Patient_Health_Monitoring_Portal

Technical Design Document

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Signature			
Date			

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1.0 Introduction

1.1 Purpose of this document

The purpose of this high level design document is to describe the detailed design of the Patient health monitoring portal application. All the components, annotations and interfaces used for the implementation of this project are mentioned here.

1.2 Project overview

The aim of this project is to build a website and database for the doctor and patient. Doctors can able to view the health records of the patient and provide prescription and also they can able to view their appointments. Patient can able to suggest the doctor they need for appointment. Admin will book the appointment for patients depending on the suggestions given by the patients and also on the availability of doctors. Through this application we fix the appointments and make the patients relieve from travel stress.

2.0 Solution Summary

2.1 Scope

The scope of the detailed design document is to create and maintain the patient, doctor and admin details. The login id and password for the patient, doctor and admin.

2.2 Assumptions

Once the application is built, the login details for the admin is manually given in the database through which he can login.

The patient and doctor can be able to have their appointments only when the admin books for them.

2.3 Dependencies

The Eclipse IDE is used for developing java applications.

The maven is used to create the spring boot applications.

MySQL is used for the database operations.

The jsp file is used to create the web page that is shown in the browser. JDK 8 is necessary for execute the applications.

2.4   Risks

The risk may be occurred here is when multiple patient opt for the same doctor at a time, the doctor may not be available for the some patient rarely.

3.0 Schematic Diagram

A schematic, or schematic diagram, is a representation of the elements of a system using abstract, graphic symbols rather than realistic pictures. It gives an overview of overall system.
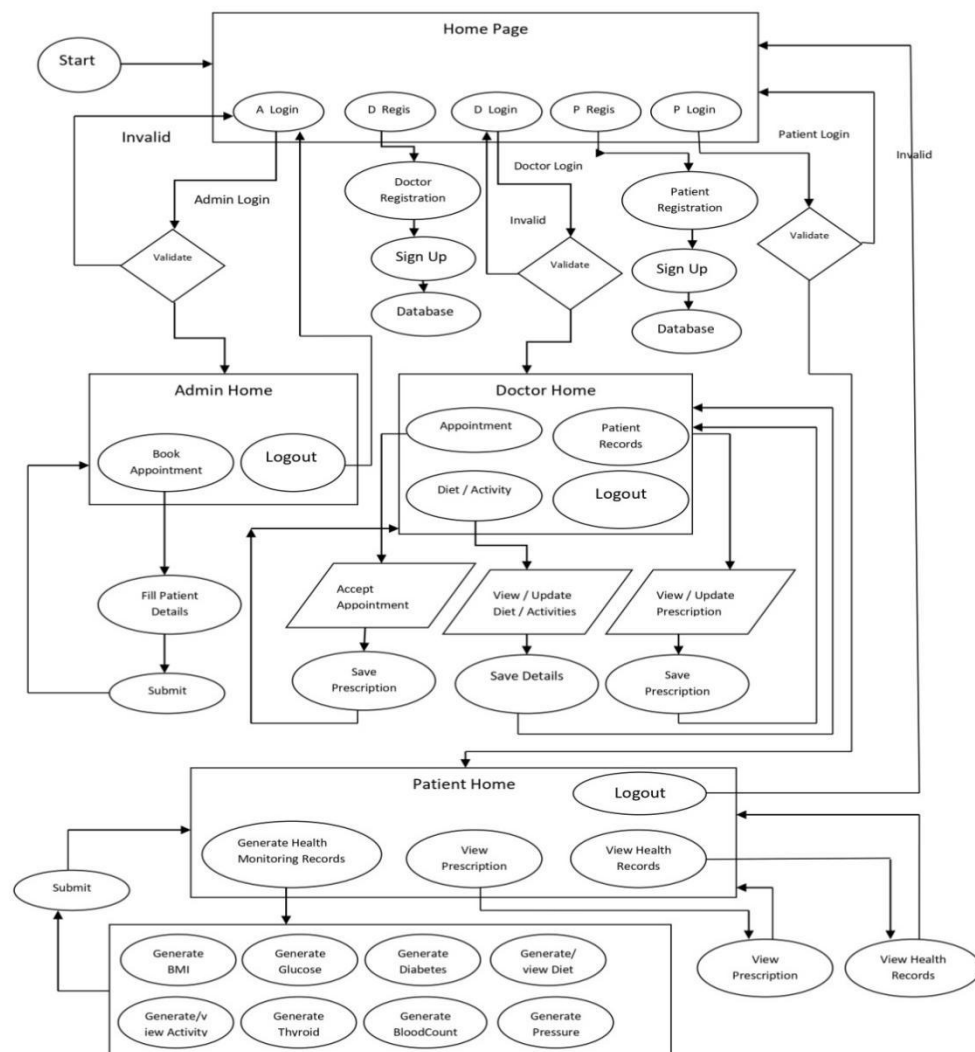
4.0 System Design

