

DBMS Project Report - Doctor Prescription System

- [DBMS Project Report - Doctor Prescription System](#)
 - [Short Description and Scope of the Project](#)
 - [ER Diagram](#)
 - [Relational Schema](#)
 - [DDL statements - Building the database](#)
 - [Populating the Database](#)
 - [Join Queries](#)
- [Aggregate Functions](#)
- [Set Operations](#)
- [Functions and Procedures](#)
- [Triggers and Cursors](#)
- [Frontend](#)
 - [Home Page - Create Operation](#)
 - [Read Operation](#)
 - [Update Operation](#)
 - [SQL Query Page](#)
 - [Bill Page](#)

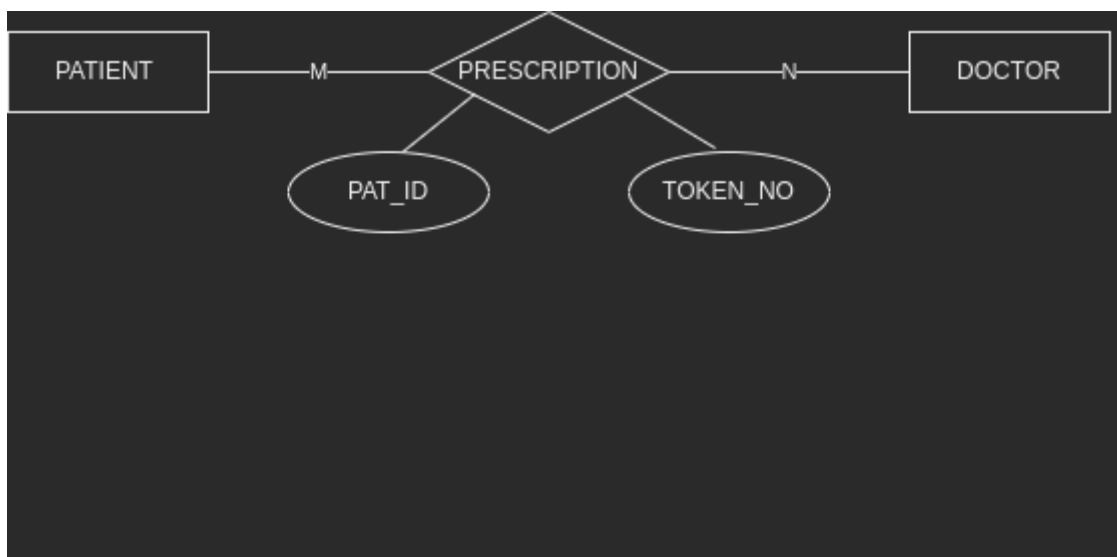
Short Description and Scope of the Project

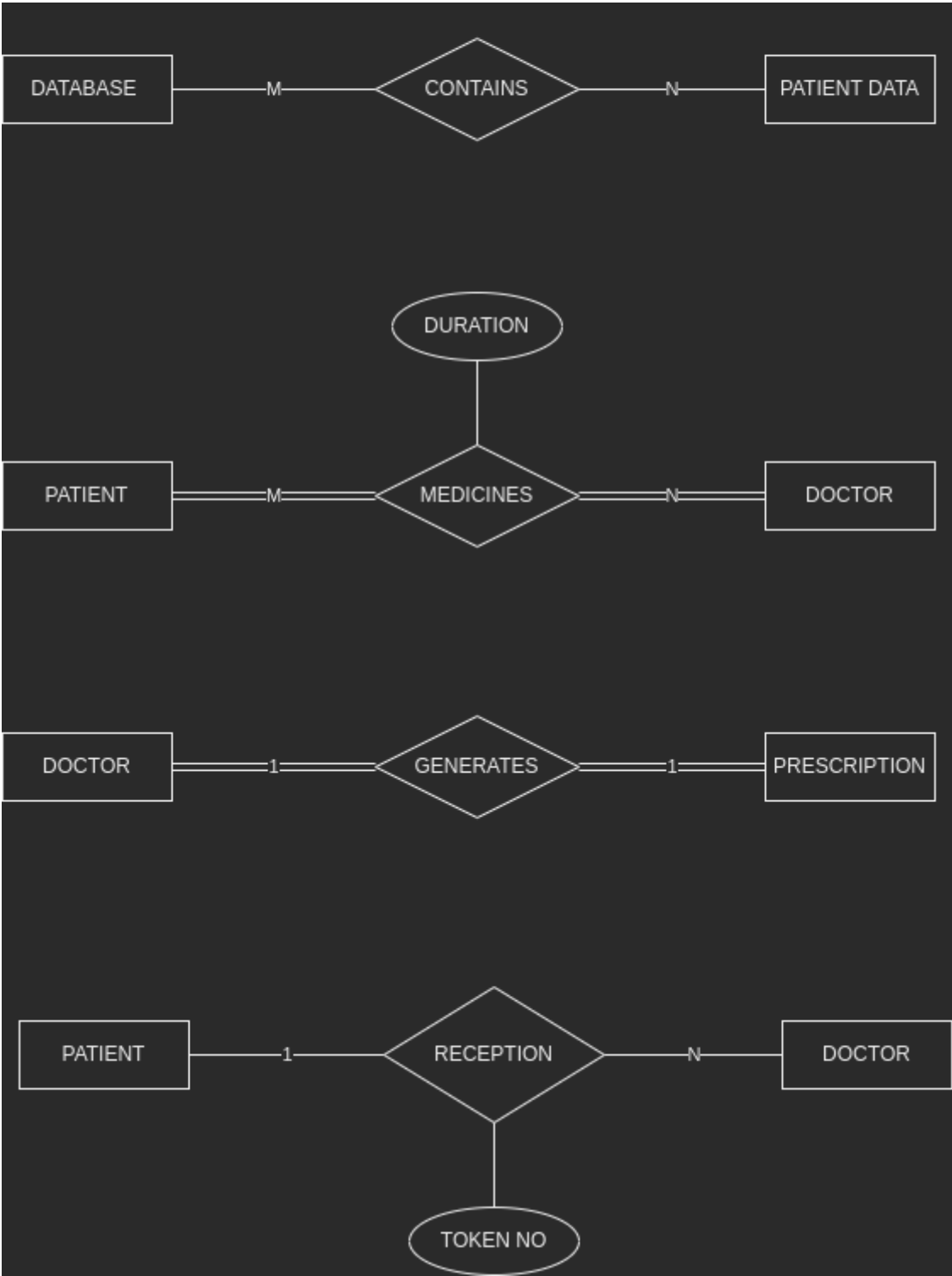
The main agenda of this project is to make a fast, responsive and robust Doctor Prescription System whereby Doctors can issue medicines and give advice in the form of prescription to Patients

Most of the already existing systems are handwritten and do not have a proper database for storing Doctor's Prescriptions and Bills. Storing in a database has a lot of advantages as the entire system is digitalized and electronically stored for future purposes.

