

JEE PROJECT ON ONLINE CLINIC MANAGEMENT SYSTEM



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Acknowledgement

We would like to take this opportunity to express our profound gratitude and deep regards to our faculty Sir.Chandan Mukherjee for his exemplary guidance, monitoring and constant encouragement throughout the course of this project. The blessing, help and guidance given by him time to time shall carry us a long way in the journey of life on which we are about to embark.

Each of us project members have worked to our utmost best as to make this project a success in our respective fields. We are grateful to one another for the cooperation during the course of this assignment.

Jeet Saha

Sanmitra Kumar

Sayan Karak

Sufal Haldar

Sushmita Shaw

Project Objective

Develop and implement a Web based Clinic Management System (CMS) for “Recuperation Clinic” to allow patients to have a 24x7 access to make appointments with doctors and view the remedies (medicines and tests) prescribed by the doctor in the form of an online prescription.

The primary goals consist of:

- **Providing a hassle free and user friendly process of making appointments.** In this era, any online based project is worthwhile and the authority and the clients get benefited by this kind of web applications.
- **To allow patients to search through a list of doctors and make appointments with their preferred doctor.** This facility is further improved by a special feature. Any registered patients can search any doctor (provided that the doctor must be approved by the concerned authority) by both any required speciality or, by any doctor's name. This feature allows the patients to go through the entire doctor's database in no time.
- **To allow patients to look into their respective prescriptions for any update or just to view their respective prescriptions.** This might be one of the most modern and classical example of getting the upper hand by modern technology. We often face many types of problem to maintain the constant record of the prescriptions given by the doctors and also sometimes we just lose it. But by this feature we can keep a record of all the prescriptions, medicines and all the suggested pathological test by the doctor. Which could help us tremendously in any emergency situations.
- **Doctors as well as the patients can see their appointments and can delete any appointments according to their needs. .**
- **Any registered doctor (must be authorised by the authority) or patient can update their profile.**
- **The authority can keep a record of the total earnings by the appointments and can authorise/disable/delete any doctor.**
- **To cancel an appointment (by the doctor or patient) in case of any emergency or whatsoever.**

Project Scope

- The broad scope of the Clinic management System includes:
- The system is available on an online platform for 24x7 access to the general public, the doctors and the administration.
- The system supports online appointments, online prescription viewing and available doctors and searching doctors according to a required speciality.
- Updating any subject's (patient/doctor) profile.
- Updating previously suggested prescriptions, deleting appointment/viewing appointments (both by doctors and patients).
- Checking total earnings by the admin.

Requirement Specifications

Problem Definition

- Providing a hassle free and user friendly process of making appointments.
- To allow patients to search through a list of doctors and make appointments with their preferred doctor.
- To allow patients to look into their respective prescriptions for any update or just to view their respective prescriptions.
- Doctors as well as the patients can see their appointments and can delete any appointments according to their needs.
- Any registered doctor (must be authorised by the authority) or patient can update their profile.
- The authority can keep a record of the total earnings by the appointments and can authorise/disable/delete any doctor.
- To cancel an appointment (by the doctor or patient) in case of any emergency or whatsoever.

Functional Requirements

CLINIC

The **RECUPERATION CLINIC** portal has three sections, those are ADMIN, DOCTOR AND PATIENT, from where they can register or login.

ADMIN

The main function of the ADMIN is to control the other two sections.

- Display Doctor Databases:
In this page ADMIN can access all the records of every doctor.
- Total Earning:
In this section ADMIN will hold the record of earnings of each doctor.
- Delete Doctor:
As ADMIN has control to every section, so ADMIN can delete any registered doctor.
- Logout:
After logged in ADMIN must logout from the portal.

DOCTOR

- REGISTRATION:
This page is for the registration of doctors who are new to **RECUPERATION CLINIC**
- LOGIN:
This is the page from where the registered doctors can login.
- View Appointment:
In this page doctor can access all the details of appointments.
- Delete Appointment:
A doctor can delete his appointments if required for any particular date.
- Create Prescription:
Doctor can create prescription of any registered patient and can store different medicine name and pathology details.
- View Prescription:
Doctor can access the details of any patient or view the prescription after giving the EMAIL ID of any registered patient.
- Update Prescription:
If required, any doctor can update the prescription or can introduce the new medicine name there or can introduce the tests if required.
- Logout:
After logged in DOCTOR must logout from the portal.

PATIENT

- REGISTRATION:
This page is for the registration of patient those are new to **RECUPERATION CLINIC**
- LOGIN:
This is the page from where the registered patient can login.
- Search:
After logged in a patient can search for suitable doctors. Searching can be of two type, it can be it terms of name or specialist.
- View Prescription:
Patient can view their prescription whenever they required it by using their EMAIL ID.

- **View Test:**
Patient can view their test those are prescribed by the doctors by using their EMAIL ID.
- **View Appointment:**
Patient can book appointment for any doctor and can view it further.
- **Delete Appointment:**
Patient can delete their booked appointment if necessary.
- **Update Profile:**
- **Logout:**
After logged in PATIENT must logout from the portal.

Hardware/Software Requirements

Hardware Requirement Specifications (Minimum for Client):-

PROCESSOR: 1.8 GHz.
MOTHERBOARD: According to the processor requirement
RAM: 512 MB.
FREE DISK SPACE: 200MB
INTERNET CONNECTION.

Hardware Requirement Specifications (Minimum for Server):-

PROCESSOR: 3.2 GHz.
MOTHERBOARD: According to the processor requirement
RAM: 4GB.
FREE DISK SPACE: 1 GB

Software Requirement Specifications: -

CLIENT SIDE:-

Operating System for Client (Any One): -

Windows 10 / Windows 8.1 or 8 / Linux any version / Mac etc.

Browser (Any One):

Google Chrome, Microsoft Edge, Mozilla Firefox 40.0

SERVER SIDE:

Operating System for Server (Any One): -

Windows 2012 Server or Red hat or Fedora Linux Server etc.

Web SERVER / Application Server: Apache Tomcat 8.0.30 or Wildfly 9

Database: MySQL

Database Connection using JDBC TYPE 4 Driver.

User Interface Created Using HTML 5

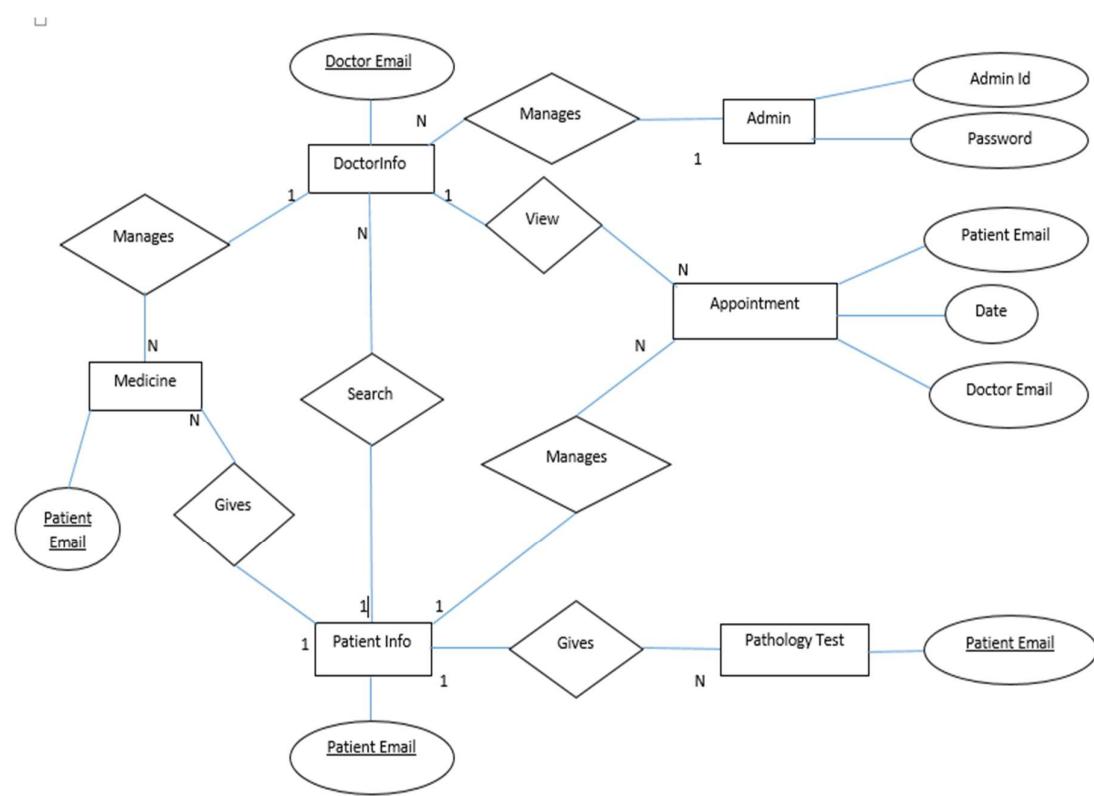
SERVER SIDE WEB COMPONENT: JAVA SERVER PAGES (JSP), SERVLET

ARCHITECTURE – MVC 2.0

(MODEL (Bean) – VIEW (JSP) – CONTROLLER (Servlet))