4.1 Proposed design

The proposed system design focuses on the detailed implementation of the feasible system. It consists of two phases namely Logical Design and Physical Design.

• During logical design phase the analyst describes inputs (sources), outputs(destinations), databases (data sores) and procedures (data flows) all in a format that meets the user requirements. The analyst also specifies the needs of the user at a level that virtually determines the information flow in and out of the system and the data resources. Here the logical design is done through data flow diagrams and database design.

• The physical design is followed by coding. Physical design produces the working system by defining the design specifications, which specify exactly what the candidate system must do. The programmers write necessary programs that accept input from the user, perform necessary processing on accepted data and produce the required report on a hard copy or display it on the screen

4.2 Component Inventory

- **Role Selection**–When a user opens the web page, the initial screen will display the options to select from the different roles "Patient", "Doctor" or "Admin" to which a user would like to login. if the user has not yet registered, he can go with the option "Register" which will guide him to the respective registration page.

- **Registration and Login** – will be used by the Patient, Doctor and Admin to register and login into the system and also to edit their respective registration details in the system.

- **Update treatment/prescription details**- Doctor on clicking Appointments, will list all the active appointments with the details Appointment id, Patient id, date and time of appointments. On clicking Patient id, will redirect to the Patient Medical record page for that appointment id. Doctor will fill in the necessary details of the treatment and prescription and submit.

- **Update patient records, Diet and activity**-Doctor on clicking the Update Records, lists all the patient records created by him and on clicking Update Diet / exercise link will redirect to the Diet recommendation page and doctor will fill in the necessary details and submit.

- **Patient Home** –Patient can check their health condition, Activities and prescription given to them by doctor.
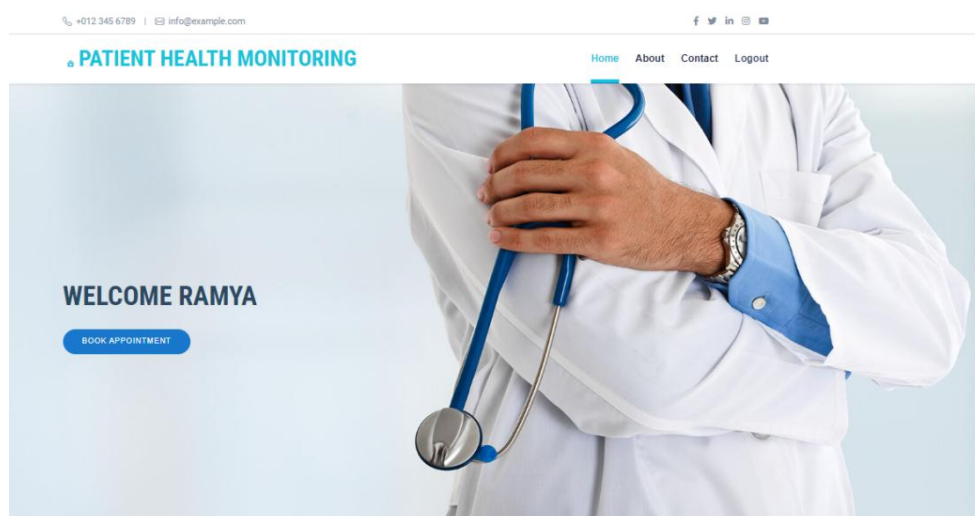
📞 +012 345 6789 | ✉ info@example.com   f ✈ in ⊙ ▶