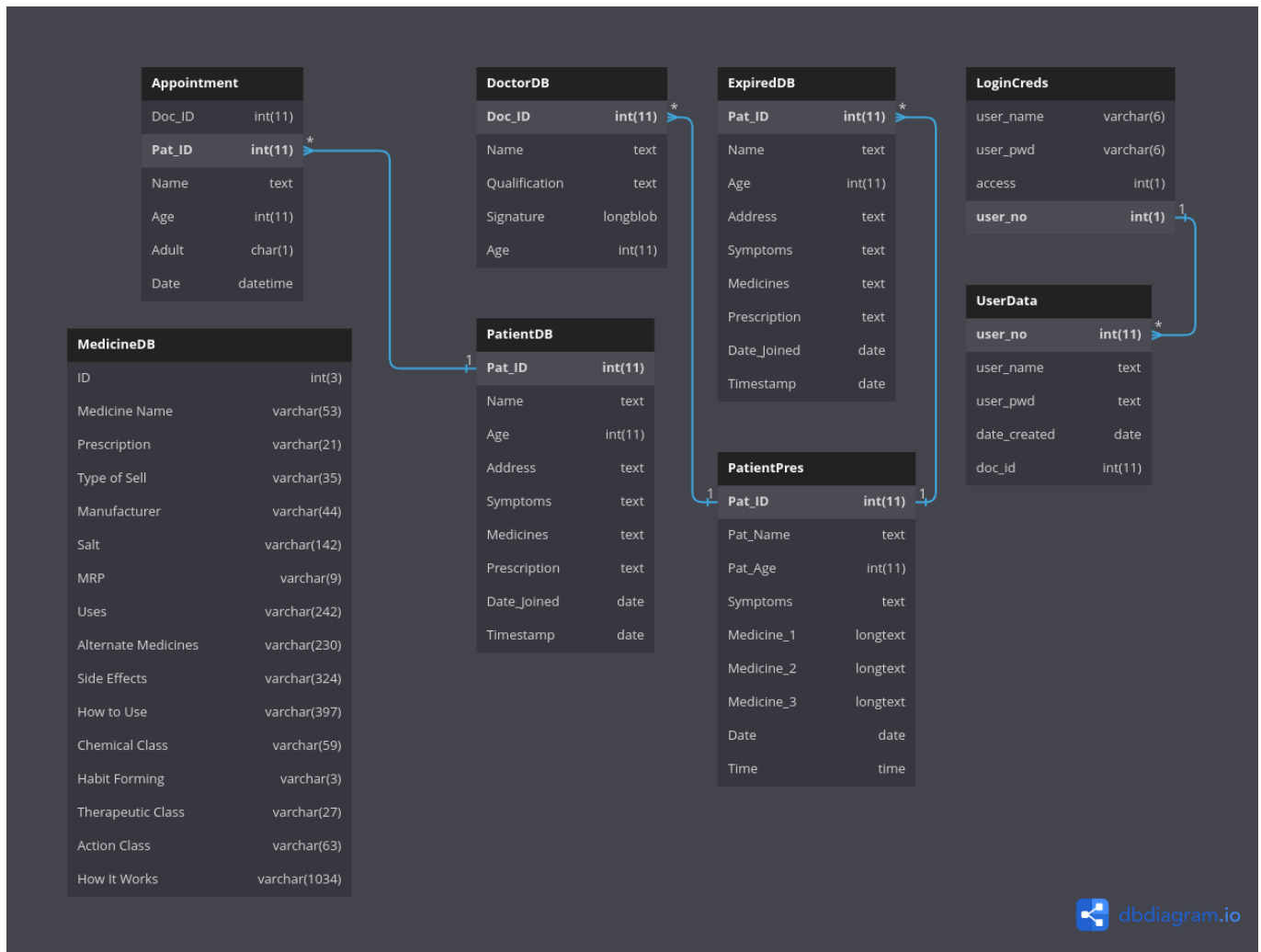
Due to the scaling properties of MySQL this system can work with a very large amount of data. Triggers and Procedures help in easing a lot of jobs that were initially cumbersome and tedious.

ER Diagram





Relational Schema



DDL statements - Building the database

```
CREATE TABLE `DoctorDB` ( `Pat_ID` int(11) NOT NULL, `Doc_id` int(11) NOT NULL, `Name` text NOT NULL, `Qualification` text NOT NULL, `Signature` longblob NOT NULL, `Age` int(11) NOT NULL) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4;
CREATE TABLE `ExpiredDB` ( `Pat_ID` int(11) NOT NULL, `Name` text DEFAULT NULL, `Age` int(11) DEFAULT NULL, `Address` text DEFAULT NULL, `Symptoms` text DEFAULT NULL, `Medicines` text DEFAULT NULL, `Prescription` text DEFAULT NULL, `Timestamp` date NOT NULL DEFAULT current_timestamp()) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4;
CREATE TABLE `LoginCreds` ( `user_name` varchar(6) DEFAULT NULL, `user_pwd` varchar(6) DEFAULT NULL, `access` int(1) DEFAULT NULL, `user_id` int(1) NOT NULL) ENGINE=InnoDB DEFAULT CHARSET=utf8;
---- Table structure for table `MedicineDB`
--CREATE TABLE `MedicineDB` ( `ID` int(3) DEFAULT NULL, `Medicine Name` varchar(53) DEFAULT NULL, `Prescription` varchar(21) DEFAULT NULL, `Type of Sell` varchar(35) DEFAULT NULL, `Manufacturer` varchar(44) DEFAULT NULL, `Salt` varchar(142) DEFAULT NULL, `MRP` varchar(8) DEFAULT NULL, `Uses` varchar(242) DEFAULT NULL, `Alternate Medicines` varchar(230) DEFAULT NULL, `Side Effects` varchar(324) DEFAULT NULL, `How to Use` varchar(397) DEFAULT NULL, `Chemical Class` varchar(59) DEFAULT NULL, `Habit Forming` varchar(3) DEFAULT NULL, `Therapeutic Class` varchar(27) DEFAULT NULL, `Action Class` varchar(63) DEFAULT NULL, `How It Works` varchar(1034) DEFAULT NULL) ENGINE=InnoDB DEFAULT CHARSET=utf8;
CREATE TABLE `PatientBill` ( `Pat_ID` int(11) DEFAULT
```

```

NULL, `Bill_ID` int(11) NOT NULL, `Medicine_1` text NOT NULL,
`Medicine_2` text NOT NULL, `Medicine_3` text NOT NULL, `Cost_1` int(11)
NOT NULL, `Cost_2` int(11) NOT NULL, `Cost_3` int(11) NOT NULL,
`Doctor_Fees` int(11) NOT NULL, `Total` int(11) NOT NULL) ENGINE=InnoDB
DEFAULT CHARSET=utf8mb4;CREATE TABLE `PatientData` ( `Pat_ID` int(11) NOT
NULL, `Pat_Name` text DEFAULT NULL, `Pat_Age` int(11) DEFAULT NULL,
`Adult` char(11) DEFAULT NULL, `Symptoms` text DEFAULT NULL,
`Prescription` text DEFAULT NULL, `Medicine_1` text DEFAULT NULL,
`Medicine_2` text DEFAULT NULL, `Medicine_3` text DEFAULT NULL,
`Timestamp` time DEFAULT current_timestamp()) ENGINE=InnoDB DEFAULT
CHARSET=utf8mb4;---- Indexes for table `DoctorDB`--ALTER TABLE `DoctorDB`
ADD PRIMARY KEY (`Pat_ID`), ADD UNIQUE KEY `Doc_id` (`Doc_id`);----
Indexes for table `ExpiredDB`--ALTER TABLE `ExpiredDB` ADD PRIMARY KEY
(`Pat_ID`);---- Indexes for table `LoginCreds`--ALTER TABLE `LoginCreds`
ADD PRIMARY KEY (`user_id`);---- Indexes for table `PatientBill`--ALTER
TABLE `PatientBill` ADD PRIMARY KEY (`Bill_ID`);---- Indexes for table
`PatientData`--ALTER TABLE `PatientData` ADD PRIMARY KEY (`Pat_ID`);----
AUTO_INCREMENT for dumped tables----- AUTO_INCREMENT for table `DoctorDB`-
-ALTER TABLE `DoctorDB` MODIFY `Doc_id` int(11) NOT NULL AUTO_INCREMENT,
AUTO_INCREMENT=6;---- AUTO_INCREMENT for table `PatientBill`--ALTER TABLE
`PatientBill` MODIFY `Bill_ID` int(11) NOT NULL AUTO_INCREMENT,
AUTO_INCREMENT=9;COMMIT;

