

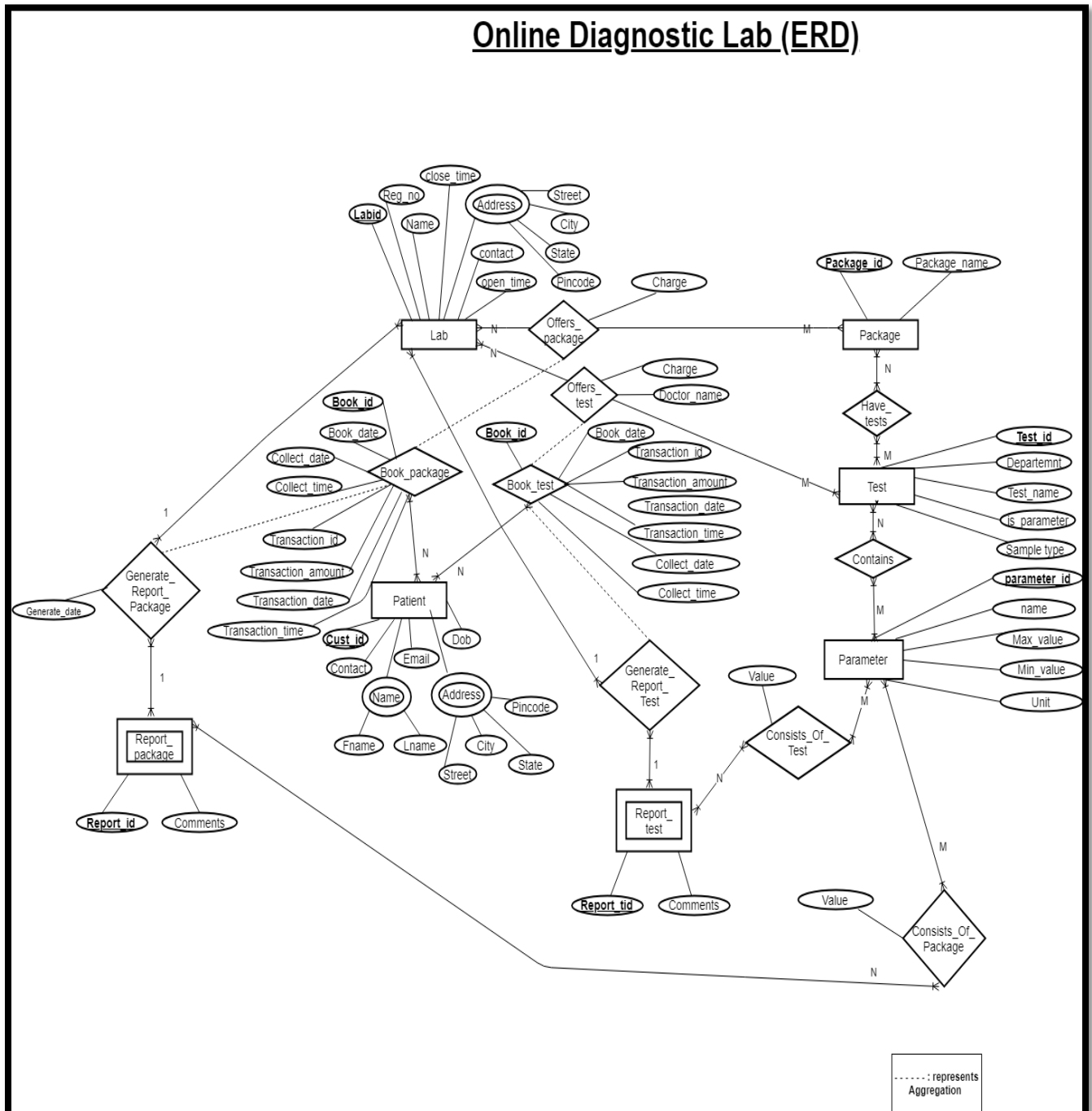
ONLINE
DIAGNOSTIC LAB
REPORTING
SYSTEM

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1. ERD OF ONLINE DIAGNOSTIC LAB REPORTING SYSTEM

*** Here we represent aggregation by using “- - - - -” (dashed-line).



2. DATA DICTIONARY:

Table	Field	Type	Null	Key	Default	Extra
<u>Lab</u>	Lab_id	int(11)	No	Primary Key	NULL	Auto_increment
	Reg_no	varchar(20)	No		NULL	
	Lab_name	varchar(100)	No		NULL	
	Lab_contact	bigint(20)	No		NULL	
	Lab_email	varchar(50)	No		NULL	
	Open_time	varchar(20)	No		NULL	
	Close_time	varchar(20)	No		NULL	
	Street	varchar(100)	No		NULL	
	City	varchar(30)	No		NULL	
	State	varchar(50)	No		NULL	
	Pincode	bigint(20)	No		NULL	
	Admin_name	varchar(100)	No		NULL	
	Admin_password	varchar(150)	No		NULL	
<u>Test</u>	Test_id	int(11)	No	Primary Key	NULL	Auto_increment
	Test_name	varchar(100)	No		NULL	
	Sample Type	varchar(200)	No		NULL	
	Department	varchar(100)	No		NULL	
	Is_parameter	tinyint(1)	Yes		NULL	

Table	Field	Type	Null	Key	Default	Extra
<u>Package</u>	Package_id	int(11)	No	Primary Key	NULL	Auto_increment
	Package_name	varchar(100)	No		NULL	
<u>Offers Test</u>	Lab_id	int(11)	No	Primary Key	NULL	Refers to Lab_id of Lab
	Test_id	int(11)	No	Primary Key	NULL	Refers to Test_id of Test
	Doctor_name	varchar(50)	No		NULL	
	Charge	double(10,5)	No		NULL	
	Discount	int(4)	Yes		NULL	
<u>Offers Package</u>	Lab_id	int(11)	No	Primary Key	NULL	Refers to Lab_id of Lab
	Package_id	int(11)	No		NULL	Refers to Package_id of Package
	Charge	double(10,5)			NULL	
	Discount	int(4)			NULL	
<u>Have tests</u>	Package_id	int(11)	No	Primary Key	NULL	Refers to Package_id of Package
	Test_id	int(11)	No	Primary Key	NULL	Refers to Test_id of Test
<u>Parameters</u>	Parameter_id	int(11)	No	Primary Key	NULL	
	Parameter_name	varchar(200)	No		NULL	

Table	Field	Type	Null	Key	Default	Extra
	Max_value	double(12,3)	Yes		NULL	
	Min_value	double(12,3)	Yes		NULL	
	Unit	varchar(100)	Yes		NULL	
<u>Contains</u>	Test_id	int(11)	No	Primary Key	NULL	
	Parameter_id	int(11)	No	Primary Key	NULL	
<u>Patient</u>	Cust_id	int(11)	No	Primary Key	NULL	Auto_increment
	Fname	varchar(100)	No		NULL	
	Lname	varchar(100)	No		NULL	
	Contact	bigint(20)	No		NULL	
	Email	varchar(50)	No		NULL	
	Dob	date	No		NULL	
	Street	varchar(200)	No		NULL	
	City	varchar(100)	No		NULL	
	State	varchar(50)	No		NULL	
	Pincode	bigint(20)	No		NULL	
	Password	varchar(100)	No		NULL	
<u>Book_Test</u>	Book_id	int(11)	No	Primary Key	NULL	Auto_increment

