MANEGE FOR CAMPUS MEDICUL CENTER BANDARANAYAKE H.A.C.S.

2019/E/021

INDIVIDUAL DATABASE APPLICATION ASSESSMENT

EC5070 DATABASE SYSTEMS

SEMESTER 5

DEPARTMENT OF COMPUTER ENGINEERING

UNIVERSITY OF JAFFNA

1. PROBLEM STATEMENT

1. High Level Problem Summary

Most of the universities in Sri Lanka have medical centers. In those centers, registration process of the students are done in manually. In that case, data may be lost and there is not enough space to keep the data files. As well as in those centers, there aren't any medical records of the students which they already submitted when they were enrolling. And also some student haven't any information about the working hours of the medical center. The students who accommodate outside of the hostel, they have to pay addition charges to get medicine from the outside as they aren't able to come inside to the university premises. Same time student have to come to medical center and have to be waited in Queues. Therefore they time may be wasted. As well as it is not easily to check medical history of the student if the records were done by manually. And it is hard to calculate the cost per day and to keep the records about the remaining medicines. The primary success criterion is the deployment of a website to manage and apply student details along with an online bulletin board. The main scope of the project is to manage medical center online and maintain the process of getting medicine easily and keep the records of the students clearly. Therefore, using the records of the past, the medical officers of the center can able to predict the occurrence of diseases at any time and calculate the cost of medicines needed at that time. Personal medical records of the student can be issued to given administer medications. It can avoid mistakes and those reports can be acceptable. You can keep your medical record with you to use at any time and it recommended under the doctor

2. Detailed Problem Statement

2.1 FUNCTION

I proposed this University Management website can be used in admitting the students in to the University. Students should register to the system with the email while they entering the university. Before student become an uncomfortable with her/his medical condition, he has to log to the website and update the problem to the website. Then, the medical officers will check the patients daily and give the sequence number and consider the severity of the disease. Sometimes if a student want to know more about her or him disease, then the student can enter him/her disease and they can check and identify the disease using the symptoms which he enter and they can get know about some first aids. Uploading of medications and medical recommendation taken by patients on that day to the website, student can submit the medical report online to the faculty administration office directly. After they came to get medicine, the doctor can check his or her medical Updates, personal history easily and give medical safety after the patient arrives. Then we can check and know what the most common disease is and how we have to get precautions for the disease. Every day, they can update the records about the medicine such as which medicines are used regularly, which are the remaining ones. After they can recognize the daily consumptions of the medicines and if needed they can request for those medicines early. Problem Statement Guide

2.2 TIME

Till now, student registration to medical center is manually and with paper works. It takes much time and efficiency is very low. When a student is sick, he must go to the medical center and register first and then wait for the doctor to see him. It's boring and takes too much time, so it's hard to manage. It is difficult to take medicine when there are many students. One problem which can be occurred is, about doctor's arrival time. If the student is registered before, he should find his medical file and it is very difficult to find his personal file among many files. There is not enough space in the medical center to hold this filling and congestion is created. The file has the student's medical history, but there is no indication of his response to medication. The doctor does not have any understanding about the medical that is given on campus and this is also a problem in giving medicine.

With this proposed University Management system, hostel administrations medical center no needs to maintain any kind of paper works or records manually, it saves lot of time. Administering medication can be done efficiently and effectively and omissions can be prevented. The medical center can manage its work well and provide good service. From this, there is a good belief among the students about the medical center and they can do their work quickly and save money.

In future, Receiving suggestions and complaints from students. To provide good service. Updating the website to provide treatment to students as well as preachers and workers. Establishing a relationship with the selected hospital. Getting information about vehicles that can be used in emergencies. The university as well as various institutions should be made aware of the website and thereby say that these institutions will be able to get an idea about the employees working there. Selling websites to various organizations and from that money can be earned.

3 KEY CHALLENGES FACED

- I choose NodeJS for programming language. This is a main challenge that I have faced. I had to learn NodeJS . Face many problems after connecting frant_end and back_end. After that I had learned html, ejs and css but node js didn't support css file parth and then many error came and I solve this problem but I west many time .
- It was little bit harder to map the mini world scenario to the ER diagram because have not get information about the medical center.
- Finding data to enter into the database was difficult.

4. DATABASE DESIGN

The database has total 9 tables.

