NORTH SOUTH UNIVERSITY

School of Engineering & Physical Sciences

CSE-311

Database Systems

Submitted To:

SIR: SLF

Professor

Department of Electrical

& Computer Engineering

Submitted By:

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ACKNOWLEDGEMENTS

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North South University gave us plenty of privileges regarding laboratory facilities. Our laboratory was well equipped. The lab experiments were very helpful. So we will also like to thank our authority.

Again Thanks to Ramez Elmasri and Shamkant B. Navathe, authors of our textbook“Database Systems”. The book came in handy during the project.

Finally, we will like to express our heartiest gratitude to our dear parents who supported us all the moments.

Project Description

Hospital Management System

Admission

A patient is admitted to the hospital by filling up a form (Attachment 1). The form data is entered into the system by an operator using a graphical user interface (to be designed by the students). In the interface, there will be some mandatory fields and some optional as mentioned in the form. After filling up and submission using the interface, all data will be saved in the database to the corresponding tables and a receipt will be printed as per Attachment 2.

Doctor Initial Investigation

After admission, a duty doctor will record all information of the patient as per the printed patient information form generated from the system as per Attachment 3. A nurse will submit all data recorded by the duty doctor using an Interface (to be designed by the student).

Medical treatment by Specialist

Each patient is admitted into the hospital under a specialist. A specialist may be Professor, Associate Professor, Asst. Professor or Consultant. Whenever, a specialist visits a patient, he/ she advises the patient about different medicines and tests as per Attachment 4. A nurse of the ward gives the entry of the medicine and test

information using an Interface (to be designed by the students). An order is prepared for medicine and for test accordingly.

Issue Medicine

Medicine order is sent to the medicine store and medicines are issued to the patient entering the medicine data using an interface (to be designed by the students). Medicine data contains the price of the medicine and the amount issued to that patient.

Test Result

Test order is sent to the Pathology/Radiology/Imaging centers as per the test order. Test samples are sent to the Pathology center if it is pathology test. For each sample, patient id is used as sample id and has a collection date and time. Test result is given sample wise. Radiology or Imaging are done by corresponding centers for different tests and results are stored as text and images.

Hospital Doctor, Nurse and Ward Management

The hospital management system contains information about doctors, patients, nurses, and other employees. A doctor can have a unique id, name, address, mobile numbers, working days, and specialization. One doctor called registrar will be responsible for a ward. In each ward, there will have many doctors and nurses. Among the nurses, there will be a staff nurse who will be the supervisor of all nurses of the ward. A nurse will be identified by nurse id. The other information for a nurse is name, present address, permanent address, duty shift, and mobile number. A doctor or a nurse can be transferred from one ward to another ward.

In the hospital, there will be many wards and each ward will contain many beds and each bed will have a bed id and rent. Each ward will have an id and type. Each patient will have an id, name, address, ward number / cabin number, disease name, disease severity, special note and bed no. Medicine will be supplied from the store of the hospital. Doctors will give prescriptions to patients from the list of medicines. Each medicine has id, name, price and date of expiry. The Doctor, Nurse, Ward and Medicine data entry/ edit forms are given in Attachments 5, 6, 7 and 8 respectively.

Task 1: Design ERD

Task 2: Transform the ERD into relational schema

Task 3: Create tables using SQL DDL

Task 4: Design and implement all of the interfaces mentioned in text and all forms for data entry into the system.

Task 5: Sample data entry and showing all of the functionality of the system.

Output

The following shall be the output of the system.

- Specialist detailed Bill
- Medicine detailed bill
- Summary bill of a patient for discharge

Attachment 1

Patient Admission Form

Date of Admission: _____ (DD/MM/YYYY)

Name: _____ (First name) _____ (middle name) _____ (Last Name)

Date of birth: _____ (DD/MM/YYYY)

Mobile (1) _____ Mobile (2) _____

Present Address:

Street No. / Village _____ Street Name _____

Area _____ Thana _____

District _____

Permanent Address:

Street No. / Village _____ Street Name _____

Area _____ Thana _____

District _____

Profession

1) Government job, 2) Private Job, 3) Business, 4) Farmer, 5) Retired 6) Others

Amount deposited: _____

Choice Cabin / Ward

Signature with date

Name:

Relation with the Patient:

Attachment 2

Patient Admission Receipt

Patient Id ????????? (generated by the system)

Date of Admission: _____ (DD/MM/YYYY)

Name: _____ (First name) _____ (middle name) _____ (Last Name)

Date of birth: _____ (DD/MM/YYYY)

Mobile (1) _____ Mobile (2) _____

Present Address:

Street No. / Village _____ Street Name _____

Area _____ Thana _____

District _____

Permanent Address:

Street No. / Village _____ Street Name _____

Area _____ Thana _____

District _____

Profession _____

Amount deposited: _____

Cabin No. _____ or Ward No. _____ Bed No. _____

Signature with date

Name of the employee:

Designation:

Attachment 3

Patient Initial Investigation Form

Patient Id ????????? (generated by the system)

Date of Admission: _____ (DD/MM/YYYY) (generated by the system)

Name: _____ (First name) _____ (middle name) _____ (Last Name)

Date of birth: _____ (DD/MM/YYYY)

All above information will be printed from system

-

_____

_____

Patient personal information

Height _____ Weight _____

Symptoms of the disease: 1. _____ 2. _____ 3._____

4. _____ 5. _____ 6. _____

Blood Pressure: Lower _____ upper _____

General Food Habit:

Breakfast 1. _____ 2. _____ 3._____

Lunch 1. _____ 2. _____ 3._____

Dinner 1. _____ 2. _____ 3._____

Hobby:

Game: 1) Foot ball 2) Hokey 3) Volley Ball 4) Cricket 5) Chess 6) All 7) None

Others: 1) Tourism 2) Writing

Disease Name:

Signature with date

Doctor Id: _____ Name of the doctor:

Designation:

Attachment 4

Medical Advise by the Specialist Form

Patient Id ????????? (generated by the system)

Date of Admission: _____ (DD/MM/YYYY) (generated by the system)

Name: _____ (First name) _____ (middle name) _____ (Last Name)

Date of birth: _____ (DD/MM/YYYY) Bed No. _____ Ward No. _____

All above information will be printed from system

_____

_____

Date of advice: _____ Time: ___

Medicine advice

Serial Number	Name of Medicine	Quantity	Times in a day	Morning		Noon		Evening	
				Before meal	After meal	Before meal	After meal	Before meal	After meal

Test Advice

Serial	Name

Number	of the test

Signature with date

Name of the doctor:

Designation:

Attachment 5

Doctors Information Form

Doctor Id _____ (generated by the system)

Name: _____ (First name) _____ (middle name) _____ (Last Name)

Date of birth: _____ (DD/MM/YYYY) Date of Appointment _____

Educational Qualification

Serial No.	Degree	Board/Institute	Year	Division/CGPA	Position
1.	SSC				
2.	HSC				
3.	MBBS				

4.	,,				
5.	,,				

Experience

Serial No.	Job title	From	To	Organization
1.				
2.				
3.				
4.	,,			
5.	,,			

Membership

- BMA
- British Medical Society
- American Medical Society
- Others

Attachment 6

Nurses Information Form

Nurse Id _____ (generated by the system)

Name: _____ (First name) _____ (middle name) _____ (Last Name)

Date of birth: _____ (DD/MM/YYYY) Date of Appointment _____

Educational Qualification

Serial No.	Degree	Board/Institute	Year	Division/CGPA	Position
1.	SSC				
2.	HSC				
3.	BSc (Nursing)				
4.	,,				
5.	,,				

Experience

Serial No.	Job title	From	To	Organization
1.				
2.				
3.				
4.	,,			
5.	,,			

Attachment 7

Ward Information Form

Ward Id _____ (generated by the system)

Ward Name: _____

Registrar Id _____ Name _____ (from database)

Nurse Supervisor Id _____ Name _____ (from database)

Serial No.	Bed No.	Bed type	Rent	Status (Empty/ occupied)
1.				
2.				
3.				
.....				

