JSS Science And Technology University

Mysuru

570 006

Department of Computer Science and Engineering

THE REPORT

Drug Database and Rehabilitation Booking System

SUBMITTED BY

Nivedita M Hanamasagar

Vaishnavi Srinath

Chinmayi P

Suma Y Gouda

Sneha H

DECLARATION

We, Nivedita Hanamasagar, Vaishnavi Srinath, Chinmayi P, Suma Y Gouda, Sneha H, declare that this dissertation is entirely our own original work and that, to the best of our knowledge, it has not been presented or submitted for any degree or examination in any other university, and that all the sources we have used or quoted have been indicated and acknowledged by complete references.

PROJECT SUPERVISOR

Name: Dr. Trisiladevi Nagavi

Signature: .....

Date: .....

Contents

Chapter 1

Introduction

1.1 Objective of the project

To create awareness among the common people about the use of illegal drugs and making it easy for them reach the de-addiction centers.

1.2 Features of the project

The database:
Provides information about the following aspects related to drugs:

- Varieties of drugs.
- Laws and policies against the use of banned drugs.
- Availability of doping agencies around the world.
- Disorders caused by the consumption of banned drugs.
- Treatment for the disorders.
- Availability of the rehabilitation homes for drug addicts.
- Role of drugs for treating covid-19.

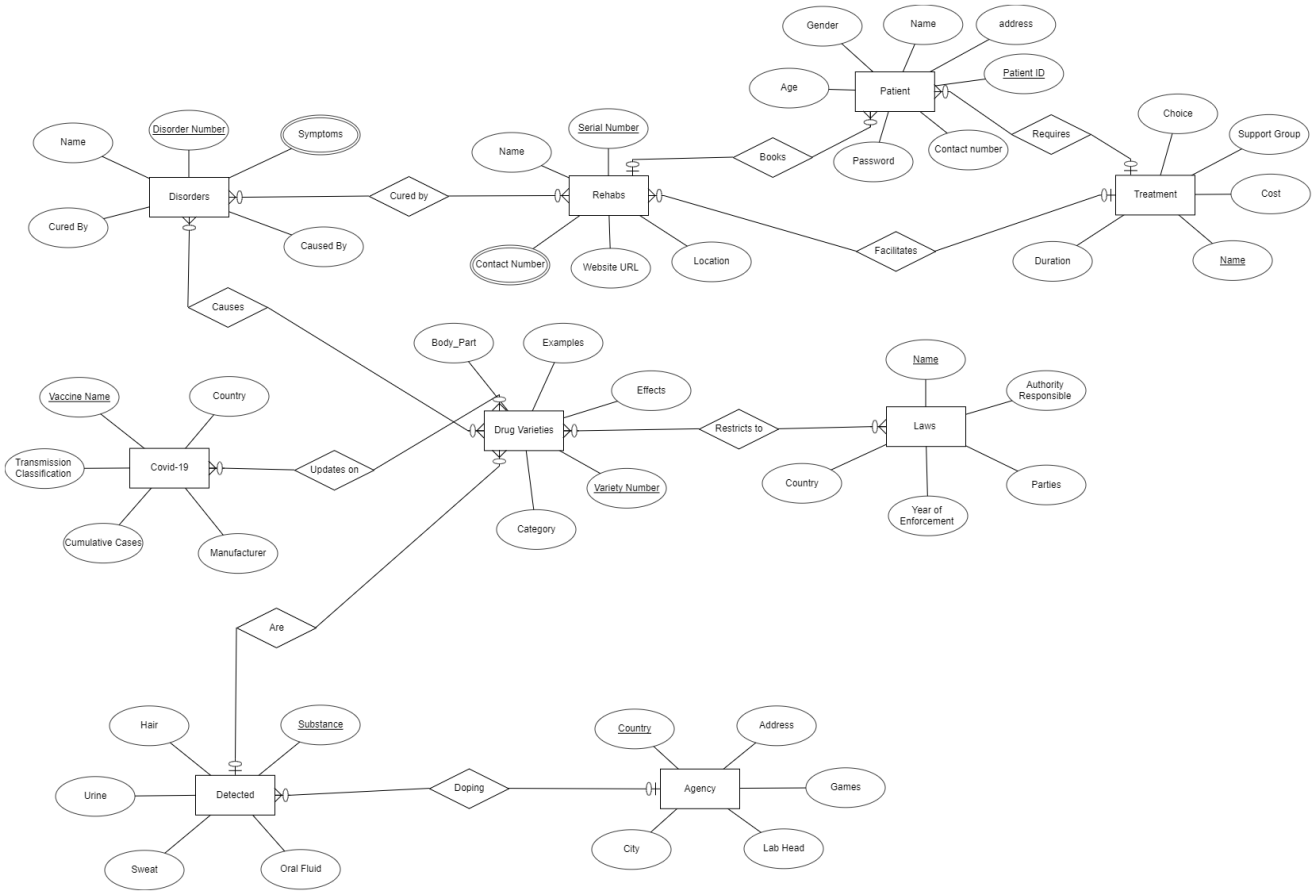
The website:

