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Hospital Health Management

Problems Definitions -

→ Lack of immediate retrievals:

- The information is very difficult to retrieve and to find particular information like to find out about the patient's history, the user has to go through various registers. This results in inconvenience and wastage of time.

→ Lack of immediate information storage:

- The information generated by various transactions takes time and efforts to be stored at right place.

→ Lack of prompt updating:

- Various changes to information like patient details or immunization details of child are difficult to make as paper work is involved.

→ Error prone manual calculation:

- Manual calculations are error prone and take a lot of time this may result in incorrect information. For example calculation of patient's bill based on various treatments.5.

→ Preparation of accurate and prompt reports:

- This becomes a difficult task as information is difficult to collect from various registers.

Solutions:

1. Improved Manual System:-

   One of the alternative solutions is the improvement of the manual system. Anything, which can be done by using automated methods, can be done manually. But the question arises how to perform thing manually in a sound manner. Following are some suggestions, which can be useful in the manual system. A more sophisticated register maintenance for various Patient Information, Doctor diary, Immunization Details and a good system for writing bill amount employees and stock availed for the customers can be maintained at central place. Adequate staff may be maintained so that updating are made at the very moment at the same time. Proper person for proper work should be made responsible so that a better efficiency could be achieved. This needs a lot of work force.

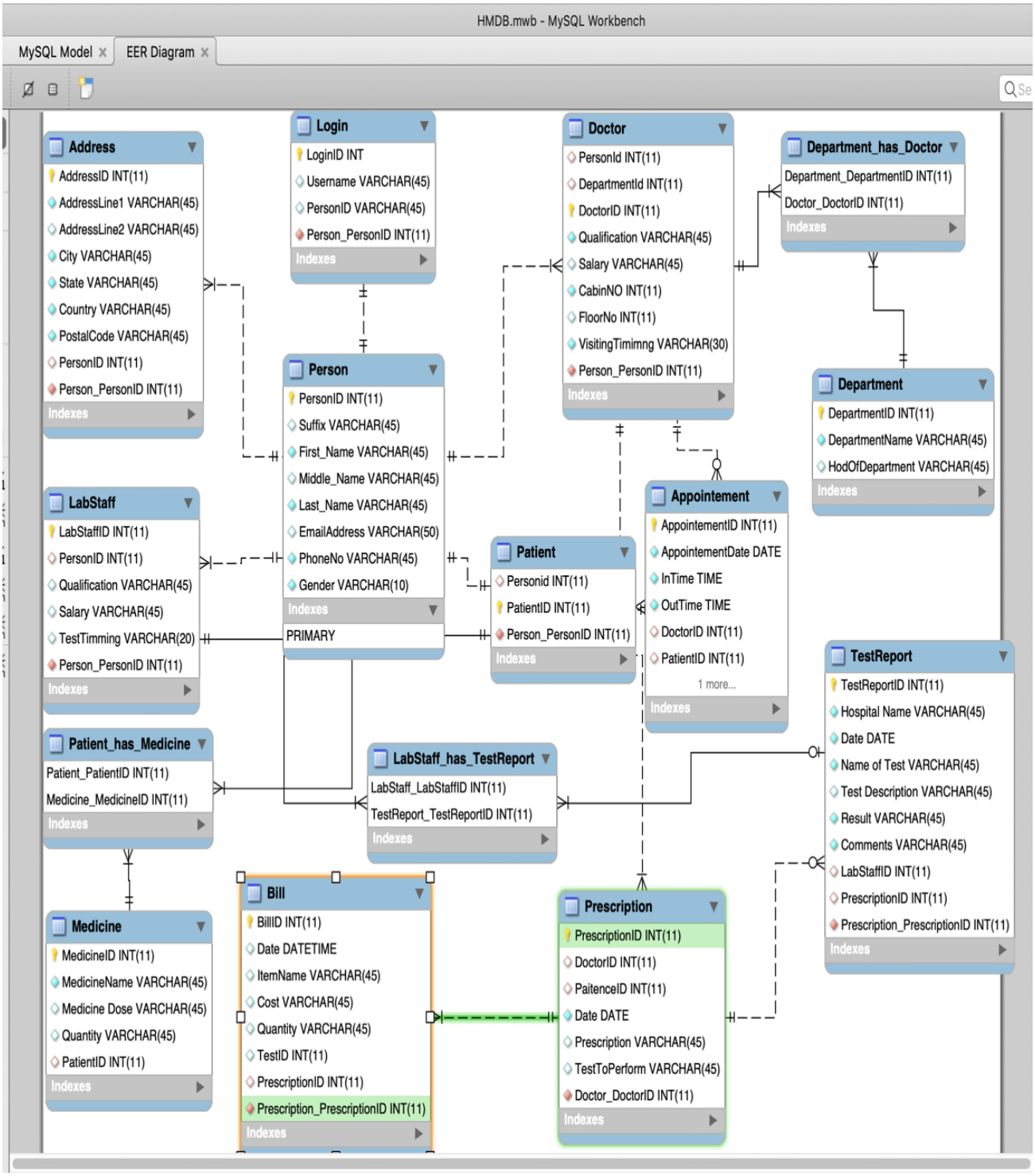
2. Batch System:-

   Another alternative solution can be used of computer based batch system for maintaining the information regarding purchase details, customers and employees. A batch system refers to a system in which data is processed in a periodical basis. The batch system is able to achieve most of the goals and sub goals. But a batch system data is processed in sequential basis. Therefore batch system is not suggested.

3. Online System:-

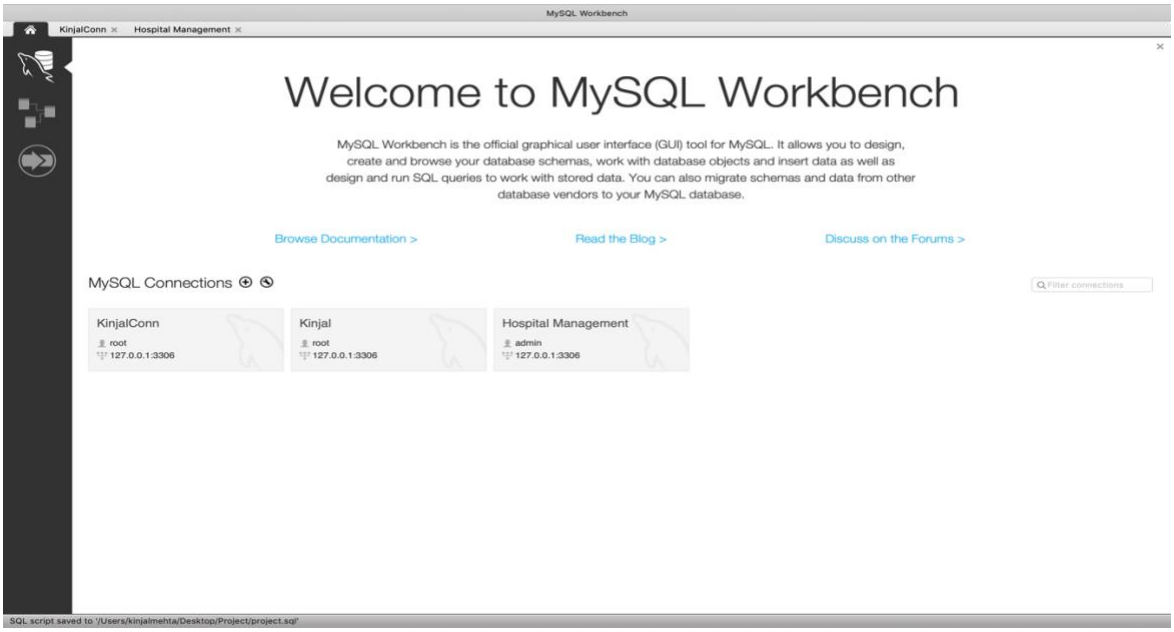
   The system provides online storage/ updating and retrieval facility. This system promises very less or no paperwork and also provides help to Doctor and operational staff. In this system everything is stored electronically so very less amount of paperwork is required and information can be retrieved very easily without searching here and there into registers. This system is been discussed here