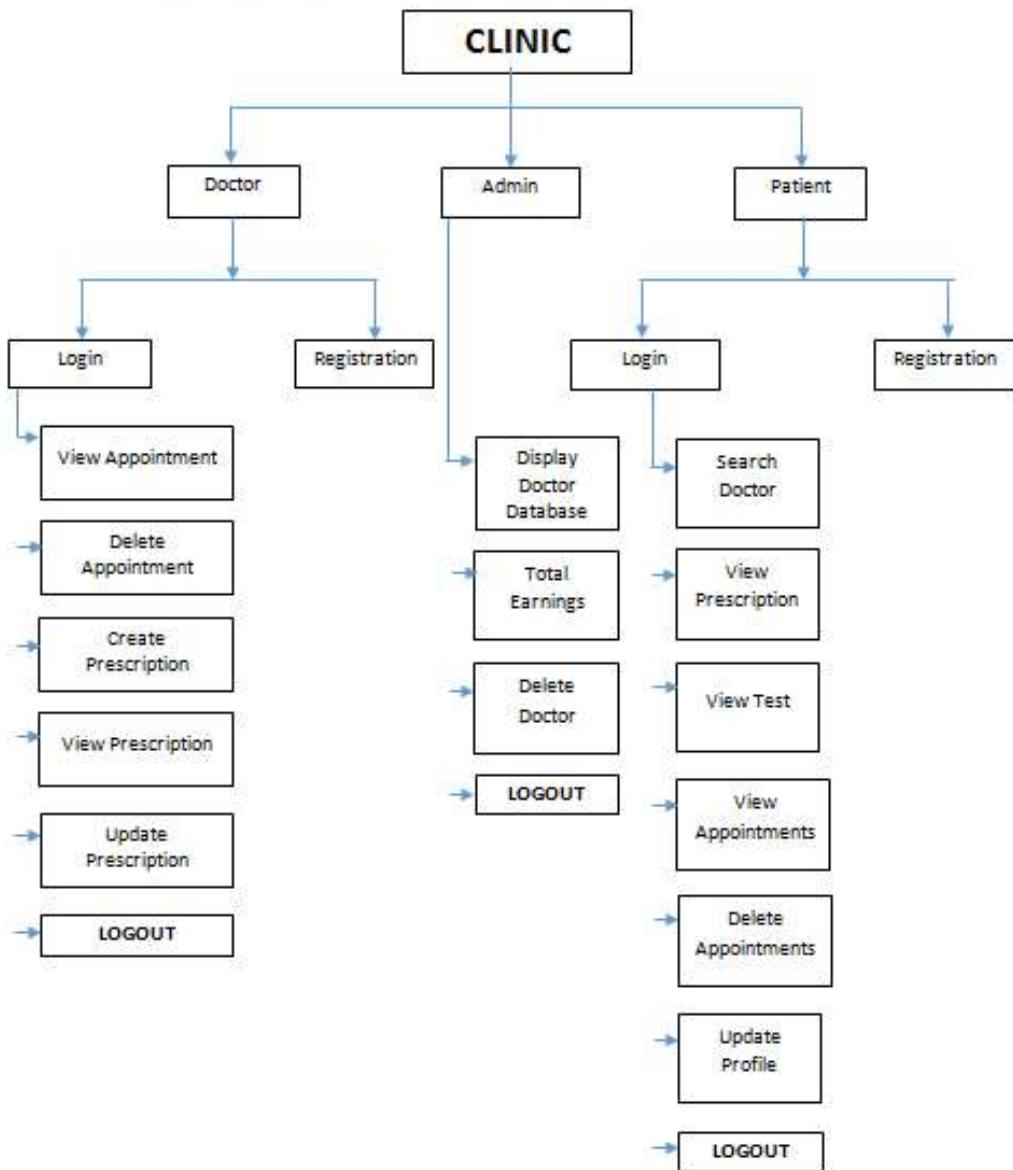
IDE Used: Eclipse Neon

Database Design

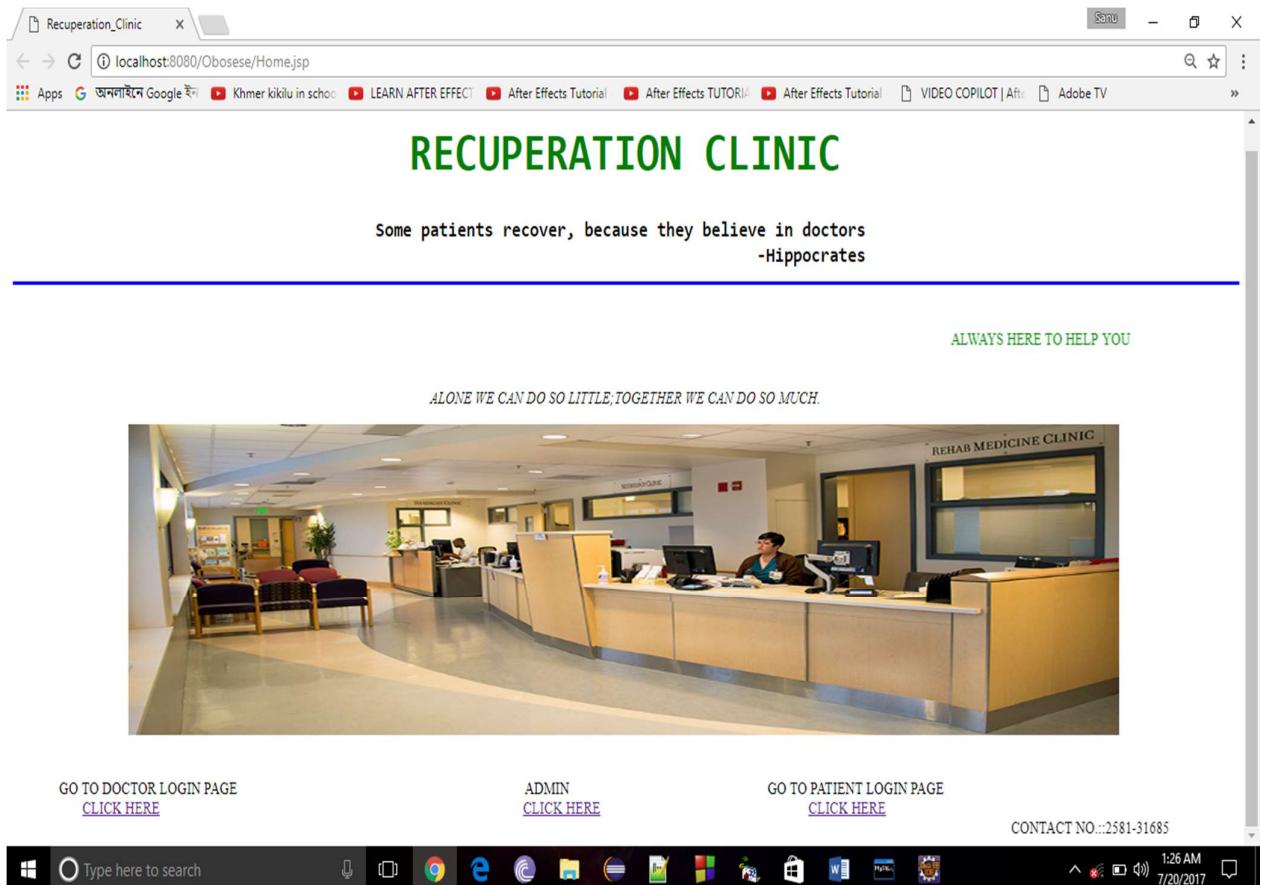


E-R Diagram of the System.

Application Work Flow

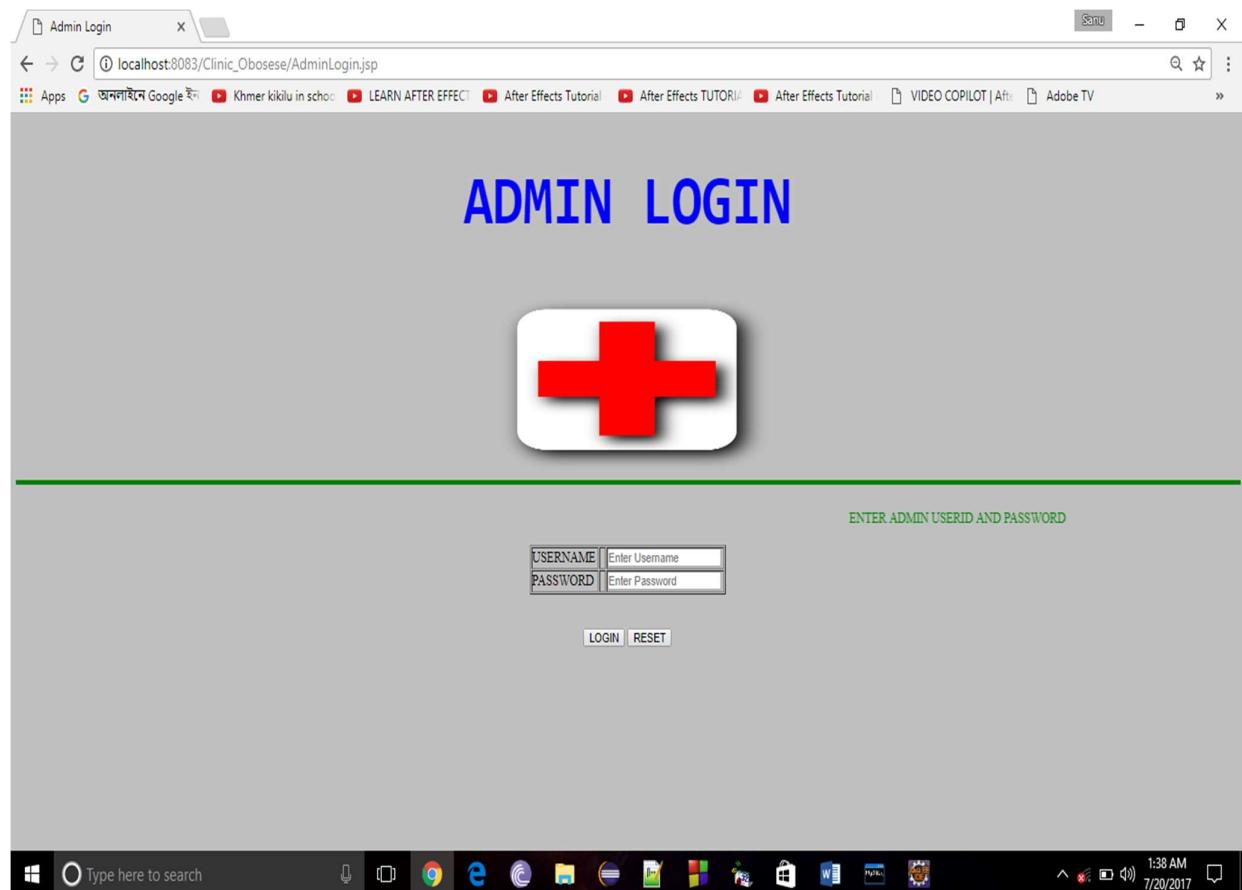


Screenshots



Home Page of the Online Clinic.

What An Admin Can Do ?



Admin Login Page.



After login Admin can opt for this available choices.

Doctor DATABASES

localhost:8083/Clinic_Obosese/DisplayAll.jsp

RECUPERATION CLINIC

DOCTOR DETAILS

NAME	EMAIL	MOBILE NO	QUALIFICATION	SPECIALISATION	EXPERIENCE	REGISTRATION NO	FESS	TIME	NO.OF PATIENTS	ENABLE
savan	a@ab	3543	MBBS	Eye	12	254	355	6	3	false
zs	affgrf@a	51251	MBBS	General Physician	54	5151	null	151	1515	null
A	B@B	12345	MBBS	Eye	12	3	200	2 AM to 6 AM	3	true
jgvjg	b@h	5454	MBBS	Gynaecologist	6	62	65	656	55	true
JEET	JQ.A.C	123	F.R.C.S	General Physician	12	2	525	55	55	true
JEET	JBGB@A.C	123	F.R.C.S	General Physician	12	2	525	55	55	false
jeet	JBGBSSS@A.C	123	F.R.C.S	General Physician	12	2	525	55	55	false
samu	s@nu	1234567890	MBBS	Heart	5	456123	500	2 PM to 4 PM	3	false
ash	xax@f	565	MBBS	General Physician	12	1232	23	232	2626	null

[CLICK HERE](#) TO GO ADMIN HOME

[CLICK HERE](#) TO DELETE DOCTOR RECORD

Enable Doctor
Doctor Email Enter Email

Disable Doctor
Doctor Email Enter Email

Windows Taskbar: Type here to search, File Explorer, Edge, File Manager, Task View, Taskbar icons, 1:38 AM, 7/20/2017

Admin can view the details of all Doctors.

Doctor DATABASES

localhost:8083/Clinic_Oboseze/Enable?Enab=s%40nu

RECUPERATION CLINIC

DOCTOR DETAILS

NAME	EMAIL	MOBILE NO.	QUALIFICATION	SPECIALISATION	EXPERIENCE	REGISTRATION NO.	FESS	TIME	NO.OF PATIENTS	ENABLE
sayan	a@ab	3543	MBBS	Eye	12	254	355	6	3	false
zs	afffrgf@a	51251	MBBS	General Physician	54	5151	null	151	1515	null
A	B@B	12345	MBBS	Eye	12	3	200	2 AM to 6 AM	3	true
jgvjg	h@h	5454	MBBS	Gynaecologist	6	62	65	656	55	true
JEET	JQ.A.C	123	F.R.C.S	General Physician	12	2	525	55	55	true
JEET	JBGB@A.C	123	F.R.C.S	General Physician	12	2	525	55	55	false
JEET	JBGBSSS@A.C	123	F.R.C.S	General Physician	12	2	525	55	55	false
samu	s@uu	1234567890	MBBS	Heart	5	456123	500	2 PM to 4 PM	3	true
ash	xsax@f	565	MBBS	General Physician	12	1232	23	232	2626	null

[CLICK HERE](#) TO GO ADMIN HOME

[CLICK HERE](#) TO DELETE DOCTOR RECORD
Doctor Enabled

Enable Doctor
Doctor Email Enter Email

Disable Doctor
Doctor Email Enter Email

Windows Taskbar: Type here to search, File Explorer, Edge, File Manager, Task View, Start button, 1:39 AM, 7/20/2017

By default every Doctor is disabled. Admin can enable any Doctor.