🏠 **PATIENT HEALTH MONITORING**   Home   About   Contact   Logout

Make an Appointment

| Patient ID | patient Name | Contact Number |
| dd-mm-yyyy --:-- | Symptoms | Select Doctor ⌄ |

Make an Appointment

Back to Home

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🏠 **PATIENT HEALTH MONITORING**   Home   About   Contact

WELCOME TO HEALTH MONITORING PORTAL

Best Health Monitoring Solution In Your City

Admin Login

Doctor Registration/Login

Registration
Login
...ation/Login

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🏠 **PATIENT HEALTH MONITORING**   Home   About   Contact

Doctor Registration Page

First name   Last name

First Name   Last Name

Email

[   ]

Phone Number

Contact Number
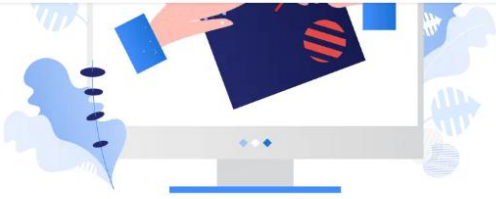
Age

Age

Gender: ○ Female   ○ Male   ○ Other

USER ID

User ID

Password

Enter password

Security Question 1

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PATIENT HEALTH MONITORING

Home   About   Contact

Password

Enter password

Security Question 1

Favourite Sport

Security Answer 1

Favourite Sport

Security Question 2

Name of Pet

Security Answer 2

Name of Pet

Security Question 3

Place of Birth

Security Answer 3

Place of Birth

Register

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PATIENT HEALTH MONITORING

Home   About   Contact

Doctor Login Page

USER ID

User ID

Password

Enter password

☐ Remember me   Forgot password?

Login

Don't have an account? Register

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PATIENT HEALTH MONITORING

Home   About   Contact   Logout

Welcome mram@gmail.com

Hello. Wishing you the best day. Kindly check your appointment list to cure more and more patients.

Appointments

Check all Available appointments

Patient Records

Check all Patient Health Records

Update Diet
Update Activities

Check all the active patient Records

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Update Prescription

| xyz1@gmail.com | raghav | 8794562134 |
| 15-04-2023 13:04 | joint pains | 1 ⌄ |

Prescription

Update Prescription

Back to Appointments

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View Patient Health Records

S.No	Patient Name	Action	
3	ramya	View Report	✖
4	raghav	View Report	✖

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ramya Health Records

BMI Report		∧
#	BMI Value	Date
1	2.312	2023-04-18

Blood Count Report	⌄
Glucose Report	⌄
Calorie Intake Report	⌄
Cholestrol Report	⌄
Pressure Report	⌄
Thyroid Report	⌄

update Patient Records

Update Records

PATIENT HEALTH MONITORING
Home About Contact Logout

Welcome pooja@gmail.com

Health is Wealth .Here you can check your health condition,Activities and prescription given to you are from most famous surgents, kindly follow it.

Services

Calculate BMI Report

Generate your BMI Report

Blood Glucose Level

Blood Glucose level Generate

Blood Count

Generate your Blood Count Report

PATIENT HEALTH MONITORING
Home About Contact Logout

Diabetes Report

Generate your Diabetes Report

Activity Tracker

Activity Prescription

Monitor your all Activities

Cholesterol Monitor

Track your Cholesterol Level

Calories Tracker

Monitor your Calories Level

DIET Tracker

DIET Prescription

-- Monitor your Diet --

Pressure Monitor

Track your Pressure

PATIENT HEALTH MONITORING
Home About Contact Logout

Calories Tracker

Monitor your Calories Level

DIET Tracker

DIET Prescription

-- Monitor your Diet --

Pressure Monitor

Track your Pressure

Thyroid Monitor

Track your Thyroid

View Prescription

View Health Records

PATIENT HEALTH MONITORING   Home   About   Contact   Logout

Diet details recorded successfully.
Add Diet Details

Patient ID: pooja@gmail.com

Date: dd-mm-yyyy

-Select Doctor-

Diet:

Time of Intake: --:--

Save

PATIENT HEALTH MONITORING   Home   About   Contact   Logout

Pressure reading recorded successfully
My Pressure Readings

Patient ID: pooja@gmail.com

Time of day: --:--

pressure Level:

Save

PATIENT HEALTH MONITORING   Home   About   Contact   Logout

Health Records

BMI Report

#	BMI Value	Date
1	1.9821673525377226	2023-04-24
2	2.231999999999998	2023-04-24

Blood Count Report

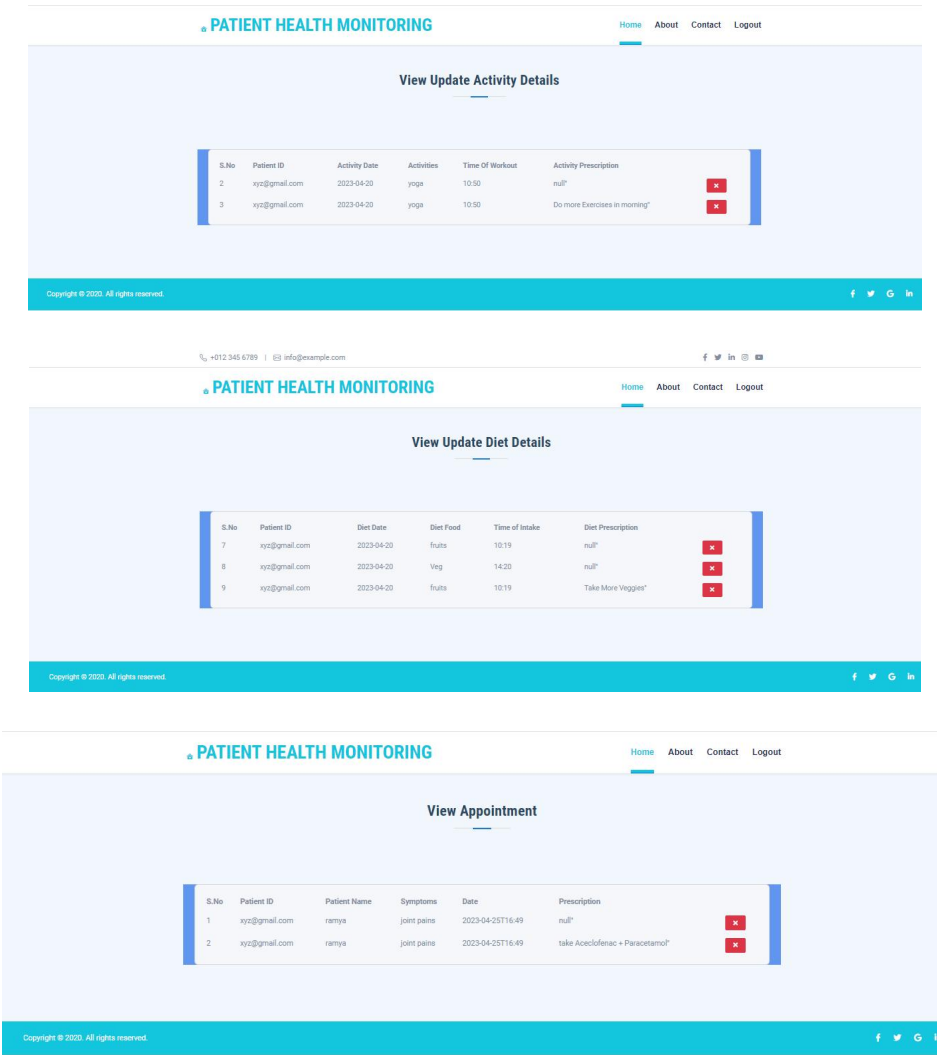| #	RBC Count	WBC Count	Platelet Count
1	1000.0	20000.0	5000.0