- Provides access to the information about all the above aspects.
- Provides the service of booking of rehabilitation homes.
  Requirements:
- Back end: MySql, PHP
- Front end: HTML, CSS, Java Script

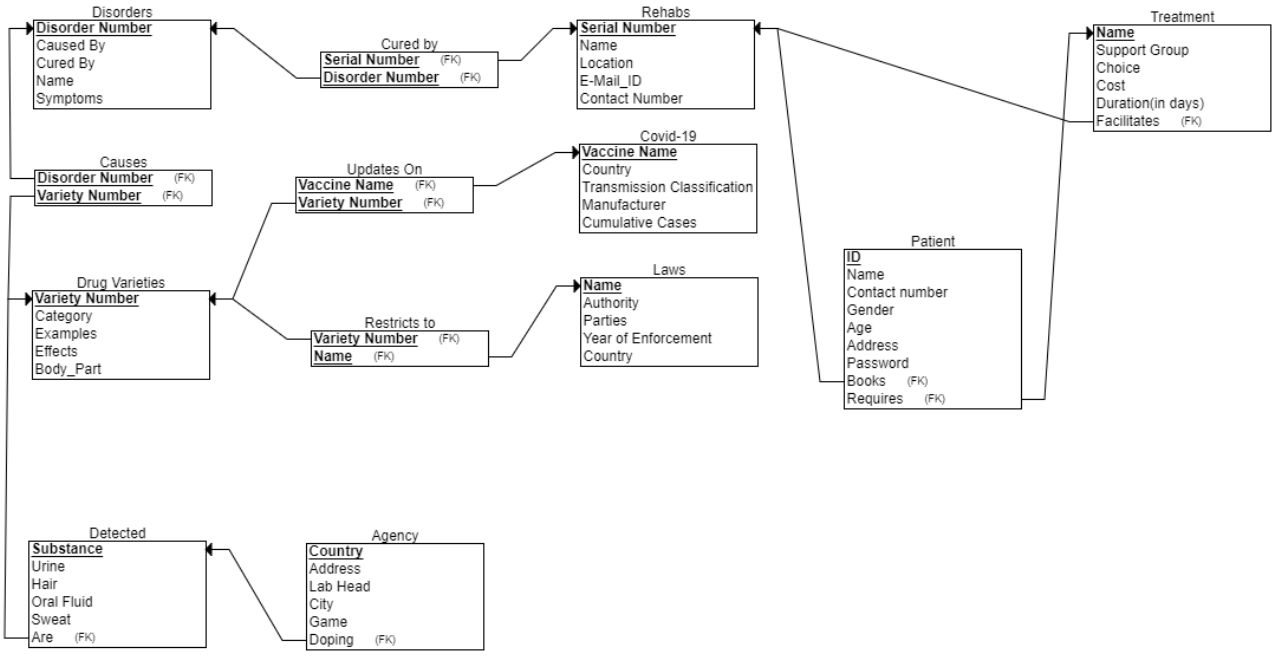
Chapter 2

System Design

2.1 ER Diagram-high level data modeling



2.2 Schema Diagram-conceptual data modeling



2.3 State Diagram

name	support_grp	choice	cost	duration	facilitates
Acamprosate (Campral)	Narcotics Anonymous	Male-Specific Treatment	530	2 days	8
Alcohol Addiction Medications	Narcotics Anonymous	Outpatient Rehab	3500	5 days	1
Buprenorphine (Suboxone)	JACS	Inpatient Rehab	4865	5 days	10
Clonidine	12-Step Programs	Faith-Based Treatment	105	3 days	5
Disulfiram (Antabuse)	Alcoholics Anonymous	Female-Specific Treatment	860	1 day	9
Drug withdrawal and detox	Alcoholics Anonymous	Inpatient Rehab	1050	7 days	2
Heroin and Opiate Addiction Mechanisms	AL-Anon	Sober Living Homes	42000	29 days	3
Medical Detox and Rehab	Nar-Anon	Gender-Specific Treatment	990	12 days	4
Methadone	Narcotics Anonymous	Inpatient Rehab	759	3 days	11
Naloxone (Narcan)	Alcoholics Anonymous: The Big Book	Intensive Outpatient Programs	5600	4 days	6
Naltrexone (Vivitrol)	Nar-Anon	Gender-Specific Treatment	10000	45 days	12
Naltrexone For Opioid Addiction	12-Step Programs	Faith-Based Treatment	4700	3 days	7