Attachment 8

Medicine Entry Form

Supplier Id _____ Supplier Name _____

Date of Supply _____ (MM/DD/YYYY)

Medicine Id	Name	Type	Unit price	Quantity	Date of Manufacture	Expiry date

Technologies:

- front-end : HTML , CSS , JavaScript , Jquery
- back-end : PHP, Mysqli
- Software : Xampp, Any browser

ER diagram

Snapshot

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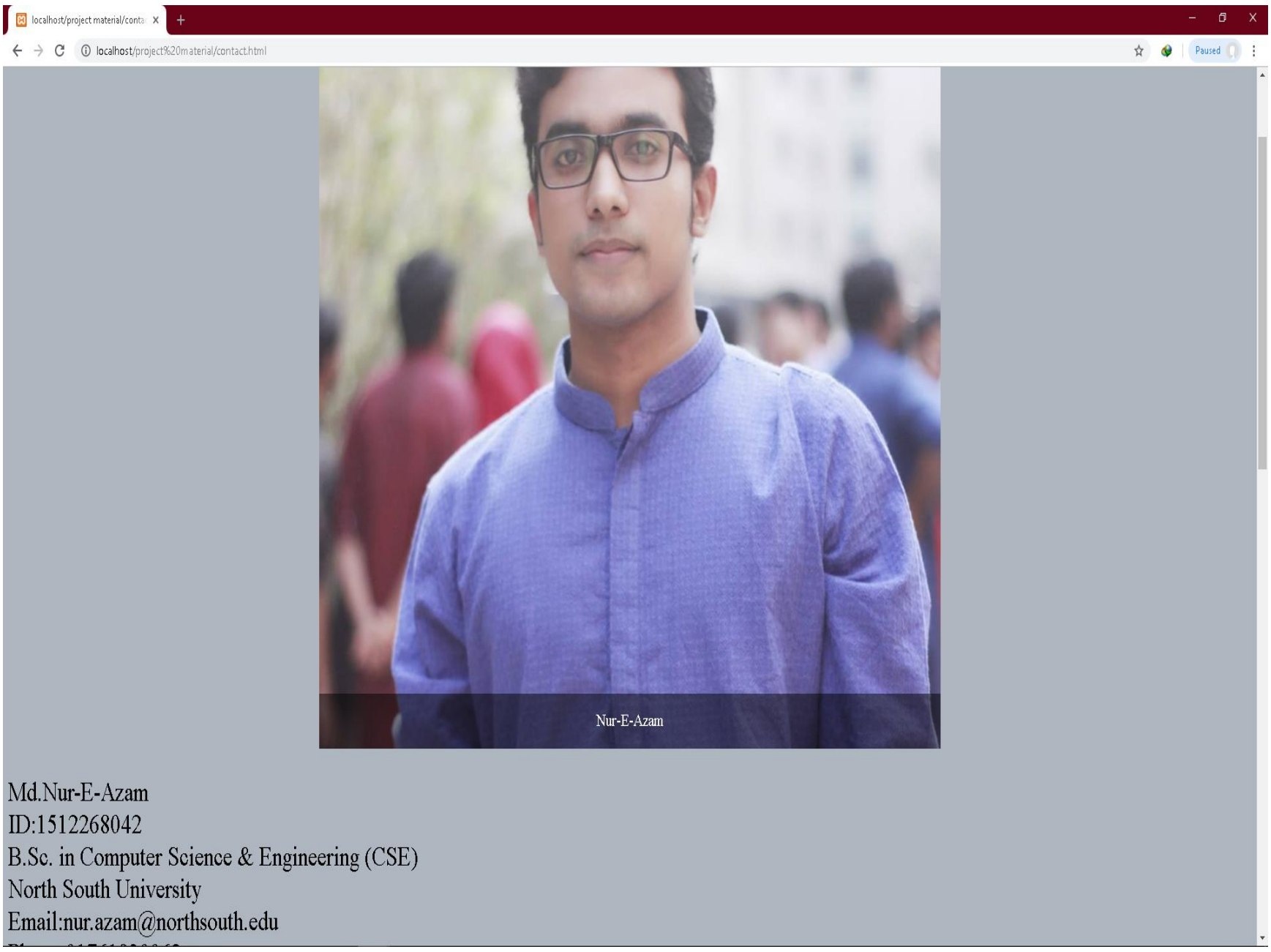
Paused
Hospital
Hospital

localhost/project material/Menu
localhost/project%20material/Menus.html#
Paused
About
Services
Contact
ALL FORM
Hospital
Hospital



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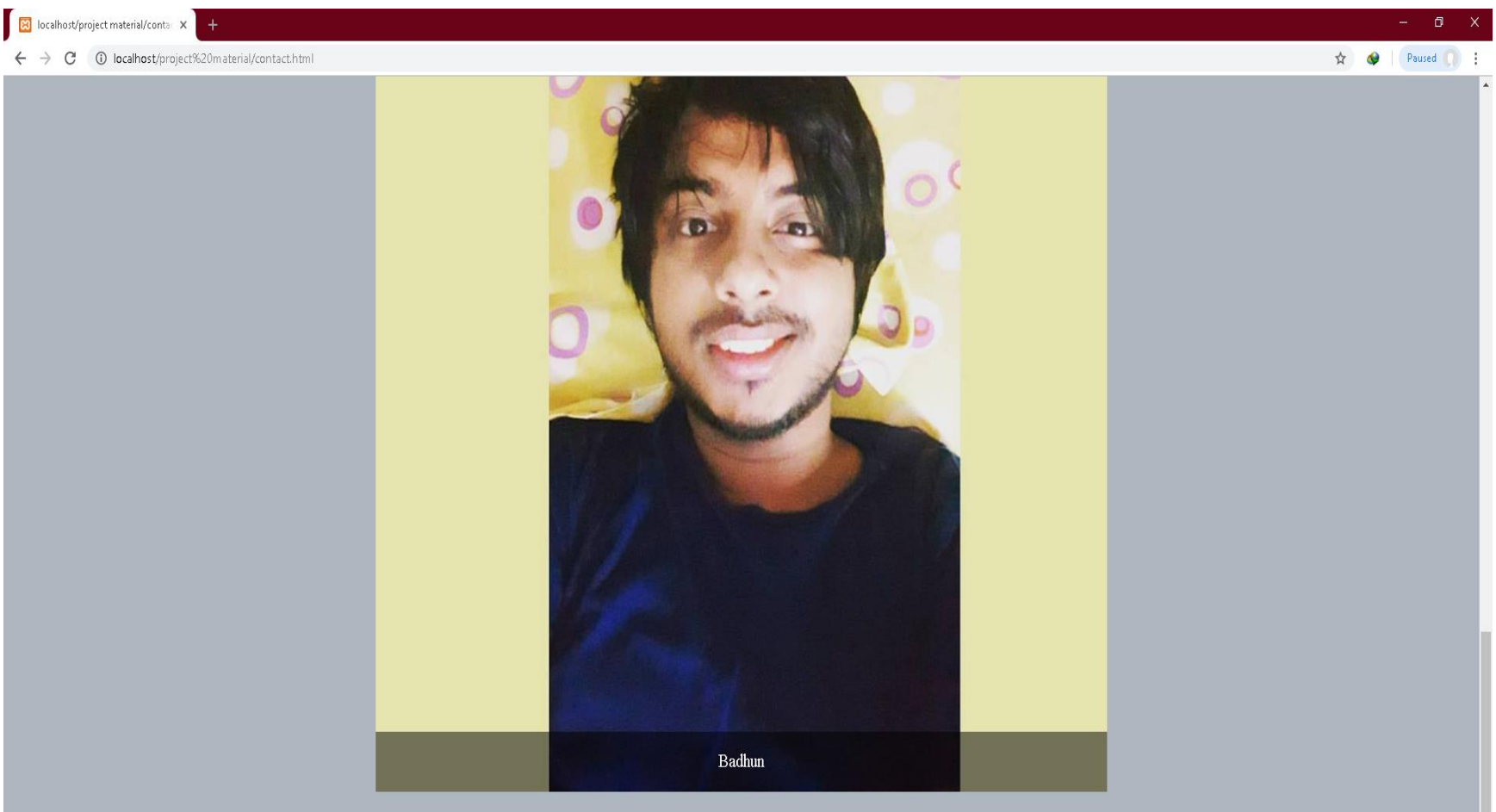