1) Student : Store the data of student

2) Doctor : store the data of doctor

3) About-the_disease : Store the disease of student

4) Medical_treatement : find first aid of the disease

5) Doctor_risevetion : get the information about what time meet the doctor

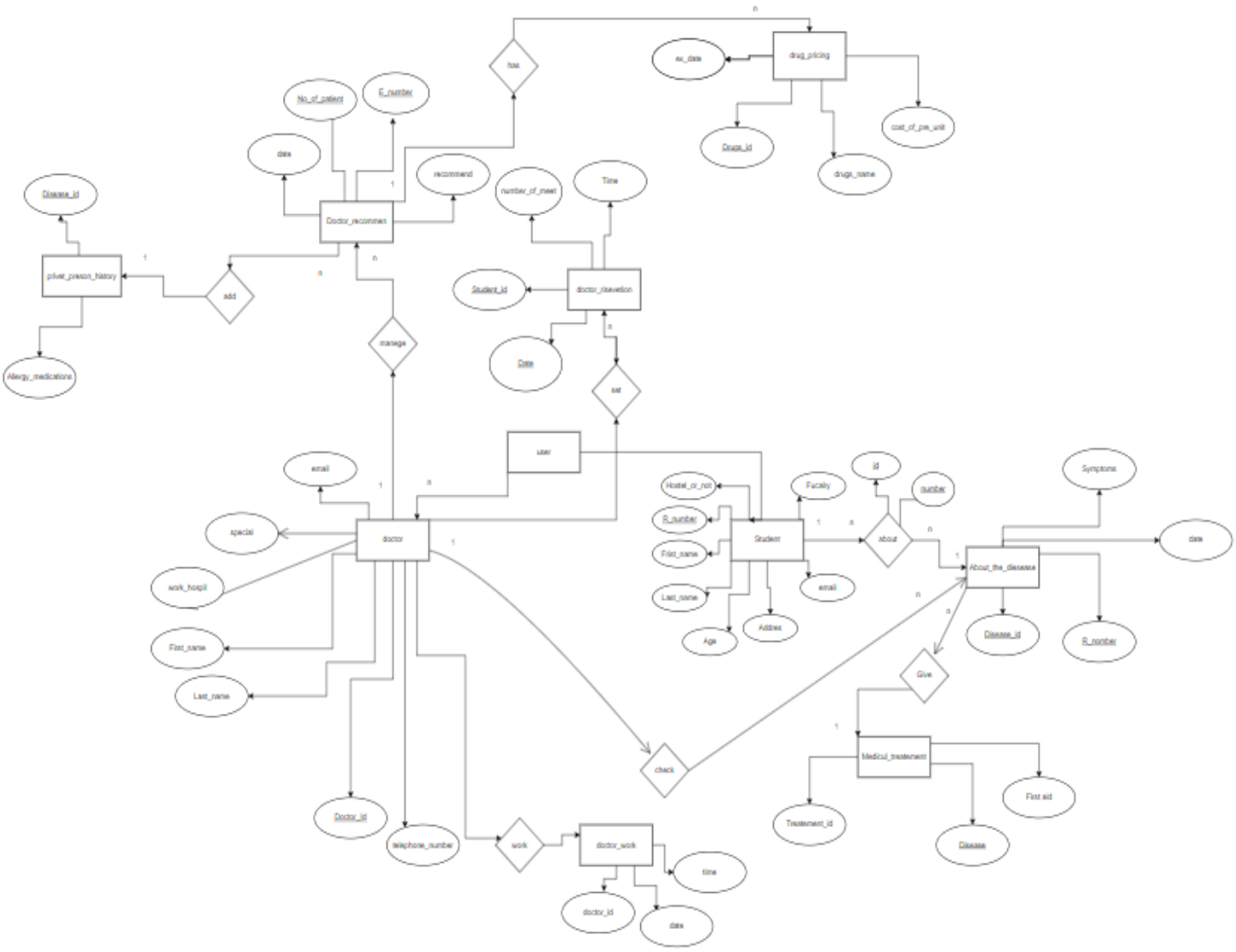
6) Doctor_recommend : what is doctor recommend of desease

7) Grug_pricing: information of drugs

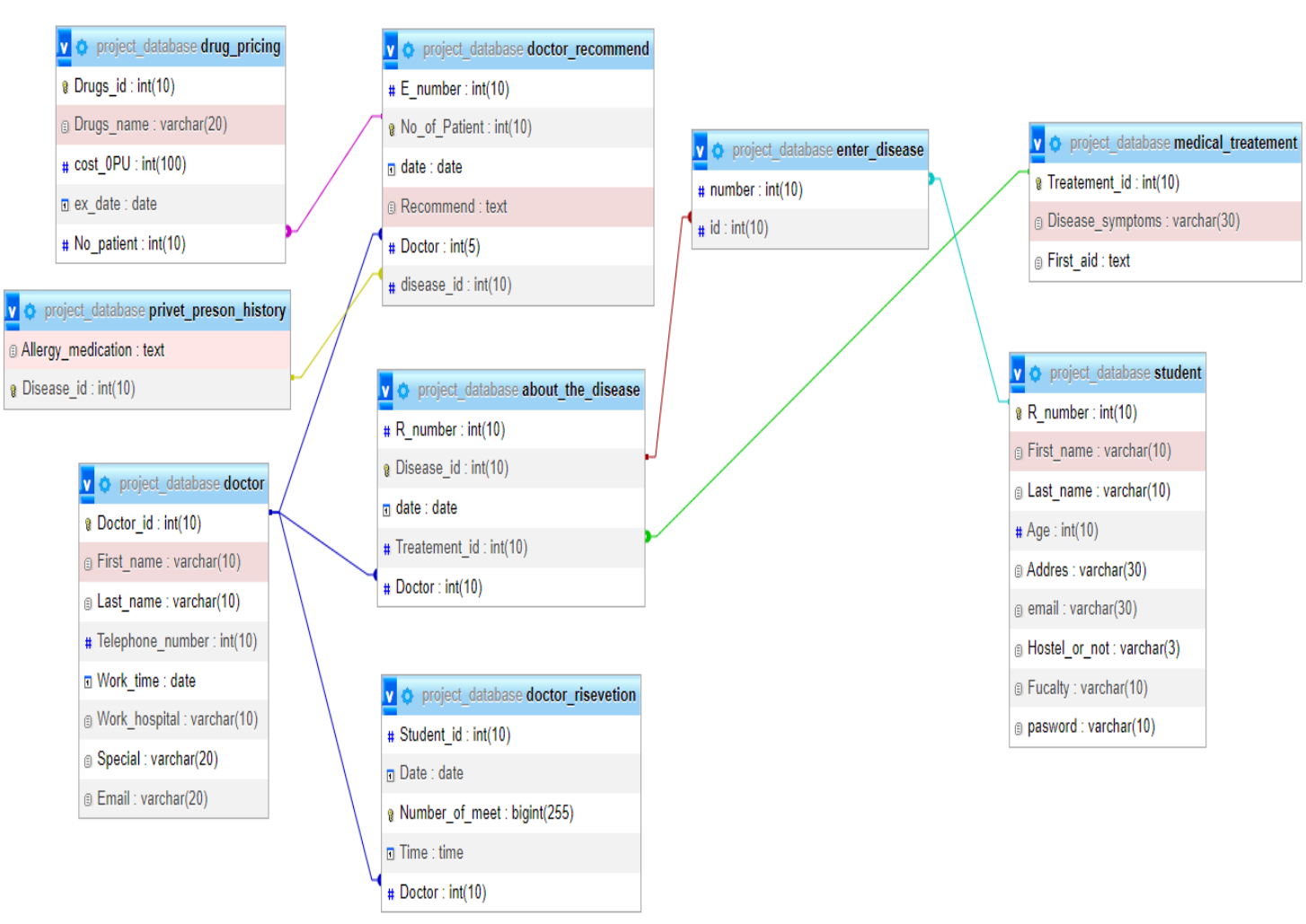
8) Privet_preson_history: privet medical history of the student