Table	Field	Type	Null	Key	Default	Extra
	Lab_id	int(11)	Yes	Foreign Key	NULL	Refers to Lab_id of Offers_Test
	Test_id	int(11)	Yes	Foreign Key	NULL	Refers to Test_id of Offers_Test
	Cust_id	int(11)	Yes	Foreign Key	NULL	Refers to Cust_id of Patient
<u>Bookings Test</u>	Book_id	int(11)	No	Primary Key	NULL	Refers to Book_id of Book_test
	Test_date	date	Yes		NULL	
	Test_timings	varchar(50)	Yes		NULL	
	Amount	double(10,5)	Yes		NULL	
<u>Report Test</u>	Report_id	int(11)	No	Primary Key	NULL	Auto_increment
	Book_id	int(11)	Yes	Foreign Key	NULL	Refers to Book_id of Bookings_Test
	Generation_Date	date	Yes		NULL	
	Comments	varchar(500)	Yes		NULL	
<u>Consists Of Test</u>	Report_id	int(11)	No	Primary Key	NULL	Refers to Report_id of Report_Test
	Parameter_id	int(11)	No	Primary Key	NULL	Refers to Parameters of Parameter_id
	Value	double(10,5)	Yes		NULL	

Table	Field	Type	Null	Key	Default	Extra
<u>Transaction Test</u>	Transaction_id	int(11)	No	Primary Key	NULL	Auto_increment
	Book_id	int(11)	Yes	Foreign Key	NULL	Refers to Book_id of Bookings_Test
	Time	timestamp	Yes		NULL	
	Date	timestamp	Yes		NULL	
	Amount	double(10,5)	Yes		NULL	
<u>Book Package</u>	Book_id	int(11)	No	Primary Key	NULL	Auto_increment
	Lab_id	int(11)	Yes	Foreign Key	NULL	Refers to Lab_id of Offers_Package
	Package_id	int(11)	Yes	Foreign Key	NULL	Refers to Package_id of Offers_Package
	Cust_id	int(11)	Yes	Foreign Key	NULL	Refers to Cust_id of Patient
	Book_date	date	Yes		NULL	
<u>Bookings Package</u>	Book_id	int(11)	No	Primary Key	NULL	Refers to Book_id of Book_Package
	Test_date	date	Yes		NULL	
	Test_timings	varchar(50)	Yes		NULL	
	Amount	double(10,5)	Yes		NULL	
<u>Report Package</u>	Report_id	int(11)	No	Primary Key	NULL	Auto_increment
	Book_id	int(11)	Yes	Foreign Key	NULL	Refers to Book_id of Bookings_Package

Table	Field	Type	Null	Key	Default	Extra
	Generation_date	date	Yes		NULL	
	Comments	varchar(500)	Yes		NULL	
<u>Consists Of Package</u>	Report_id	int(11)	No	Primary Key	NULL	Refers to Report_id of Report_Package
	Parameter_id	int(11)	No	Primary Key	NULL	Refers to Parameter_id of Parameters
	Value	double(10,5)	Yes		NULL	
<u>Transaction Package</u>	Transaction_id	int(11)	No	Primary Key	NULL	Auto_increment
	Book_id	int(11)	Yes	Foreign Key	NULL	Refers to Book_id of Bookings_Package
	Time	timestamp	Yes		NULL	
	Date	timestamp	Yes		NULL	
	Amount	double(10,5)	Yes		NULL	

3. TABLES & NORMALIZATION:

- a) **Lab** (Lab_id, Reg_no, Lab_name, Lab_contact, Lab_email, Open_time, Close_time, Street, City, State, Pincode, Admin_name, Admin_password)
- b) **Test** (Test_id, Test_name, Sample_type, Department, is_parameter)
- c) **Package**(Package_id, Package_name)
- d) **Offers_Test** (Lab_id, Test_id, Doctor_name, Charge, Discount)
- e) **Offers_Package** (Lab_id, Package_id, Charge, Discount)
- f) **Have_tests** (Package_id, Test_id)
- g) **Parameters** (Parameter_id, Parameter_name, Max_value, Min_value, Unit)
- h) **Contains** (Test_id, Parameter_id)
- i) **Patient** (Cust_id, Fname, Lname, Contact, Email, Dob, Street, City, State, Pincode, Password)
- j) **Book_Test** (Book_id, Lab_id, Test_id, Cust_id, Book_date)
- k) **Bookings_Test** (Book_id, Test_date, Test_timings, Amount)
- l) **Report_Test** (Report_id, Book_id, Generation_date, Comments)
- m) **Consists_Of_Test** (Report_id, Parameter_id, Value)
- n) **Transaction_Test** (Transaction_id, Book_id, Time, Date, Amount)
- o) **Book_Package** (Book_id, Lab_id, Package_id, Cust_id,

Book_date)

- p) **Bookings_Package** (*Book_id*, Test_date, Test_timings, Amount)
- q) **Report_Package** (*Report_id*, Book_id, Generation_date, Comments)
- r) **Consists_Of_Package** (*Report_id, Parameter_id*, Value)
- s) **Transaction_Package** (*Transaction_id*, Book_id, Time, Date, Amount)