ER Diagram:


HMDB.mwb - MySQL Workbench
MySQL Model
EER Diagram
Address
AddressID INT(11)
AddressLine1 VARCHAR(45)
AddressLine2 VARCHAR(45)
City VARCHAR(45)
State VARCHAR(45)
Country VARCHAR(45)
PostalCode VARCHAR(45)
PersonID INT(11)
Person_PersonID INT(11)
Indexes
Login
LoginID INT
Username VARCHAR(45)
PersonID VARCHAR(45)
Person_PersonID INT(11)
Indexes
Doctor
PersonId INT(11)
DepartmentId INT(11)
DoctorID INT(11)
Qualification VARCHAR(45)
Salary VARCHAR(45)
CabinNO INT(11)
FloorNo INT(11)
VisitingTimimng VARCHAR(30)
Person_PersonID INT(11)
Indexes
Department_has_Doctor
Department_DepartmentID INT(11)
Doctor_DoctorID INT(11)
Indexes
Person
PersonID INT(11)
Suffix VARCHAR(45)
First_Name VARCHAR(45)
Middle_Name VARCHAR(45)
Last_Name VARCHAR(45)
EmailAddress VARCHAR(50)
PhoneNo VARCHAR(45)
Gender VARCHAR(10)
Indexes
PRIMARY
Department
DepartmentID INT(11)
DepartmentName VARCHAR(45)
HodOfDepartment VARCHAR(45)
Indexes
LabStaff
LabStaffID INT(11)
PersonID INT(11)
Qualification VARCHAR(45)
Salary VARCHAR(45)
TestTimming VARCHAR(20)
Person_PersonID INT(11)
Indexes
Patient
Personid INT(11)
PatientID INT(11)
Person_PersonID INT(11)
Indexes
Appointement
AppointementID INT(11)
AppointementDate DATE
InTime TIME
OutTime TIME
DoctorID INT(11)
PatientID INT(11)
1 more...
Indexes
TestReport
TestReportID INT(11)
Hospital Name VARCHAR(45)
Date DATE
Name of Test VARCHAR(45)
Test Description VARCHAR(45)
Result VARCHAR(45)
Comments VARCHAR(45)
LabStaffID INT(11)
PrescriptionID INT(11)
Prescription_PrescriptionID INT(11)
Indexes
Patient_has_Medicine
Patient_PatientID INT(11)
Medicine_MedicineID INT(11)
Indexes
LabStaff_has_TestReport
LabStaff_LabStaffID INT(11)
TestReport_TestReportID INT(11)
Indexes
Bill
BillID INT(11)
Date DATETIME
ItemName VARCHAR(45)
Cost VARCHAR(45)
Quantity VARCHAR(45)
TestID INT(11)
PrescriptionID INT(11)
Prescription_PrescriptionID INT(11)
Indexes
Prescription
PrescriptionID INT(11)
DoctorID INT(11)
PaitenceID INT(11)
Date DATE
Prescription VARCHAR(45)
TestToPerform VARCHAR(45)
Doctor_DoctorID INT(11)
Indexes
Medicine
MedicineID INT(11)
MedicineName VARCHAR(45)
Medicine Dose VARCHAR(45)
Quantity VARCHAR(45)
PatientID INT(11)
Indexes