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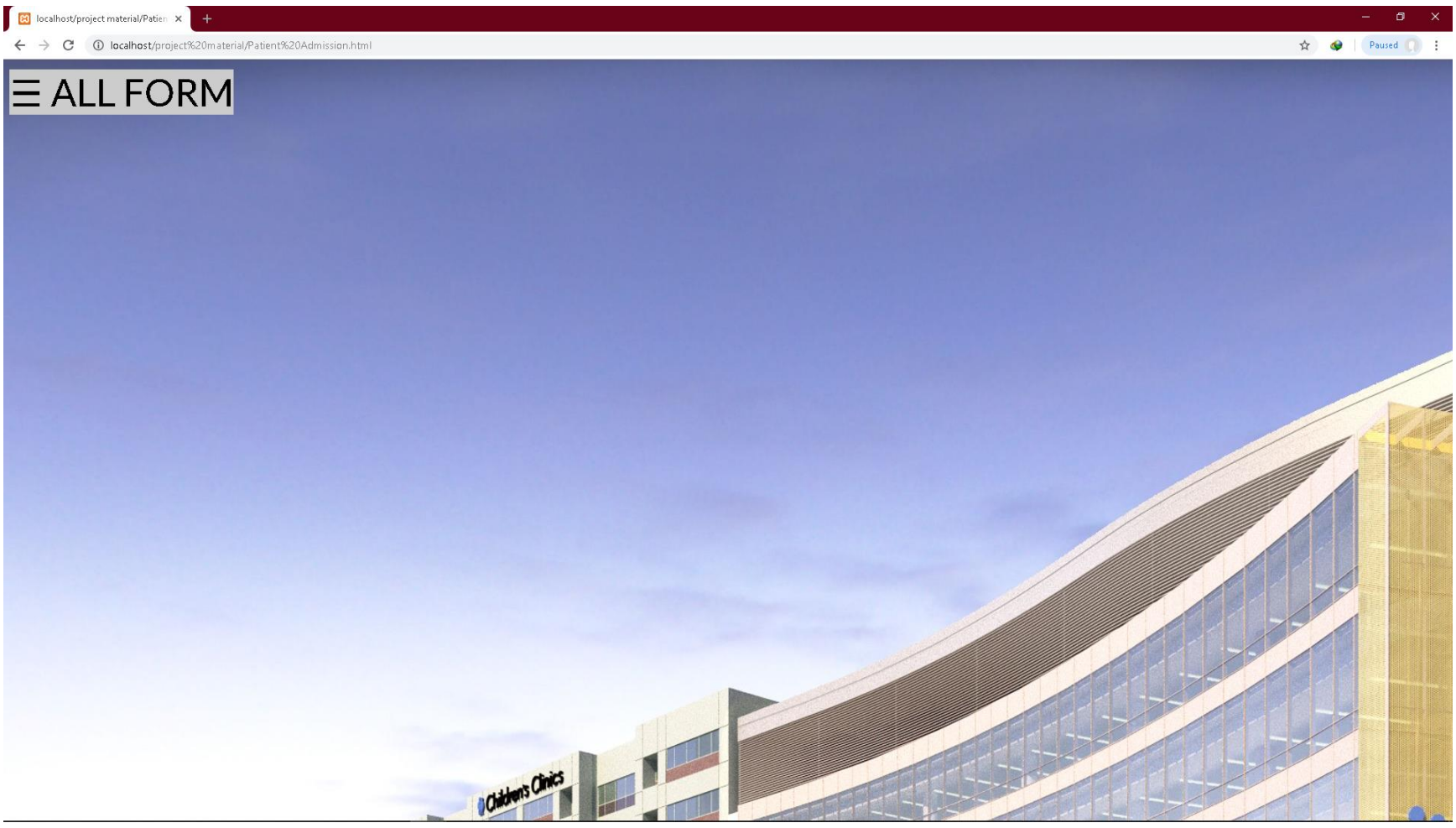
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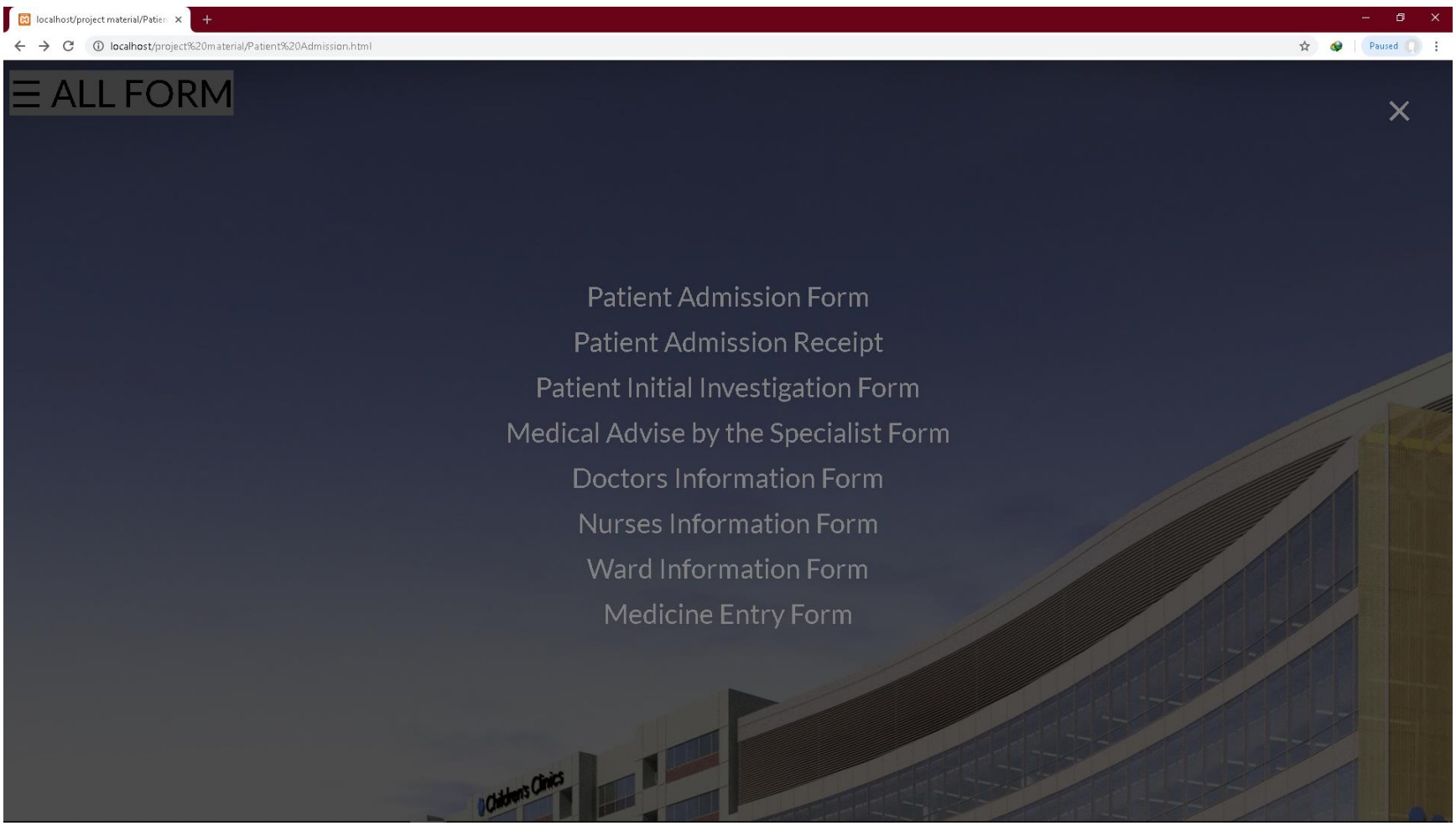
Children's Clinics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Patient Admission Form
Patient Admission Receipt
Patient Initial Investigation Form
Medical Advise by the Specialist Form
Doctors Information Form
Nurses Information Form
Ward Information Form
Medicine Entry Form
Children's Clinics

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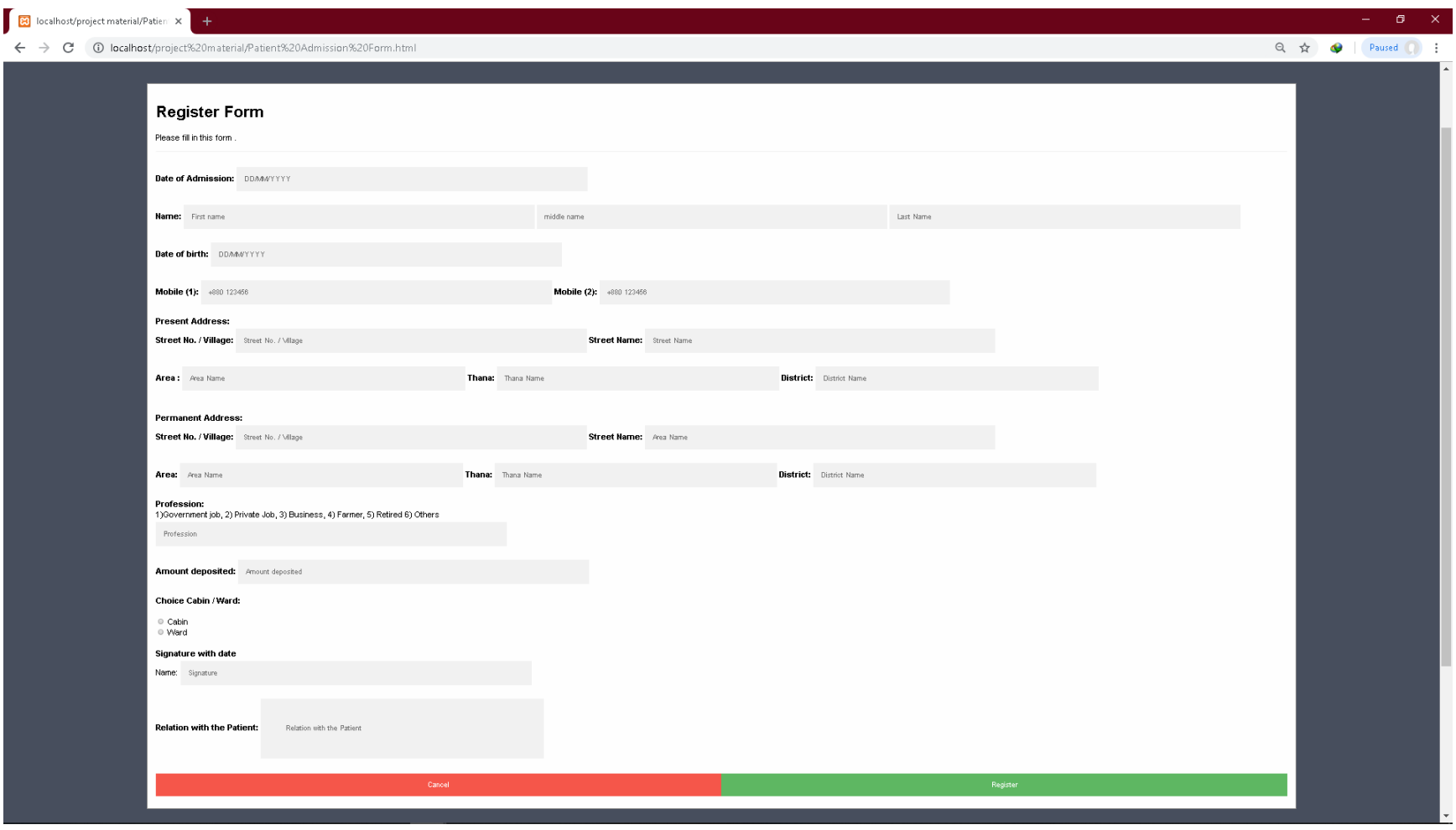
Patient Admission Form
Register Form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Register Form
Please fill in this form .
Date of Admission: DD/MM/YYYY
Name: First name middle name Last Name
Date of birth: DD/MM/YYYY
Mobile (1): +880 123456
Mobile (2): +880 123456
Present Address:
Street No. / Village: Street No. / Village
Street Name: Street Name
Area : Area Name
Thana: Thana Name
District: District Name
Permanent Address:
Street No. / Village: Street No. / Village
Street Name: Area Name
Area: Area Name
Thana: Thana Name
District: District Name
Profession:
1)Government job, 2) Private Job, 3) Business, 4) Farmer, 5) Retired 6) Others
Profession
Amount deposited: Amount deposited
Choice Cabin / Ward:
Cabin
Ward
Signature with date
Name: Signature
Relation with the Patient: Relation with the Patient
Cancel
Register