Id	name	contact_number	gender	age	address	books	requires	passwor
1	mahesh	1234532423	male	50	yelahanka,mysore	2	Alcohol Addiction Medications	*NULL*
2	madhu	1234532789	female	40	majestic,bangalore	2	Medical Detox and Rehab	*NULL*
3	chandu	1234532745	male	45	majestic,bangalore	4	Medical Detox and Rehab	*NULL*
4	chandru	1234532976	male	35	vijaynagar,mysore	13	Heroin and Opiate Addiction Mechanisms	*NULL*
5	megha	1234532890	female	45	gundlupet	15	Naltrexone (Vivitrol)	*NULL*
6	prasad	1234534567	male	30	jalahalli,talakad	15	Naltrexone (Vivitrol)	*NULL*
7	poornima	1234532830	female	32	gundlupet	11	Buprenorphine (Suboxone)	*NULL*
8	poornima	1234532540	female	45	medini,talkad	12	Disulfiram (Antabuse)	*NULL*
9	murthy	1234532350	male	55	dattagalli,mysore	9	Disulfiram (Antabuse)	*NULL*
10	suresh	1234563790	male	49	bije, mangalore	9	Alcohol Addiction Medications	*NULL*
11	Anita	1234590830	female	37	Dharwad	1	Buprenorphine (Suboxone)	*NULL*
12	Mohan	1234530852	male	45	JP nagar,mysore	5	Heroin and Opiate Addiction Mechanisms	*NULL*
13	Ranjan	1234598763	male	28	Udupi	12	Heroin and Opiate	*NULL*

rno	name	location	contact_no	website_url
1	Shri Maitri De-addiction Cum Rehab Center	Near Bidnal Cross,Sri Maitri Hospital Building, Sh...	8362242248	www.shrimaitrirehab.com
2	Karnataka Rehabilitation Center	Ashirwad Nagar, Sonam Layout, Visthar, Bengaluru, ...	*NULL*	www.karrehabcenter.com
3	Kripa Revival Center	No 1/1, Narayanaswamy Building, Dasarahalli Yelaha...	8064526462	www.kriparevival.com
4	Hope Recovery Center	Janatha Plot, Opp to KLS School, Piranwadi Villag...	9449205853	www.hoperecovery.com
5	Usiru Foundation(Deaddiction center)	Ring Rd, Srirampura University Layout, Mysuru, Kar...	7259759582	www.usirufound.com
6	4S QUIT drug de addiction rehabilitation center	144, Shyam Arcade, opp VSS International Public Sc...	9739868686	www.quitdrug.com
7	Sakthi De-addiction & Rehabilitation Centre	NO 111/5, Parvathi Road, Ramiah Complex, Kogilu Vi...	7795040240	www.sakthicenter.com
8	Cadabam's AMITHA: A Centre for Rehabilitation Care	Gulakamale Village, Near Kaggalipura, 17th Mile Po...	9611194949	www.cadabamsamitha.com
9	Higher Power Foundation	# 128, 560043, 10th Cross, Esther Enclave Layout, ...	9844014881	www.higherpower.com
10	Garuda Recovery & Rehabilitation Services	610, 12th Cross, Dr Shivrama Karanth Layout, Hegde...	9945176598	www.garudarehab.com
11	Abhayam	4, 3rd A Cross, Lake View Residency, Horamavu Agar...	*NULL*	www.abhayamcarerehab.com
[illegible]	[illegible]	Gokarna, Karnataka	[illegible]	[illegible]

vaccine_name	country	transmission_classification	manufacturer	cumulative_cases
AD5-nCoV	China	Cluster of cases	Casino biologics	86490
AZD1222	Sweden	Communty transmission	Astrazeneca	230514
BIBP-CorV	China	cluster of cases	Beijing institute of biological products	86490
BNT162	China	Cluster of cases	BioNtech	86490
coronavac	China	Cluster of cases	Sinovac	86490
covaxin	India	Cluster of cases	Bharath biotech	9266705
EpivacCorona	Russia	Cluster of cases	Vektor state research center of biotechnology	2162503
Gam-covid-vac	Russia	Cluster of cases	Gamaley national research center of microbiology	2162503
INO-4800	America	Community transmission	Inovio pharmaceuticals	13139882
LNP-nCoVsaRNA	London	Community transmission	Imperical college london	1574562
MRNA-1273	America	Community transmission	Moderna	13139882
NVX-CoV2373	America	Community transmission	Novavac	13139882
V590	Russia	Cluster of cases	Merck	2162503
VIR-7831	America	Community transmission	Vir biotechnology	13139882
Zycov-D	India	Cluster of cases	Zydus candila	9266705