9) Enter_disease: one by one student have what disease

4.1 ER DIAGRAM

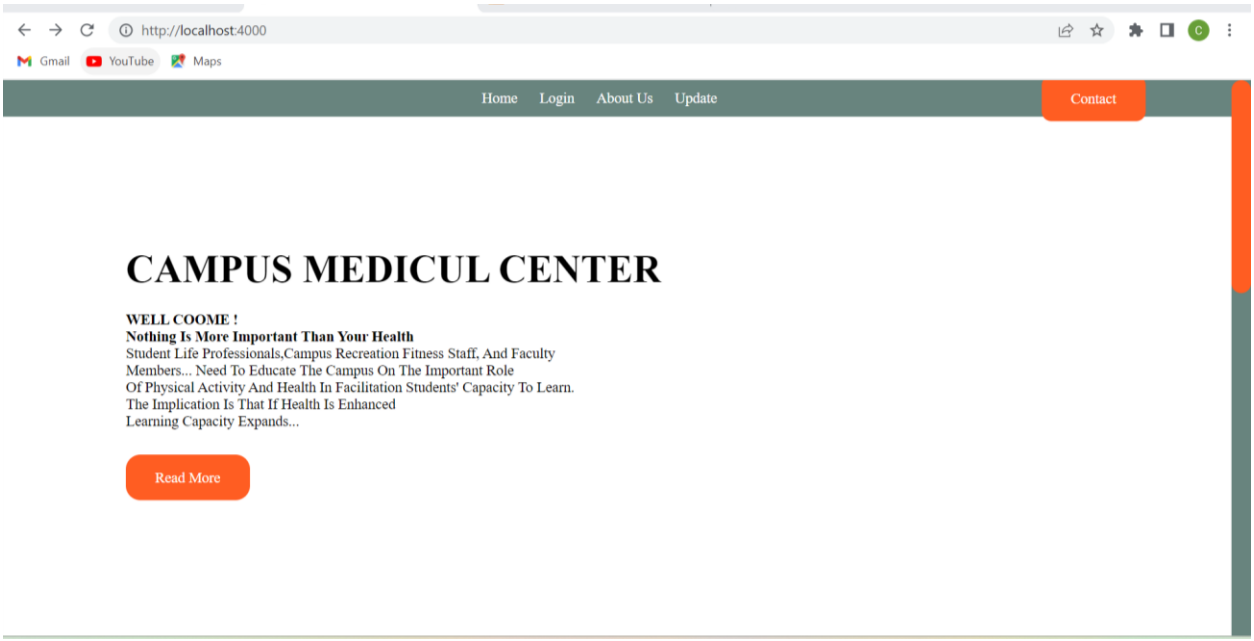


4.2 RELATION SCHEMA



5. SAMPLE REPORTS WITH SQL QUERIES

5.1 Home page



5.2 Get Main Disease

SQL Query

```
function getmaindisaese(date1,date2){
  return new Promise((resolve, reject) => {
    sql = `SELECT ab.Treatement_id,md.Disease_symptoms,md.First_aid
           FROM about_the_disease as ab
           INNER JOIN  medical_treatement as md
           ON ab.Treatement_id = md.Treatement_id
           WHERE ab.date between "${date1}" and "${date2}"`;
    db.query(sql, (error, result) => {
      if (error) console.log(error.message);
      resolve(result);
      console.log(result)
      reject(new Error(" Error"));
    });
  });

}
```

Report

Our Special Services

Find The Main Desease Of Theis Time Period And Inform How Protect To That Desease Registration Form Student

Date1 Mm/Dd/Yyyy
Date2 Mm/Dd/Yyyy
Submit

Rrow Number	Treatment Id Number	Disease Symptoms	Firs Aid
1			

Main Disease

Find The Main Desease Of Theis Time Period And Inform How Protect To That Desease Registration Form Student

Date1 10/14/2022
Date2 10/18/2022
Submit

Rrow Number	Treatment Id Number	Disease Symptoms	Firs Aid
1	1	FEVER	*Drink Plenty Of Fluids To Stay Hydrated. *Dress In Lightweight Clothing. *Use A Light Blanket If You Feel Chilled, Until The Chills End. *Take Acetaminophen (Tylenol, Others) Or Ibuprofen (Advil, Motrin IB, Others). Follow The Directions On The Label
2	3	TOOTHACHE	*Rinse Your Mouth With Warm Water. *Use Dental Floss To Remove Any Food Particles Or Plaque Wedged Between Your Teeth. *Consider Taking An Over-The-Counter (OTC) Pain Reliever To Dull The Ache, But Don't Place Aspirin Or Another Painkiller Directly Against Your Gums Because It May Burn Your Gum Tissue
3	1	FEVER	*Drink Plenty Of Fluids To Stay Hydrated. *Dress In Lightweight Clothing. *Use A Light Blanket If You Feel Chilled, Until The Chills End. *Take Acetaminophen (Tylenol, Others) Or Ibuprofen (Advil, Motrin IB, Others). Follow The Directions On The Label