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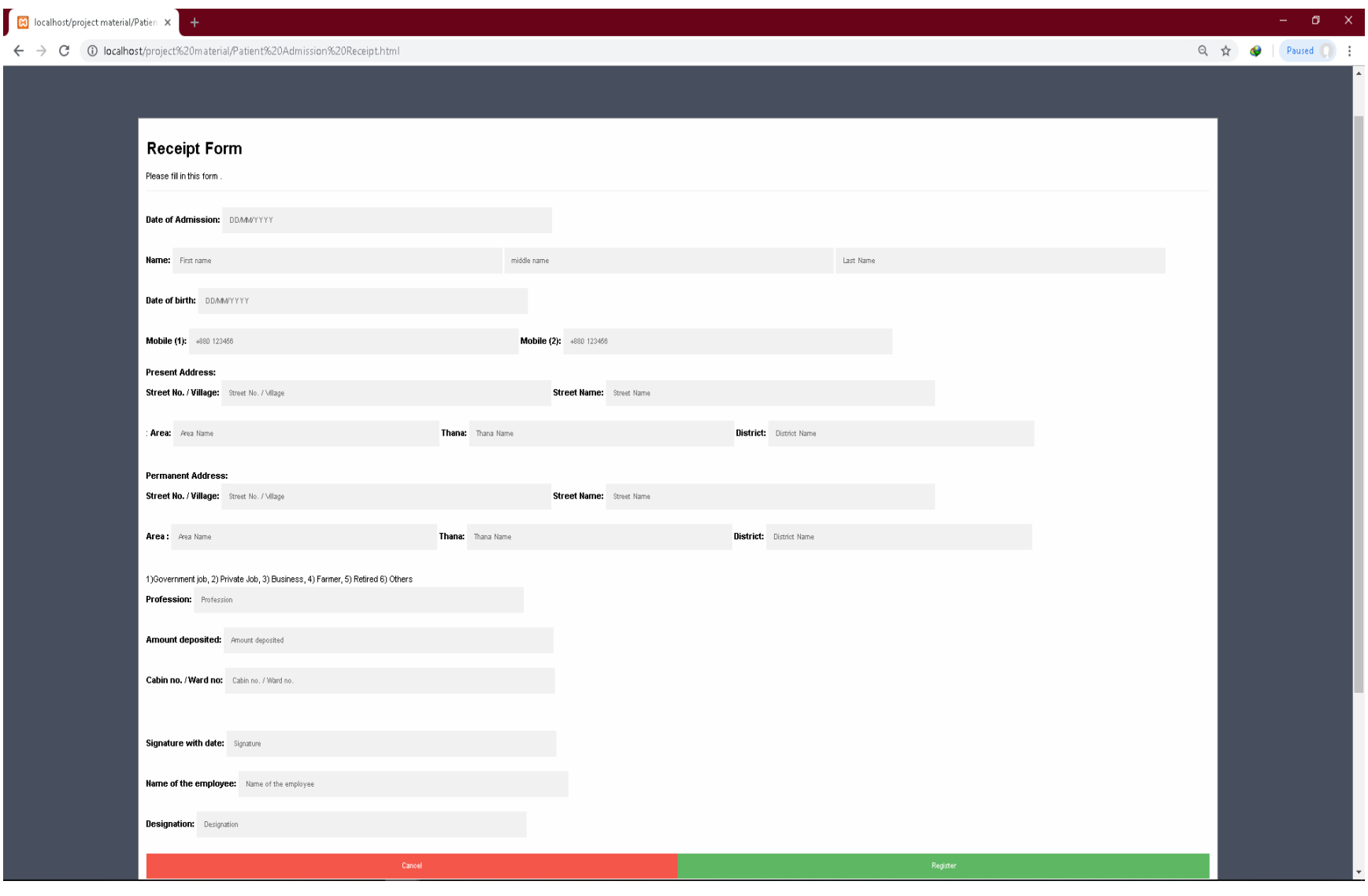
Patient Admission Receipt
Receipt Form
EXIT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Receipt Form
Please fill in this form .
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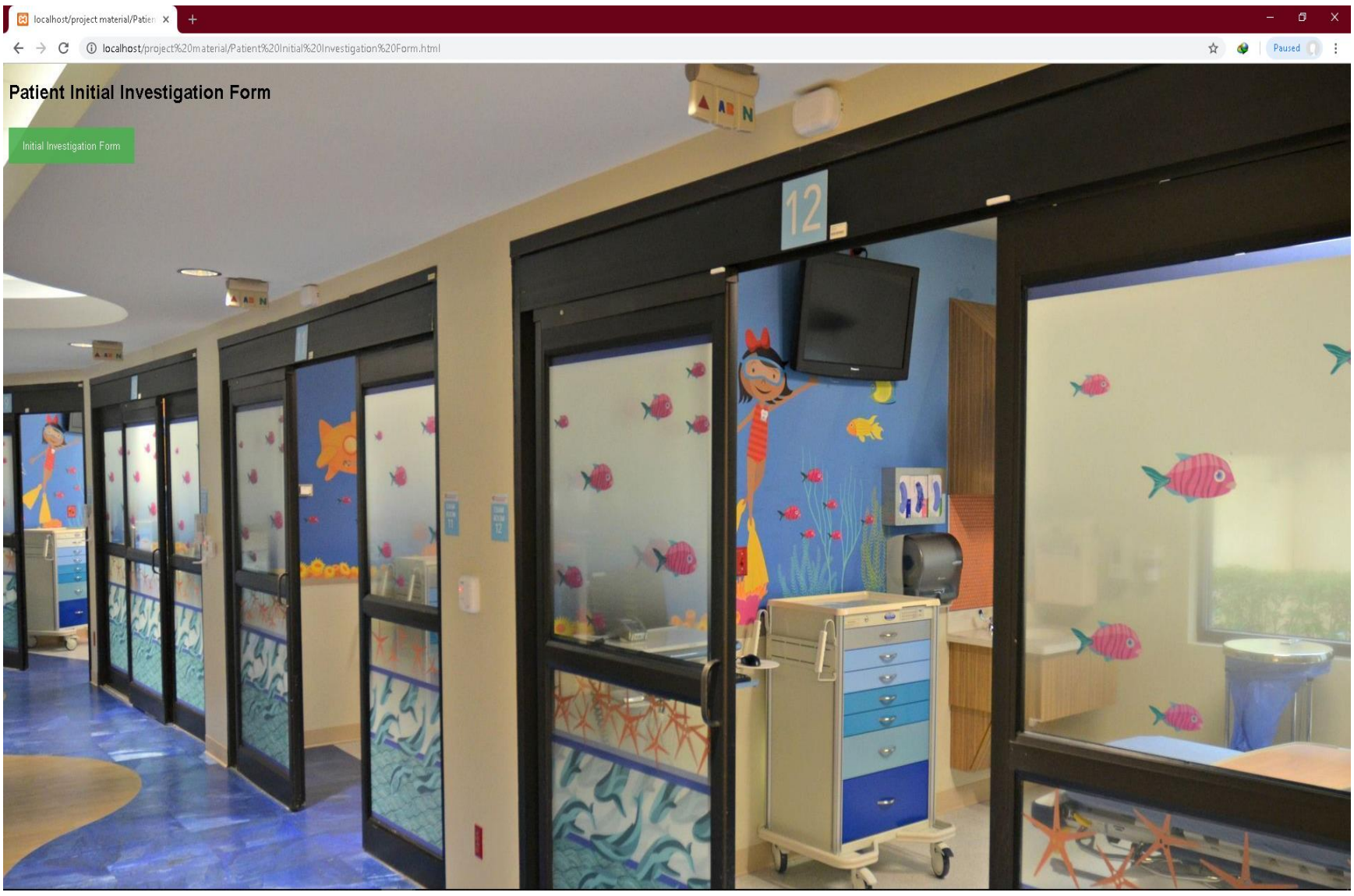
Name: First name middle name Last Name
Date of birth: DD/MM/YYYY
Mobile (1): +880 123456
Mobile (2): +880 123456
Present Address:
Street No. / Village: Street No. / Village
Street Name: Street Name
: Area: Area Name
Thana: Thana Name
District: District Name
Permanent Address:
Street No. / Village: Street No. / Village
Street Name: Street Name
Area : Area Name
Thana: Thana Name
District: District Name
1)Government job, 2) Private Job, 3) Business, 4) Farmer, 5) Retired 6) Others
Profession: Profession
Amount deposited: Amount deposited
Cabin no. / Ward no: Cabin no. / Ward no.
Signature with date: Signature
Name of the employee: Name of the employee