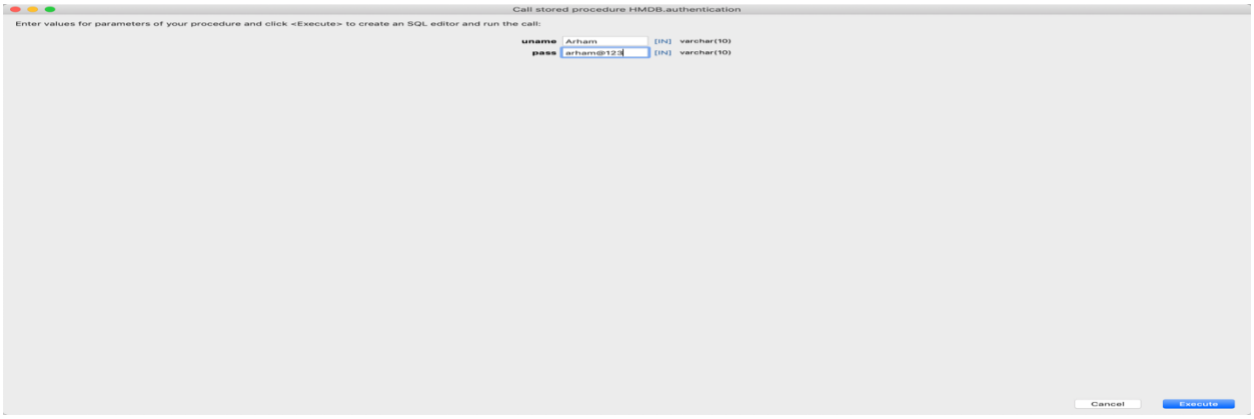
This Database have 1 privilege

Admin:

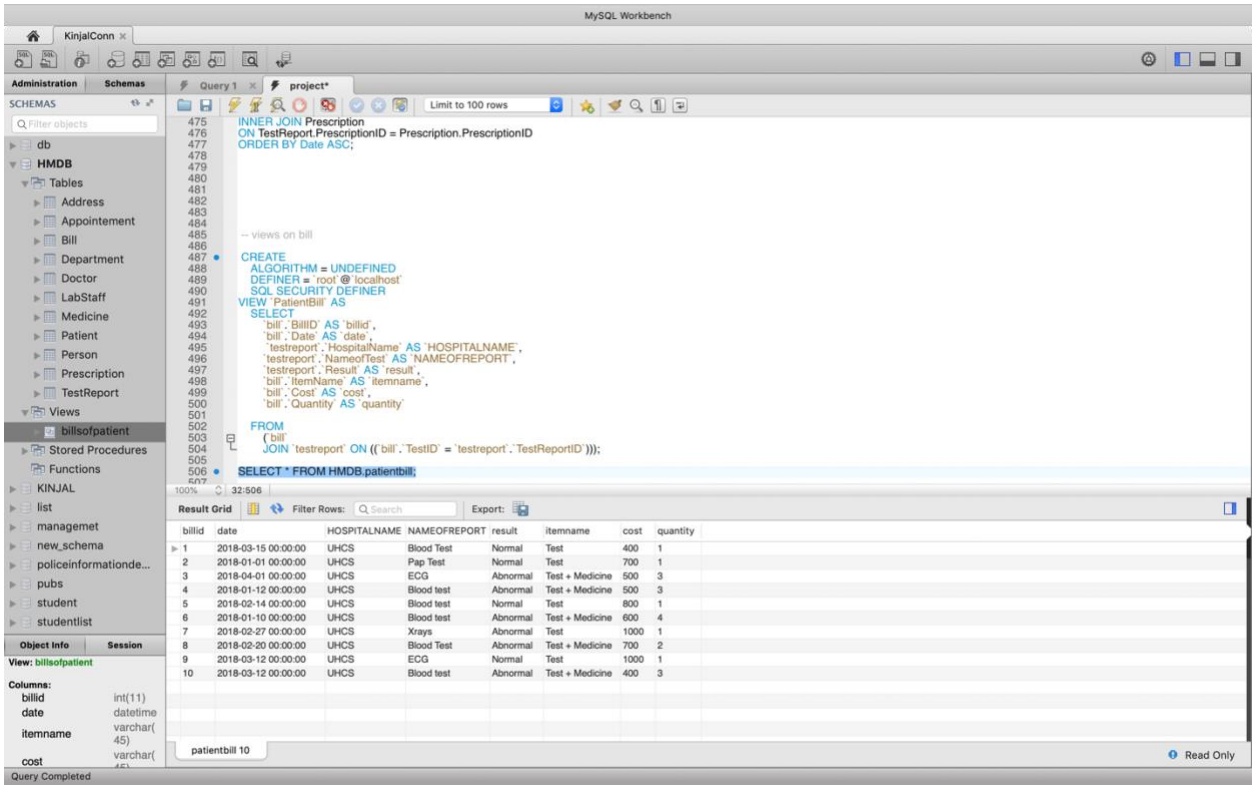


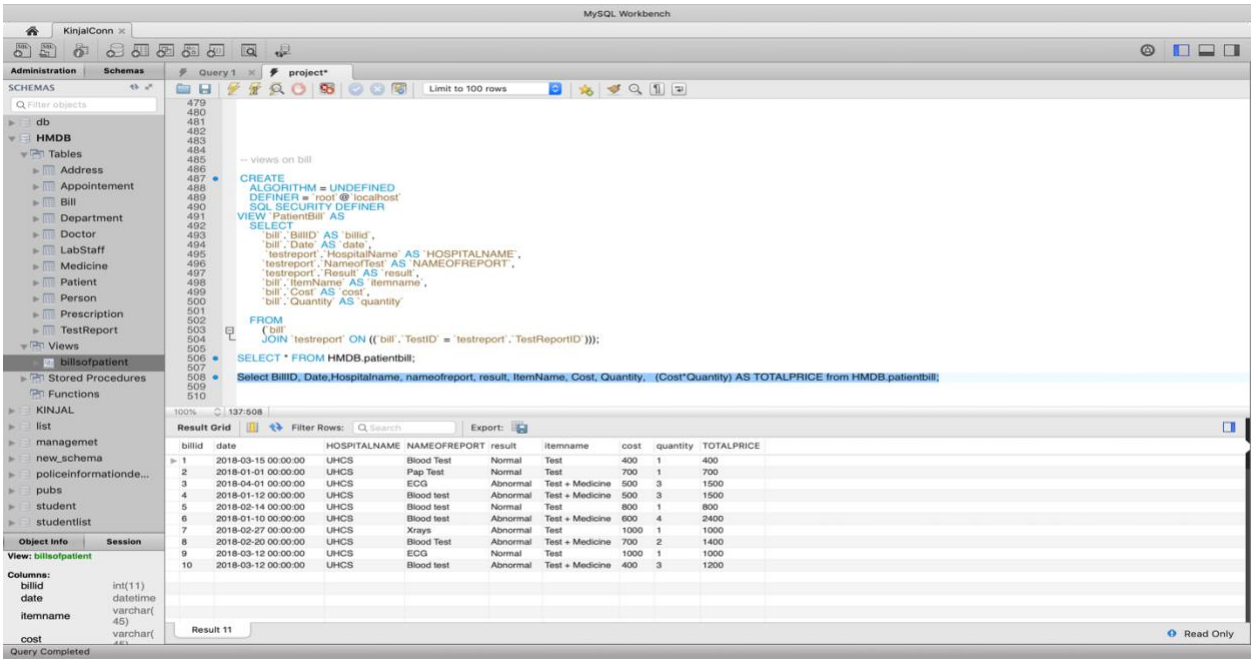
Project have 3 Special Features:

1. **Login** is created using stored procedure for doctor.