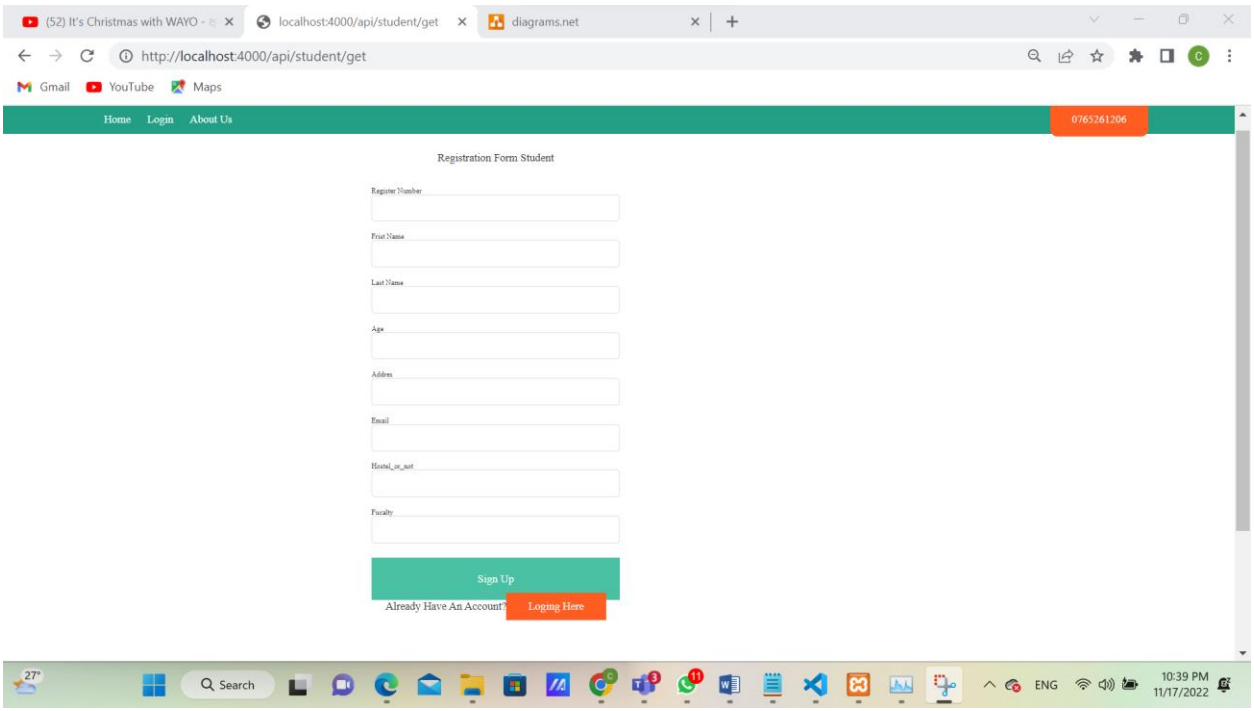
Main Disease

5.3 Register Student

SQL Query

```
function addStudent(details) {
    return new Promise(async (resolve, reject) => {
      console.log(details);
     let {R_number,First_name,Last_name,Age,Addres,email,Hostel_or_not,Fucalty,pasword} = details;
   //console.log(first_name);
  let sql = `INSERT INTO student(R_number,First_name,Last_name,Age,Addres,email,Hostel_or_not,Fucalty,pasword)
      VALUES('${R_number}','${First_name}','${Last_name}','${Age}','${Addres}','${email}','${Hostel_or_not}','
      db.query(sql, (error, _results) => {
        if (error) {
          console.log(error.message);
          resolve(false);
        }
        resolve(true);

        reject(new Error("from addstudent"));
      });
            });
```

Report



5.4 Get Student

SQL Query

```
function getstudent() {
  return new Promise((resolve, reject) => {
    sql = `SELECT * FROM student`;
    db.query(sql, (error, result) => {
      if (error) console.log(error.message);
      resolve(result);
      console.log(result)
      reject(new Error(" Error"));
    });
  });
}
```

Report

RowNumber	R_number	First_name	Last_name	Age	Addres	Email	Hostel_or_not	Fucalty
1	1	Chathura	Bandaranay	24	Kandy	2019e021@Eng.Jfn.Ac.Lk	No	Eng
2	20	Charaka	Bandara	24	Badulla	2019e020@Eng.Jfn.Ac.Lk	Not	Eng
3	21	Chathura	Bandaranay	24	Kandy	2019e021@Eng.Jfn.Ac.Lk	No	Eng
4	90	Yamuna	Bandara	25	Kilinochchi	Yamuna@Gmail.Com	Yes	Enginering
5	100	Kasun	Bandara	21	Hagurankotha	2019e100@Eng.Jfn.Ac.Lk	Yes	Enginering

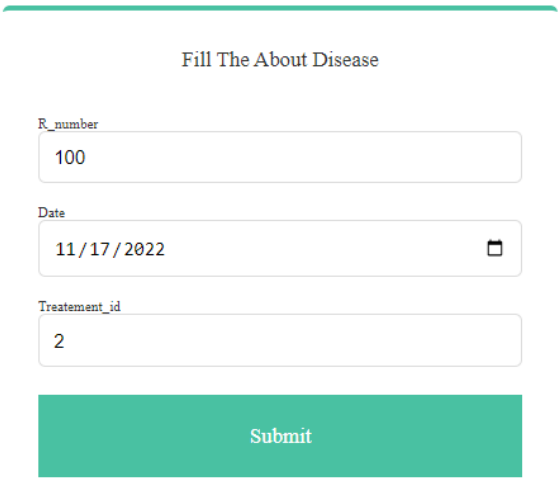
5.5 Add Student About Disease

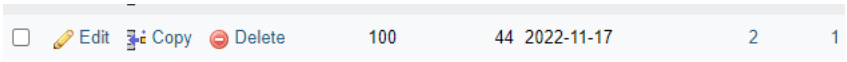
SQL Query

```
function addabout_disease(details) {
   return new Promise(async (resolve, reject) => {
     let {R_number,date,Treatement_id} = details;
     console.log("--------------------------------------------------")
     console.log(date);
 let sql1 = `
     SELECT Doctor_id
     from doctor
     where Work_time = '${date}'`;

 let Doctor = db.query(sql1, (error, _results) => {
       if (error) {
         console.log(error.message);
```

```
          resolve(false);
        }
        resolve(true);

        reject(new Error("from adddruug"));
      });
      console.log("--------------------------------doc");
      console.log(Doctor);
      console.log("--------------------------------doc");
       Doctor=1;
            let sql2= `INSERT INTO
about_the_disease(R_number,date,Treatement_id,Doctor)
            VALUES('${R_number}','${date}','${Treatement_id}','${Doctor}')`;

            db.query(sql2, (error, _results) => {
              if (error) {
                console.log(error.message);
                resolve(false);
              }
              resolve(true);

              reject(new Error("from adddruug"));
            });
          });

  }
```