Australia	Cricket,Badminton	Sydney	Dr. Catrin Goebel	Australian Sports Drug Testing Laboratory (ASDTL) ...	All
Austria	Cricket,Badminton	Seibersdorf	Dr.Gunter Gmeiner	Seibersdorf Labor GmbH Doping Control Laboratory A...	All
Belgium	Football,Handball	Ghent	Prof. Dr. Peter Van Eenoo	DoCoLab Universiteit Gent-UGent Technologiepark 30...	All
Brazil	Football	Rio de Janeiro	Prof.Dr.Henrique Marcelo	Brazilian Doping Control Laboratory-LBCD (Laborató...	All
Canada	Football	Montreal	Prof. Christiane Ayotte	Laboratoire de contrôle du dopage,INRS-Institut Ar...	All
Cuba	All	Havana	Mr.Rodney Montes de Oca Porto	Antidoping Laboratory,Sports Medicine Institute,Ca...	All
Finland	All	Helsinki	Dr.Tina Suominen	Helsinki Doping Control Laboratory,Forensic Toxico...	All
France	All	Paris	Dr.Magnus Ericsson	Agence Française de Lutte contre le Dopage (AFLD),...	All
Germany	All	Cologne	Prof.Mario Thevis	Institute of Biochemistry-German Sport University ...	All
Great Britain	All	London	Prof.Kim Wolff	Drug Control Centre,Kings College London,The Frank...	All
Greece	All	Athens	Dr.Ioannis Angelis	Doping Control Laboratory of Athens,Institute of B...	All
India	All	New Delhi	Dr.P.L.Sahu	National Doping Testing Laboratory(NDTL),Ministry ...	All
Italy	All	Roma	Prof. Francesco Botrè	Laboratorio Antidoping FMSI,Federazione Medico Spo...	All
Japan	All	Tokyo	Dr.Masato Okano	Anti-Doping Laboratory LSI Medience Corporation,3-...	All

Chapter 3

Normalization upto 3 NF

1NF: Each column should contain atomic values Entries like x,y, and w,x violate this rule. The column should contain values that are of the same type. Do not intermix different types of values in any column. Each column should have a unique name Same names lead to confusion at the time of data retrieval. The order in which data is saved doesnt matter Using SQL query you can easily fetch data in any order from a table.

2NF: Second Normal Form (2NF) is based on the concept of fully functional dependency. Second Normal Form applies to relations with composite keys, that is, relations with a primary key composed of two or more attributes. A relation with a single-attribute primary key is automatically in at least 2NF. A relation that is not in 2NF may suffer from the update anomalies. To be in second normal form, a relation must be in first normal form and the relation must not contain any partial dependency. A relation is in 2NF if it has No Partial Dependency, i.e., no non-prime attribute (attributes which are not part of any candidate key) is dependent on any proper subset of any candidate key of the table.

3NF: A relation will be in 3NF if it is in 2NF and no transition dependency exists. A relation is in third normal form if there is no transitive dependency for non-prime attributes as well as it is in second normal form. A relation is in 3NF if at least one of the following condition holds in every non-trivial function dependency X $>$ Y: X is a super key. Y is a prime attribute (each element of Y is part of some candidate key).

As there are 3 techniques to achieve First Normal Form, we opted for technique in which a multivalued or a composite attribute is divided into atomic attributes. As there was no functional dependency and transitive dependency, it was already in Second and Third Normal Form.

Chapter 4

System Implementation

4.1 Introduction to MySQL and DBMS

MySQL is a popular open-source relational database management system (RDBMS) that is developed, distributed and supported by Oracle Corporation. In MySQL, each individual records are stored as rows in a table. A table is used to store rows (records) of similar type. MySQL as the name suggests uses Structured Query Language (SQL) for database access. The schema can not be changed. The inputs following the given schema are only entered.