Doctor DATABASES

localhost:8083/Clinic_Obose/Disable?Disab=J%40A.C

RECUPERATION CLINIC

DOCTOR DETAILS

NAME	EMAIL	MOBILE NO	QUALIFICATION	SPECIALISATION	EXPERIENCE	REGISTRATION NO	FESS	TIME	NO.OF PATIENTS	ENABLE
sayan	a@ab	3543	MBBS	Eye	12	254	355	6	3	false
zs	afffrgrf@a	51251	MBBS	General Physician	54	5151	null	151	1515	null
A	B@B	12345	MBBS	Eye	12	3	200	2 AM to 6 AM	3	true
jgvg	h@h	5454	MBBS	Gynaecologist	6	62	65	656	55	true
JEET	J@A.C	123	F.R.C.S	General Physician	12	2	525	55	55	false
JEET	JBGB@A.C	123	F.R.C.S	General Physician	12	2	525	55	55	false
JEET	JBGBSS@A.C	123	F.R.C.S	General Physician	12	2	525	55	55	false
samu	s@nu	1234567890	MBBS	Heart	5	456123	500	2 PM to 4 PM	3	true
ash	xsax@f	565	MBBS	General Physician	12	1232	23	232	2626	null

[CLICK HERE](#) TO GO ADMIN HOME

[CLICK HERE](#) TO DELETE DOCTOR RECORD
Doctor Disabled

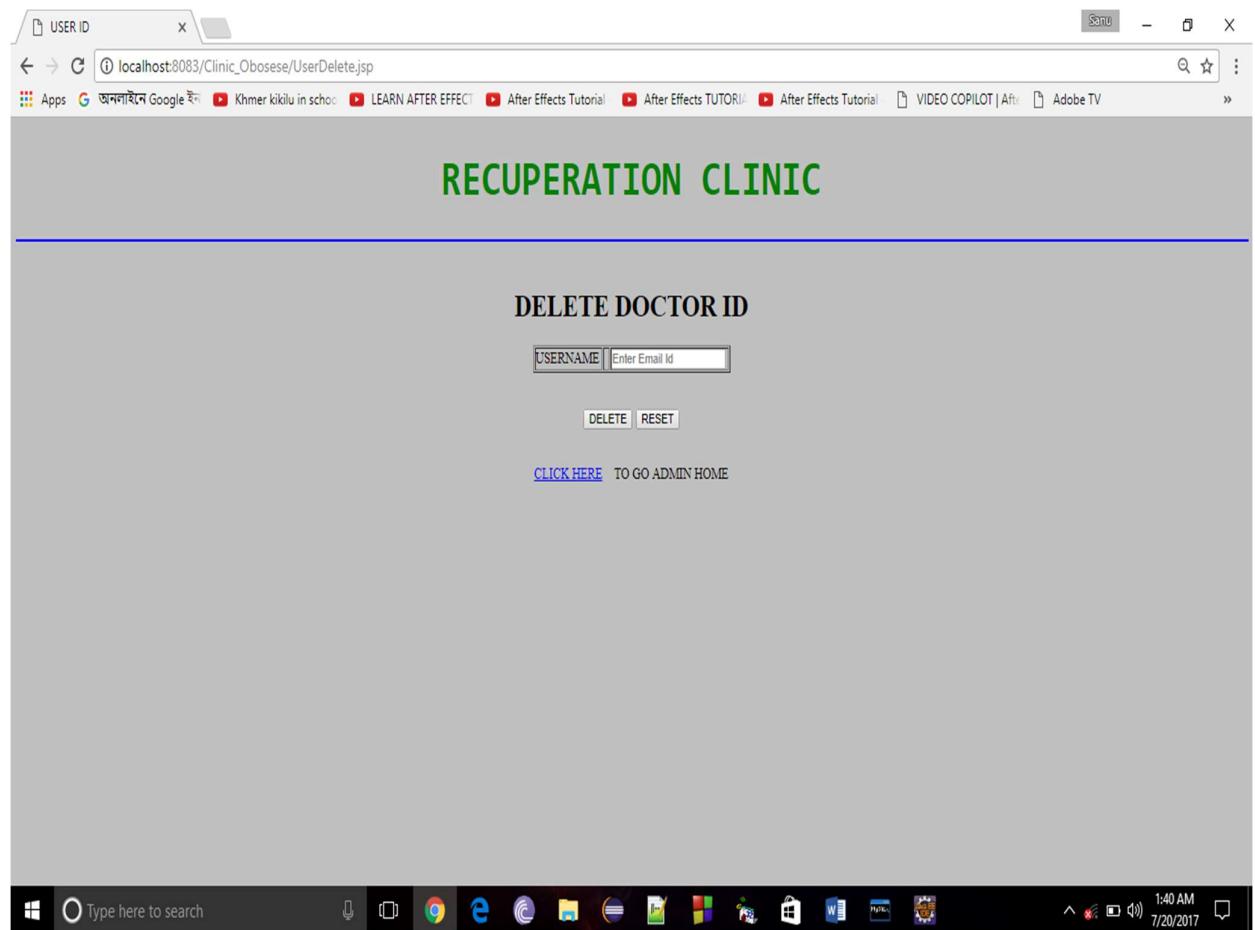
Enable Doctor
Doctor Email Enter Email

Disable Doctor
Doctor Email Enter Email

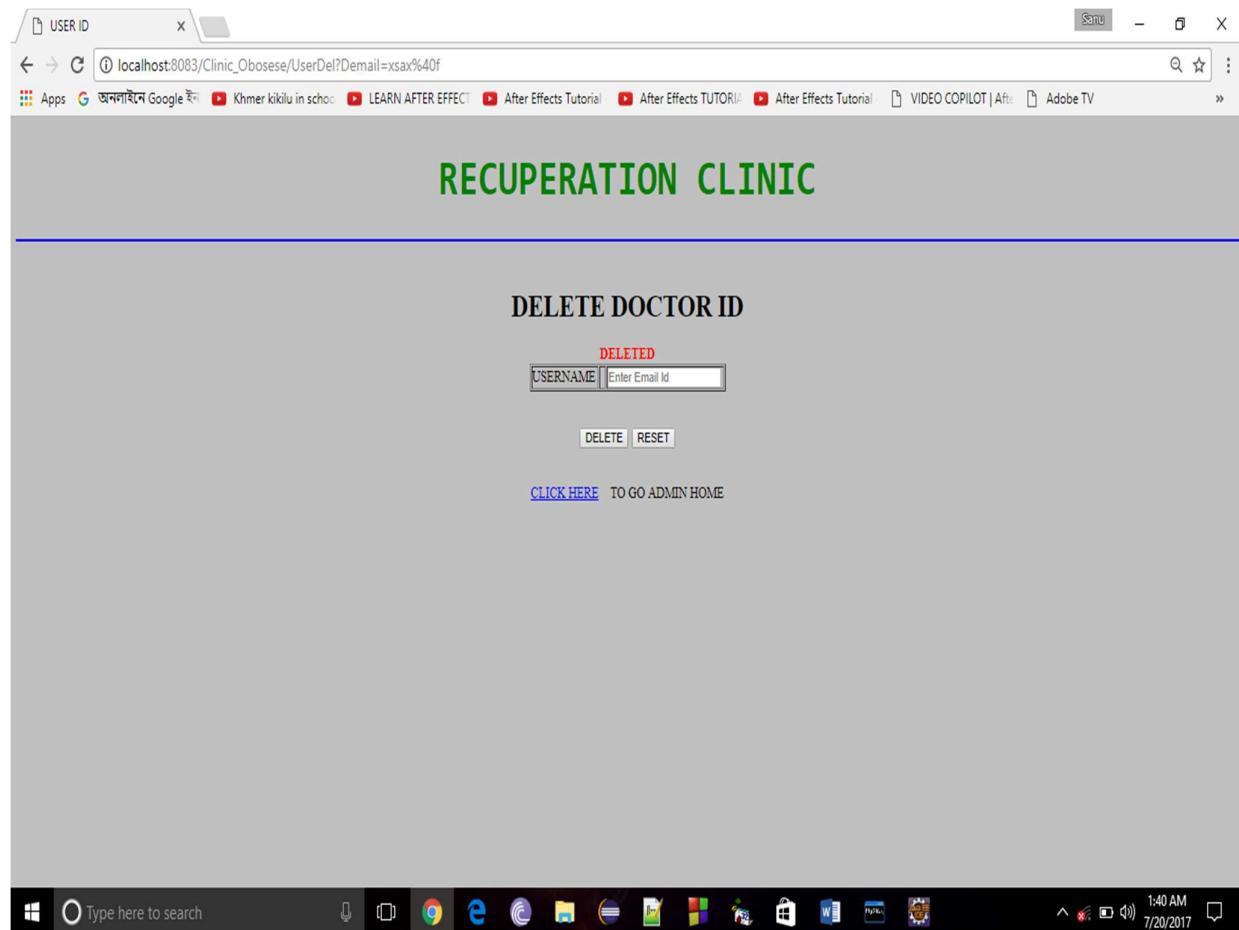
Type here to search

1:39 AM 7/20/2017

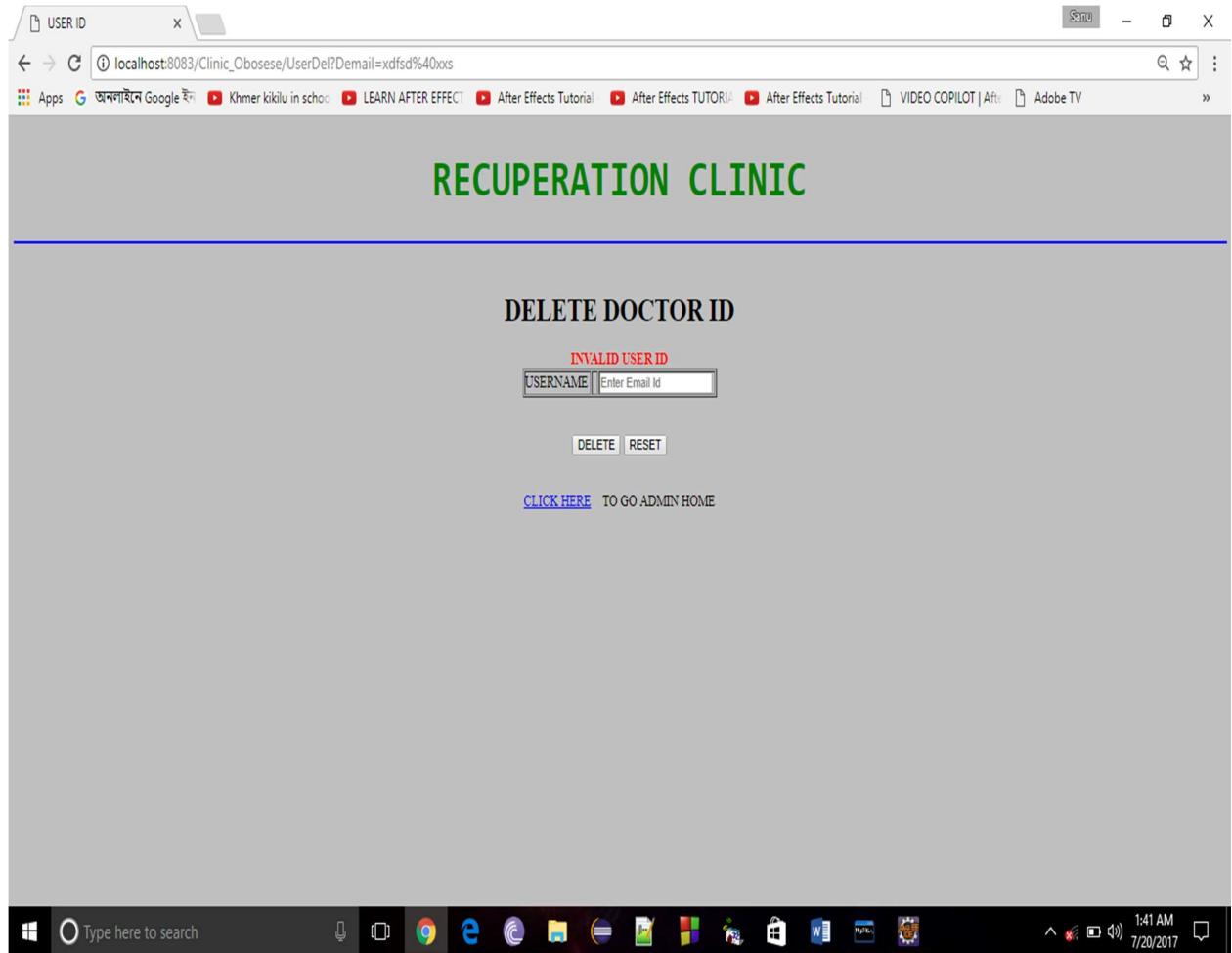
If required Admin can also disable any Doctor.