Report



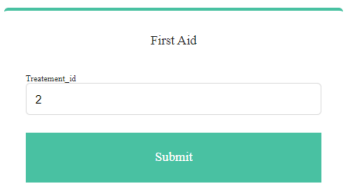


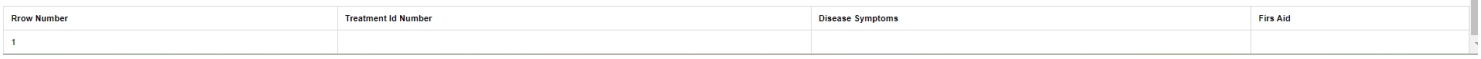
5.6 Get First Aid

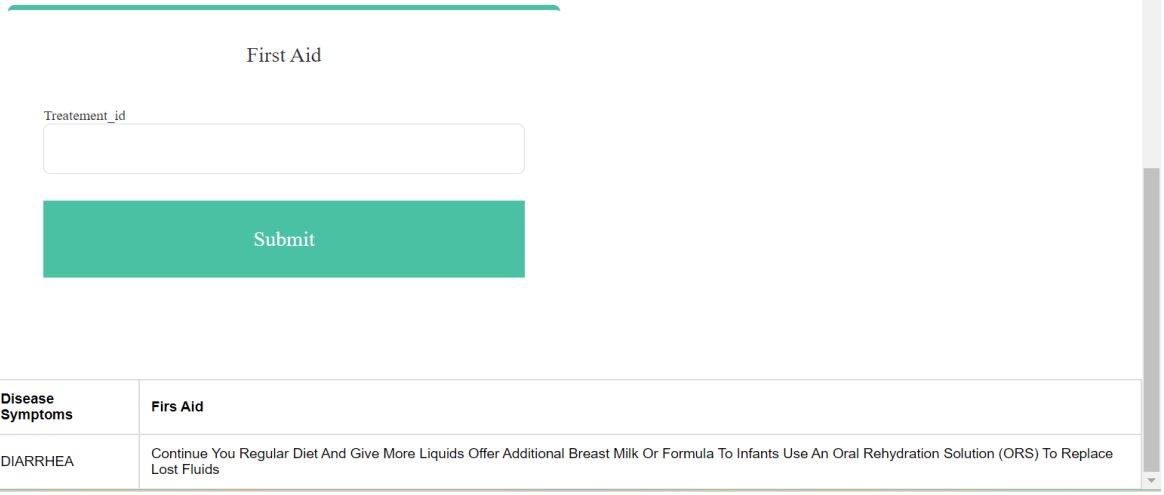
SQL Query

```
function gettreatement(tretment) {
  console.log(tretment);
  return new Promise((resolve, reject) => {
    sql = `SELECT  Treatement_id,Disease_symptoms,First_aid
           FROM medical_treatement
           WHERE Treatement_id = '${tretment}'`;
    db.query(sql, (error, result) => {
      if (error) console.log(error.message);
      resolve(result);
      console.log(result)
      reject(new Error(" Error "));
    });
  });
}
```

Report







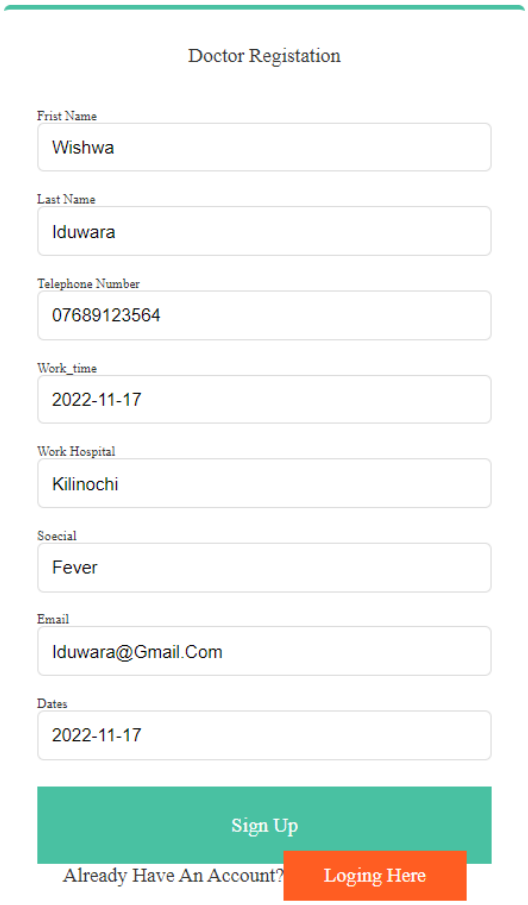
Rrow Number	Treatment Id Number	Disease Symptoms	Firs Aid
1	2	DIARRHEA	Continue You Regular Diet And Give More Liquids Offer Additional Breast Milk Or Formula To Infants Use An Oral Rehydration Solution (ORS) To Replace Lost Fluids

5.7 Add Doctor (Register Doctor)

SQL Query

```
function adddoctor(details){
  return new Promise(async (resolve, reject) => {
    let { First_name,Last_name,Telephone_number,Work_time,Work_hospital,Special,Email} =details;
      //console.log(Fucalty);
let sql = `INSERT INTO doctor(First_name,Last_name,Telephone_number,Work_time,Work_hospital,Special,Email)
    VALUES('${First_name}','${Last_name}','${Telephone_number}','${Work_time}','${Work_hospital}',
    '${Special}','${Email}')`;

    db.query(sql, (error, _results) => {
      if (error) {
        console.log(error.message);
        resolve(false);
      }
      resolve(true);

      reject(new Error("from adddoctor"));
    });
          });
```