```

Populating the Database

```

INSERT INTO `DoctorDB` (`Pat_ID`, `Doc_id`, `Name`, `Qualification`,
`Signature`, `Age`) VALUES(4160, 2, 'Aditya Balasubramaniam', '- Medicine
\r\n- MBBS',
0x89504e470d0a1a0a0000000d494844520000011d000000b10803000000ce1d99680000008
7504c5445fffff000000f9f9f9131313f2f2f2b1b1b1e7e7e7f7f7f7bdbdbdeeeeee7d7d7
929292dbdbdbc0c0c03a3a3ad0d0dadad8585857f7f7f6868689c9c9c6363631a1a1ae1e
1e1d1d1d1414141535353a5a5a5080808b7b7b77777772a2a2a3131314d4d4d8d8d8d707070
2222227b7b7b6565655b5b5b2e2e2e9f9f9f4949491717173e3e3e294054b50000081649444
154789ced9de97ab23a10801d3617764529105750d4cffbfbfe835a95bd04ec699cf0fe6a2d
f8847432992dc360d0d3d3d3d3d3d3d3c31c4359b5d5787b9a9e96da5f8f852934278ed
600b039fb61ec19c94f33fdafc7c406da68954c87b1b226d2f33377b90732fac341b1816627
222386cb71e12fc20e7ca9e40e6e180676323576d51a1a47c0affed16700c436eb2e09a1285
33c203889ae99d74ecd15fffc7f0c8631a4bd088b5303b91040fdfd1b0c570976cdd56b36b
2de04b332b7b80ed8f4bea015fc223257373a631f466c6af8d85390280359d916773b3b4cc0
d2c1cca7b0268bc0a3f1a2906b0a9efb2800b876b94281c97feb68087d9917c00da4575c3e6
607646225cdaf94c536821701f85b06f2938091b10de3a16e6d0d660b4158009f86f1d0b735
800bbd637071deefd046ce8a2572ff0f5bea13087e043d441ad9a00ef1b0b732847d876d1aa
67cc4ea84620ec727f223a78bdac09e9f8af3fc3f44d43610f193a4ece124079d3589823000
83a7d81f0afe317304cf28f6f181dad620feb7f0c853d12852a77fe06ac0ea8d95972060bb2
7acb50d84369ef763e58a15d5782d1cdce49d0f1aeab10b61dbf411049d7f96595252c861db
f624e48d7af6094318149db7bbf1d070b006bf54edc3a26a35feeda460212bf73440ca1b7de
6c4280687b8d23c70048d79510b5dc6c861eb97a0e575340ed6a49328b05ed1685b0116f71b
2f87a3bda9a2fa35d6a573044e356d033c75c5620b74c22c424ba573bc5de3b87c318b3765b
b14da2ef508e8778768476bb8d0ccff252cc299a2f6853073979197f63b4eed5e05a69d1265
86a88cf6085893945b36b63a9d864f3fc599dbf6f30cc61b7d8cf7548d5b47b5d83662ce3d0
67762591a482eba80be146f46984b9985a4c13cc6a27793adad9d133c1a0e9feadc3610ddac

```

```
7a7ab8e53fa15856724ce659ad0000000049454e44ae426082, 30), (7014, 4, 'A.K  
Goyal', '- MBBS \r\n- MD',
```