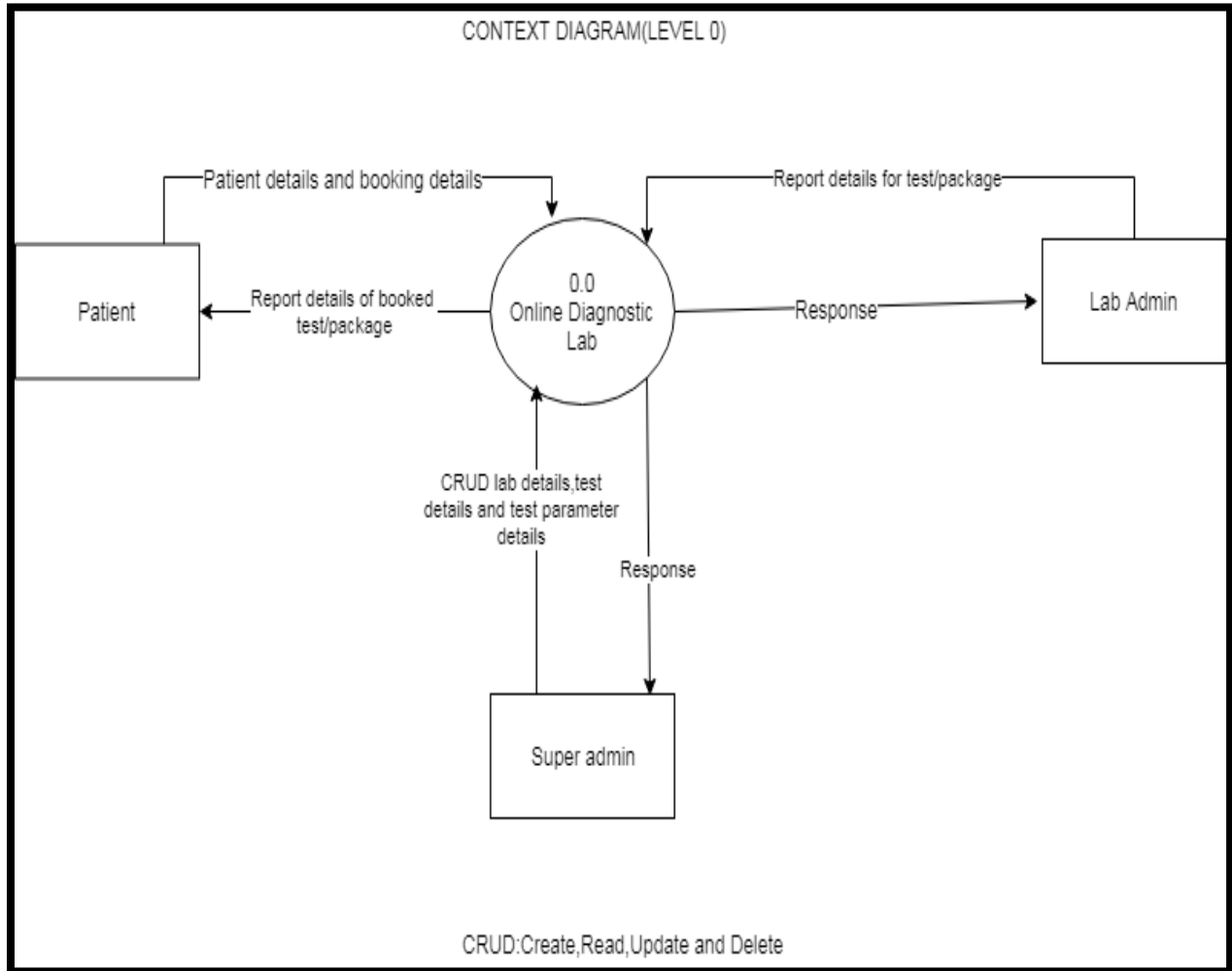
****** Normalization : Upto 3NF**

***NOTE:-**

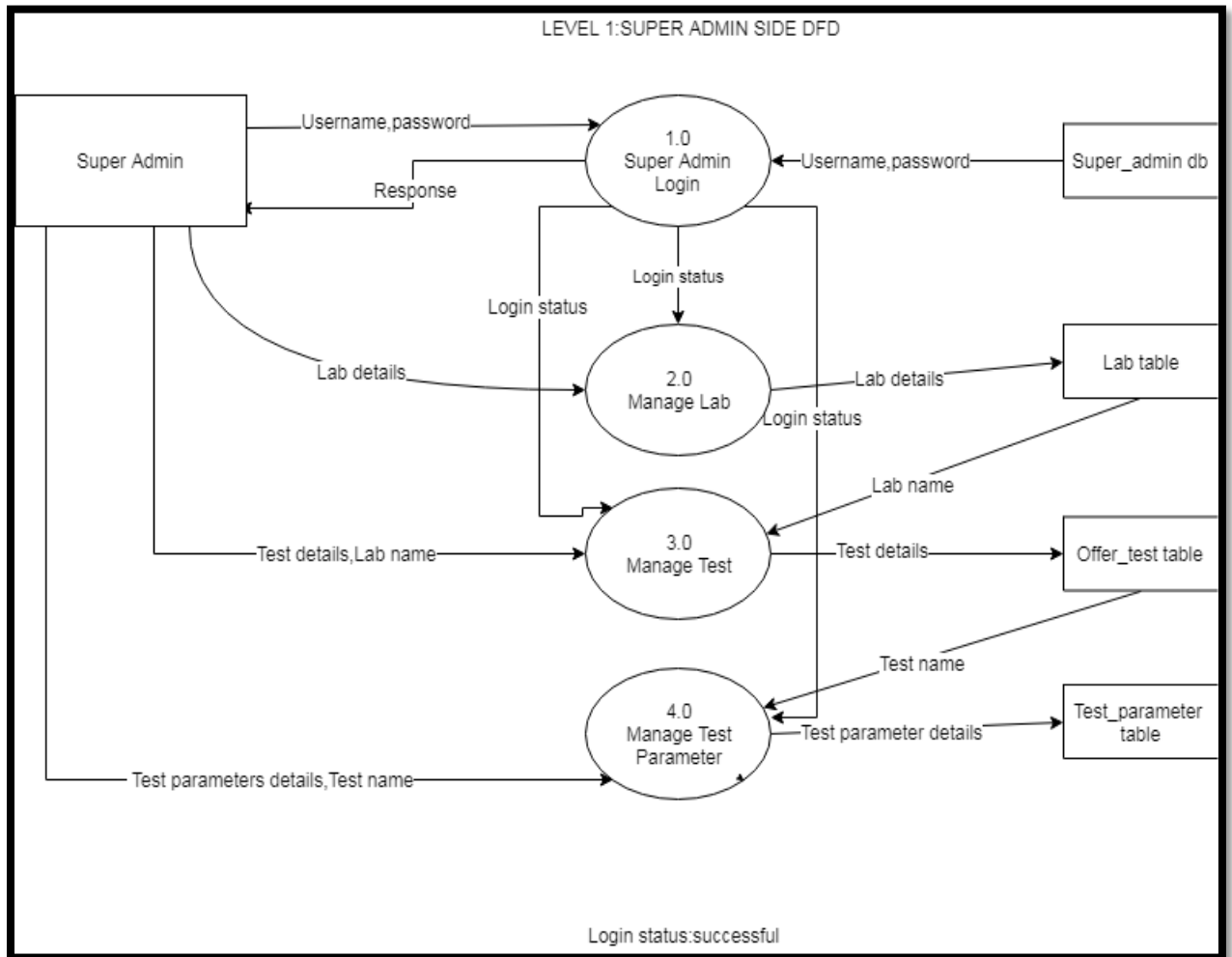
In MYSQL, one foreign key cannot refer two attributes of two different parent tables. So, we have created two different tables for Payment_test and Payment_package. The book_id of Payment_test refers to the book_id of Book_test table and vis-à-vis book_id of Payment_package refers to the Book_package table. Here we assume that there is only one payment_id against a book_id (online full payment during booking).