Designation: Designation
Cancel
Register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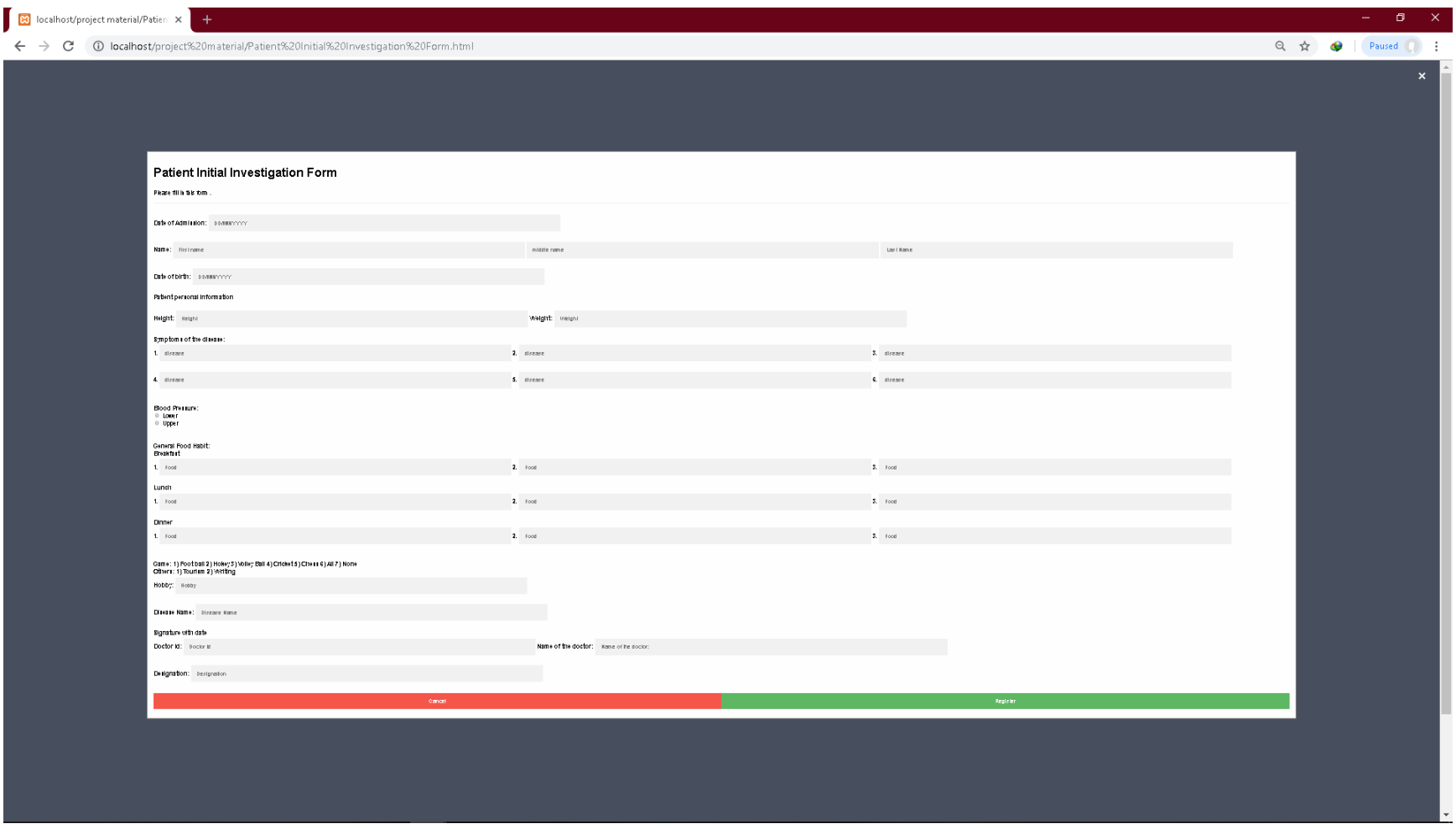
Patient Initial Investigation Form
Initial Investigation Form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Patient Initial Investigation Form
Please fill in this form .
Date of Admission: DD/MM/YYYY
Name: First name
middle name
Last Name
Date of birth: DD/MM/YYYY
Patient personal information
Height: Height
Weight: Weight
Symptoms of the disease:
1. disease
2. disease
3. disease
4. disease
5. disease
6. disease
Blood Pressure:
Lower
Upper
General Food Habit:
Breakfast
1. Food
2. Food
3. Food
Lunch
1. Food
2. Food
3. Food
Dinner
1. Food
2. Food
3. Food
Game: 1) Football 2) Hokey 3) Volley Ball 4) Cricket 5) Chess 6) All 7) None
Others: 1) Tourism 2) Writing
Hobby: Hobby
Disease Name: Disease Name
Signature with date
Doctor id: Doctor id
Name of the doctor: Name of the doctor
Designation: Designation
Cancel
Register