A **Database management system (DBMS)** refers to the technology for creating and managing databases. DBMS is a software tool to organize (create, retrieve, update, and manage) data in a database. The main aim of a DBMS is to supply a way to store up and retrieve database information that is both convenient and efficient. By data, we mean known facts that can be recorded and that have embedded meaning. Usually, people use software such as DBASE IV or V, Microsoft ACCESS, or EXCEL to store data in the form of a database. A datum is a unit of data. Meaningful data combined to form information.

Why we used MySQL is because MySQL is well-organized for its high performance,flexibility,reliable data protection,high availability and management ease. Proper data indexing can solve the issue with performance, facilitates interaction and ensure robustness. MySQL features a distinct storage-engine framework that facilitates system administrators to configure the MySQL database server for a flawless performance. It comes with the assurance of 24*7 uptime and offers a wide range of high availability solutions. With the average download and installation time being less than 30 minutes, MySQL means usability from day one. All the fears and worries that arise in an open source solution can be brought to an end with MYSQLs round-the-clock support. By considering all the above mentioned features we decided to use MySQL.

4.2 Relational Algebraic Queries

- Select
  select * from covid_19 where country="india";

- Project
  select distinct Country,Name from laws;

- Set Union
  select Country from agency where Games='Football' union select Country from laws where Year_of_enforcement>2000;

- Set Intersection
  select id,patient,name,gender,age,requires from patient left join treatment on patient.requires=treatment.name;

- Set Difference
  select adress from patient where not exists(select location from rehabs where patient.adress=rehabs.location);

- Cross Product
  select rehabs.rno,rehabs.name, cured_by.disorder_number,cured_by.rno from rehabs cross join cured_by;

- Rename
  select A.Games as Sports, A.Lab_Head as Laboratory_Incharge, A.Address as Location, A.doping as Tests from agency as A where A.Games="Football";

4.3 Queries designed using SQL commands

1. SIMPLE:
   - desc laws;
   - select * from drug_varieties;
   - update treatment set cost=10000 where duration='45 days';
   - alter table unwanted add useless int;

- alter table unwanted drop column useless;
- create table covid_19(vaccine_name varchar(20), country char(20), transmission_classification char(25), manufacturer char(25), cumulative_cases bigint, primary key(vaccine_name));
- delete from disorders where disorder_name='Ataxia';
- create table var_category(Variety_number int, category varchar(20), primary key(Variety_number), foreign key(Variety_number) references drug_varieties(Variety_number) on delete cascade);

2. NESTED:
   - select Disorder_number from disorders where Disorder_number in (select rno from cured_by where cured_by.rno=5);
   - select name from rehabs where rno in (select Disorder_number from cured_by where cured_by.Disorder_number>2);
   - select * from treatment where facilitates in (select rno from rehabs where name='Kripa Revival Center');
   - select Country from laws where Name in (select Name from restricts_to);
   - select Country from laws where Name in (select Name from restricts_to where Variety_number<5);
3. SET operations:
   - select Country from agency where Games='Football' union select Country from laws where Year_of_enforcement>2000;
   - select distinct Caused_by from disorders where Caused_by in (select Category from drug_varieties);
4. GROUP BY:
   - select count(cumulative_cases),transmission_classification from covid_19 group by transmission_classification;
   - select country,count(*) from covid_19 group by country;
5. ORDER BY:
   - select variety_number,example_1 from drug_varieties order by variety_number;
6. CHECK:
   - alter table covid_19 add check(cumulative_cases>=20000);
7. HAVING:
   - select * from treatment having cost>1000;

8. EXISTS and NOT EXISTS:
    - select adress from patient where not exists(select location from rehabs where patient.adress=rehabs.location);
    - select vaccine_name from covid_19 where exists(select vaccine_name from updates_on);
9. Aggregate functions:
    - select count(distinct City) from agency where Games='All';
    - select sum(cost) from treatment;
    - select max(cumulative_cases) as MAX_CASES from covid_19;
    - select min(cumulative_cases) as MIN_CASES from covid_19;
    - select avg(cumulative_cases) as AVG_CASES from covid_19;
10. Like, Between:
    - select Substance,Sweat from detected where Sweat like '%days';
    - select name,contact_no from rehabs where contact_no like '9_____';
    - select name,age from patient where age between 18 and 50;
11. Correlated queries:
    - select name from patient where age>30 and exists (select * from patient);
    - select country from covid_19 where cumulative_cases > (select avg(cumulative_cases) from covid_19 where vaccine_name=vaccine_name);
12. Views:
    - create view patient_rehab_treatment(Patient_Name, Rehab_Name, Treatment_Name, Treatment_Choice) as select p.name, r.name, t.name, t.choice from patient as p, rehabs as r, treatment as t where p.books=r.rno and p.requires=t.name;
13. Triggers:
    - create trigger upcase before insert on patient for each row set new.Name=upper(new.Name);
14. Stored Procedures:
    - create procedure SelectAllRehabs() select * from rehabs go;
    - call SelectAllRehabs;