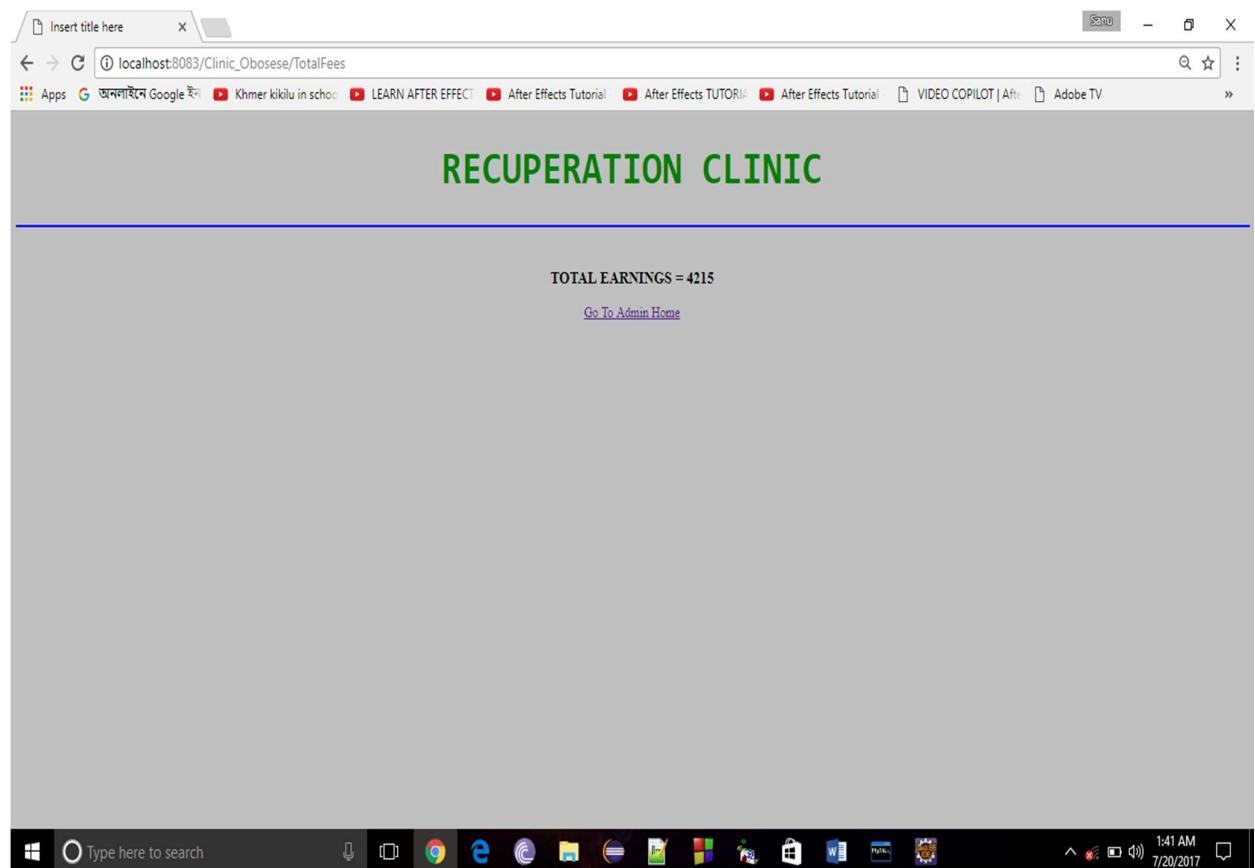
Admin has the authority to delete information of any Doctor from the database.



After successfully deletion of record of a Doctor.

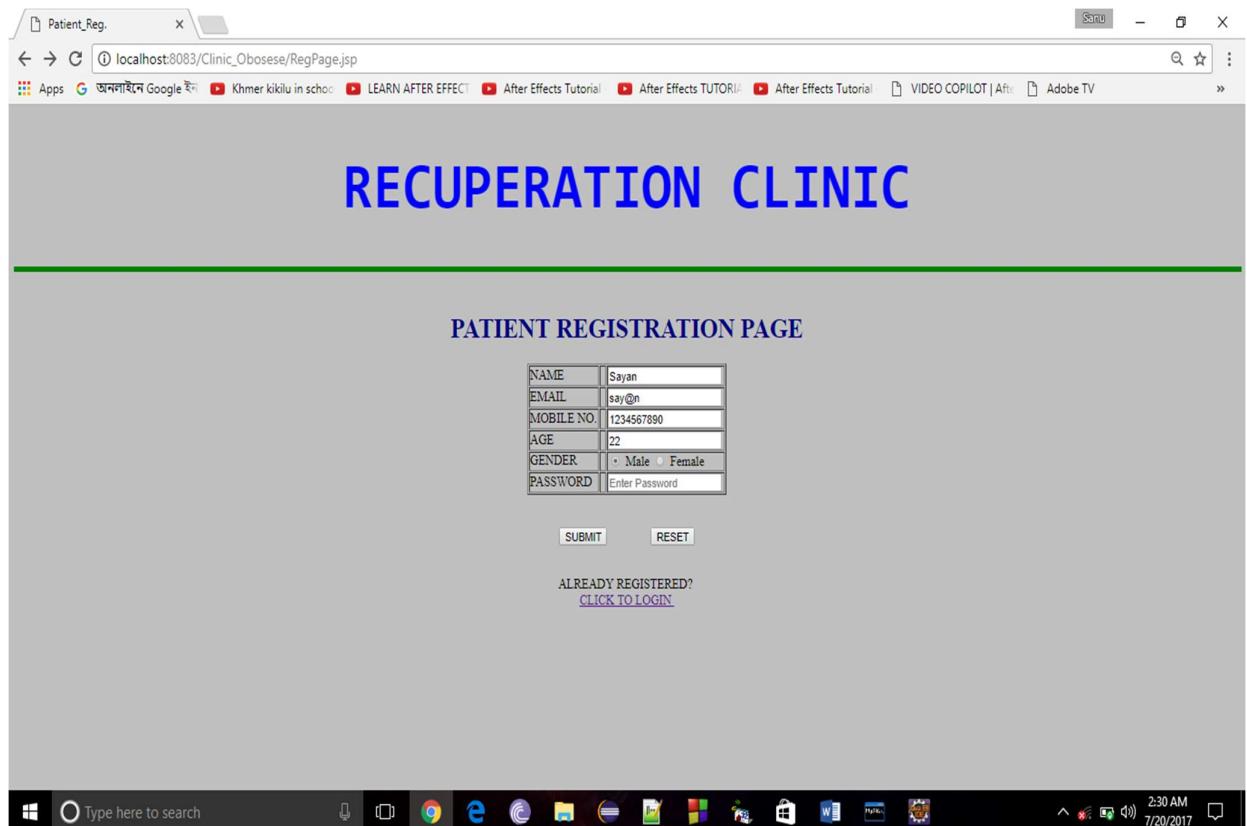


For wrong username it shows an error message.

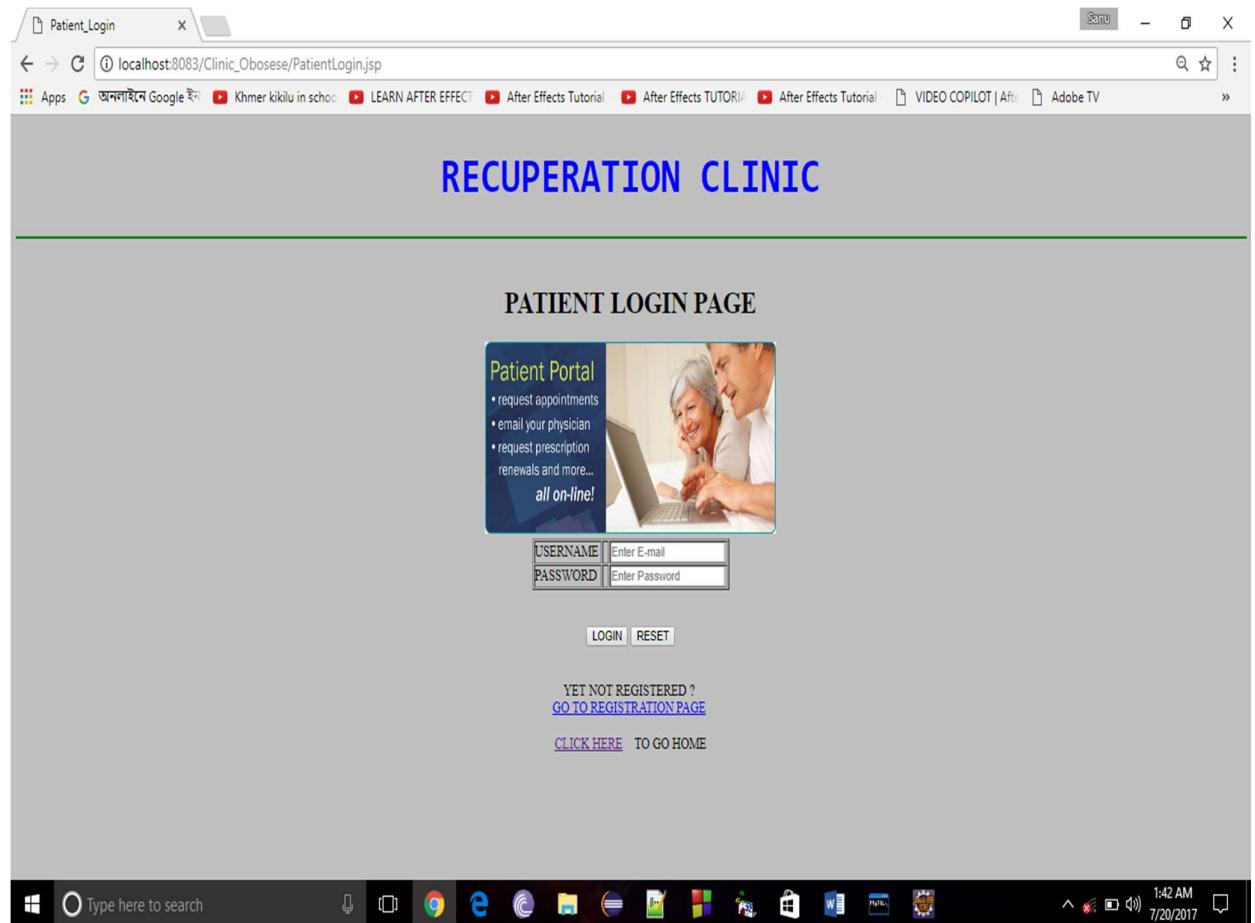


Admin can calculate the total earnings from all the Doctors.

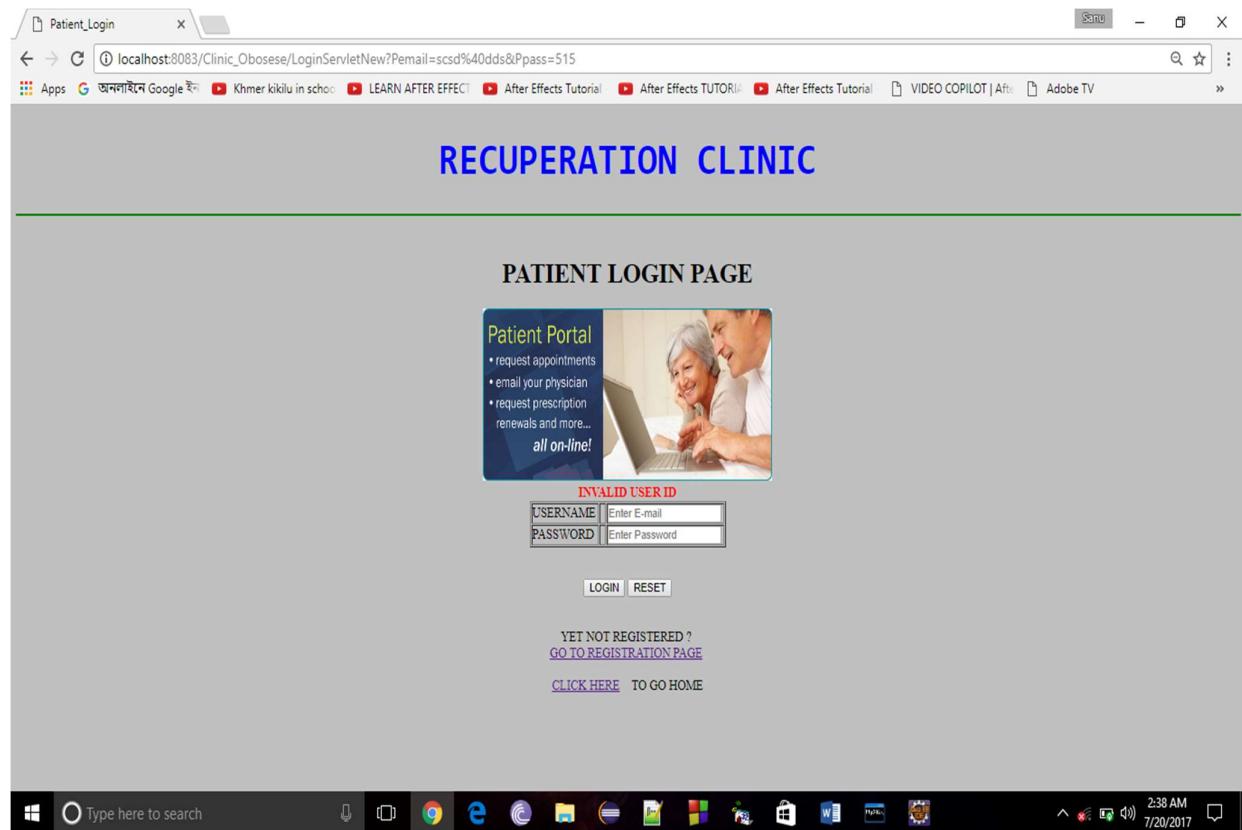
What A Patient Can Do ?