Report



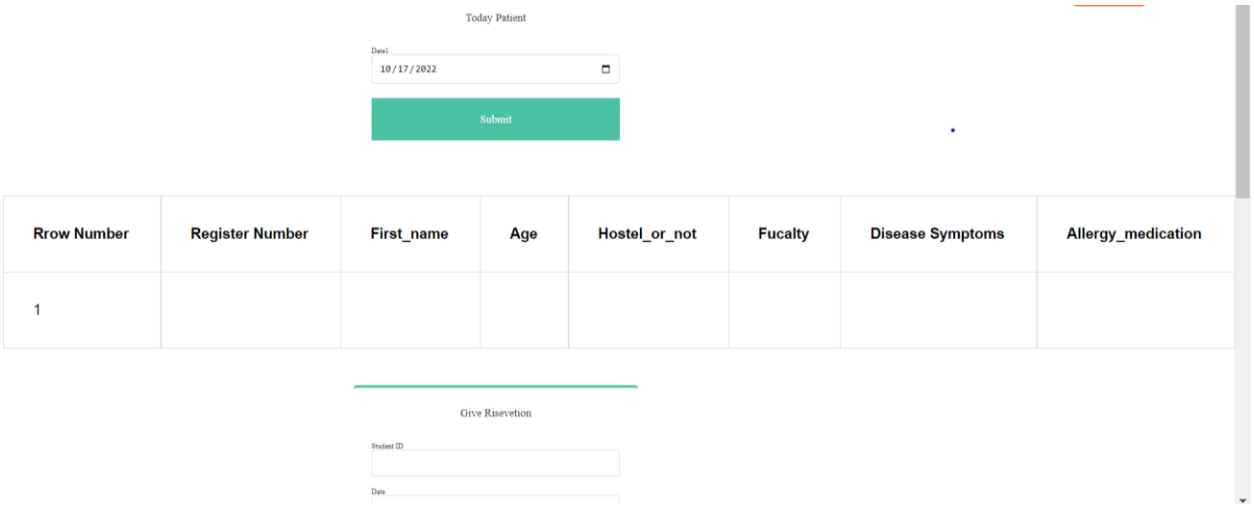
	Doctor_id	First_name	Last_name	Telephone_number	Work_time	Work_hospital	Special	Email
Edit Copy Delete	1	chameera	wirawardha	705241536	2022-10-17	kilinochi	Cardiologists	chameera@gmail.com
Edit Copy Delete	2	mishra	mohomad	765148923	2022-11-01	kilinochi	Psychiatrists	mishra@gmail.com
Edit Copy Delete	3	nimali	silva	729864575	2022-11-16	kilinochi	Gynaecologists/Obste	nimali@gmail.com
Edit Copy Delete	4	wishwa	iduwara	2147483647	2022-11-17	kilinochi	fever	iduwara@gmail.com