83a7d81f0afe317304cf28f6f181dad620feb7f0c853d12852a77fe06ac0ea8d95972060bb2
7acb50d84369ef763e58a15d5782d1cdce49d0f1aeab10b61dbf411049d7f96595252c861db
f624e48d7af6094318149db7bbf1d070b006bf54edc3a26a35feeda460212bf73440ca1b7de
6c4280687b8d23c70048d79510b5dc6c861eb97a0e575340ed6a49328b05ed1685b0116f71b
2f87a3bda9a2fa35d6a573044e356d033c75c5620b74c22c424ba573bc5de3b87c318b3765b
b14da2ef508e8778768476bb8d0ccff252cc299a2f6853073979197f63b4eed5e05a69d1265
86a88cf6085893945b36b63a9d864f3fc599dbf6f30cc61b7d8cf7548d5b47b5d83662ce3d0
67762591a482eba80be146f46984b9985a4c13cc6a27793adad9d133c1a0e9feadc3610ddac
2496193398725620debdc0945baeba719a75541bdb0ae4b8bca9ad3205317b8c31a4c7ee051
f9d831c9647616cbf70e86395ca078c2256cd2bf4eb086045fa81435375ed6bc99625f58094
6e364969d0baea34d44a4909a7aa20a904c4da14e7e6338aca1343409e7623696e3a32dd7c9
a0340a6169909595312f2788dd265506b9dd7c60d5c54c5d0fd1d429d18fc17793fccb7e10d
5099c07a8aa79663fc532ceb946177addc2da01b2d04650bf752df3552c871ae1b06041e9bf
318f7259d71c02588b59d91ad7d8d81a44223e43f1541dcf90c54beeda4bf98509c335f130a
62aa47945145e58e4f5484d597b0cd671f1ce61318329aecbd4a92ee6b4cea8baacdd01798c
6bc74a61c1b6a87e36f995b2ad7c7c33b1bc97780d45418569ce6d9749cef2732bf5ca188cc
43ce85aa5c932d20ad4cc31ad23c92db77d5475afb11d264a097396ebd639457dc9cf88e42c
69a172739b5ef591823eb4e1a6e46726e66c1bab4a27ebb779d1396800a6ccbee567029bdc9
fd615b6def82e532af643e937dc03a8891699e55b099a55b5099b7b9a34e4222c76931f472f
14cfed2bd258f6f7e73ee6c28c0c4a0862fefc4d859dfc4ccaa33d8b540288b9c8aa5e1e9d7
09f9386b95a2e874566ee3c333fdb63e985e4b99e309f4acfb15e7c25ebef09a1fb7fca49b
1f3f537f2d7a3e7d283ab92f93c9997c3b0fa7d2f4e02e9517457c2c3d47fc3c9e6412e366e
41dcb76a4515a1755bba8c818432aca25c37c9cb809250b4bcb58402be44d789e3824fdd8c3
1d9c9c12f75cca6a9a13b6a07215a298750a94399418c2976c4db889b7e34306bd18e40308f
37529879cac0c9147301e8405c32ff1c277b974c4ea5fdee98cf165244a1016056f5b25e3c1
e418a73675a718af5872e1a42f49c172896f8672aa467e59e65770612dfba470167b715f34e
6e3f947a5593f9903e1518ae793a4878739f4fcab72d62b423d067ecd1314cb9eb4d73a0ac5
7122391571b031feb57529b66f3053992a15aceaaab12fec610ca5e430b699aee6b6eb8edc9
a30fb8531b1835a62d42929251c406dd18f12632c35787229cbf7be7cd055f2f0f5b9990044
0b6b0342170e259faebe4f0e4cd6b7d046505f0b3ef2e1a29a187777a7d492b9d7a76ab3874
e0a7f386721988e0fb099ada653542940af5c2c64589c09bcb2a39b261dc314d7c5d5b35ba9
da905cc74fbf0a4969dfdb88359363d14297392f9cc1037ee5f6f60edbe538d50ba6395622
2ee1b5c814e11df8bb9c9d03cd853285b973be18968f20adee9d7c6c12413aa9a5aabb28c10
2701cd61da8184fefdf2c597c3a55e2776db1fb59a45aec3441c55ca05cc0a42c32313988b2b
fd8897487cfc6a8dfd09267bba1bc814a897f3a507dfaaa9c0b476af98bbab6cd6bec957d3e
f46f6e8cb92915bc06d469a39c31fae4de0b83ba2793c7cfec08f4ef0858f3a39527f4efdec
09e174e21d35b2ff88b0a9ed8d42ef784236b30a68ef5051c791246f931911a0e58df275144
a057b1848f364e5724eae6a73ce56c26d4bd73a6c83b7aa6b1a8fd087e8e1c5d6787f286114
70b6be0d036e8bcf01455de531655e85cd5a8ac285b0b5df8f1b112c20dd5e54bbe527d33ba
1d28e268c34a3850d50c4cb1be27b482034d34e28b23ffff34648b141b7f0c93e1c9a5ef621d
efe67159c9a37887138393d9c426ebcb24caeccc03b5a533f4ba37f0bcee72334f4b34a7b3e
e0476c14c150f869249361d564c1689c4ece406ff0964bdaea3044fc6cc4b47b1d220ec29f1
e7dca5176afc00f7bbab289b83302d3cceb8447e529c85e86549d96d08ec85e86d002bdc222
540e68df144f43b028c9c2b80708394aced420175a488fb6b0e35a1ba7718db5fcb47b94d10
ca2532f3729f40344a1ad3a7b0fc03bf56253409397b213e8bc05007b7a7a7a7a7a7a7a7a
7a7ab8e53fa15856724ce659ad0000000049454e44ae426082, 35);INSERT INTO
`ExpiredDB` (`Pat_ID`, `Name`, `Age`, `Address`, `Symptoms`, `Medicines`,
`Prescription`, `Timestamp`) VALUES(0, NULL, NULL, NULL, NULL, NULL, NULL,
'2022-11-22'),(1209, NULL, NULL, NULL, NULL, NULL, NULL, '2022-11-22'),
(3710, 'Anirudh ', 5000, NULL, ' - hand not able', NULL, '- get new hand',
'2022-11-22');INSERT INTO `LoginCreds` (`user_name`, `user_pwd`, `access`,
`user_id`) VALUES('ala', 'ala', 0, 1),('admin', 'admin', 1, 2),('adarsh',
'adarsh', 1, 3);INSERT INTO `MedicineDB` (`ID`, `Medicine Name`,
`Prescription`, `Type of Sell`, `Manufacturer`, `Salt`, `MRP`, `Uses`,


```

`Alternate Medicines`, `Side Effects`, `How to Use`, `Chemical Class`,
`Habit Forming`, `Therapeutic Class`, `Action Class`, `How It Works`)
VALUES(1, 'Augmentin 625 Duo Tablet', 'Prescription Required', '10 tablets
in 1 strip', 'Glaxo SmithKline Pharmaceuticals Ltd', 'Amoxycillin (500mg)
+ Clavulanic Acid (125mg)', '201.71', 'Treatment of Bacterial
infections', 'Moxikind-CV 625 Tablet,Moxiforce-CV 625 Tablet,Mega-CV 625
Tablet,Fightox 625 Tablet,Duet 625 Tablet', 'Vomiting,Nausea,Diarrhea',
'Take this medicine in the dose and duration as advised by your doctor.
Swallow it as a whole. Do not chew, crush or break it. Augmentin 625 Duo
Tablet is to be taken with food.', 'Not Listed', 'No', 'ANTI INFECTIVES',
'Not Listed', 'Augmentin 625 Duo Tablet is a combination of two medicines:
Amoxycillin and Clavulanic Acid. Amoxycillin is an antibiotic. It works
by preventing the formation of the bacterial protective covering which is
essential for the survival of bacteria. Clavulanic Acid is a beta-
lactamase inhibitor which reduces resistance and enhances the activity of
Amoxycillin against bacteria. '), (2, 'Azithral 500 Tablet', 'Prescription
Required', '5 tablets in 1 strip', 'Alembic Pharmaceuticals Ltd',
'Azithromycin (500mg)', '119.5', 'Treatment of Bacterial infections',
'Ibithral 500mg Tablet,Azibest 500mg Tablet,Zeethrom 500 Tablet,Trulimax
500mg Tablet,Zady 500 Tablet', 'Vomiting,Nausea,Abdominal pain,Diarrhea',
'Take this medicine in the dose and duration as advised by your doctor.
Swallow it as a whole. Do not chew, crush or break it. Azithral 500 Tablet
may be taken with or without food, but it is better to take it at a fixed
time.', 'Macrolides', 'No', 'ANTI INFECTIVES', 'Macrolides', 'Azithral 500
Tablet is an antibiotic. It works by preventing synthesis of essential
proteins required by bacteria to carry out vital functions. Thus, it stops
the bacteria from growing, and prevents the infection from spreading. '), (3,
'Ascoril LS Syrup', 'Prescription Required', '100 ml in 1 bottle',
'Glenmark Pharmaceuticals Ltd', 'Ambroxol (30mg/5ml) + Levosalbutamol
(1mg/5ml) + Guaifenesin (50mg/5ml)', '108', 'Treatment of Cough with
mucus', 'Solvin LS Syrup,Ambrodil-LX Syrup,Zerotuss XP Syrup,Capex LS
Syrup,Asthalin AX Syrup', 'Nausea,Vomiting,Diarrhea,Upset stomach,Stomach
pain,Allergic
reaction,Dizziness,Headache,Rash,Hives,Tremors,Palpitations,Muscle
cramp,Increased heart rate', 'Take this medicine in the dose and duration
as advised by your doctor. Check the label for directions before use.
Measure it with a measuring cup and take it by mouth. Shake well before
use. Ascoril LS Syrup may be taken with or without food, but it is better
to take it at a fixed time.', 'Not Listed', 'No', 'RESPIRATORY', 'Not
Listed', 'Ascoril LS Syrup is a combination of three medicines: Ambroxol,
Levosalbutamol and Guaifenesin, which relieves cough with mucus. Ambroxol
is a mucolytic which thins and loosens mucus (phlegm), making it easier to
cough out. Levosalbutamol is a bronchodilator. It works by relaxing the
muscles in the airways and widens airways. Guaifenesin is an expectorant
which decreases the stickiness of mucus (phlegm) and helps in its removal
from the airways. Together, they make breathing easier. '), (4, 'Allegra
120mg Tablet', 'Prescription Required', '10 tablets in 1 strip', 'Sanofi
India Ltd', 'Fexofenadine (120mg)', '198.93', 'Treatment of Sneezing and
runny nose due to allergies,Treatment of Allergic conditions', 'Lcfex
Tablet,Intrafen 120mg Tablet,Nexofex 120mg Tablet,Histafree 120
Tablet,Fexise 120mg Tablet', 'Headache,Drowsiness,Dizziness,Nausea',
'Take this medicine in the dose and duration as advised by your doctor.
Swallow it as a whole. Do not chew, crush or break it. Allegra 120mg Tablet
may be taken with or without food, but it is better to take it at a fixed