4. DFD OF ONLINE DIAGNOSTIC LAB REPORTING SYSTEM:-

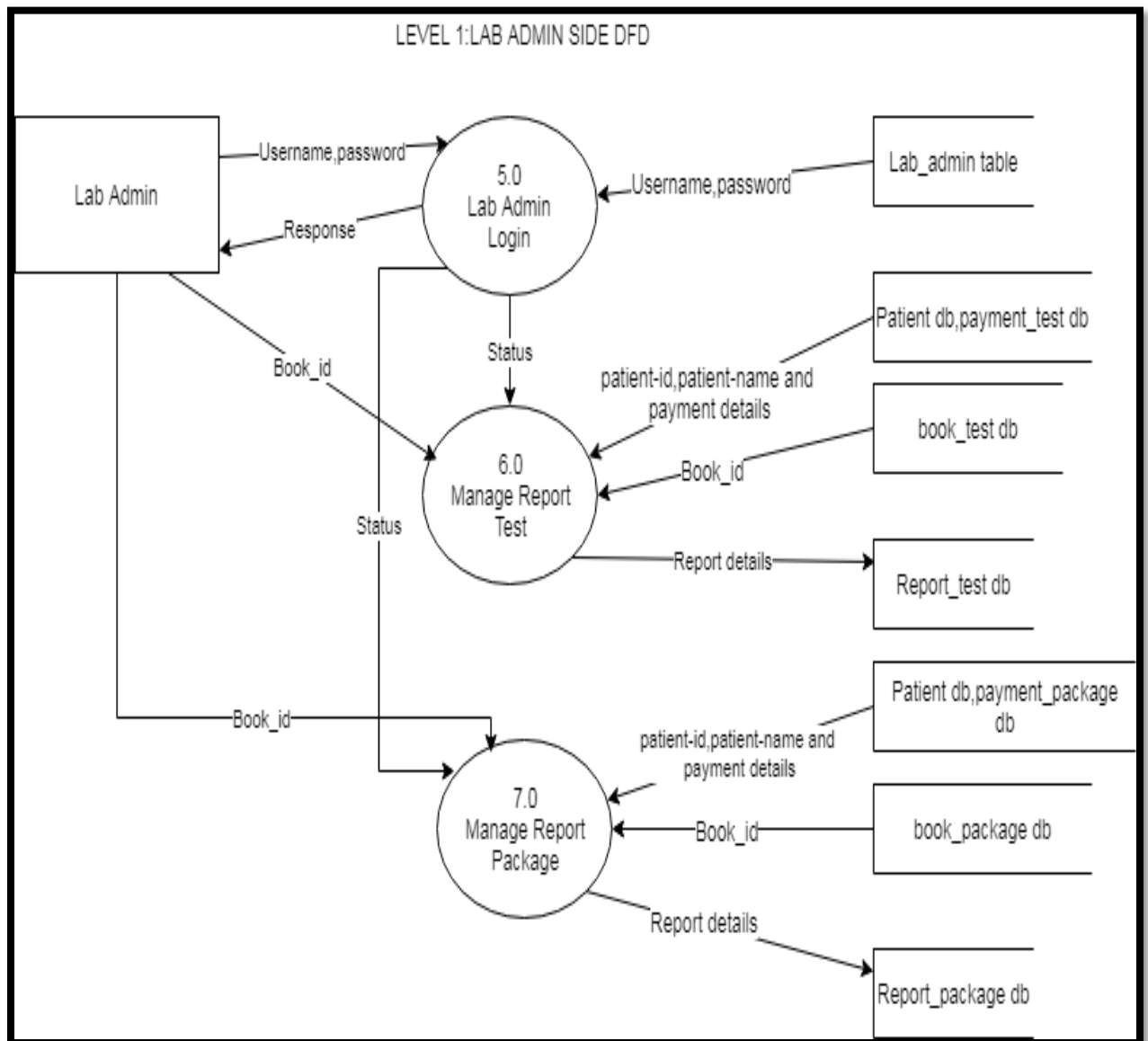
4.1. Level-0 DFD:



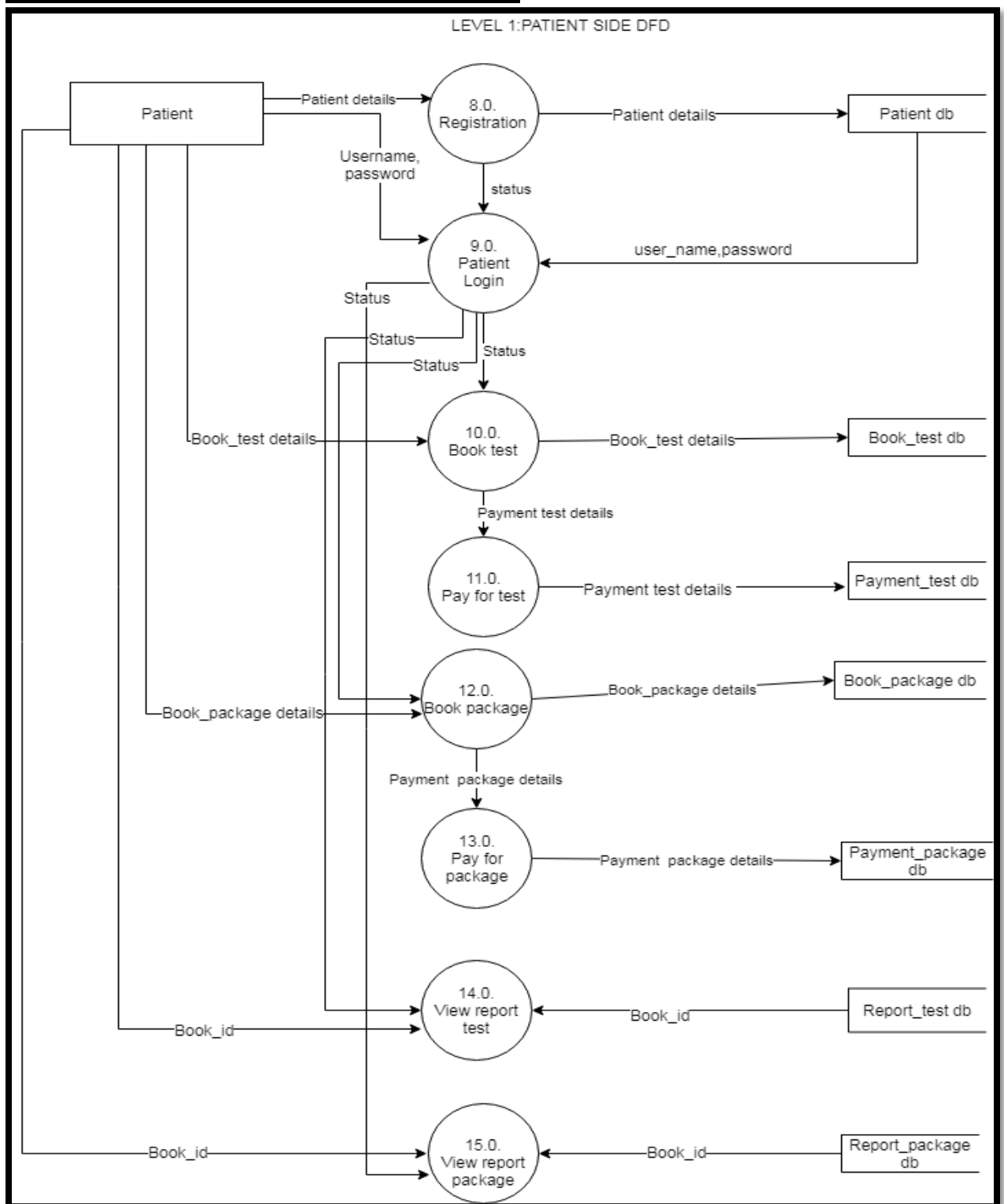
4.2. Level-1 DFD (Super Admin Side):