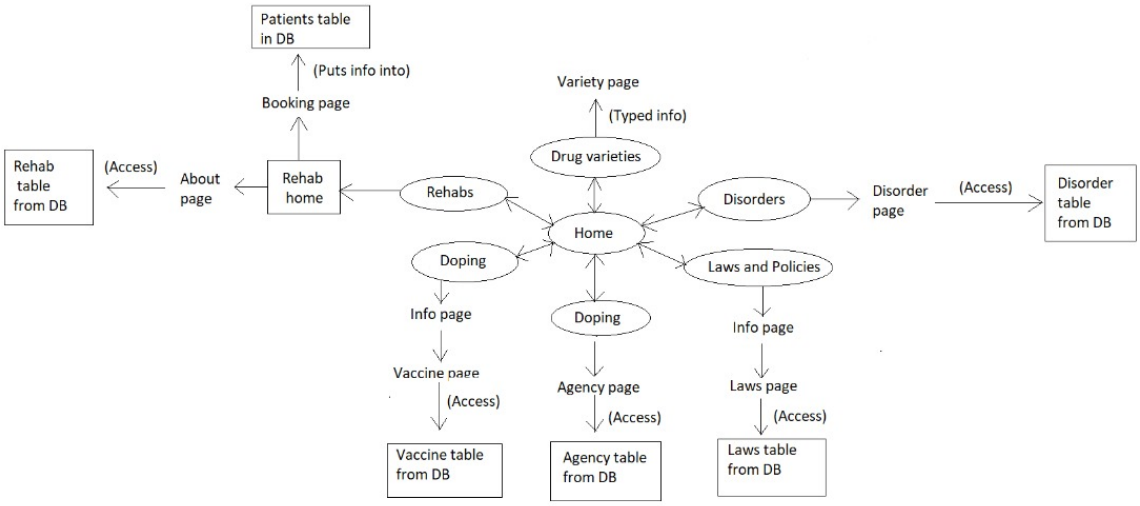
Chapter 5

System Testing and Results

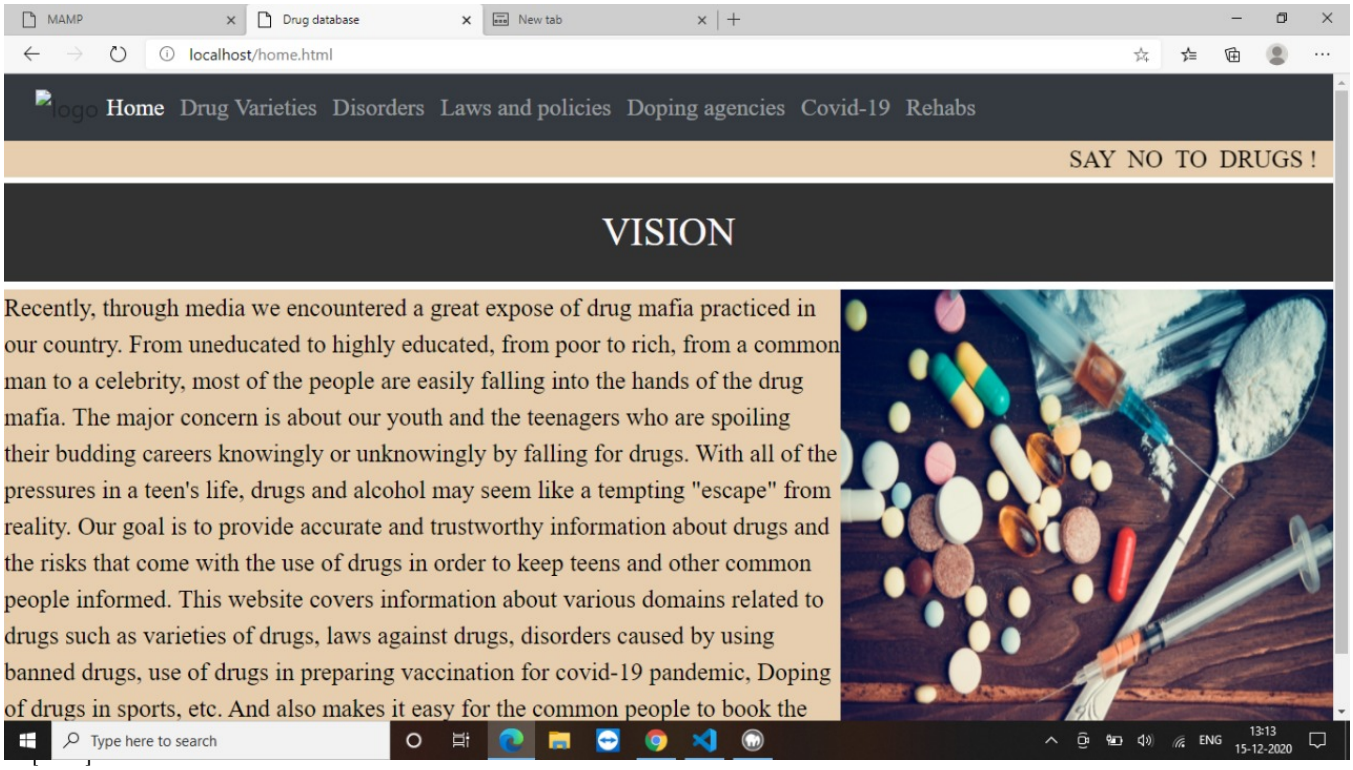
5.1 Architectural Design

The design of DBMS depends on its architecture. DBMS architecture helps in design, development, implementation, and maintenance of a database. A database stores critical information for a business. Selecting the correct Database Architecture helps in quick and secure access to this data. Architectural design elements give us an overall view of the software.It involves identifying the major components of the system and the communication between these components.The architectural design element is usually depicted as a set of interconnected subsystems, often derived from analysis packages within the requirements model. ArchitecturalStyle: Our software is based on data centered architecture.

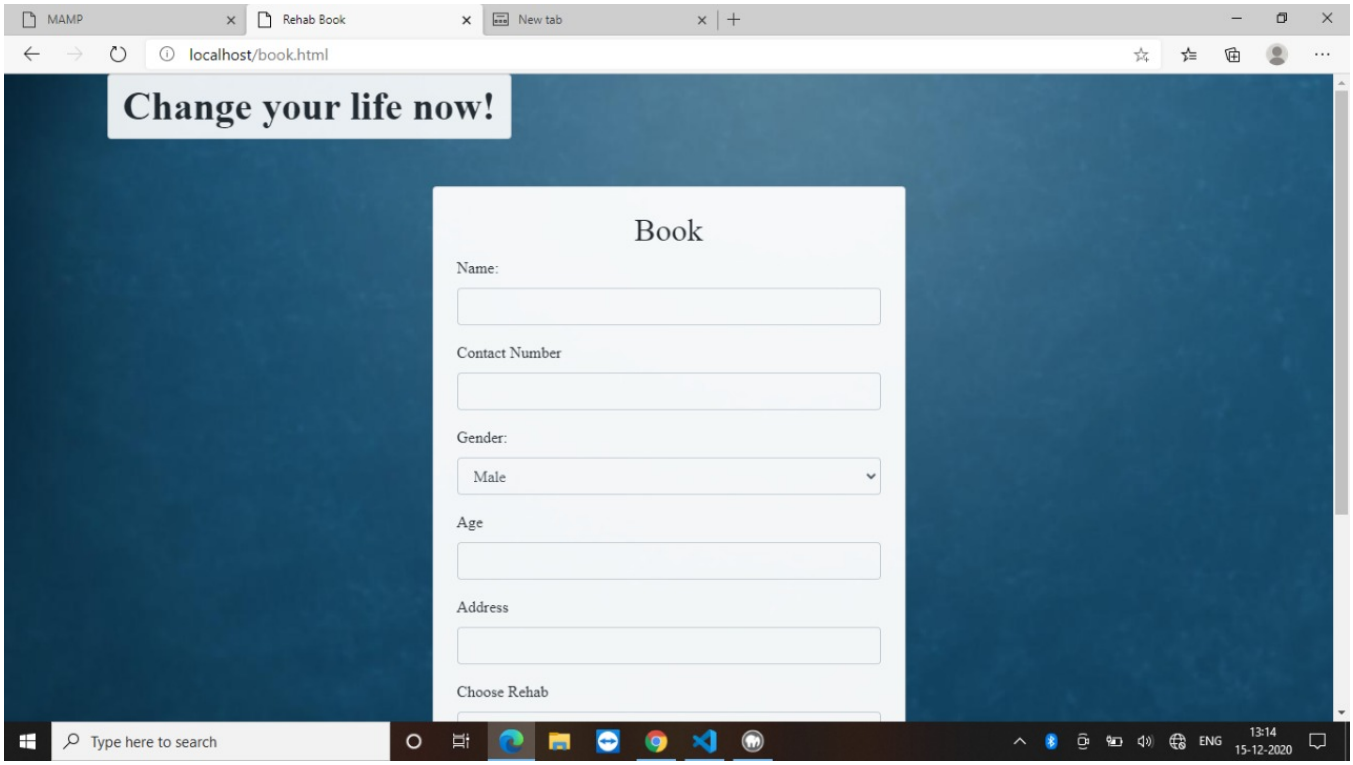
All the modules or components access this repository to store,retrieve or manipulate data as a result of which any changes made to the database will be updated and this updated version is available to all modules. Main purpose of data centered architecture is to achieve integrality of data. Data-centered architecture consists of different components that communicate through shared data repositories. The components access a shared data structure and are relatively independent, in that, they interact only through the data store. We are using mysql in the backend which acts as the data repository for our drug database. we can interact with this database to insert , update and delete data in the database. The data is consistent and integrality of data is also maintained. We are making use of mysql,phpmyadmin for backend and html,css with bootstrap framework for frontend design.