```

time.', 'Diphenylmethane Derivative', 'No', 'RESPIRATORY', 'H1 Antihistaminics (second Generation)', 'Allegra 120mg Tablet belongs to a class of medicines called antihistamines. It blocks the release of a chemical called histamine, which is responsible for causing inflammation and its associated symptoms such as itching, redness, swelling, and irritation.')(5, 'Avil 25 Tablet', 'Prescription Required', '15 tablets in 1 strip', 'Sanofi India Ltd', 'Pheniramine (25mg)', '9.97', 'Treatment of Allergic conditions', 'Eralet 25mg Tablet, Apvil 25mg Tablet', 'Sleepiness, Dryness in mouth', 'Take this medicine in the dose and duration as advised by your doctor. Swallow it as a whole. Do not chew, crush or break it. Avil 25 Tablet is to be taken with food.', 'Pyridines Derivatives', 'No', 'RESPIRATORY', 'H1 Antihistaminics (First Generation)', 'Avil 25 Tablet is an antiallergic medication. It works by blocking the action of a chemical messenger (histamine). This relieves symptoms of severe allergic reactions due to insect bite/sting, certain medicines, hives (rashes, swelling, etc.))(6, 'Aciloc 150 Tablet', 'Prescription Required', '30 tablets in 1 strip', 'Cadila Pharmaceuticals Ltd', 'Ranitidine (150mg)', '36.96', 'Treatment of Gastroesophageal reflux disease (Acid reflux), Treatment of Peptic ulcer disease', 'Ranitas 150mg Tablet, Zynol 150mg Tablet, Ranitin 150 Tablet, Ranizem 150mg Tablet, Histac 150 Tablet', 'Sleepiness, Headache, Tiredness, Constipation, Diarrhea', 'Take this medicine in the dose and duration as advised by your doctor. Swallow it as a whole. Do not chew, crush or break it. Aciloc 150 Tablet may be taken with or without food, but it is better to take it at a fixed time.', 'Aralkylamines Derivative', 'No', 'GASTRO INTESTINAL', 'H2 Receptor Blocker', '))(7, 'Atarax 25mg Tablet', 'Prescription Required', '15 tablets in 1 strip', 'Dr Reddy's Laboratories Ltd', 'Hydroxyzine (25mg)', '77.75', 'Treatment of Anxiety, Treatment of Skin conditions with inflammation & itching', 'Hydin 25mg Tablet, Hizet 25mg Tablet, Hyzox 25 Tablet, Hydil 25mg Tablet, Zyzine 25mg Tablet', 'Sedation, Nausea, Vomiting, Upset stomach, Constipation', 'Take this medicine in the dose and duration as advised by your doctor. Swallow it as a whole. Do not chew, crush or break it. Atarax 25mg Tablet may be taken with or without food, but it is better to take it at a fixed time.', 'Piperazine Derivative', 'No', 'RESPIRATORY', 'H1 Antihistaminics (First Generation)', 'Atarax 25mg Tablet is an antihistaminic medication. In allergy, it works by blocking the action of a chemical messenger (histamine). This relieves allergy symptoms such as itching, swelling, and rashes. In short-term anxiety, it works by decreasing the activity in brain, thereby helping you feel relaxed/sleepy.))(8, 'Amoxyclav 625 Tablet', 'Prescription Required', 'strip of 6 tablets', 'Abbott', 'Amoxycillin (500mg) + Clavulanic Acid (125mg)', '113.25', 'Treatment of Bacterial infections', 'Moxikind-CV 625 Tablet, Moxiforce-CV 625 Tablet, Mega-CV 625 Tablet, Fightox 625 Tablet, Duet 625 Tablet', 'Vomiting, Nausea, Diarrhea', 'Take this medicine in the dose and duration as advised by your doctor. Swallow it as a whole. Do not chew, crush or break it. Amoxyclav 625 Tablet is to be taken with food.', 'Not Listed', 'No', 'ANTI INFECTIVES', 'Not Listed', 'Amoxyclav 625 Tablet is a combination of two medicines: Amoxycillin and Clavulanic Acid. Amoxycillin is an antibiotic. It works by preventing the formation of the bacterial protective covering which is essential for the survival of bacteria. Clavulanic Acid is a beta-lactamase inhibitor which reduces resistance and enhances the activity of Amoxycillin against bacteria.))(9, 'Anovate Cream', 'Prescription Required', '20 gm in 1 tube', 'USV Ltd', 'Phenylephrine (0.10% w/w) + Beclometasone (0.025% w/w) + Lidocaine (2.50%

w/w),', '122', 'Treatment of Piles,', 'Pilo GO Cream,PileClear Cream,Proctosedyl BD Cream,', 'Application site reactions (burning, irritation, itching and redness)', 'This medicine is for external use only. Use it in the dose and duration as advised by your doctor. Check the label for directions before use. Clean and dry the affected area and apply the cream. Wash your hands after applying, unless hands are the affected area.', 'Not Listed', 'No', 'DERMA', 'Not Listed', 'Anovate Cream is a combination of three medicines: Phenylephrine, Beclometasone and Lidocaine, which treats piles. Phenylephrine is a decongestant which shrinks the blood vessels in the affected area of skin and decreases swelling. Beclometasone is a steroid which blocks the production of certain chemical messengers (prostaglandins) that make the skin red, swollen and itchy. Lidocaine is a local anesthetic which works by blocking pain signals from the nerves to the brain thereby decreasing pain sensation. '), (10, 'Avomine Tablet', 'Prescription Required', 'strip of 10 tablets', 'Abbott', 'Promethazine (25mg)', '50.89', 'Treatment of Nausea,Treatment of Vomiting,Treatment of Allergic conditions,Treatment of Motion sickness,', 'Propazine Tablet,Progene 25mg Tablet,Proz 25mg Tablet,Prometh 25mg Tablet,Emin 25mg Tablet,', 'Dryness in mouth,Blurred vision,Headache,Dizziness,', 'Take this medicine in the dose and duration as advised by your doctor. Swallow it as a whole. Do not chew, crush or break it. Avomine Tablet may be taken with or without food, but it is better to take it at a fixed time.', 'Phenothiazine Derivative', 'No', 'GASTRO INTESTINAL', 'H1 Antihistaminics (First Generation)', 'Avomine Tablet is an antiallergic medication. When your body is exposed to an allergen (pollen, animal dander, house dust etc.), it produces a chemical called histamine. This causes watery eyes, runny or blocked nose, sneezing, skin rashes, itching etc. Avomine Tablet works by blocking the action of histamine, thereby relieving these symptoms. It also works directly on several areas of the brain to prevent nausea/vomiting and help you feel more relaxed. '), (11, 'Allegra-M Tablet', 'Prescription Required', '10 tablets in 1 strip', 'Sanofi India Ltd', 'Montelukast (10mg) + Fexofenadine (120mg)', '228.46', 'Treatment of Sneezing and runny nose due to allergies,', 'Emlukast-FX Tablet,Fixar 10mg/120mg Tablet,Histakind-M Tablet,Histafree-M Tablet,Spiromont-F Tablet,', 'Nausea,Diarrhea,Vomiting,Skin rash,Flu-like symptoms,Headache,Drowsiness,Dizziness,', 'Take this medicine in the dose and duration as advised by your doctor. Swallow it as a whole. Do not chew, crush or break it. Allegra-M Tablet may be taken with or without food, but it is better to take it at a fixed time.', 'Not Listed', 'No', 'RESPIRATORY', 'Not Listed', 'Montelukast is a leukotriene antagonist. It works by blocking the action of a chemical messenger called leukotriene. This reduces inflammation (swelling) in the airways and nose and improves symptoms. Fexofenadine is an antiallergic which blocks the action of another chemical messenger (histamine) responsible for runny nose, watery eyes and sneezing. '), (12, 'Alprax 0.25 Tablet', 'Prescription Required', 'strip of 15 tablets', 'Torrent Pharmaceuticals Ltd', 'Alprazolam (0.25mg)', '29', 'Treatment of Anxiety,Treatment of Panic disorder,', 'Alltop 0.25mg Tablet,Alprasafe 0.25mg Tablet,Nindra 0.25mg Tablet,Alora 0.25mg Tablet,Alp 0.25mg Tablet,', 'Lightheadedness,Drowsiness,', 'Take this medicine in the dose and duration as advised by your doctor. Swallow it as a whole. Do not chew, crush or break it. Alprax 0.25 Tablet may be taken with or without food, but it is better to take it at a fixed time.', 'Benzodiazepines Derivative', 'Yes', 'NEURO CNS', 'Benzodiazepines', 'Alprax 0.25 Tablet is a benzodiazepine. It works by increasing the action