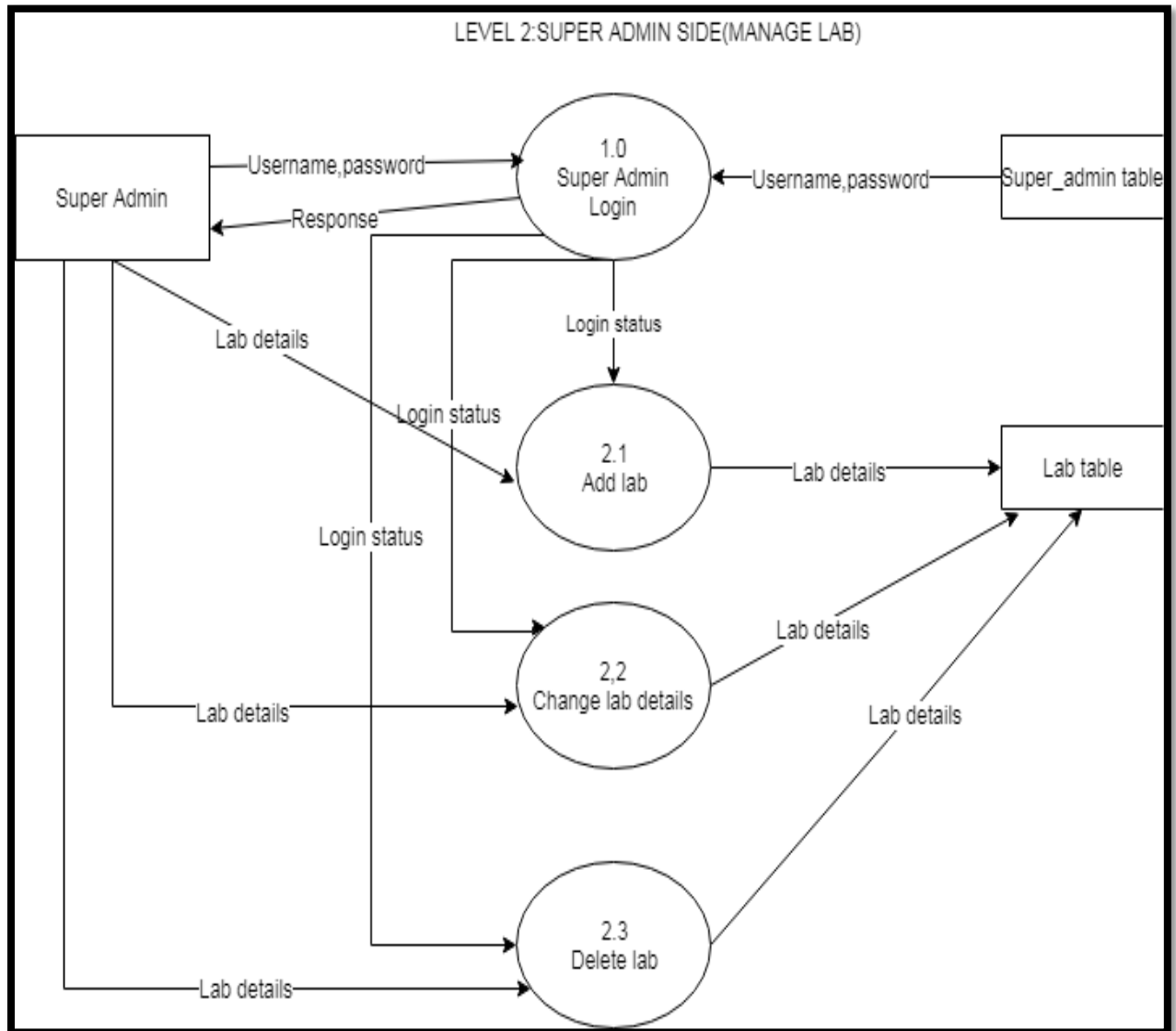
4.2. Level-1 DFD (Lab Admin Side):



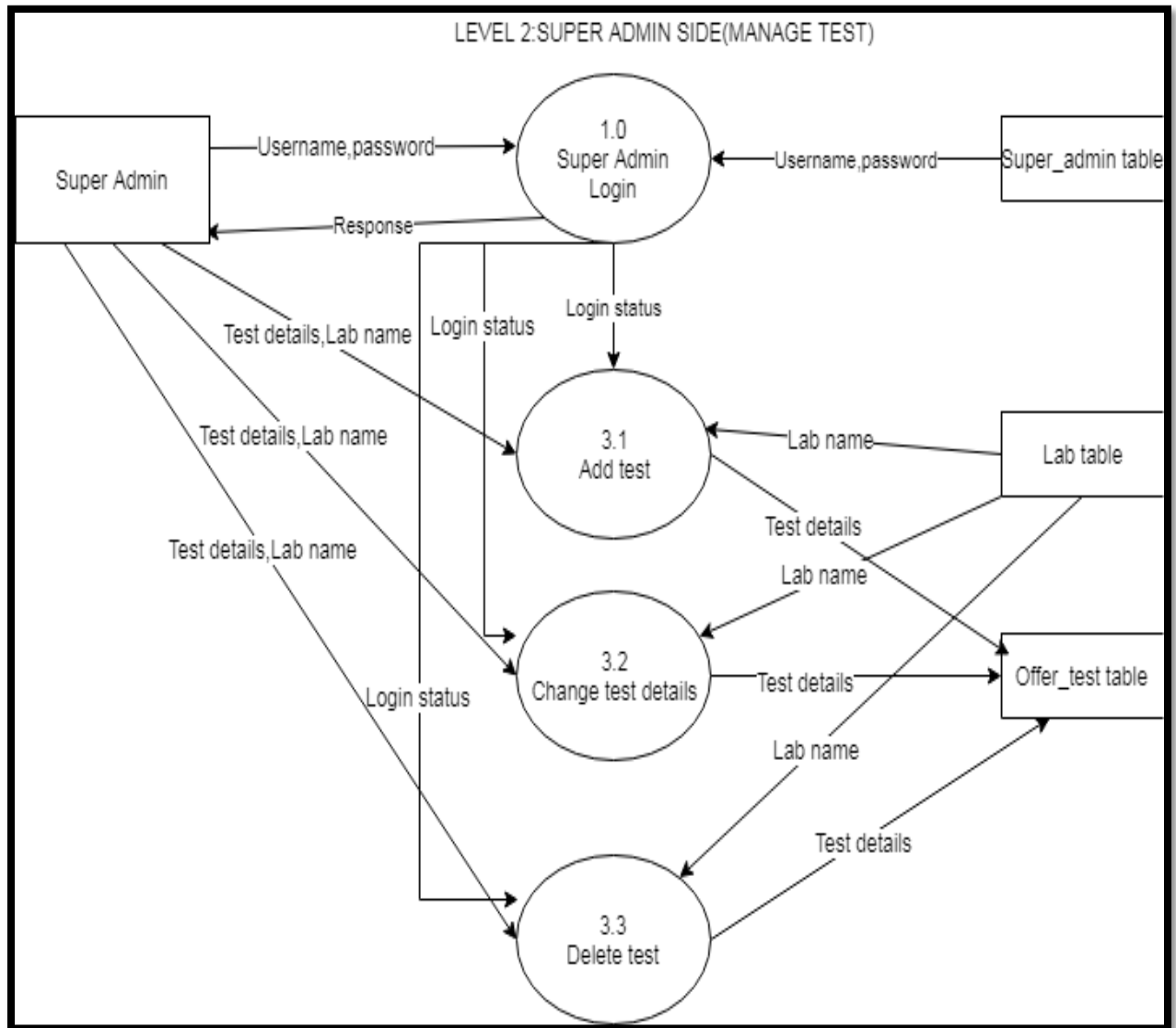
4.2. Level-1 DFD (Patient Side):