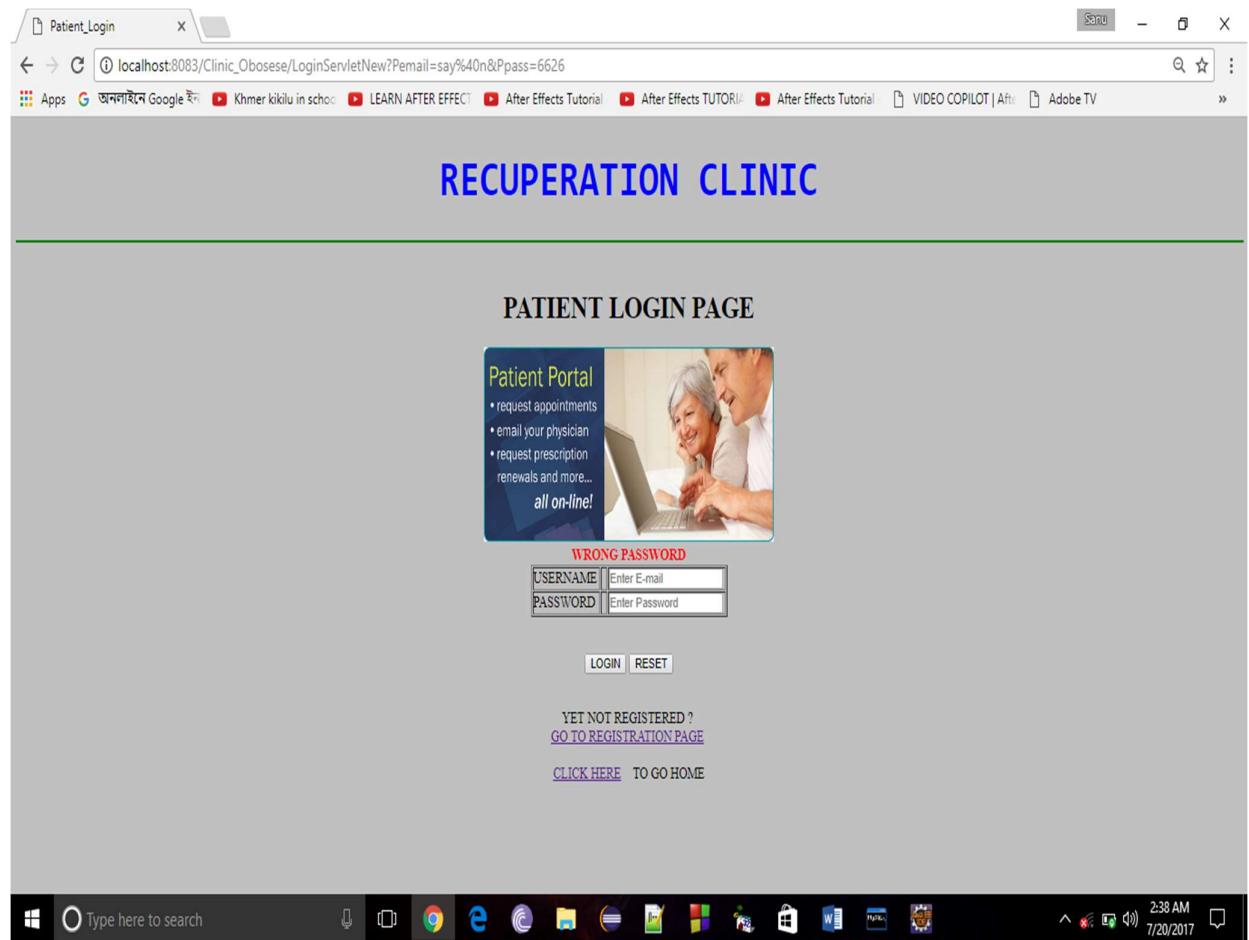
Patient registration page.



Patient login page.



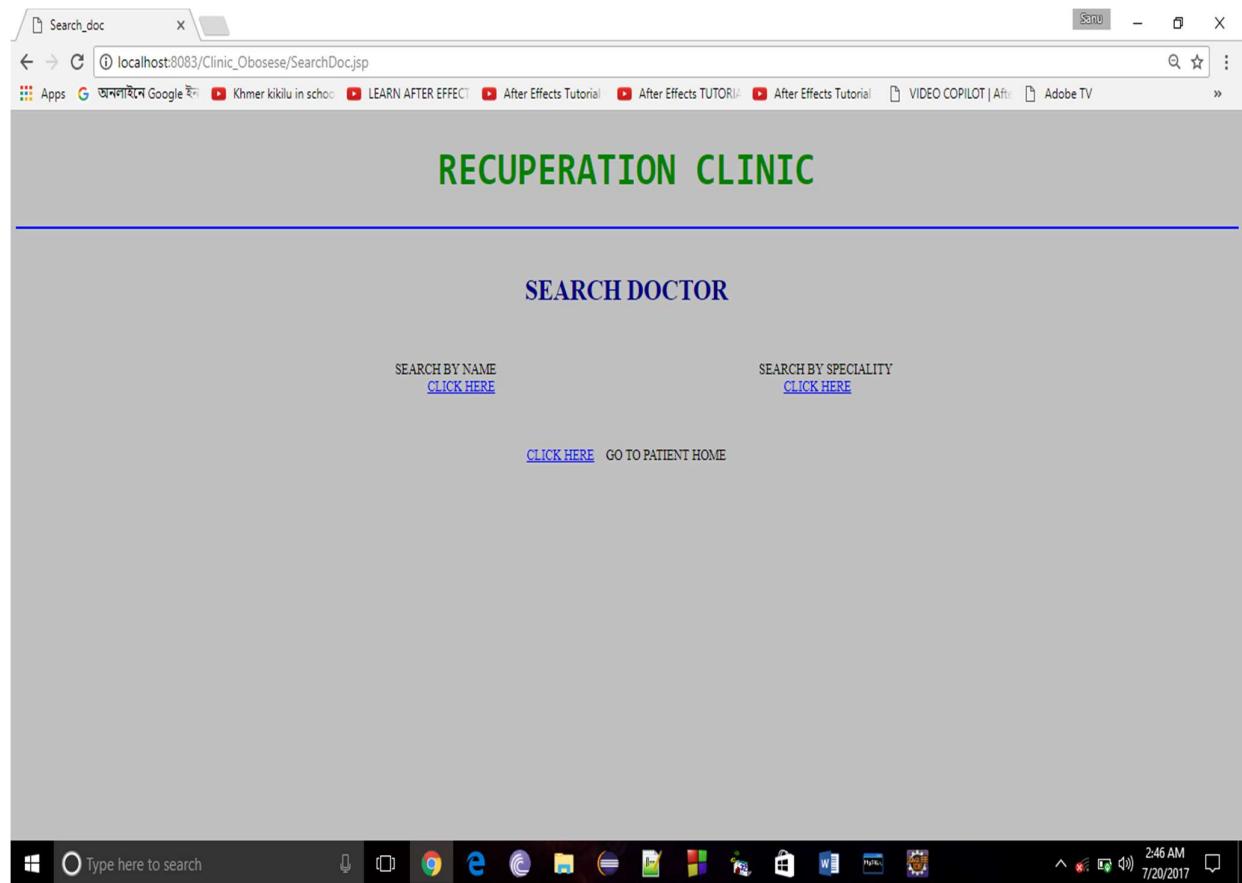
For incorrect username it shows an error message.



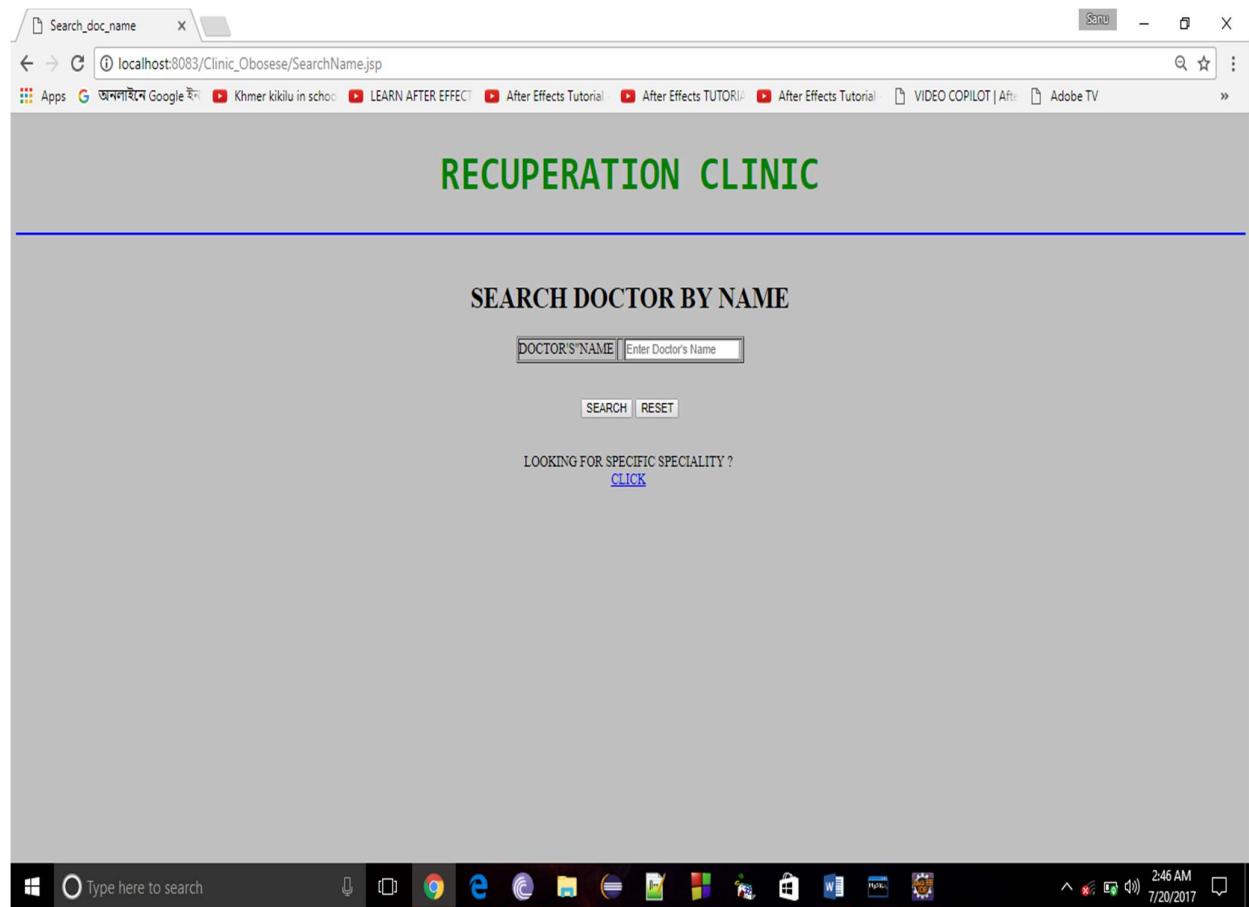
For incorrect password it shows an error message.