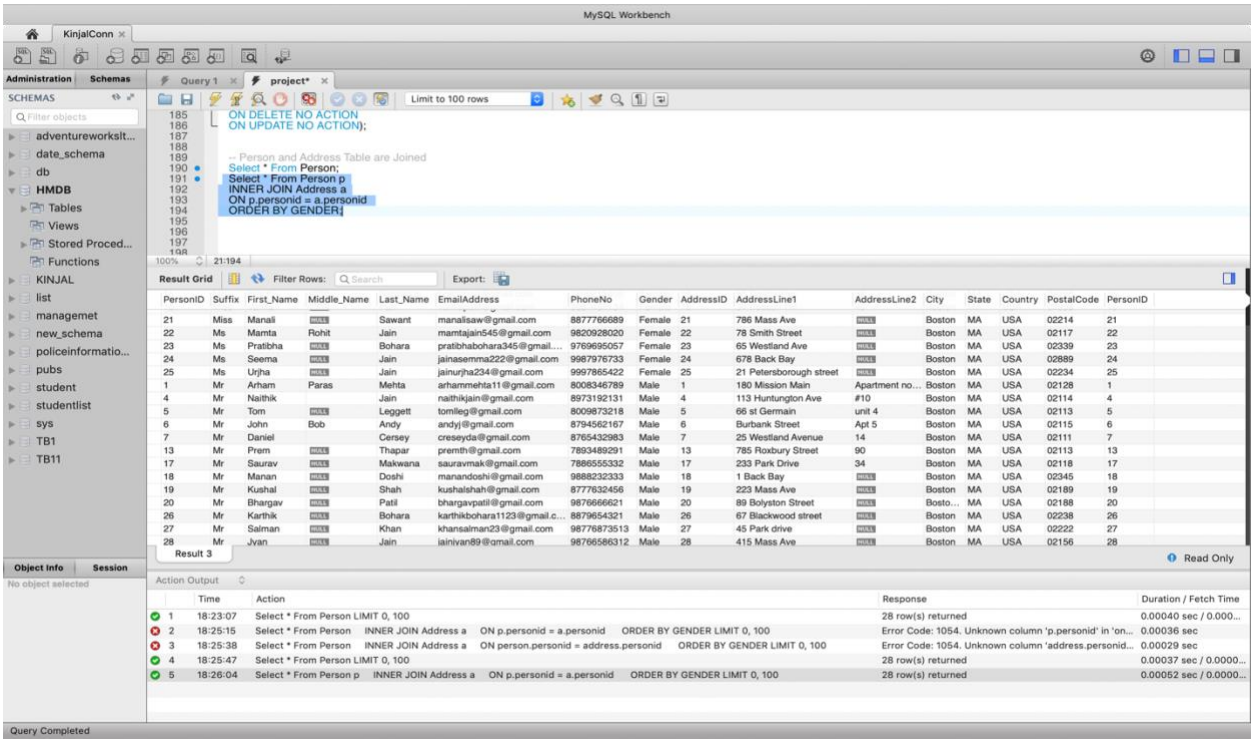


2. **View** is created to know the bill of each patient.