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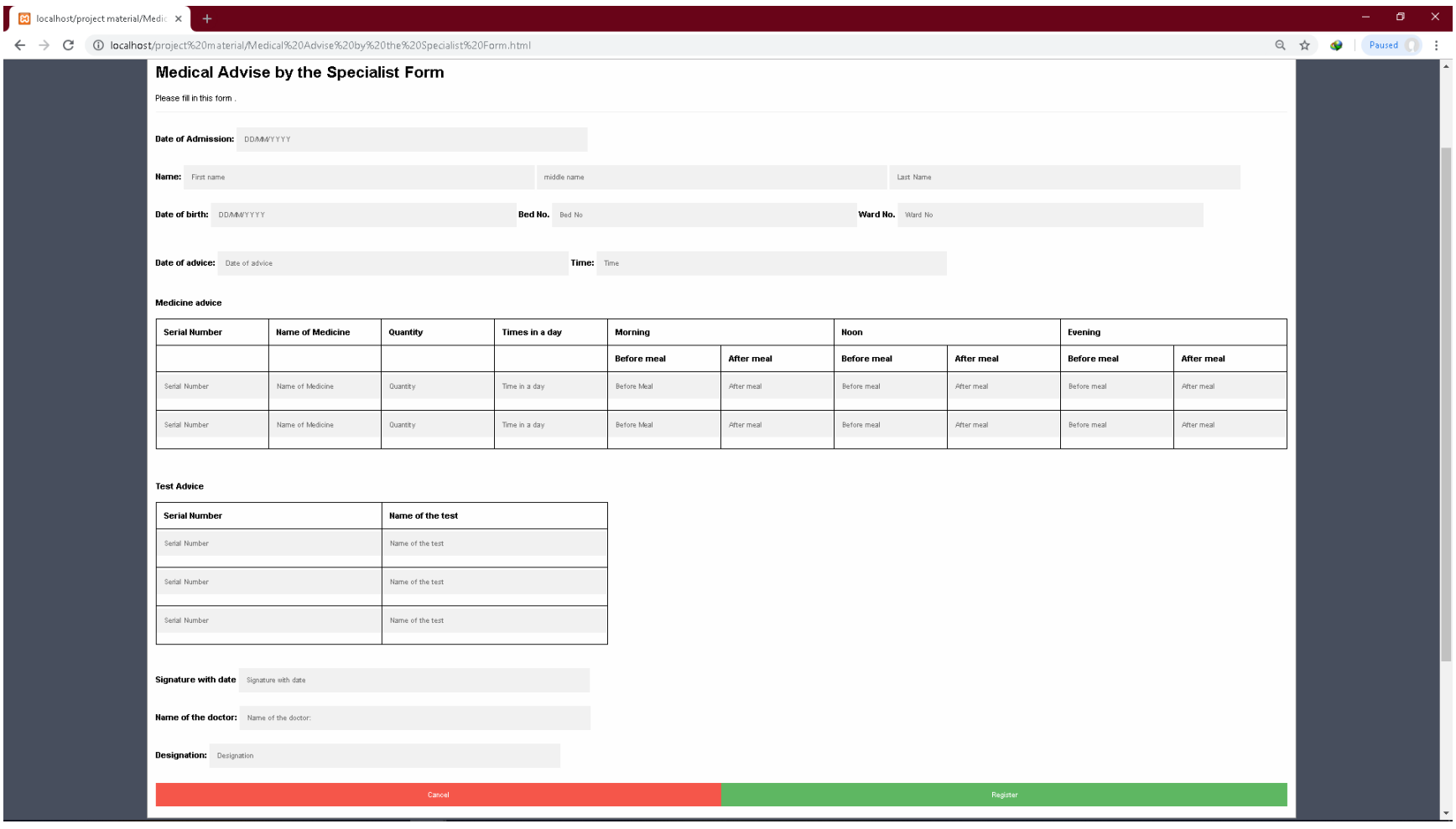
Medical Advise by the Specialist Form
Specialist Form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Medical Advise by the Specialist Form
Please fill in this form .
Date of Admission: DD/MM/YYYY
Name: First name middle name Last Name
Date of birth: DD/MM/YYYY
Bed No. Bed No
Ward No. Ward No
Date of advice: Date of advice
Time: Time
Medicine advice
Serial Number
Name of Medicine
Quantity
Times in a day
Morning
Noon
Evening
Before meal
After meal
Before meal
After meal
Before meal
After meal
Serial Number
Name of Medicine
Quantity
Time in a day
Before Meal
After meal
Before meal
After meal
Before meal
After meal
Serial Number
Name of Medicine
Quantity
Time in a day
Before Meal
After meal
Before meal
After meal
Before meal
After meal
Test Advice
Serial Number
Name of the test
Serial Number
Name of the test
Serial Number
Name of the test
Serial Number
Name of the test
Signature with date
Signature with date
Name of the doctor:
Name of the doctor:
Designation:
Designation
Cancel
Register