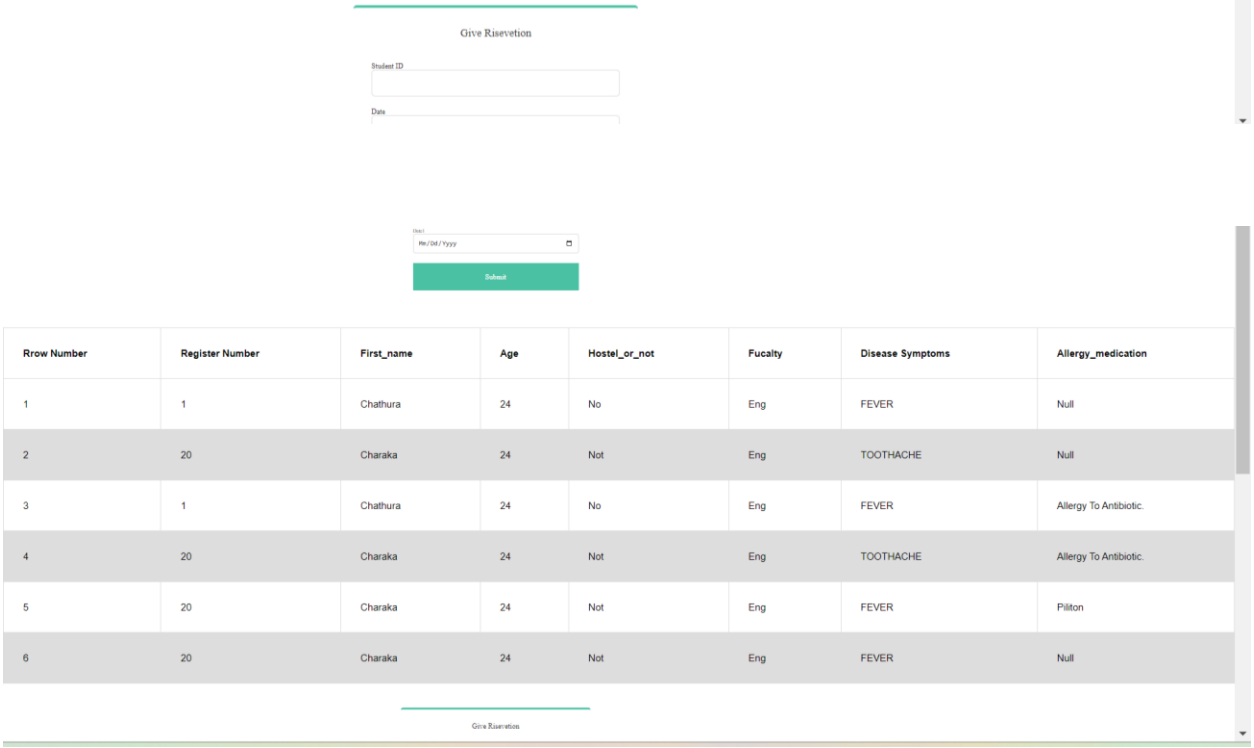
5.8 Get Today patient

SQL Query

```
function gettodaywork(date1){
console.log("...................");
console.log(date1);
  return new Promise((resolve, reject) => {
   let sql = `select
ad.R_number,st.First_name,st.Age,st.Hostel_or_not,st.Fucalty,ad.Treatement_id,mt.
Disease_symptoms,ph.Allergy_medication
from about_the_disease as ad
inner join medical_treatement as mt
on ad.Treatement_id = mt.Treatement_id
inner join doctor as d
on ad.Doctor = d.Doctor_id
inner join doctor_recommend as dr
on d.Doctor_id =  dr.Doctor
inner join privet_preson_history as ph
on dr.disease_id = ph.Disease_id
inner join enter_disease as ed
on ed.id = ad.Disease_id
inner join student as st
on st.R_number = ed.number
where ad.date = '${date1}' `;
console.log("................................................")
console.log(sql);

     db.query(sql, (error, result) => {
      if (error) console.log(error.message);
      resolve(result);
      console.log(result)
      reject(new Error(" Error"));
    });
  });

}
```

Report





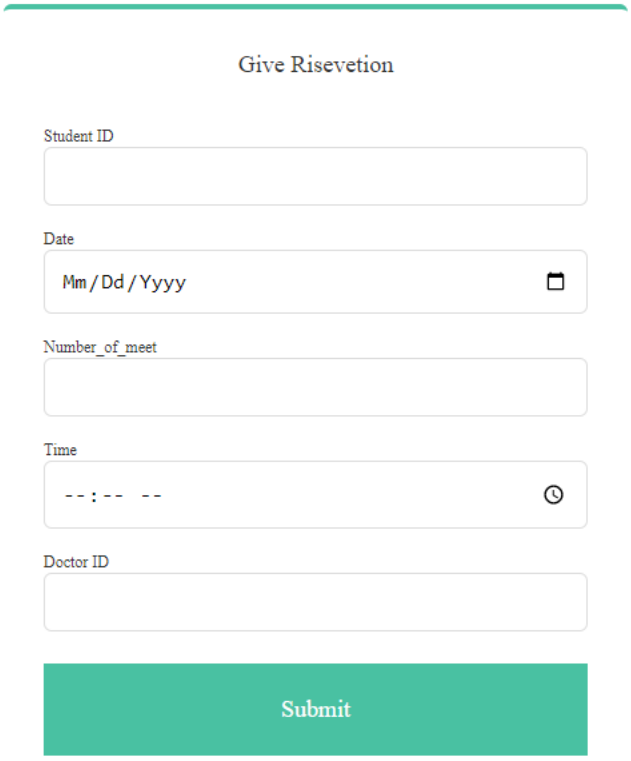
5.9 Doctor Give reservation

SQL Query

```
function addrisevetion(details) {
  return new Promise(async (resolve, reject) => {
    let {Student_id,Date,Number_of_meet,Time,Doctor } = details;
```

```
let sql = `INSERT INTO
doctor_risevetion(Student_id,Date,Number_of_meet,Time,Doctor)
    VALUES('${Student_id}','${Date}','${Number_of_meet}','${Time}','${Doctor}')`;

    db.query(sql, (error, _results) => {
      if (error) {
        console.log(error.message);
        resolve(false);
      }
      resolve(true);

      reject(new Error("from adddruug"));
    });
          });


}
```

Report

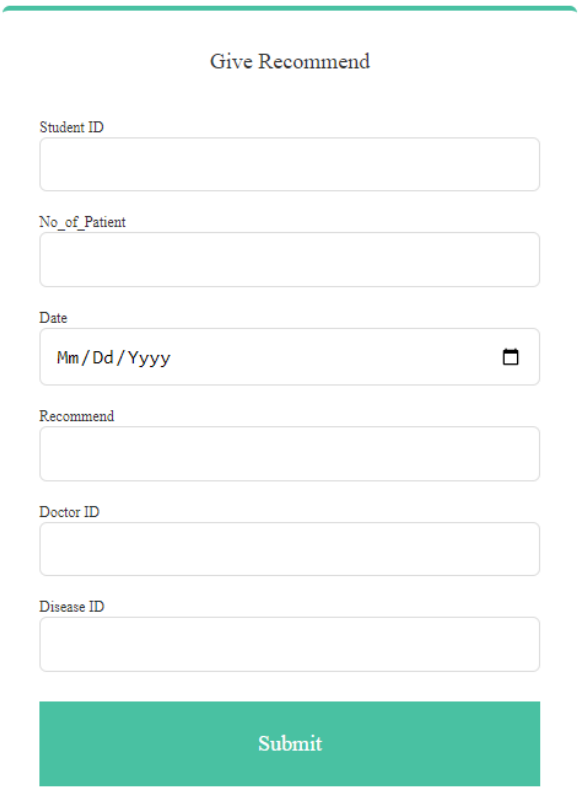


5.10 Doctor give Recommend

SQL Query

```
function addrecommend(details) {
  return new Promise(async (resolve, reject) => {
    let {E_number,  No_of_Patient,date,Recommend,Doctor,disease_id} = details;

let sql = `INSERT INTO
doctor_recomend(E_number,No_of_Patient,date,Recommend,Doctor,disease_id)
    VALUES('${E_number}','${No_of_Patient}',${date}','${Recommend}','${Doctor}','
${disease_id}')`;

    db.query(sql, (error, _results) => {
      if (error) {
        console.log(error.message);
        resolve(false);
      }
      resolve(true);

      reject(new Error("from adddruug"));
    });
          });


}
```