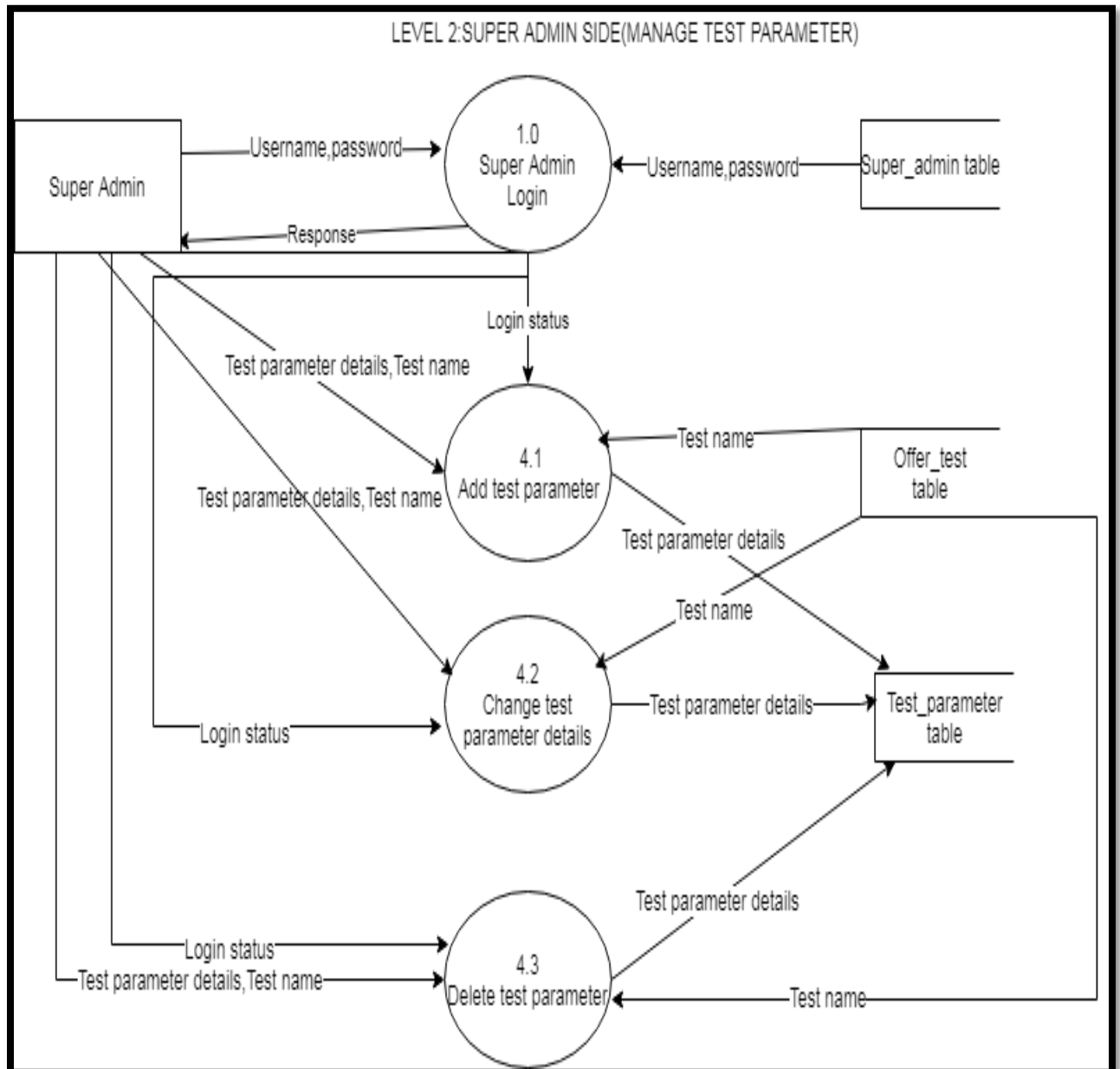
4.3. Level-2 DFD (Super Admin Side) (Manage Lab):



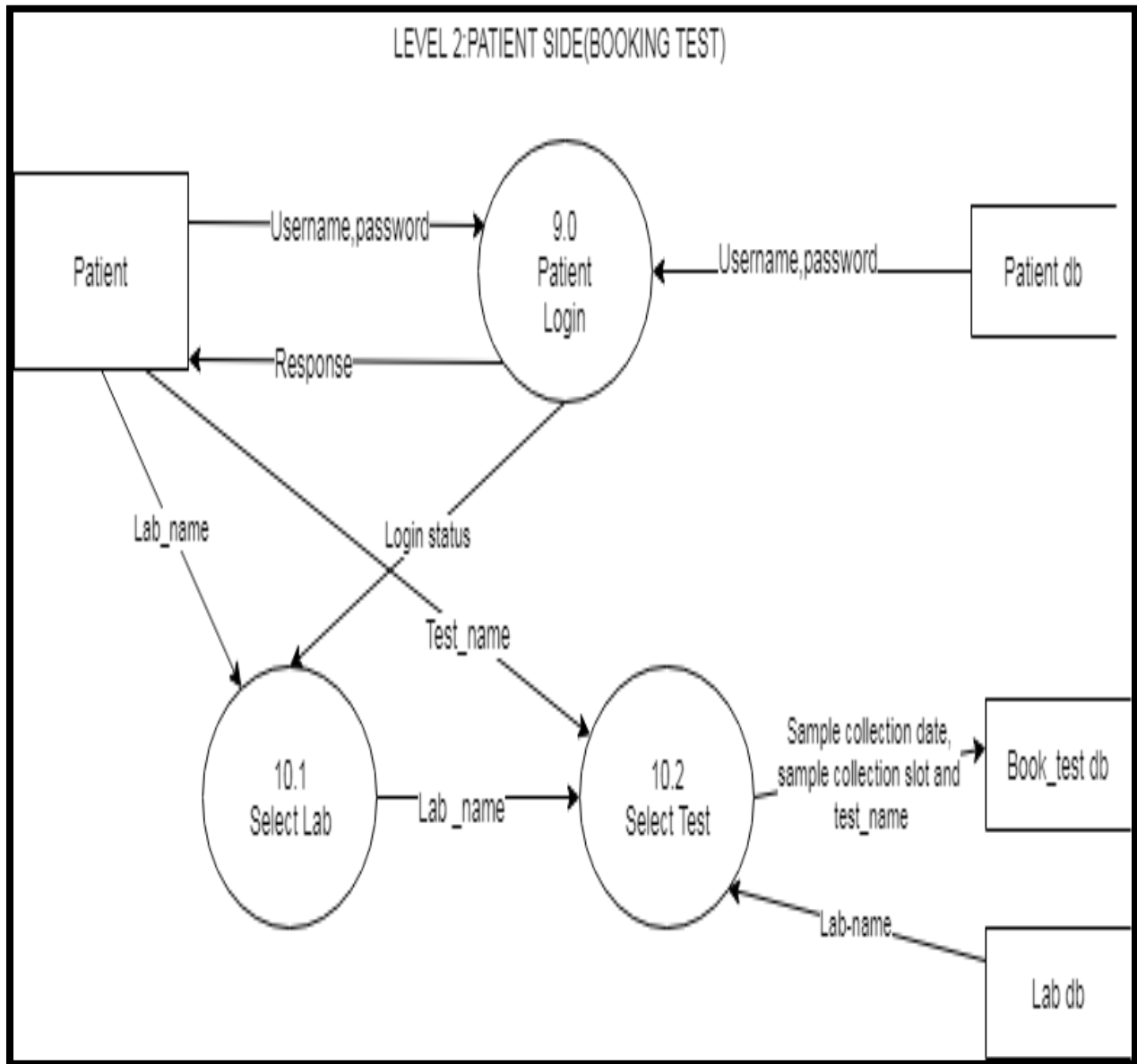
4.3. Level-2 DFD (Super Admin Side) (Manage Test):