5.2 Graphical Description of Web Pages




MAMP
Covid-19
New tab
localhost/covid_19.html
Covid-19
Corona Virus SMS : Sanitizer | Mask | Social Distancing
Watch the first health workers receive Pfizer's Covid-19 vaccine in New York
Watch later
Share
CNBC
FIRST VACCINE SHOTS GIVEN TO HEALTH CARE WORKERS
Type here to search
ENG
13:13
15-12-2020


MAMP
Rehab Book
New tab
localhost/book.html
Change your life now!
Book
Name:
Contact Number
Gender:
Male
Age
Address
Choose Rehab
Type here to search
ENG
13:14
15-12-2020

5.3 Unit Testing and Results

Unit testing is a testing method which allows us to test the smallest,atomic programmable part of a database object. Using the component-level design description as a guide, important control paths are tested to uncover errors within the boundary of the module. This testing plays a key role in the modern database development. Unit testing adds a great worth to database project because unit tests are more reliable than manual test methods. It focuses on the internal processing logic and data structures within the boundaries of a component. In this portion of the report, we unveil various tests on the module and the features in response.

Test No	Feature	Input	Expected Output	Actual Output	Remarks
1.	Successful registration of addict	Enter correct email address,Name, Gender of the addict,Name and Location of the center	Addict information is registered.	Addict information is registered	Pass
2.	Unsuccessful registration of addict	Incorrect email address,Name, Gender of the adddict,Name and Location of the center	Addict information is not registered	Addict information is not registered	Pass

Website logo along with tagline

DRUGS DETOX

#DESTRUCTDRUGSCONSTRUCTLIVES

Chapter 6

Conclusion

This report attempted to provide a brief visualisation of the project **Drug Database**. Addiction doesnt discriminate, and it affects all types of people from different backgrounds. Being aware of the issue allows people from all walks of life to open up. Many people fall into the delusion that addiction only happens to people who live in certain parts of the country or have specific backgrounds. However, the truth of the matter is that addiction is a disease. This disease hurts people from all walks of life, some are just better at hiding it. We want anyone struggling with addiction to feel comfortable opening up. Opening up about the issue is the first step in choosing to live a better, sober life. In order to maintain a healthy society, this step of making a website that helps people become aware of drugs and also allowing them to book a rehabilitation center for their loved ones is taken.

ER Diagram and Relational Schema(as shown in section 2.1 and 2.2) were first developed in order to have clear idea of the project. Then we achieved Normalisation upto 3NF. Later we executed SQL queries(mentioned in section 4.2 and 4.3) in phpmyadmin and MySQL command line interface. For backend we used PHP, MySQL, MAMP server whereas for forntend we used HTML, CSS, Bootstrap and Javascript.

Chapter 7

References

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  - For learning HTML and Bootstrap
- www.stackoverflow.com
  - For doubts clarification
- https://youtu.be/4q0gYjAVonI
  - For PHP
- https://youtu.be/4q0gYjAVonI
  - For Backend
- https://www.youtube.com/watch?v=OOy764mDtiAab$_channel = DaniKrossing$
  - For Frontend