Glucose Report

Calorie Intake Report

Cholestrol Report

Pressure Report

Thyroid Report

View Prescription

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5.0 Database Design

5.1 Data Model
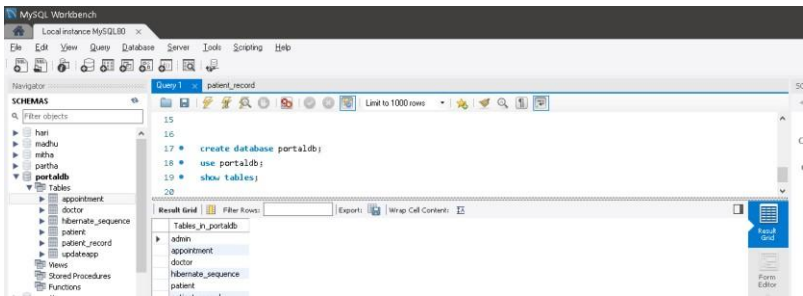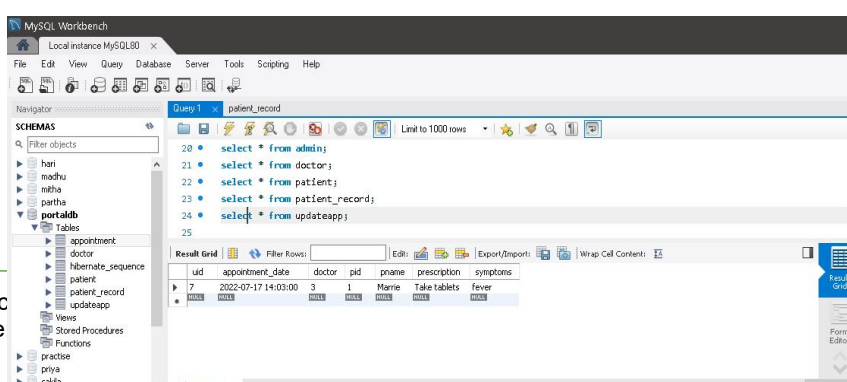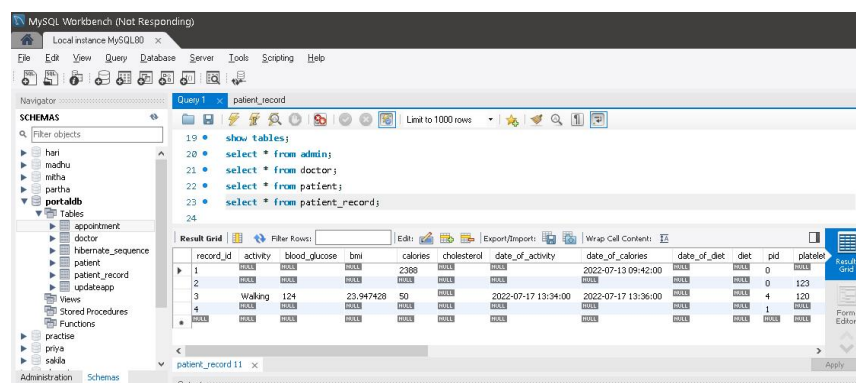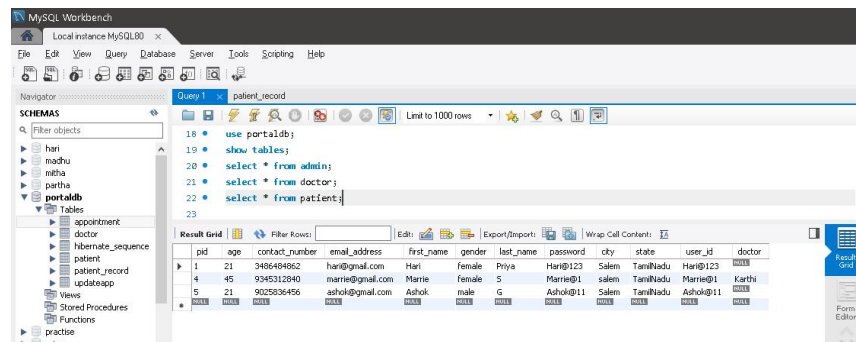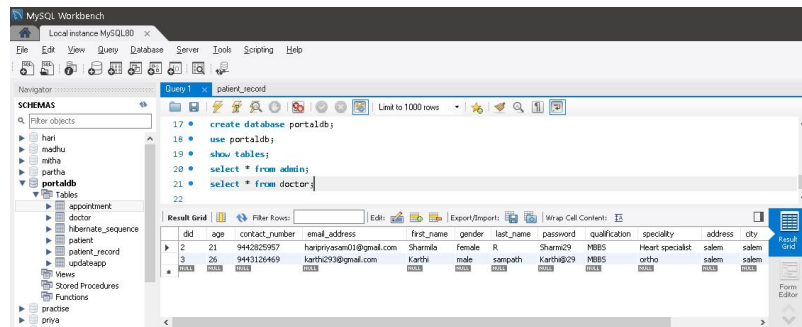
5.2   Tables Structure