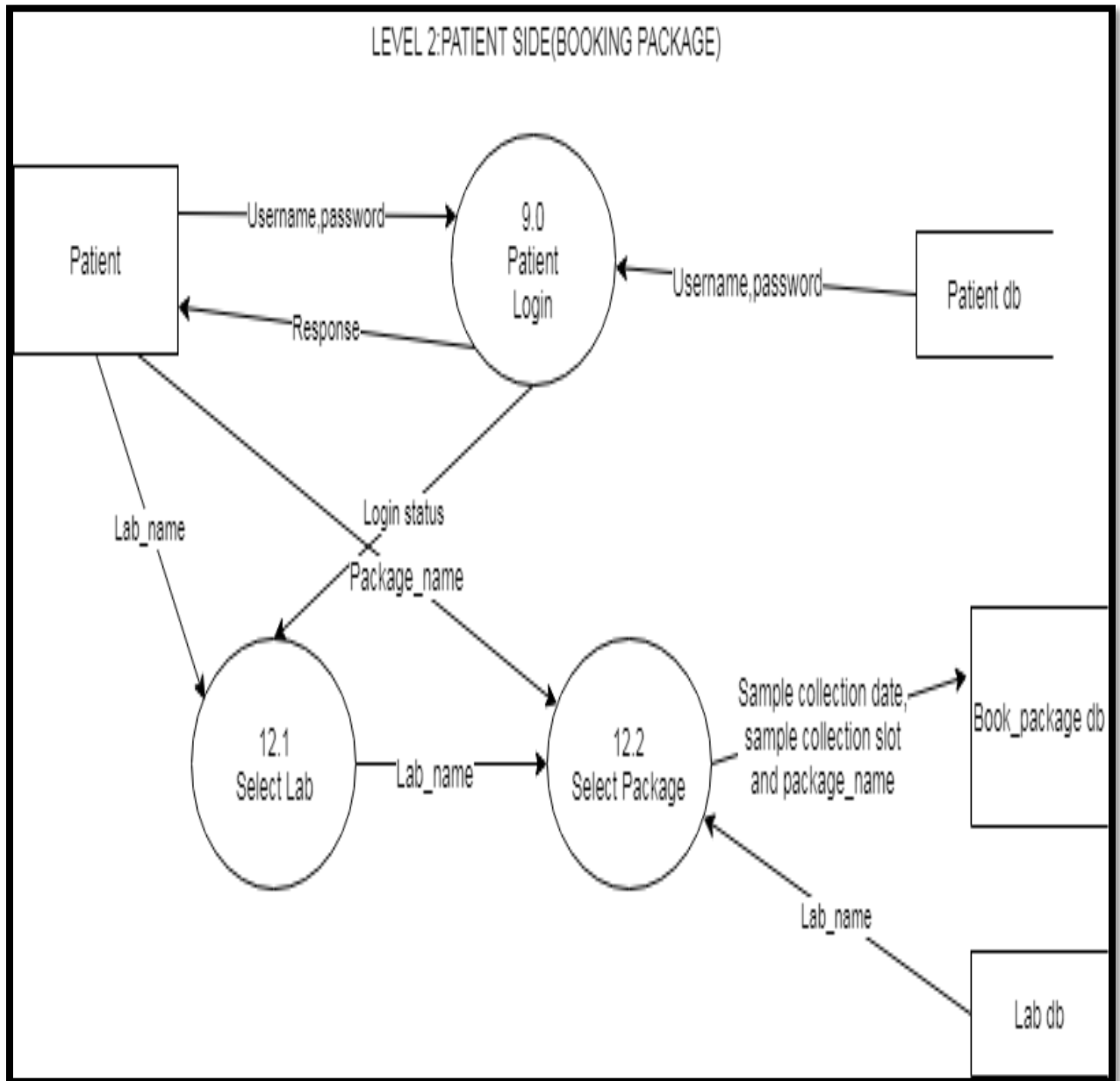
4.3. Level-2 DFD (Super Admin Side) (Manage Test Parameter):



4.3. Level-2 DFD (Patient Side) (Booking Test) :



4.3. Level-2 DFD (Patient Side) (Booking Package):



5. USER INTERFACES

5.1 Super Admin User Interfaces:-

5.1.1 Super admin login:-

The image shows a web interface for 'DEXTER DIAGNOSTIC LAB'. The main heading is 'DEXTER DIAGNOSTIC LAB' in a large, dark blue font. Below this, there is a dark blue rectangular box containing the 'SUPER ADMIN LOGIN' section. The title 'SUPER ADMIN LOGIN' is in white, bold, uppercase letters. Below the title, there are two input fields: 'Admin Name' with a user icon and 'Password' with a lock icon. Below these fields is a checkbox labeled 'Remember me'. At the bottom of the login section are two buttons: 'Login' and 'Reset'.

DEXTER DIAGNOSTIC LAB

SUPER ADMIN LOGIN

☐ Remember me

Login Reset

5.1.2 Super admin lab details:-

DEXTER DIAGNOSTIC LAB

ADD LAB DETAILS

*Reg-no:

*Lab-name:

*Lab-contact:

*Lab-email:

*Open-time:

*Close-time:

*Street:

*City:

*State:

*Pin:

*AdminName:

*AdminPsw:

☐ Remember me

Submit

DEXTER DIAGNOSTIC LAB

DELETE LAB DETAILS

*Enter Reg-no:

*Enter Lab-name:

Submit

5.1.3 Super admin test details:-

DEXTER DIAGNOSTIC LAB

ADD TEST DETAILS

Select Lab ▼

*Enter Testname:

*Enter Sample-type:

*Enter Department:

*Enter Is_parameter:

*Enter Doctor-name:

*Enter Charge:

*Enter Discount:

Select Package(if any) ▼

Submit

5.1.4 Super admin test parameter details:-

DEXTER DIAGNOSTIC LAB

ADD TEST PARAMETER DETAILS

Select Test

*Enter ParameterName:

*Enter Max-value:

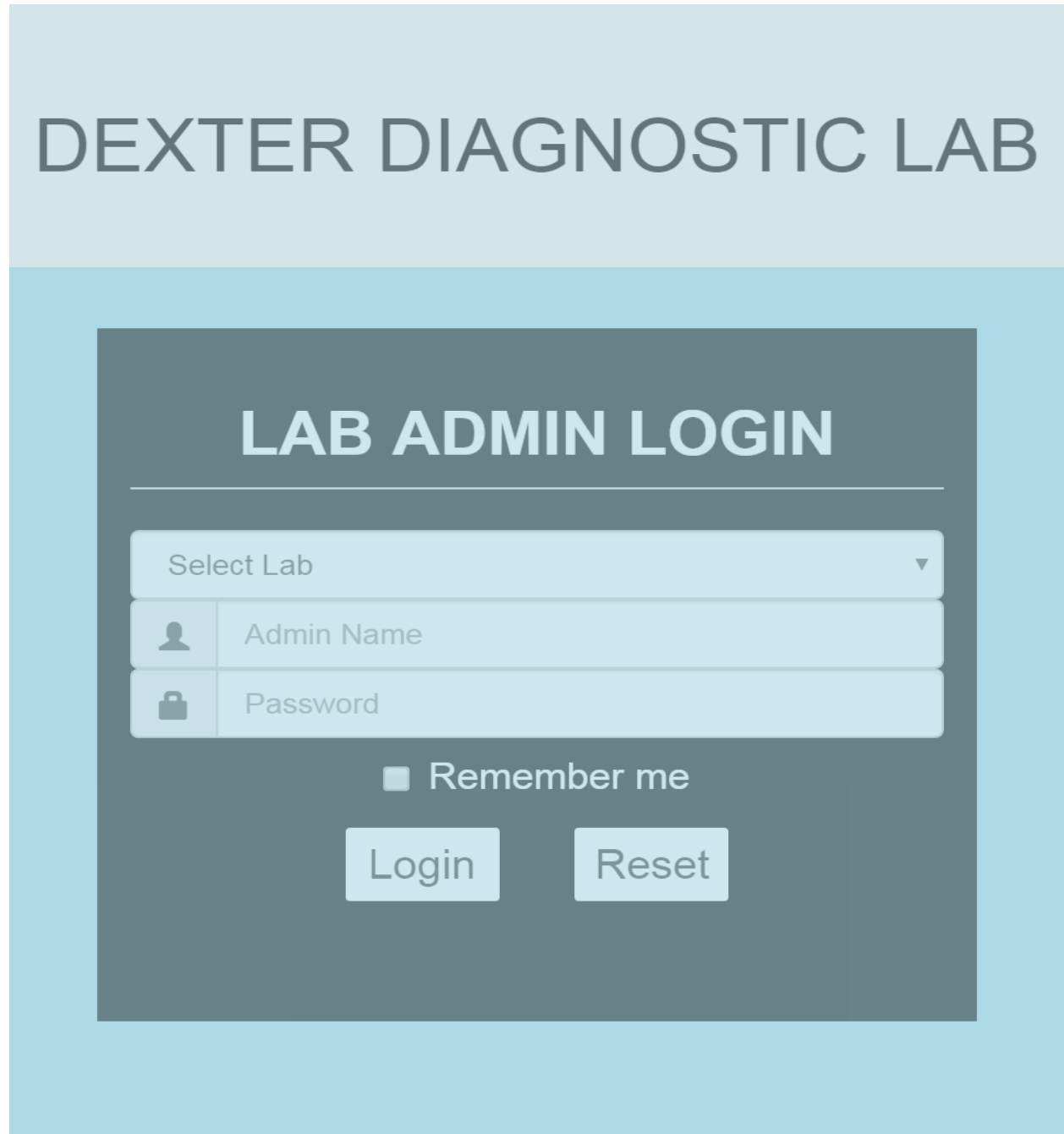
*Enter Min-value:

*Enter Unit:

Submit

5.2Lab Admin User Interfaces:-

5.2.1 Lab Admin Login:-





The image displays a web interface for the 'DEXTER DIAGNOSTIC LAB'. The main heading 'DEXTER DIAGNOSTIC LAB' is in a large, dark blue font at the top. Below it, a dark blue box contains the title 'LAB ADMIN LOGIN' in white. The login form includes a dropdown menu labeled 'Select Lab', followed by two input fields: 'Admin Name' (with a person icon) and 'Password' (with a lock icon). Below these fields is a checkbox labeled 'Remember me'. At the bottom of the form are two buttons: 'Login' and 'Reset'.

DEXTER DIAGNOSTIC LAB

LAB ADMIN LOGIN

Select Lab ▼

 Admin Name

 Password

☐ Remember me

Login Reset

5.2.2 Lab Admin Report Generate:-

DEXTER DIAGNOSTIC LAB

Generate Report For :

Select Test/Package ▾

Submit

Select Book_Id :

Select book_id ▾

Submit

5.2.3.1 Lab Admin Generate report for test(example):-

DEXTER DIAGNOSTIC LAB

Report Generation(For Test)

Test Name : Bilirubin Test

Doctor Name : Dr.B.Roy

Book-id : BK-102 Cust-id : Cust-100 Cust-Name : debanwita dutta

<u>Parameter Name</u>	<u>Max Value</u>	<u>Min Value</u>	<u>Value</u>	<u>Unit</u>
Total Bilirubin	1.900	0.300	<input type="text" value="Enter the value"/>	mg/dL
Indirect Bilirubin	1.700	0.300	<input type="text" value="Enter the value"/>	mg/dL
Direct Bilirubin	0.300	0.000	<input type="text" value="Enter the value"/>	mg/dL

Comments :

Submit

5.2.3.2Lab Admin Generate report for Package (example):-

DEXTER DIAGNOSTIC LAB

Report Generation(For Package)

Package Name : Liver Function Test(LFT)

Book-id : BK-101 Cust-id : Cust-100 Cust-Name : debanwita dutta

Test name : Bilirubin Test

Doctor name : Dr.B.Roy

<u>Parameter Name</u>	<u>Max Value</u>	<u>Min Value</u>	<u>Value</u>	<u>Unit</u>
Total Bilirubin	1.900	0.300	<input type="text" value="Enter the value"/>	mg/dL
Indirect Bilirubin	1.700	0.300	<input type="text" value="Enter the value"/>	mg/dL
Direct Bilirubin	0.300	0.000	<input type="text" value="Enter the value"/>	mg/dL

Test name : Serum Albumin Test

Doctor name : Dr.P.Barua

<u>Parameter Name</u>	<u>Max Value</u>	<u>Min Value</u>	<u>Value</u>	<u>Unit</u>
Serum Albumin	5.500	3.500	<input type="text" value="Enter the value"/>	g/dL

Test name : Serum Globulin Test

Doctor name : Dr.K.khan

<u>Parameter Name</u>	<u>Max Value</u>	<u>Min Value</u>	<u>Value</u>	<u>Unit</u>
Serum Globulin	3.500	2.000	<input type="text" value="Enter the value"/>	g/dL

Comments :

5.3 Patient User Interfaces:-

5.3.1 Patient Login:-



The image displays the user interface for DEXTER DIAGNOSTIC LAB, featuring a background image of a person's head and shoulders. The interface is divided into two main sections: SIGN IN and REGISTER.

SIGN IN

Username

Password

☐ Remember me

Login Reset

If you haven't registered, then Register Now!!

REGISTER

*First-Name:

*Last-name:

*Password:

****Password should be minimum 6 length of characters.**

*Contact:

*Email:

*Dob:

*Street:

*City:

*State:

*Pin:

☐ Remember me

Submit

5.3.2 Patient Book Test:-

DEXTER DIAGNOSTIC LAB

BOOK A TEST

Select a Lab

Enter

Select a Test

*Choose Sample collection date:

mm/dd/yyyy

Select a Sample Collection Slot

Submit

5.3.3 Patient Book Package:-

DEXTER DIAGNOSTIC LAB

BOOK A PACKAGE

Select a Lab

Enter

Select a Package

*Choose Sample collection date:

mm/dd/yyyy

Select a Sample Collection Slot

Submit

5.3.4 Patient Payment:-

DEXTER DIAGNOSTIC LAB

CREDIT CARD DETAILS

Owner

CVV

Card Number

Expiration Date

January ▾

2016 ▾

Submit

5.3.5 Patient View Report:-

DEXTER DIAGNOSTIC LAB

VIEW/SEARCH REPORT

Select (Test/Package) : *

Select Test/Package ▼

Get Book Id

Select Book_Id : *

Select book id ▼

Submit