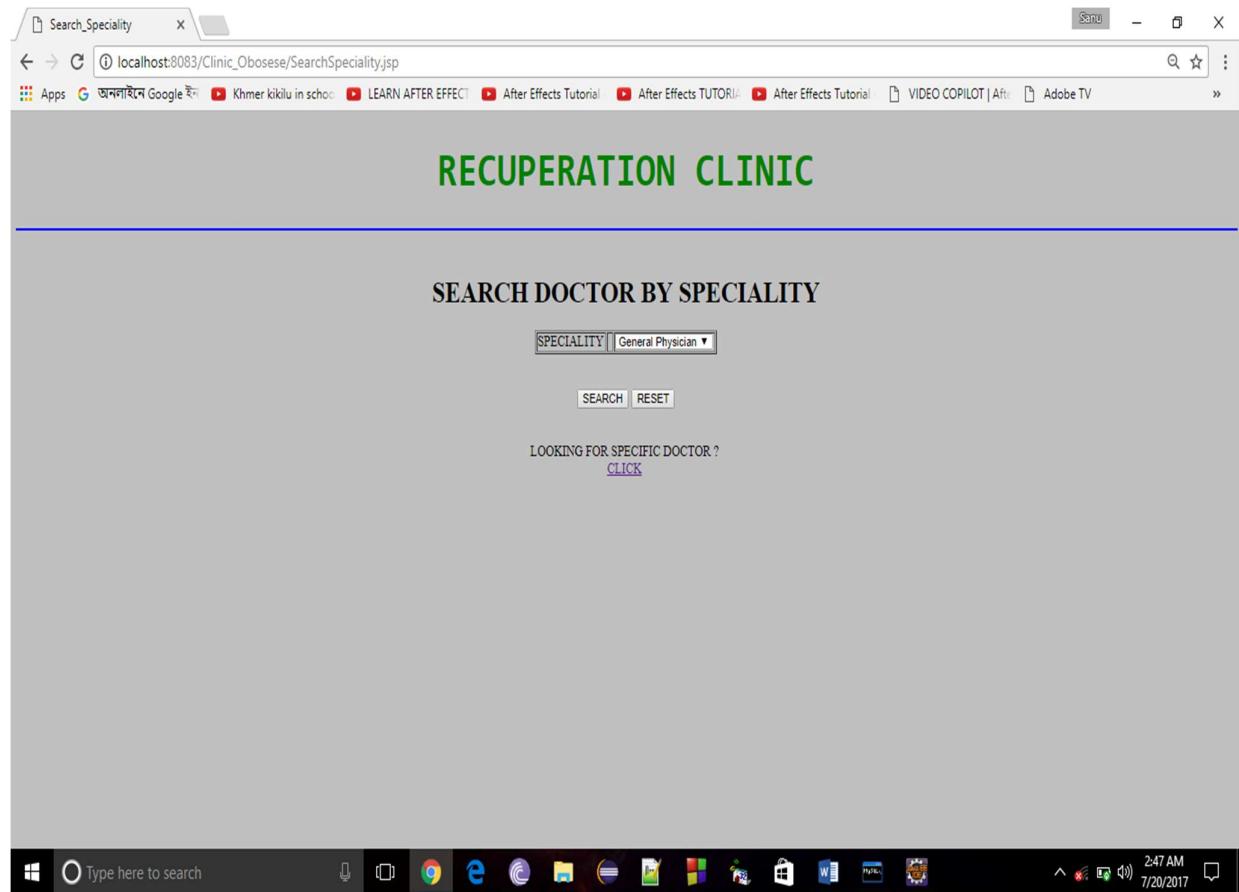
After login Patient can opt for this available choices.



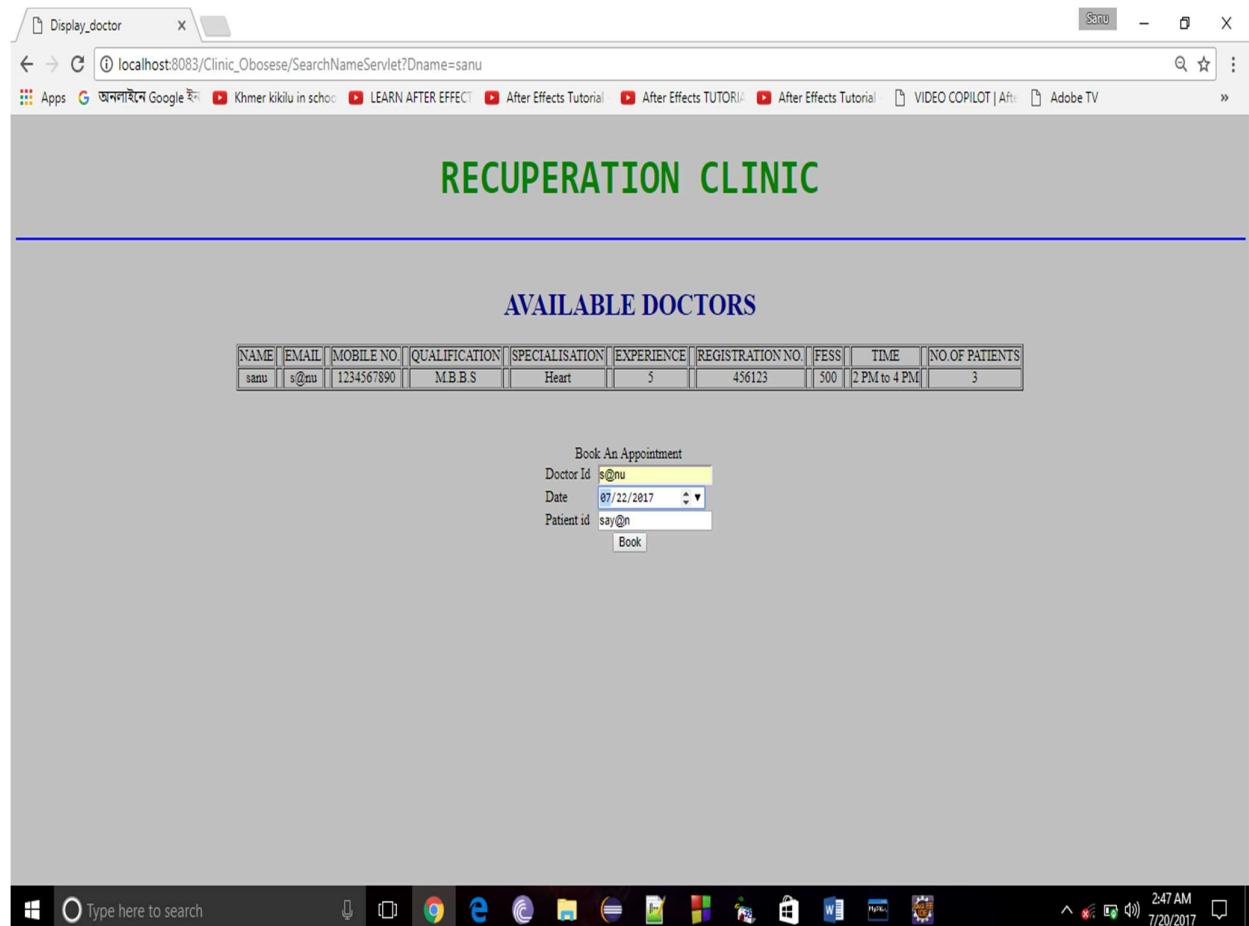
Patient can search Doctors either by name or by speciality.



Search by Doctor's name.



Search by Doctor's speciality.



A list of available Doctors is displayed and accordingly the Patient can book an appointment on his/her desired date.



If an appointment is available for a particular Doctor then it books an appointment against that Doctor and displays a success message.



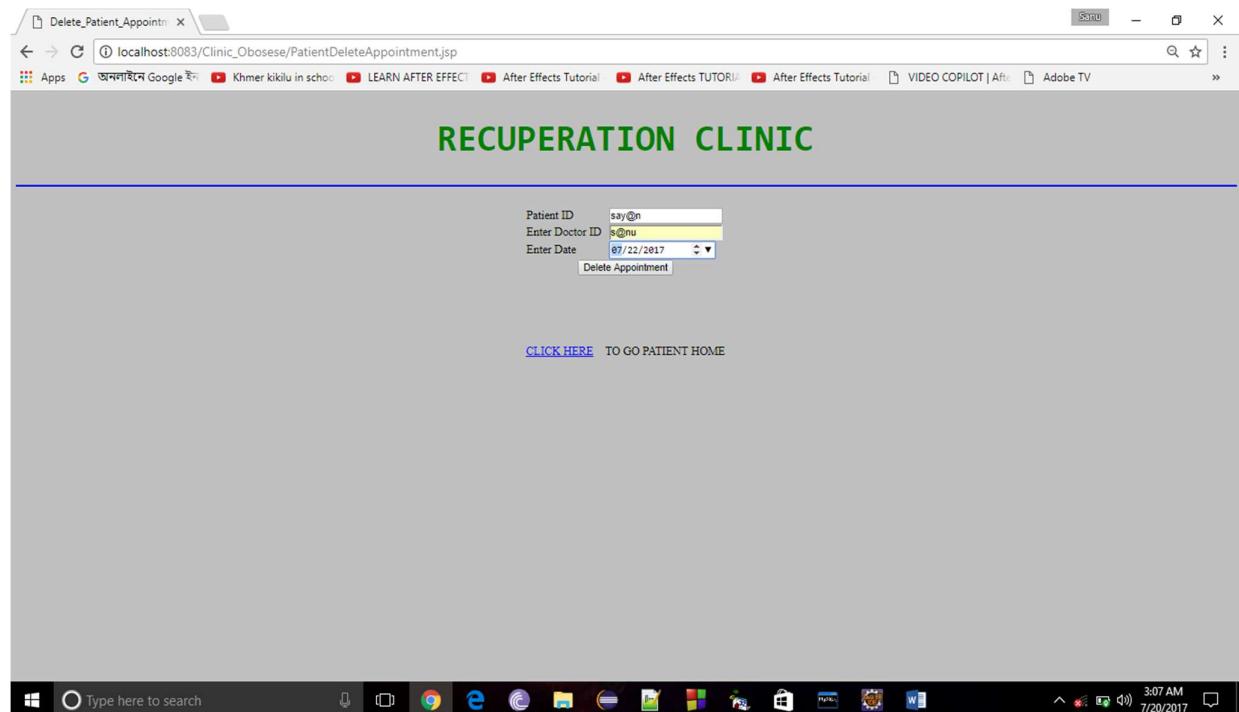
If no appointment is available for a particular Doctor then it displays an error message.

The screenshot shows a web browser window titled "Patient_View_Appointment". The address bar displays the URL "localhost:8083/Clinic_Obosese/PatientViewAppointment?patient=say@n". The main content area features a green header "RECUPERATION CLINIC" with a blue horizontal line below it. A table lists three patient appointments:

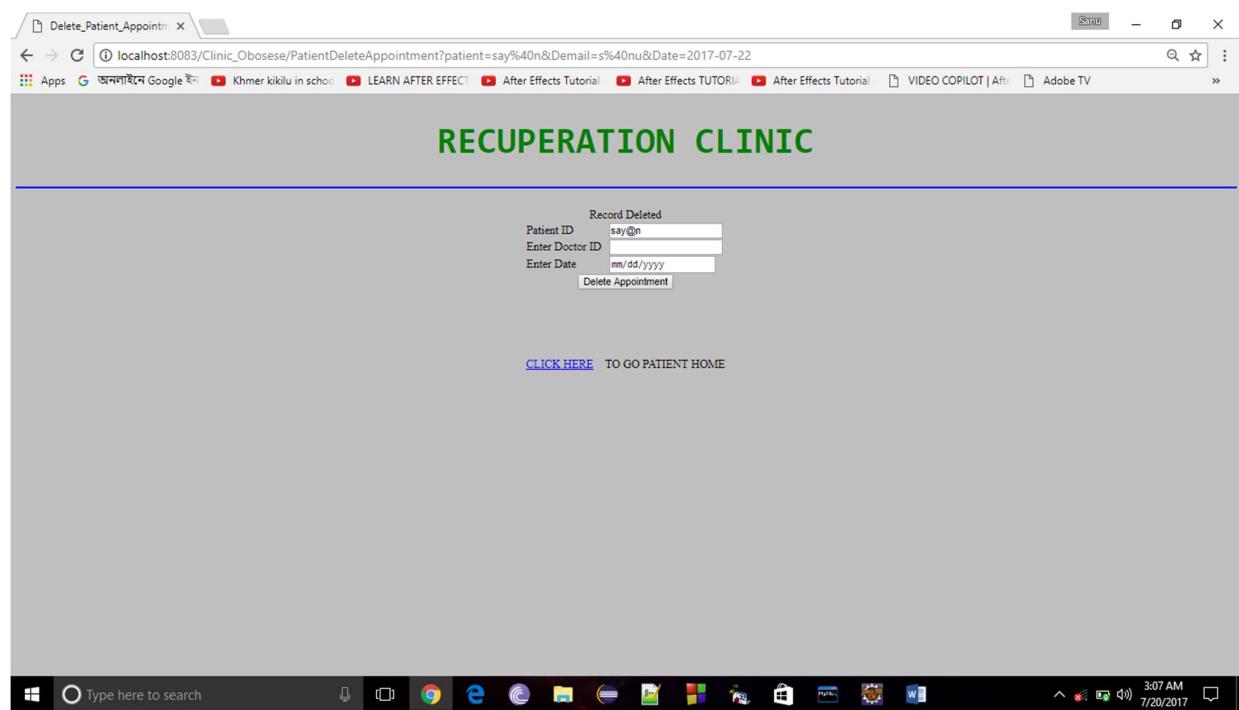
Patient ID	Appointment Date	Doctor's ID
say@n	2017-07-22	s@nu
say@n	2017-07-22	s@nu
say@n	2017-07-22	s@nu

