.Net as front end and MYSQL for database in back end . This software provides facility for reporting of Patient, Doctors etc. We are developing such types of the module which help to reduce the Clinical Lab work manually & it helps to save the time of the user. considerable reduce the corruption in the transport department keep the Lab document safely.

This software is developed with scalability in mind. Additional modules can be easily added when necessary. The software is developed with modular approach. All modules in the system have been tested with valid data and invalid data and everything work successfully. Thus the system has fulfilled all the objectives identified and is able to replace the existing system. The application has been tested with live data and has provided a successful result. Hence the software has proved to work efficiently

FUTURE ENHANCEMENT

- ❖ The system could reduce the manual work & physical entities of the system.
- ❖ We will include more functionality as per the user requirements .
- ❖ In Future due to increase in records of database file, data redundancy occurs.
- ❖ More modules can be included in future.
- ❖ The system can be further enhanced by proposing an advance Facilities.
- ❖ We want to improved our home page, as it is the main thing which attracts all users.
- ❖ We can host the platform on online server to make it accessible worldwide
- ❖ Development and launching of Website and refining existing services and adding more service.

SUGGESTION

- The Proposed System has efficient Management Records and time saving
- It is also user-friendly.
- The size of the database increases day-by-day, increasing the load on the database back up and data maintenance activity.
- Graphical user interface can better.



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BIBLIOGRAPHY

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