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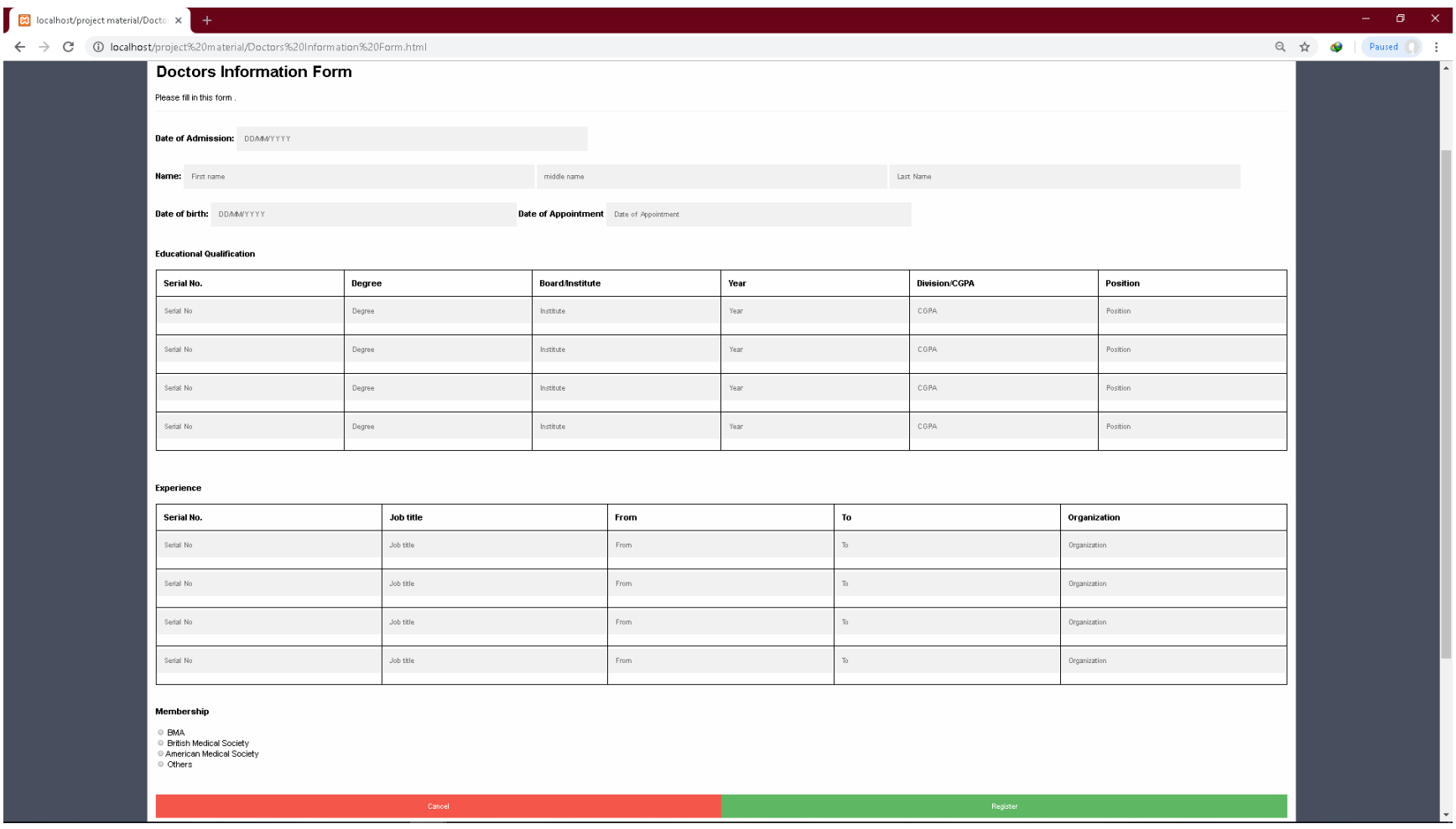
Doctors Information Form
Doctors Information Form
FLORIDA HOSPITAL
EMERGENCY MEDICAL SERVICES
FLORIDA HOSPITAL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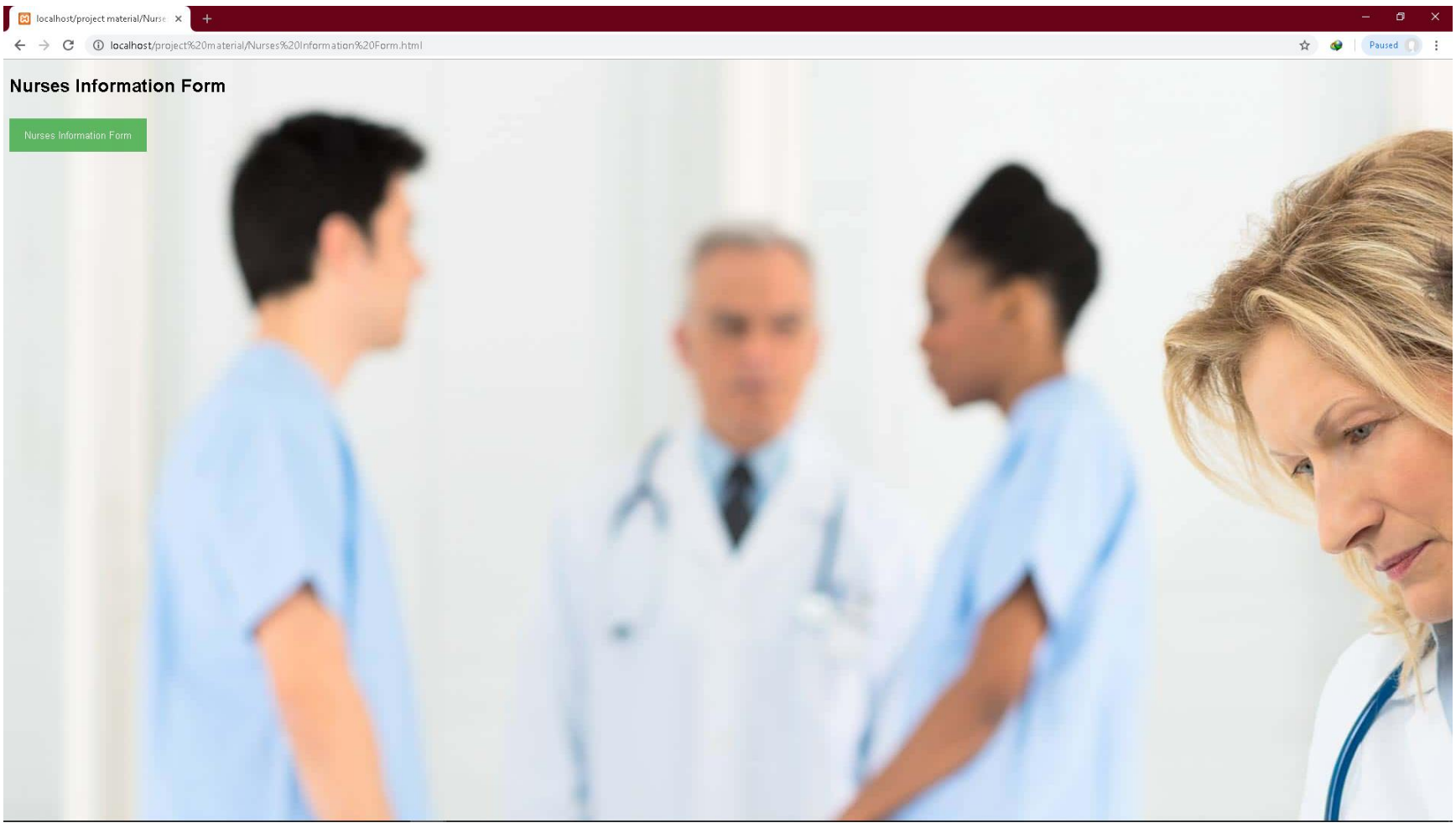
Doctors Information Form
Please fill in this form .
Date of Admission: DD/MM/YYYY
Name: First name middle name Last Name
Date of birth: DD/MM/YYYY
Date of Appointment Date of Appointment
Educational Qualification
Serial No. Degree Board/Institute Year Division/CGPA Position
Serial No Degree Institute Year CGPA Position
Serial No Degree Institute Year CGPA Position
Serial No Degree Institute Year CGPA Position
Experience
Serial No. Job title From To Organization
Serial No Job title From To Organization
Serial No Job title From To Organization
Serial No Job title From To Organization
Membership
BMA
British Medical Society
American Medical Society
Others
Cancel
Register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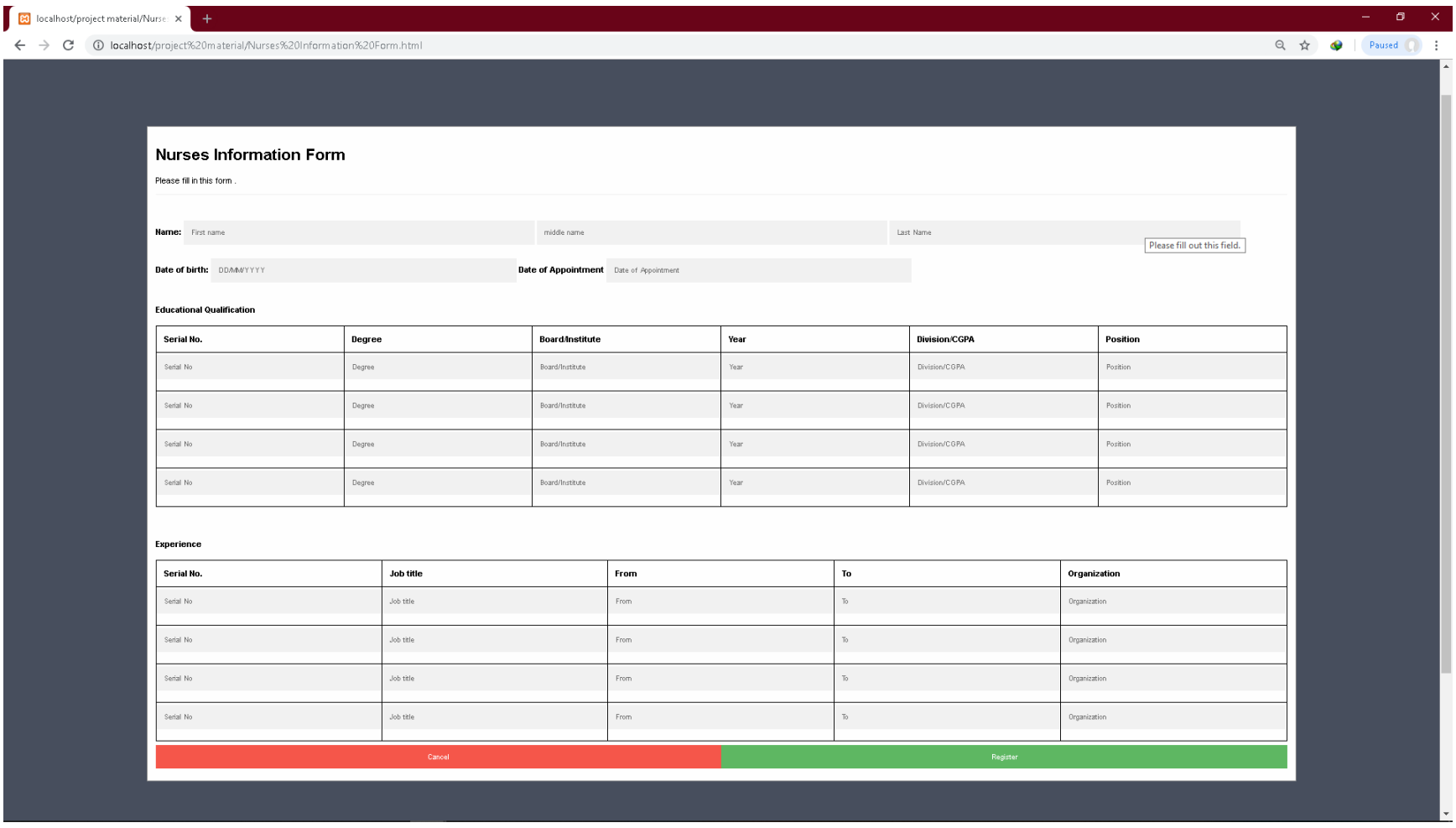
Nurses Information Form
Nurses Information Form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Nurses Information Form
Please fill in this form .
Name:
First name
middle name
Last Name
Please fill out this field.
Date of birth:
DD/MM/YYYY
Date of Appointment
Date of Appointment
Educational Qualification
Serial No.
Degree
Board/Institute
Year
Division/CGPA
Position
Serial No
Degree
Board/Institute
Year
Division/CGPA
Position
Serial No
Degree
Board/Institute
Year
Division/CGPA
Position
Serial No
Degree
Board/Institute
Year
Division/CGPA
Position
Serial No
Degree
Board/Institute
Year
Division/CGPA
Position
Experience
Serial No.
Job title
From
To
Organization
Serial No
Job title
From
To
Organization
Serial No
Job title
From
To
Organization
Serial No
Job title
From
To
Organization
Cancel
Register