of a chemical messenger (GABA) which suppresses the abnormal and excessive activity of the nerve cells in the brain.),(13, 'Arkamin Tablet', 'Prescription Required', '30 tablets in 1 strip', 'Torrent Pharmaceuticals Ltd', 'Clonidine (100mcg)', '66.05', 'Treatment of Hypertension (high blood pressure)', 'Albamine 100mcg Tablet, Arkapres 100 Tablet, Cloud 100mcg Tablet, Closidin 100mcg Tablet, Cata-Dict 0.1 Tablet', 'Dizziness, Dryness in mouth, Constipation, Headache, Nausea, Fatigue, Insomnia (difficulty in sleeping)', 'Take this medicine in the dose and duration as advised by your doctor. Swallow it as a whole. Do not chew, crush or break it. Arkamin Tablet may be taken with or without food, but it is better to take it at a fixed time.', 'Imidazoline derivative', 'No', 'CARDIAC', 'Alpha 2-adrenoceptors agonist (Central sympatholytics)', 'Arkamin Tablet is an alpha-2 agonist. It works by relaxing blood vessels which makes the heart more efficient at pumping blood around the body.),(14, 'Alkasol Oral Solution', 'N', 'bottle of 100 ml Oral Solution', 'Stadmed Pvt Ltd', 'Disodium Hydrogen Citrate (1.4gm/5ml)', '115.14', 'Treatment of Gout, Treatment of Kidney stone', 'Stomach pain, Tiredness, Diarrhea, Nausea, Vomiting, Frequent urge to urinate', 'Take this medicine in the dose and duration as advised by your doctor. Check the label for directions before use. Measure it with a measuring cup and take it by mouth. Shake well before use. Alkasol Oral Solution may be taken with or without food, but it is better to take it at a fixed time.', 'Carboxylic acid derivative', 'No', 'UROLOGY', 'Uricosuric agent-gout', 'Alkasol Oral Solution is a urine alkalizer. It works by increasing the pH of urine which makes it less acidic. This helps the kidneys get rid of excess uric acid, thereby preventing gout and certain types of kidney stones.),(15, 'Augmentin Duo Oral Suspension', 'Prescription Required', '30 ml in 1 bottle', 'Glaxo SmithKline Pharmaceuticals Ltd', 'Amoxycillin (200mg) + Clavulanic Acid (28.5mg)', '60.82', 'Treatment of Resistance Tuberculosis (TB), Treatment of Bacterial infections', 'Goldclav Oral Suspension, Moxikind-CV Dry Syrup, Tervis DS Oral Suspension, Bestomax Dry Syrup, Amoxyril-CV Dry Syrup', 'Nausea, Vomiting, Abdominal pain, Diarrhea, Allergy, Skin rash', 'Take this medicine in the dose and duration as advised by your doctor. Check the label for directions before use. Measure it with a measuring cup and take it by mouth. Shake well before use. Augmentin Duo Oral Suspension is to be taken with food.', 'Not Listed', 'No', 'ANTI INFECTIVES', 'Not Listed', 'Augmentin Duo Oral Suspension is an antibiotic. It has two active agents, amoxycillin and clavulanic acid. Amoxycillin works by preventing the formation of the bacterial protective covering (cell wall) essential for the survival of the bacteria. Whereas, clavulanic acid serves a special purpose of inhibiting an enzyme (beta-lactamase) that is produced by resistant bacteria. This makes the combination of amoxycillin and clavulanic acid an effective line of treatment for many types of infections.');

```
INSERT INTO `PatientBill`
(`Pat_ID`, `Bill_ID`, `Medicine_1`, `Medicine_2`, `Medicine_3`, `Cost_1`,
`Cost_2`, `Cost_3`, `Doctor_Fees`, `Total`) VALUES(NULL, 1, 'Aciloc 150 Tablet', 'Atarax 25mg Tablet', 'Allegra-M Tablet', 37, 78, 228, 50, 393),
(NULL, 2, 'Avil 25 Tablet', 'Atarax 25mg Tablet', 'Nikoran 5 Tablet', 10, 78, 365, 50, 503),
(NULL, 3, 'Aciloc 150 Tablet', 'Atarax 25mg Tablet', 'Allegra-M Tablet', 37, 78, 228, 100, 443),
(NULL, 4, 'Aciloc 150 Tablet', 'Atarax 25mg Tablet', 'Allegra-M Tablet', 37, 78, 228, 100000, 100343),
(1166, 5, 'Augmentin 625 Duo Tablet', 'Augmentin 625 Duo Tablet', 'Augmentin 625 Duo Tablet', 202, 202, 202, 50, 655),
(1166, 6, 'Augmentin 625 Duo Tablet', 'Augmentin 625 Duo Tablet', 'Augmentin 625 Duo Tablet',
```

```
202, 202, 202, 50, 655),(3238, 7, 'Augmentin 625 Duo Tablet', 'Augmentin
625 Duo Tablet', 'Augmentin 625 Duo Tablet', 202, 202, 202, 50, 655),(3710,
8, 'Augmentin 625 Duo Tablet', 'Levocet Tablet', 'Allegra-M Tablet', 202,
47, 228, 5000, 5477);INSERT INTO `PatientData` (`Pat_ID`, `Pat_Name`,
`Pat_Age`, `Adult`, `Symptoms`, `Prescription`, `Medicine_1`, `Medicine_2`,
`Medicine_3`, `Timestamp`) VALUES(2580, 'Shenoy', 20, '1', '', NULL, NULL,
NULL, NULL, '00:00:00'),(3238, 'Navin Shrinivas', 120, '1', '', NULL,
'Augmentin 625 Duo Tablet', 'Augmentin 625 Duo Tablet', 'Augmentin 625 Duo
Tablet', '00:00:00'),(4160, 'adarsh Liju abraham', 19, '1', '', NULL, NULL,
NULL, NULL, '00:00:00'),(5148, 'adarsh', 56, NULL, 'sdgsdfg', 'sfdgsfdg',
NULL, NULL, NULL, '21:49:48'),(5623, 'yggk', 134, '1', '', NULL, NULL,
NULL, NULL, '00:00:00'),(6733, 'adarsh', 56, 'A', 'sdgsdfg', 'sfdgsfdg',
NULL, NULL, NULL, '21:52:01'),(7014, 'adarsh', 190, '1', '', NULL, NULL,
NULL, NULL, '00:00:00'),(9182, 'adarsh Liju abraham', 19, '1', '', NULL,
NULL, NULL, NULL, '00:00:00'),(9425, 'adarsh Liju abraham', 19, '1', '',
NULL, NULL, NULL, NULL, '00:00:00');
```

Join Queries

```
-- Simple Join
SELECT * FROM PatientPres JOIN PatientData WHERE PatientPres.Pat_Age =
PatientData.Pat_Age;

-- INNER JOIN
SELECT * FROM PatientPres INNER JOIN PatientData ON PatientPres.Pat_Age =
PatientData.Pat_Age;

-- LEFT JOIN
SELECT * FROM PatientPres LEFT JOIN PatientData ON PatientPres.Pat_Age =
PatientData.Pat_Age;

-- RIGHT JOIN
SELECT * FROM PatientPres RIGHT JOIN PatientData ON PatientPres.Pat_Age =
PatientData.Pat_Age;

-- CROSS JOIN
SELECT * FROM PatientPres CROSS JOIN PatientData;
```

Aggregate Functions

1. Count all the patients that paid their bills - **COUNT**

```
SELECT COUNT(Pat_ID) FROM `PatientBill`;
```

1. Maximum Doctor fees - **MAX**

```
SELECT MAX(Doctor_Fees) FROM `PatientBill`;
```

1. Average of Total Bill - **AVG**

```
SELECT AVG(Total) FROM `PatientBill`;
```

1. Concatenate 3 Medicines to a single String - **GROUP_CONCAT**

```
SELECT GROUP_CONCAT(Medicine_1,Medicine_2,Medicine_3) FROM `PatientData`  
WHERE 1;
```

Set Operations

Showcase at least 4 Set Operations queries

```
-- UNION  
SELECT Pat_Name FROM PatientPres UNION SELECT Pat_ID FROM PatientData;  
  
-- UNION ALL  
SELECT Pat_Name FROM PatientPres UNION ALL SELECT Pat_ID FROM PatientData;  
  
-- INTERSECT  
SELECT Pat_Name FROM PatientPres INTERSECT SELECT Pat_Name FROM  
PatientData;  
  
-- EXCEPT  
SELECT Pat_Name FROM PatientPres EXCEPT SELECT Pat_Name FROM PatientData;
```

Functions and Procedures

1. Function to check if the person is senior citizen or not

```
DELIMITER $$  
CREATE DEFINER=`ala`@`localhost` FUNCTION `isSenior`(`age` INT) RETURNS  
char(50) CHARSET utf8mb4  
    DETERMINISTIC  
RETURN IF(age>60,"Senior Citizen","Not Senior Citizen")$$  
DELIMITER ;
```