1. Admin:

Column Name	Data Type
adminid	varchar(255) PK
name	varchar(20)
password	varchar(64)

2. Doctor

Column Name	Data Type
doc_id	bigint PK
doc_age	Int
doc_email	varchar(255)
doc_fname	varchar(255)
doc_gender	varchar(255)
doc_lname	varchar(255)
doc_password	varchar(255)
doc_ph_no	Bigint
doc_userid	varchar(255)
doc_sa1	varchar(255)
doc_sa2	varchar(255)
doc_sa3	varchar(255)
doc_sq1	varchar(255)
doc_sq2	varchar(255)
doc_sq3	varchar(255)

3.Patient

Column Name	Data Type
patient_id	bigint PK
patient_age	Int
patient_city	varchar(255)
patient_email	varchar(255)
patient_fname	varchar(255)
patient_gender	varchar(255)
patient_lname	varchar(255)

patient_password	varchar(255)
patient_ph_no	Bigint
patient_user_id	varchar(255)
pa_sa1	varchar(255)
pa_sa2	varchar(255)
pa_sa3	varchar(255)
pa_sq1	varchar(255)
pa_sq2	varchar(255)
pa_sq3	varchar(255)

4.Appointment

Column Name	Data Type
appointment_id	bigint PK
date	varchar(255)
doctor	varchar(255)
patient_id	varchar(255)
patient_name	varchar(255)
patient_ph_no	bigint
symptoms	varchar(255)
prescription	varchar(255)

5.BMI

Column Name	Data Type
id	bigint PK
bmi	double
date	varchar(255)
glucose_level	double
height	double
patient_id	varchar(255)
weight	double
idbmi	bigint
datebmi	varchar(255)

6.Calorie Intake

Column Name	Data Type
id	bigint PK
calories	Int
date	Date
patient_id	Bigint
time_of_intake	Time
calorie_intake_id	Bigint

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7. Cholestrol Level

Column Name	Data Type
id	bigint AI PK
cholestrol_level	double
patient_id	varchar(255)
time_of_day	varchar(255)
cholestrol_monitor_id	bigint
time_of_day_cholestrol_monitor	varchar(255)

8.Platelet Count

Column Name	Data Type
patient_id	int PK
platelet_count	int
rbc_count	int
time_of_day	varchar(255)
wbc_count	int
diabetes_id	bigint
diabetes_risk1	varchar(255)

9.Diet

Column Name	Data Type
id	bigint AI PK
diet_food	varchar(255)
dietdate	varchar(255)
patient_id	varchar(255)
time_of_intake	time
update_diet1	varchar(255)
doctor	varchar(255)

10. Glucose

Column Name	Data Type
id_glucose	bigint PK
date_glucose	varchar(255)
glucose_level	double
patient_id	varchar(255)

11. Patient Records

Column Name	Data Type
patient_rec_id	bigint PK
doc_id	varchar(255)
doc_name	varchar(255)
patient_id	varchar(255)
patient_name	varchar(255)
update_patient_rec	varchar(255)

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12.Pressure

Column Name	Data Type
id	bigint AI PK
patient_id	varchar(255)
pressure_level	int
time_of_day	time
pressure_id	bigint
time_of_day_pressure	time

13.Thyroid

Column Name	Data Type
id	bigint AI PK
patient_id	varchar(255)
thyroid_level	double
time_of_day	varchar(255)
thyroid_id	bigint
time_of_day_thyroid	varchar(255)

6.0 Appendices

6.1 Glossary

Acronyms	Definitions
appid	Appointment_id
pid	Patient_id
pname	Patient name
did	Doctor_id
u_id	User_id

6.2   Other

7.0 Terms & Conditions

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8.0 Change Log

Please note that this table needs to be maintained even if a Configuration Management tool is used.

Version Number	Changes made			
V<n.n>	*<If the change details are not explicitly documented in the table below, reference should be provided here>*			
	Page no	Changed by	Effective date	Changes effected

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