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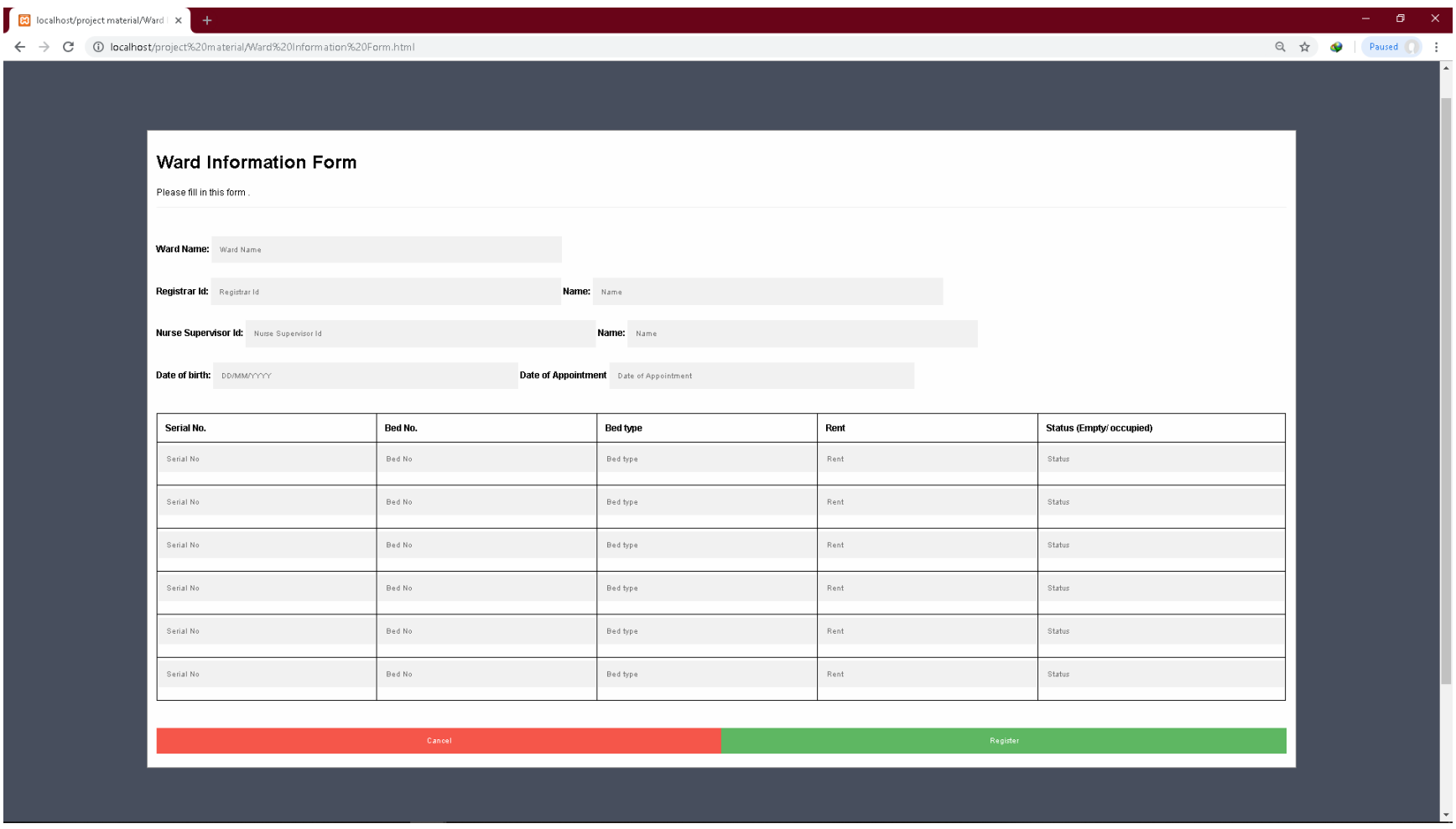
Ward Information Form
Ward Information Form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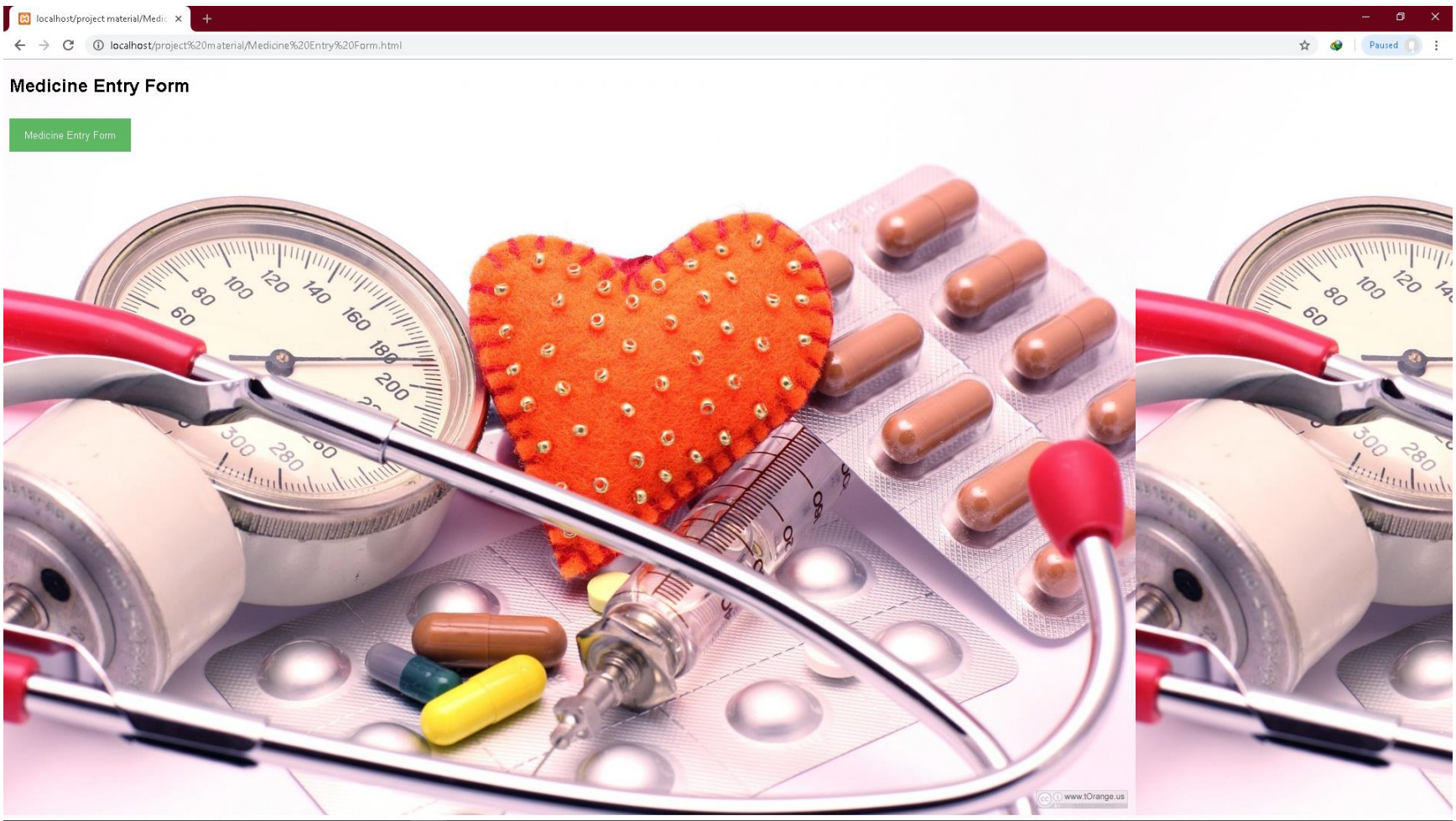
Paused
Ward Information Form
Please fill in this form .
Ward Name:
Ward Name
Registrar Id:
Registrar Id
Name:
Name
Nurse Supervisor Id:
Nurse Supervisor Id
Name:
Name
Date of birth:
DD/MM/YYYY
Date of Appointment
Date of Appointment
Serial No.
Bed No.
Bed type
Rent
Status (Empty/ occupied)
Serial No
Bed No
Bed type
Rent
Status
Cancel
Register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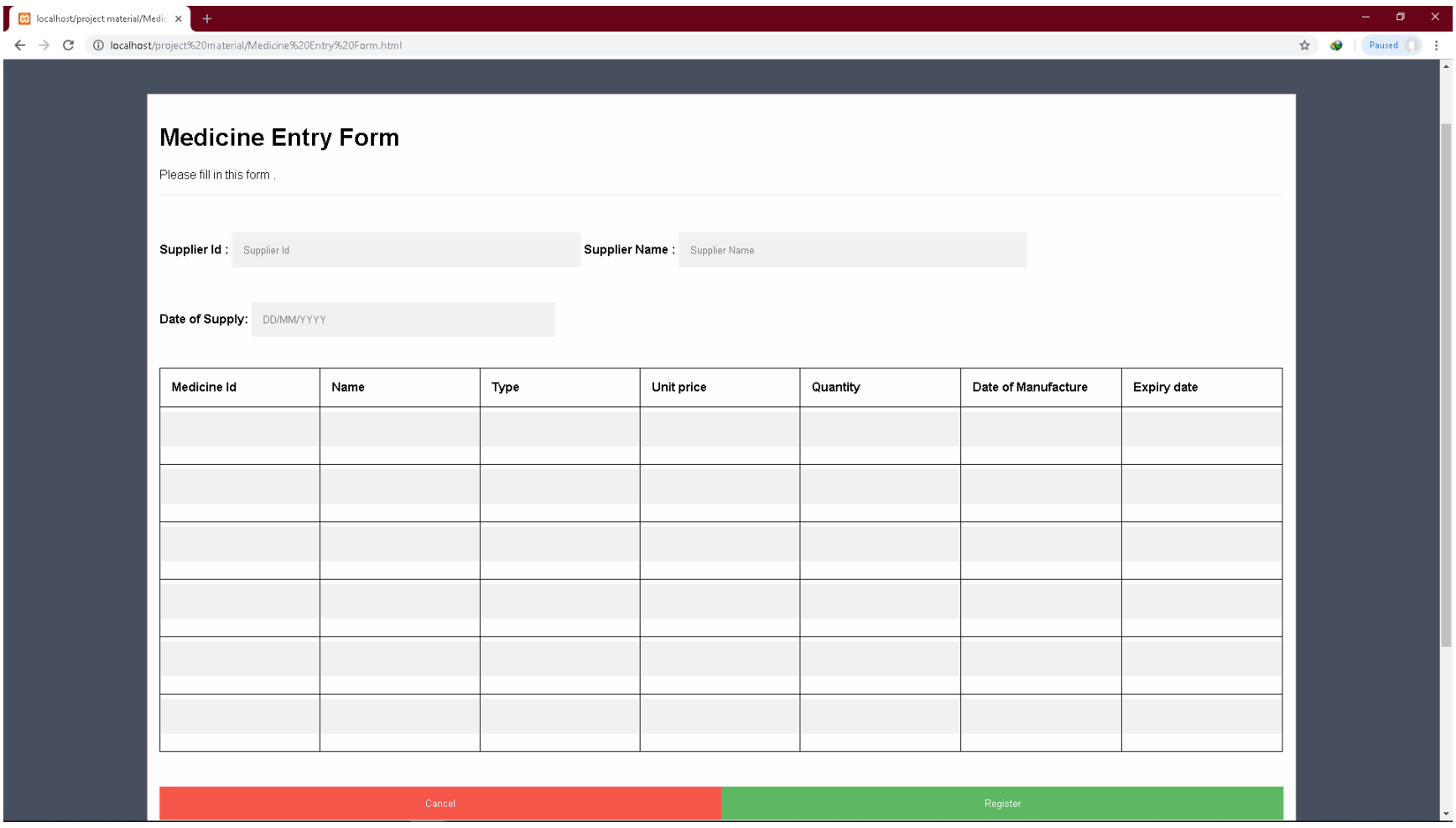
Medicine Entry Form
Medicine Entry Form
www.tOrange.us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localhost/project%20material/Medicine%20Entry%20Form.html
Paused
Medicine Entry Form
Please fill in this form .
Supplier Id :
Supplier Id
Supplier Name :
Supplier Name
Date of Supply:
DD/MM/YYYY
Medicine Id
Name
Type
Unit price
Quantity
Date of Manufacture
Expiry date
Cancel
Register

REFERENCES

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https://www.w3schools.com/css/default.asp
https://www.w3schools.com/php/default.asp
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