1. Procedure to return payments greater than 2000 rupees

```
DELIMITER $$
CREATE DEFINER=`ala`@`localhost` PROCEDURE `huge_payments`()
BEGIN
SELECT * FROM PatientBill WHERE PatientBill.Total>2000;
END$$
DELIMITER ;
```

1. Display All senior citizens by integrating the function

```
DELIMITER $$
CREATE DEFINER=`ala`@`localhost` PROCEDURE `senior_citizens`()
BEGIN
SELECT *,isSenior(PatientData.Pat_Age) FROM PatientData;
END$$
DELIMITER ;
```

Triggers and Cursors

1. Create a backup of Data when a patient has expired

```
CREATE TRIGGER `death` BEFORE DELETE ON `PatientData`
FOR EACH ROW BEGIN
INSERT into ExpiredDB(Pat_ID,Name,Age,Symptoms,Prescription) VALUES
(old.Pat_ID,old.Pat_Name,old.Pat_Age,old.Symptoms,old.Prescription);
END
```

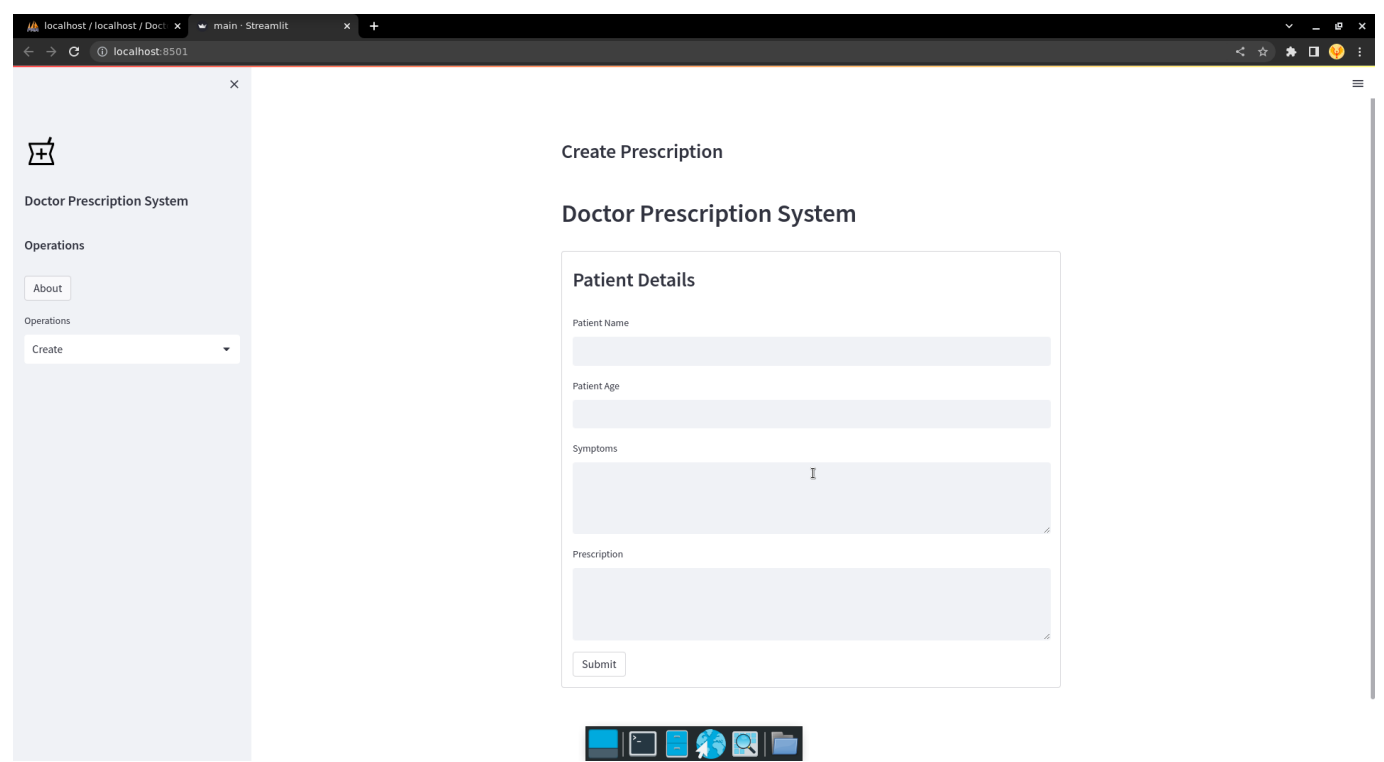
1. Classify Adult/Child based on Patient Age

```
CREATE TRIGGER `age_verify` BEFORE INSERT ON `PatientData`
FOR EACH ROW IF new.`Pat_Age` < 18 then set new.`Adult` = 'C';
ELSEIF new.`Pat_Age` > 18 then set new.`Adult` = 'A';
END IF
```

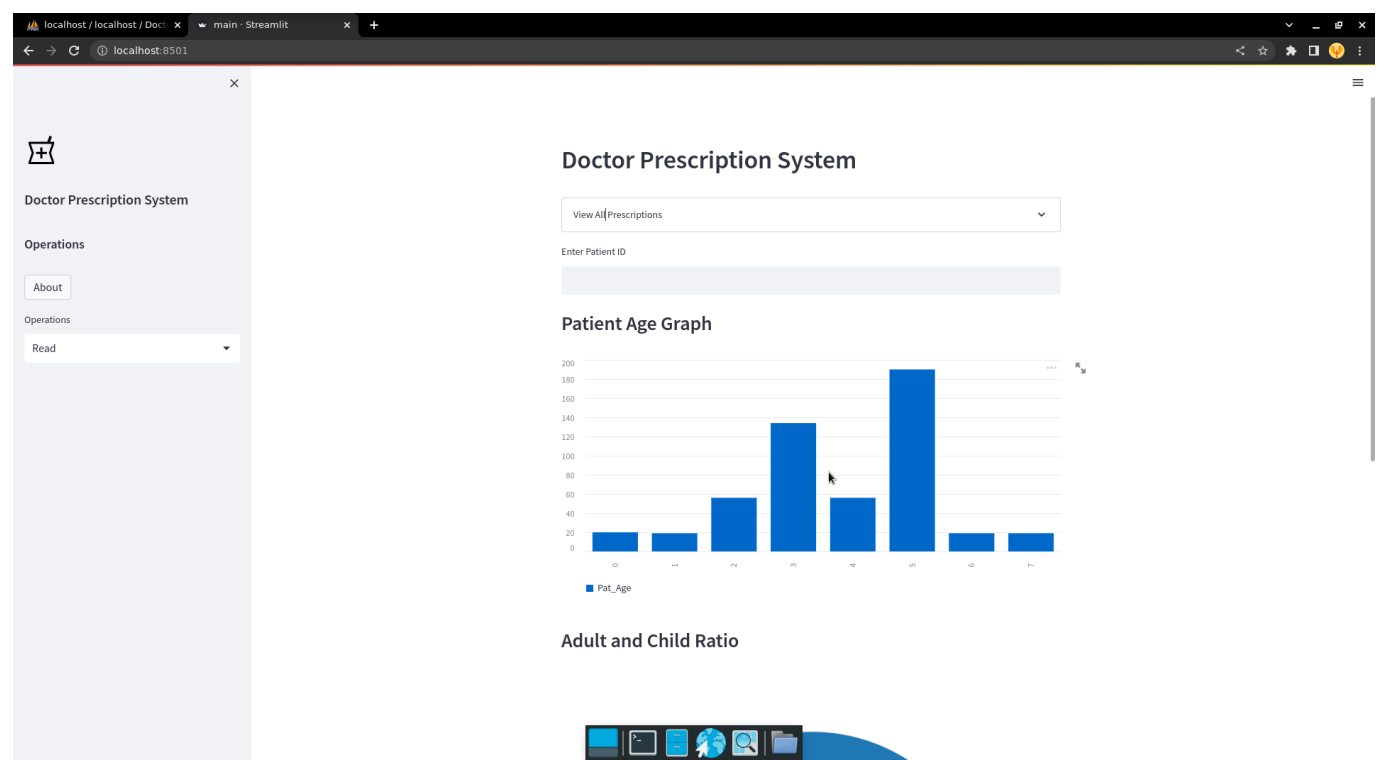
Frontend

The Frontend was made using `streamlit` and `pymysql` using `python` as the programming language