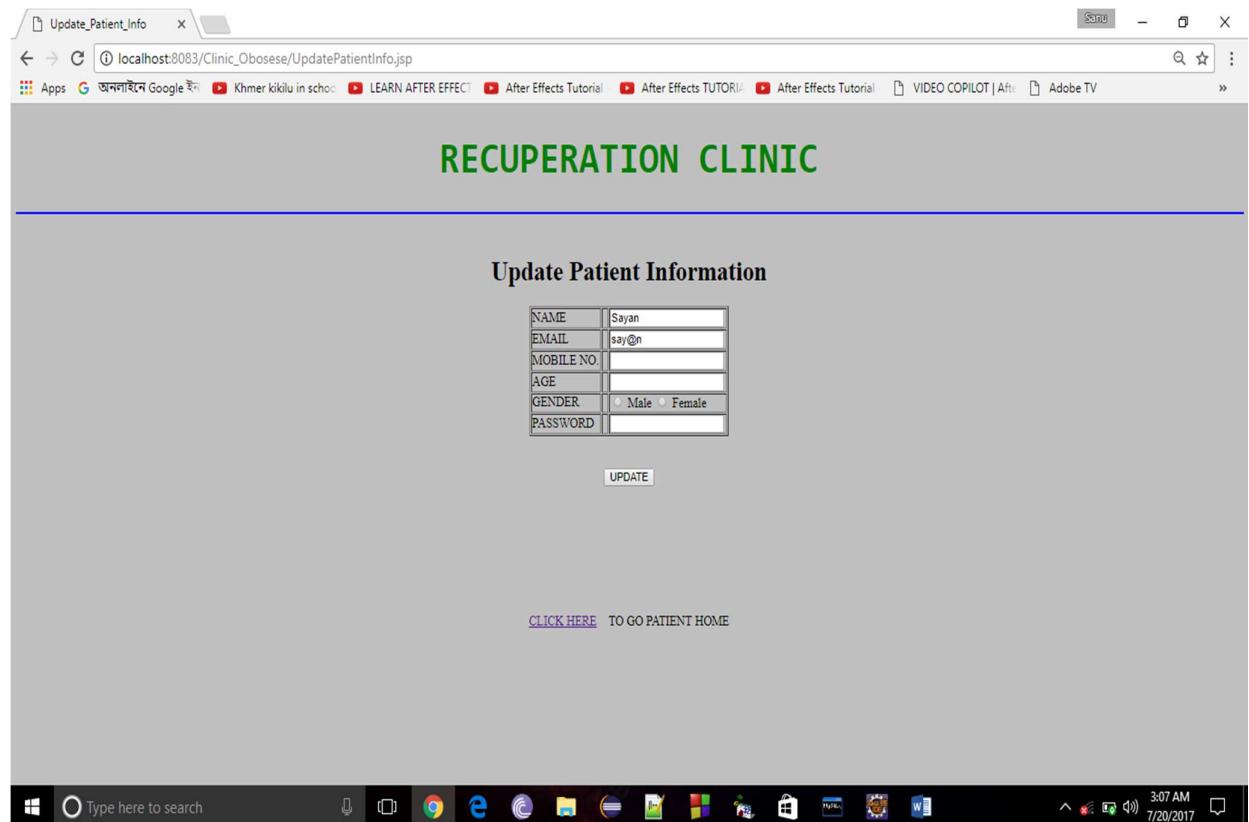
Below the table is a link "[CLICK HERE TO GO PATIENT HOME](#)". The bottom of the screen shows a Windows taskbar with various icons and a system tray indicating the date and time as "3:06 AM 7/20/2017".

Patient can view all the appointments his/she has booked.



Patient can cancel an appointment. On successful cancelation, it displays a success message.





Patient can update his/her profile.

The screenshot shows a web browser window titled "Patient_View_Prescription" with the URL "localhost:8083/Clinic_Obosese/PatientViewPrep?patient=say@n". The page displays "RECUPERATION CLINIC" and "MEDICINE DETAILS" sections. A table shows medicine details: Medicine 1 (mno, dose 2, duration 4), Medicine 2 (xyz, dose 3, duration 3), and Doctor Id (s@mn). Below the table is a link "CLICK HERE TO GO PATIENT HOME". The taskbar at the bottom shows various application icons and the date/time "7/20/2017 3:37 AM".

MEDICINE 1	DOSE	DURATION	MEDICINE 2	DOSE	DURATION	Doctor Id
mno	2	4	xyz	3	3	s@mn

[CLICK HERE TO GO PATIENT HOME](#)

Patient can view his/her medicine details.



Patient can view his/her pathology details.

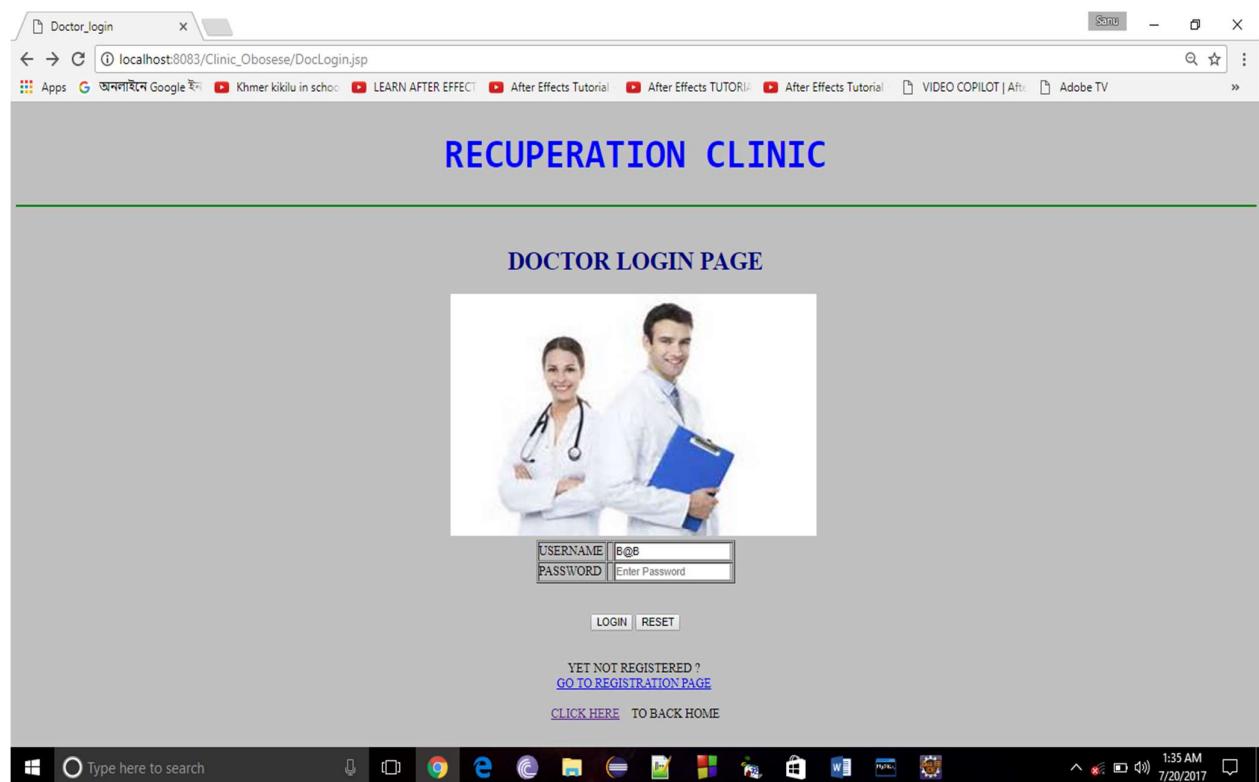
What A Doctor Can Do ?

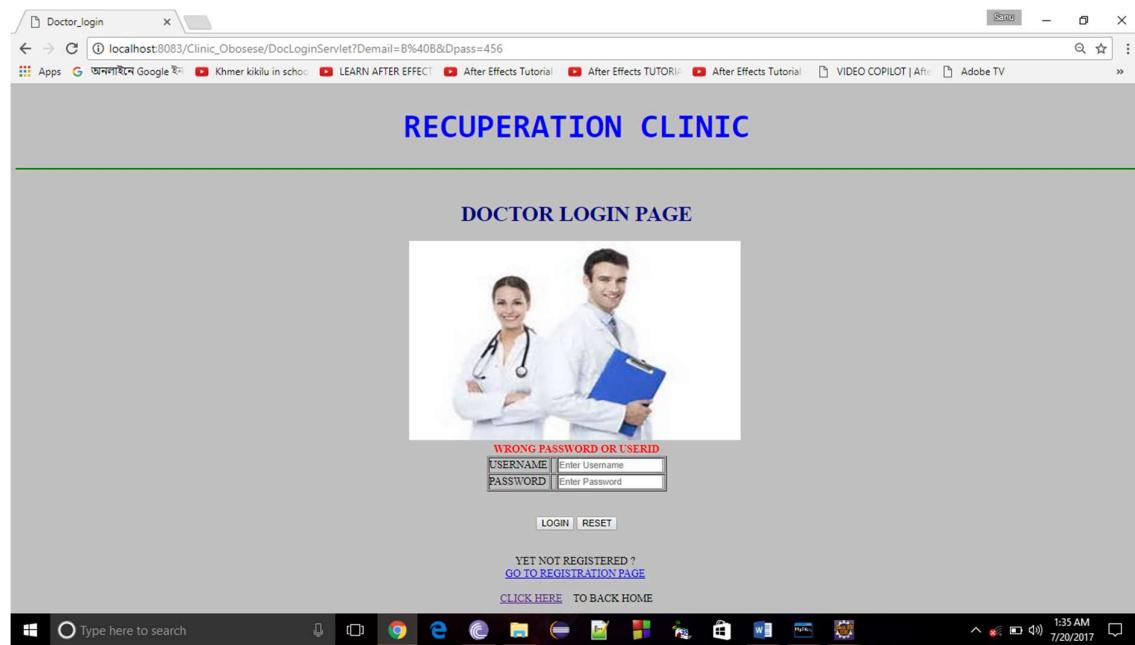
The screenshot shows a web browser window titled "Doctor_Reg" with the URL "localhost:8080/Oboosee/DoctorRegistration.jsp". The page has a header "RECUPERATION CLINIC" and a sub-header "DOCTOR REGISTRATION PAGE". Below this is a form with the following fields:

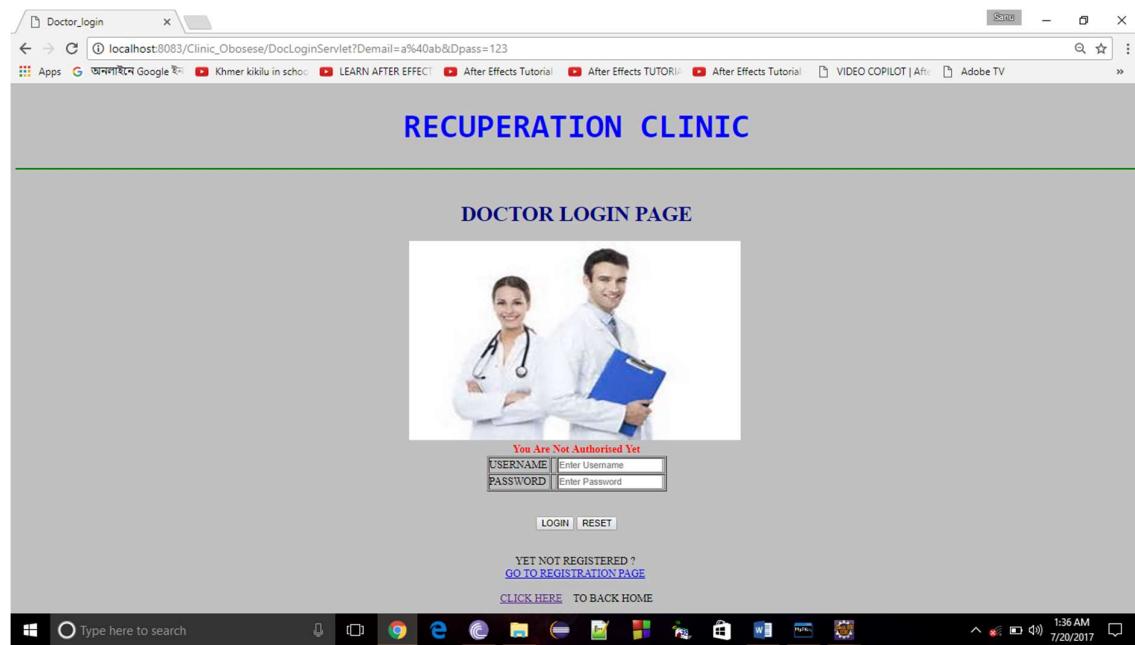
Name	Enter Your Name
Email	Enter Email Id
Mobile No.	Enter Mobile Number
Qualification	M.B.B.S ▾
Specialisation	General Physician ▾
Experience	Enter Number of Years
Choose PassWord	Choose Password
Registration	Enter Registration numl
Fees	Enter Amount
Time	Enter Time
Enter Max Number of Patient	Enter Number