Report



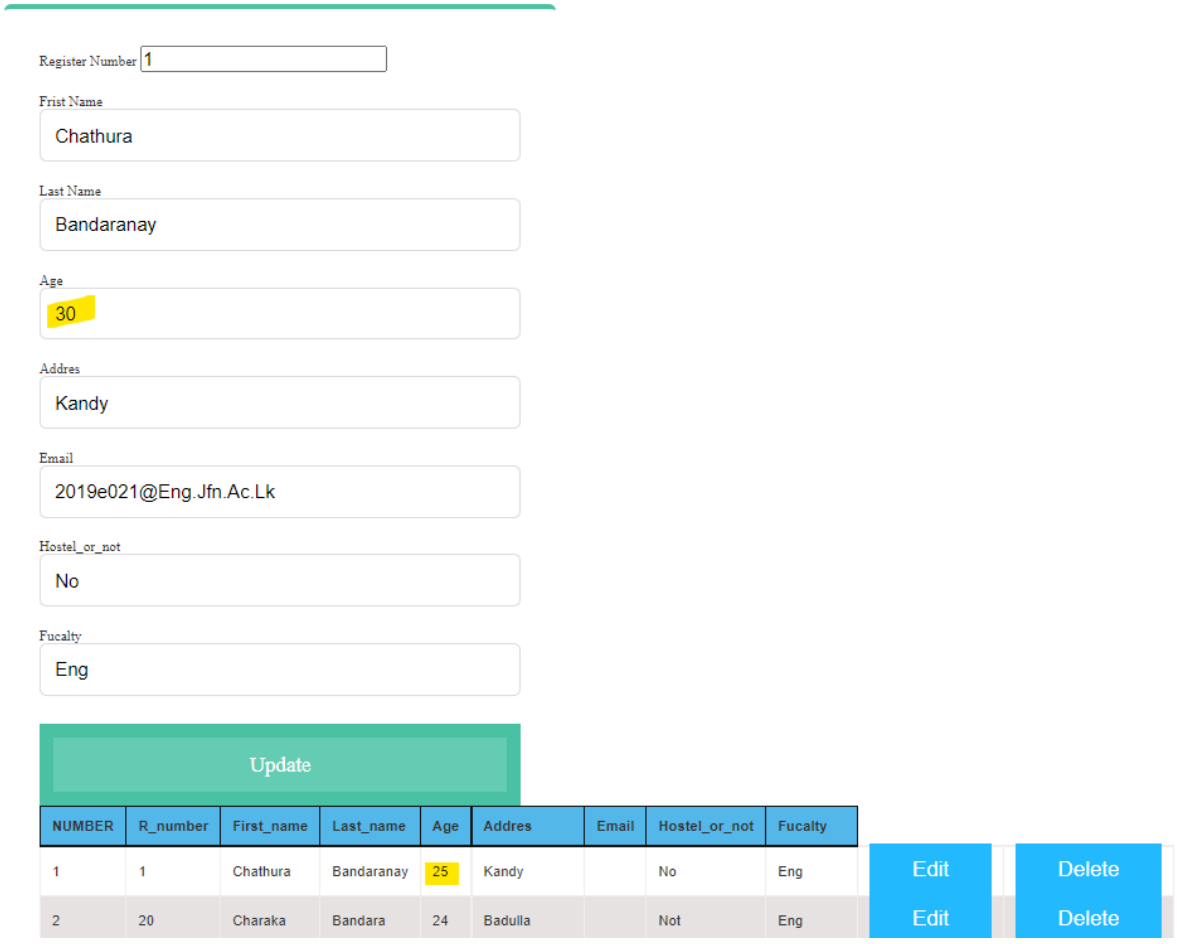
5.11 Student Edit

SQL Query

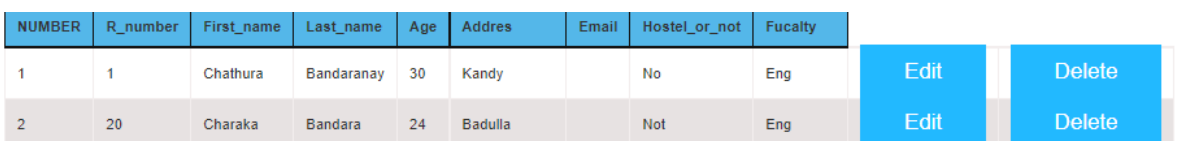
```
  function updatestudent(id,details) {
    return new Promise(async (resolve, reject) => {
      let {R_number,First_name,Last_name,Age,Addres,email,Hostel_or_not,Fucalty}
= details;
      console.log(details)
     let sql = `UPDATE student
     SET   R_number='${R_number}', First_name =
'${First_name}',Last_name='${Last_name}', Age = '${Age}',Addres
='${Addres}',email = '${email}',Hostel_or_not =
'${Hostel_or_not}',Fucalty='${Fucalty}'
     WHERE R_number='${id}'`;
      db.query(sql, (error, results) => {
        if (error) {
          console.log(error.message);
          resolve(false);
        }
```

```
        resolve(true);
        reject(new Error("from addtodaymenu"));
      });
    });
  }
```

Report



After edit



5.12 Student Delete

SQL Query

```
function removeStudent(R_number) {
   return new Promise(async (resolve, reject) => {
 let sql = `DELETE FROM student WHERE R_number = '${R_number}'`;

     db.query(sql, (error, results) => {
       if (error) {
         console.log(error.message);
         resolve(false);
       }
       resolve(true);
       reject(new Error("from addtodaymenu"));
     });
   });
 }
```

Report

NUMBER	R_number	First_name	Last_name	Age	Addres	Email	Hostel_or_not	Fucalty		
1	1	Chathura	Bandaranay	30	Kandy		No	Eng	Edit	Delete
2	20	Charaka	Bandara	24	Badulla		Not	Eng	Edit	Delete
3	21	Chathura	Bandaranay	24	Kandy		No	Eng	Edit	Delete
4	90	Yamuna	Bandara	25	Kilinochchi		Yes	Enginering	Edit	Delete
5	100	Kasun	Bandara	21	Haguranketha		Yes	Enginering	Edit	Delete

<-Github link->

Bandaranayake97/campusmedicalcenter (github.com)