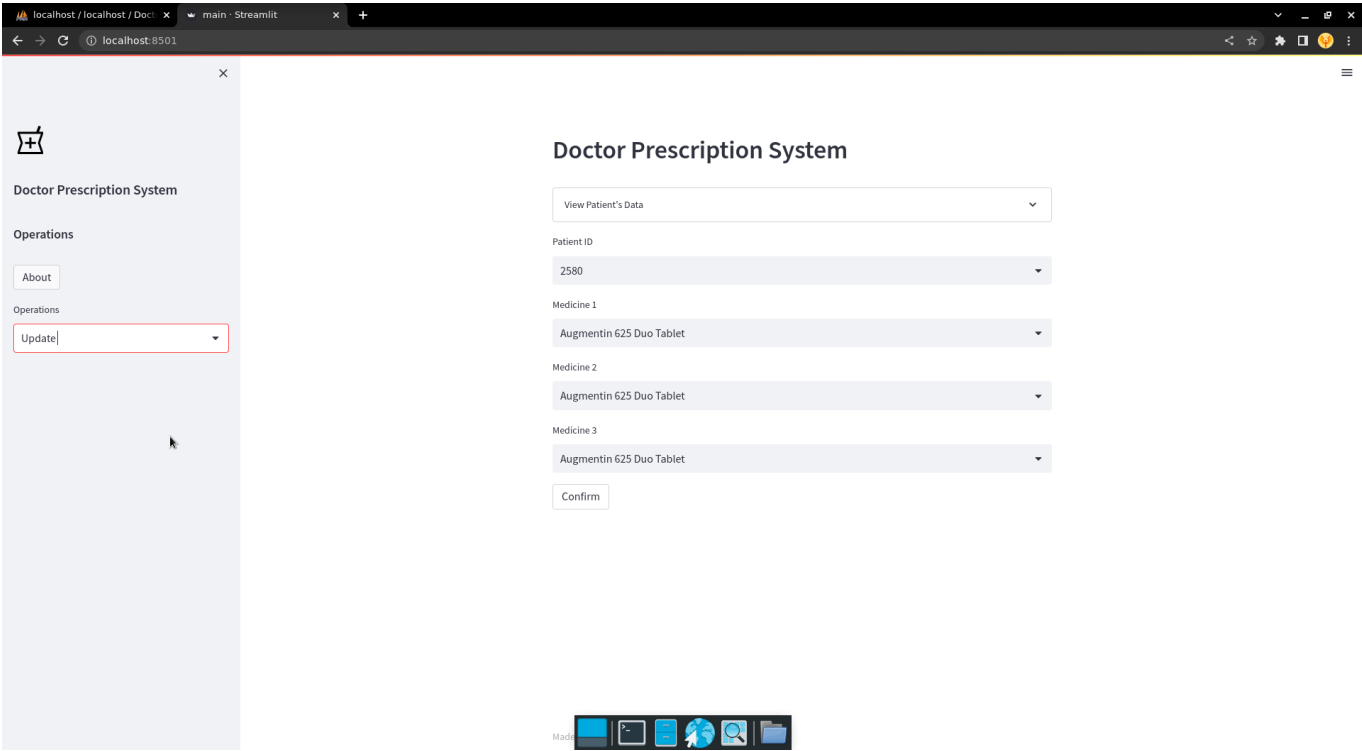
Home Page - Create Operation



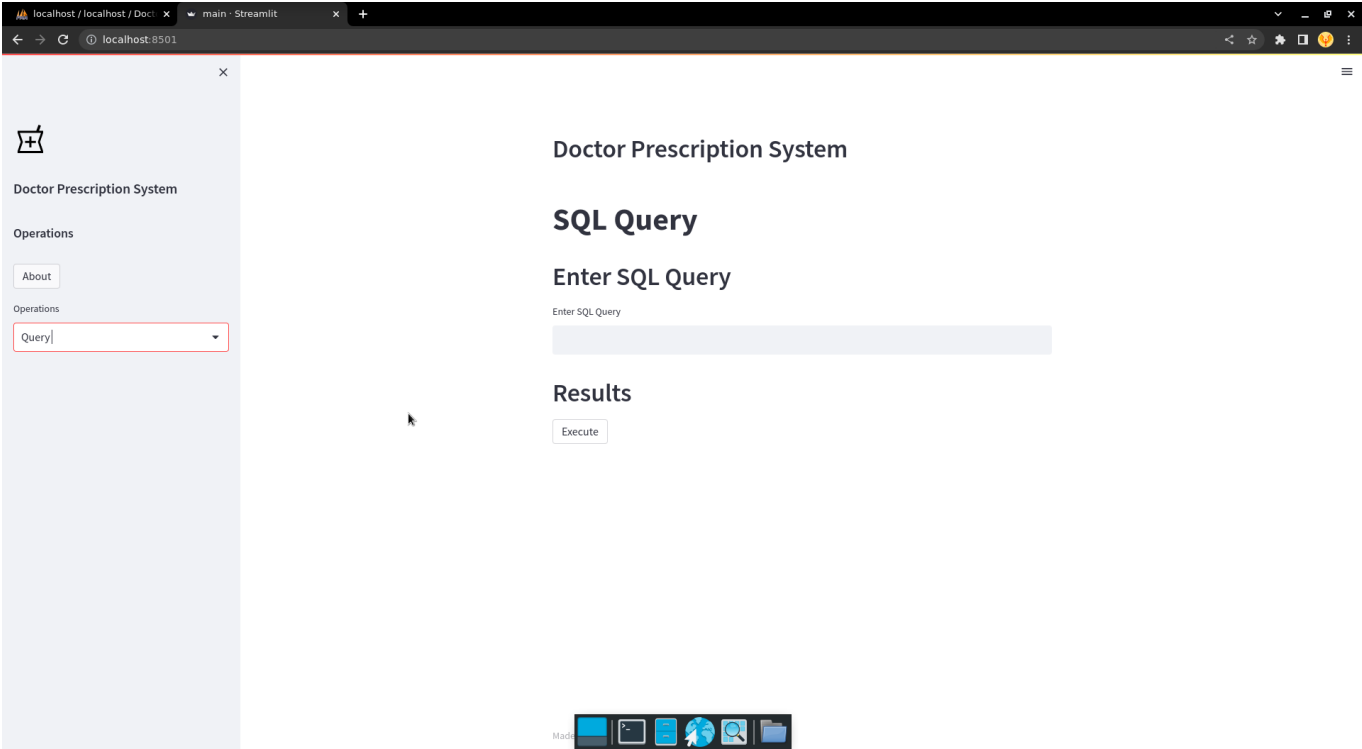
Read Operation



Update Operation



SQL Query Page



Bill Page

Doctor Prescription System

Operations

About

Operations

Bill

Enter the Patient ID

Patient ID

2580

	Pat_Name	Pst_Age	Medicine_1	Medicine_2	Medicine_3
0	Shenoy	20	Dolo 650 Tablet	Ascoril LS Syrup	Anovate Cream

Enter the Doctor's Fee

Doctor's Fee

400

Doctor's Fee: 400.0

Cost of Medicine 1 : 30.91

Cost of Medicine 2 : 108

Cost of Medicine 3 : 122

Total Bill: 660.91

Generate Bill