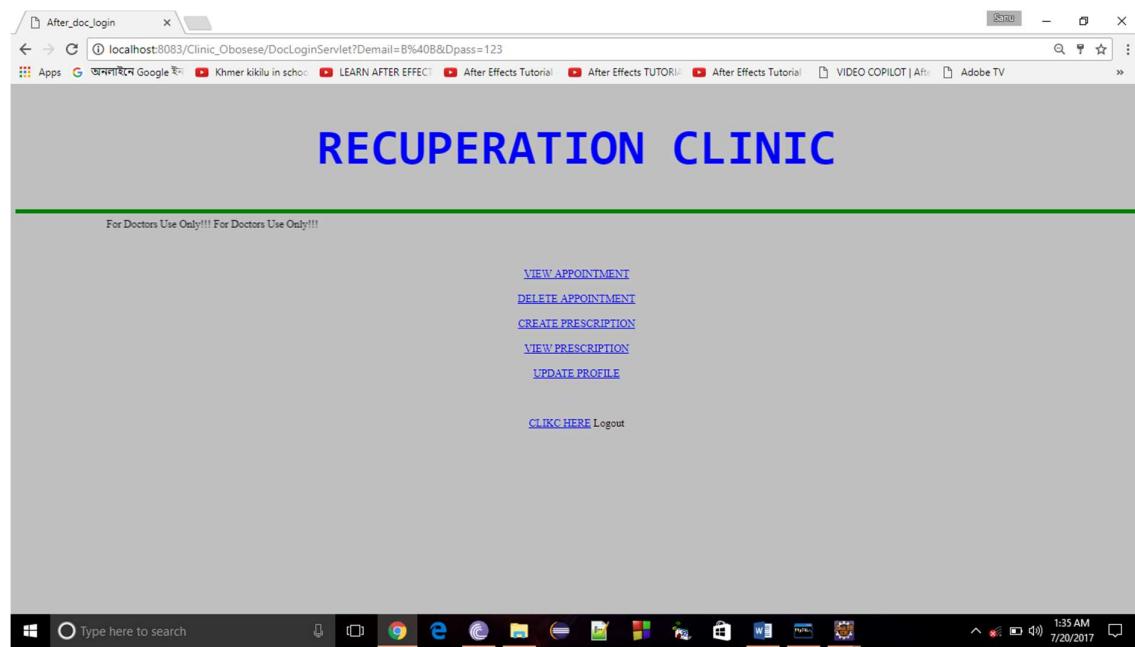
At the bottom of the form is a "SUBMIT" button.

The browser's address bar shows "localhost:8080/Oboosee/DoctorRegistration.jsp". The taskbar at the bottom includes icons for File Explorer, Edge, File Manager, Task View, and others, along with system status indicators like battery level and date/time (1:26 AM, 7/20/2017).









Create_Prescription

localhost:8083/Clinic_Obosese/CreatePrescription.jsp

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RECUPERATION CLINIC

Doc. Id: s@nu Patient Id: say@n

MEDICINE DETAILS

Medicine Name	Dosage	Duration
abc	2	4
xyz	3	3

PATHOLOGY DETAILS

Test 1	def
Test 2	ghi

SUBMIT

[CLICK HERE TO GO DOCTOR HOME](#)

type here to search 3:34 AM 7/20/2017





Requested_Prescription

localhost:8083/Clinic_Oboseose/DocViewPrespServlet?Pid=say%40n

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RECUPERATION CLINIC

PRESCRIPTION DETAILS

MEDICINE DETAILS

(UPDATE THE MEDICINES IF REQUIRED)

Medicine Name	Dosage	Duration
abc	2	4
xyz	3	3

PATHOLOGY DETAILS

Test 1	Test 2	Patient Id	Doctor Id
def	ghi	say@n	s@zu

[CLICK HERE](#) TO GO DOCTOR HOME

3:35 AM 7/20/2017

Santu - X

localhost:8083/Clinic_Obosese/UpdatePrescription?Pid=say%40n&Mname1=mno&Mdose1=2&Mdur1=4&Mname2=xyz&Mdose2=3&Mdur2=3

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RECUPERATION CLINIC

PRESCRIPTION DETAILS

UPDATED PRESCRIPTION

MEDICINE DETAILS

Medicine Name 1	Dosage 1	Duration 1	Medicine Name 2	Dosage 2	Duration 2	Patient Id	Doctor Id
mno	2	4	xyz	3	3	say@n	null

[CLICK HERE TO GO DOCTOR HOME](#)



Santu - X

localhost:8083/Clinic_Obosese/DoctorViewAppointment?doctor=s@nu

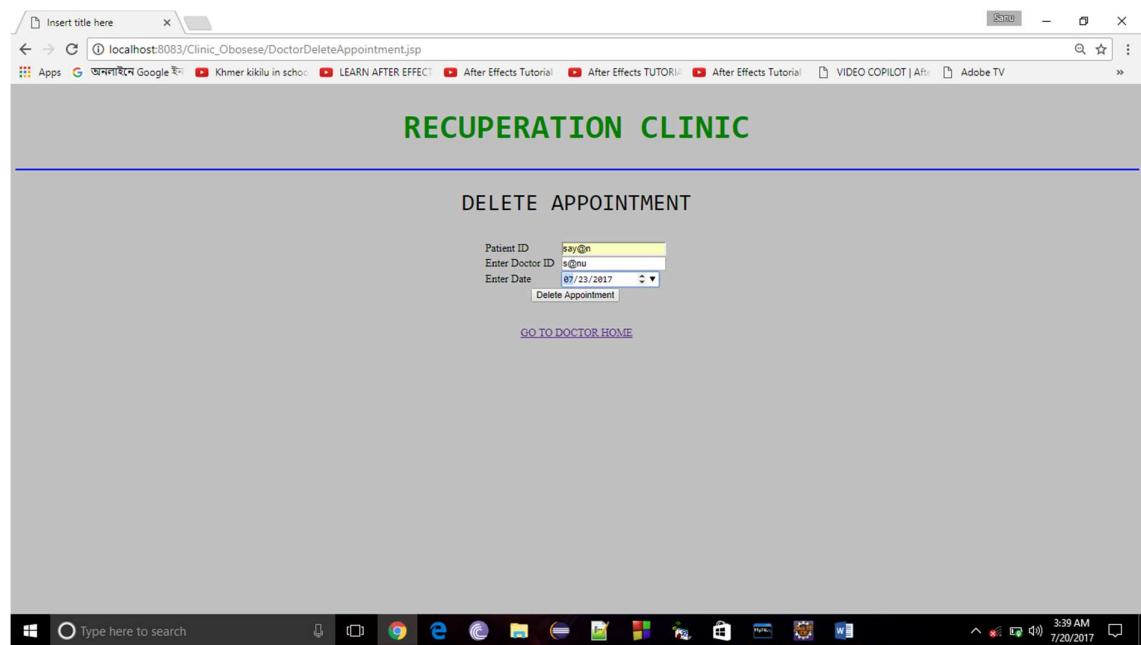
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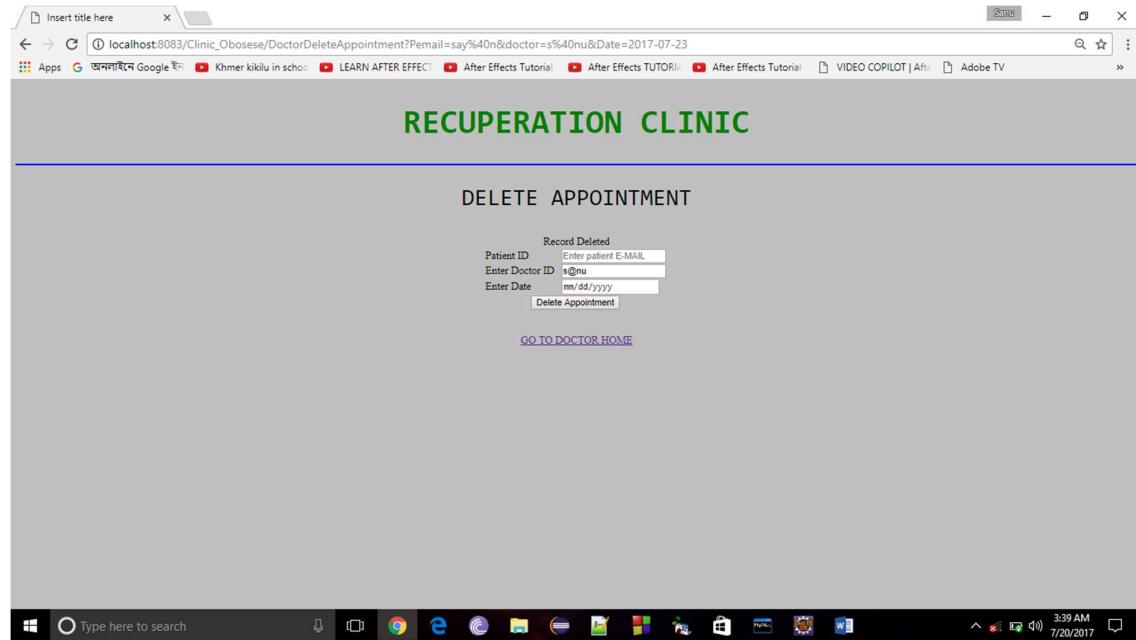
RECUPERATION CLINIC

Patient ID	Appointment Date	Doctor's ID
say@nu	2017-07-23	s@nu
say@nu	2017-07-28	s@nu

[GO TO DOCTOR HOME](#)

Windows Type here to search 3:39 AM 7/20/2017





Update_Doc_Info

localhost:8083/Clinic_Obosese/UpdateDocInfo.jsp

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RECUPERATION CLINIC

Name	sanu
Email	sanu@gmail.com
Mobile No	Enter Mobile Number
Qualification	M B B S
Specialisation	General Physician
Experience	Enter Number of Years
Choose PassWord	Choose Password
Registration	456123
Fees	Enter Amount
Time	Enter Time
Enter Max Number of Patient	Enter Number

UPDATE

[CLICK HERE TO GO DOCTOR HOME](#)



3:36 AM 7/20/2017

Future Scope of Improvements

We do not have an online medicine retailer which the public can avail. This can be added so that it will be much easier to purchase the medicines which are prescribed.

We can also add a statistical analysis so that the administration can account for the total profit of each doctor and the popularity of each doctor and accordingly order them when the \public need to search for doctors of a certain specialization.

An online guidebook can be added containing some rules and regulations which are to be maintained while inside the clinic.

Similarly, a guide as to the daily Do's and Don'ts to maintain a healthy daily life can be added which the doctors can access and update which the general public can refer to in order to maintain a healthy lifestyle.

An online billing system can be added which curtails to the use of online payment for cashless visits to the clinic.

Here we are using a person's email-id as is unique id. This can be modified so that a random id is generated for each user in case a person doesn't have a personal email-id.

All the medical stores can be included into the system. And any patient can redirect their medicine lists to the store, and then the store can deliver it to the patients' address. Same can be done for any pathological test centre.

Hospitals could be included into the system. Where every hospital could access their patients' previous records and access quicker.

For any trivial situation one can get quick suggestions, where the patient would fill in some details and they will get suggestions for any exercise or any tasks/actions by which they could be relieved.

For paediatric patients there should be different fields where they could keep a track of their entire vaccination doses.

For emergency circumstances there could be emergency window, where the authority could see the patients' blood group, any allergies, and any severe diseases in the history or any other information guideline.

Certificate

This is to certify that Mr. Jeet Saha of Academy Of Technology, registration number: 151690110145 has successfully completed a project on Clinic Management System using JEE (Java Enterprise Edition) under the guidance of Mr. Chandan Mukherjee.

[*Chandan Mukherjee*]

Globsyn Finishing School

Certificate

This is to certify that Mr. Sanmitra Kumar of Academy Of Technology, registration number: 151690110165 has successfully completed a project on Clinic Management System using JEE (Java Enterprise Edition) under the guidance of Mr. Chandan Mukherjee.

[*Chandan Mukherjee*]

Globsyn Finishing School

Certificate

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[*Chandan Mukherjee*]

Globsyn Finishing School

Certificate

This is to certify that Mr. Sufal Haldar of Academy Of Technology, registration number: 151690110185 has successfully completed a project on Clinic Management System using JEE (Java Enterprise Edition) under the guidance of Mr. Chandan Mukherjee.

[*Chandan Mukherjee*]

Globsyn Finishing School

Certificate

This is to certify that Miss. Sushmita Shaw of Academy Of Technology, registration number: 151690110187 has successfully completed a project on Clinic Management System using JEE (Java Enterprise Edition) under the guidance of Mr. Chandan Mukherjee.

[*Chandan Mukherjee*]

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