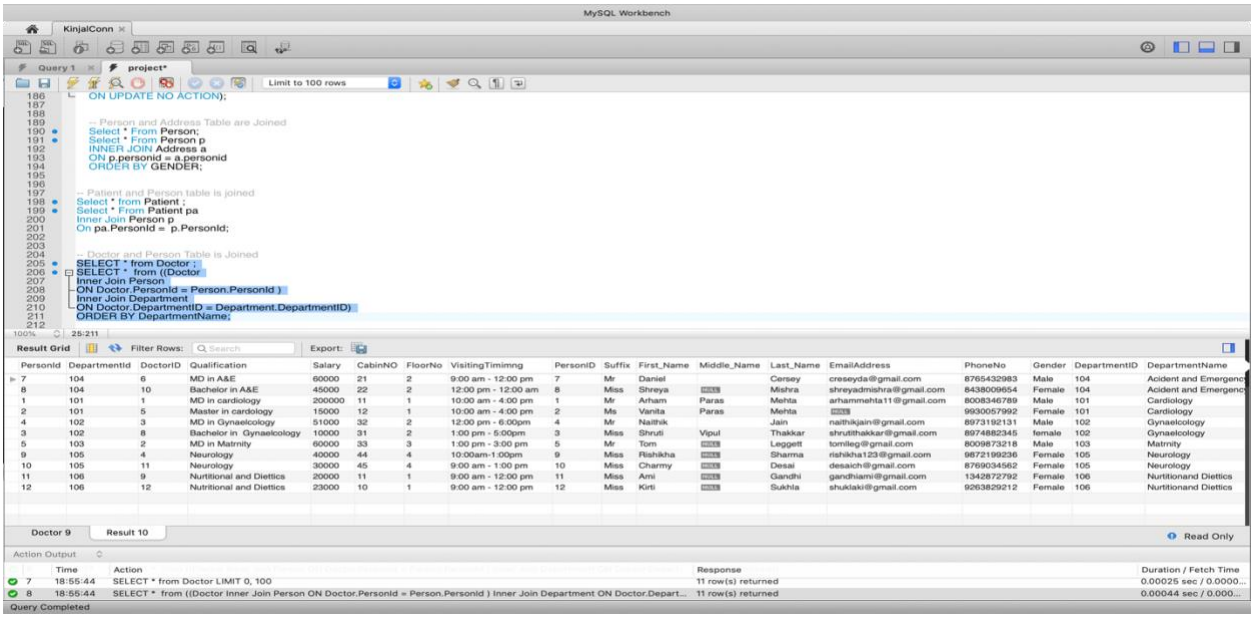



MySQL Workbench
KinjalConn
Administration
Schemas
SCHEMAS
db
HMDB
Tables
Address
Appointement
Bill
Department
Doctor
LabStaff
Medicine
Patient
Person
Prescription
TestReport
Views
billsofpatient
Stored Procedures
Functions
KINJAL
list
managemet
new_schema
policeinformationde...
pubs
student
studentlist
Object Info
Session
View: billsofpatient
Columns:
billid int(11)
date datetime
itemname varchar(45)
cost varchar(
Query 1
project*
Limit to 100 rows
-- views on bill
CREATE
ALGORITHM = UNDEFINED
DEFINER = `root`@`localhost`
SQL SECURITY DEFINER
VIEW `PatientBill` AS
SELECT
`bill`.`BillID` AS `billid`,
`bill`.`Date` AS `date`,
`testreport`.`HospitalName` AS `HOSPITALNAME`,
`testreport`.`NameofTest` AS `NAMEOFREPORT`,
`testreport`.`Result` AS `result`,
`bill`.`ItemName` AS `itemname`,
`bill`.`Cost` AS `cost`,
`bill`.`Quantity` AS `quantity`
FROM
(`bill`
JOIN `testreport` ON ((`bill`.`TestID` = `testreport`.`TestReportID`)));
SELECT * FROM HMDB.patientbill;
Select BillID, Date,Hospitalname, nameofreport, result, ItemName, Cost, Quantity, (Cost*Quantity) AS TOTALPRICE from HMDB.patientbill;
Result Grid
Filter Rows:
Export:
billid date HOSPITALNAME NAMEOFREPORT result itemname cost quantity TOTALPRICE
1 2018-03-15 00:00:00 UHCS Blood Test Normal Test 400 1 400
2 2018-01-01 00:00:00 UHCS Pap Test Normal Test 700 1 700
3 2018-04-01 00:00:00 UHCS ECG Abnormal Test + Medicine 500 3 1500
4 2018-01-12 00:00:00 UHCS Blood test Abnormal Test + Medicine 500 3 1500
5 2018-02-14 00:00:00 UHCS Blood test Normal Test 800 1 800
6 2018-01-10 00:00:00 UHCS Blood test Abnormal Test + Medicine 600 4 2400
7 2018-02-27 00:00:00 UHCS Xrays Abnormal Test 1000 1 1000
8 2018-02-20 00:00:00 UHCS Blood Test Abnormal Test + Medicine 700 2 1400
9 2018-03-12 00:00:00 UHCS ECG Normal Test 1000 1 1000
10 2018-03-12 00:00:00 UHCS Blood test Abnormal Test + Medicine 400 3 1200
Result 11
Read Only
Query Completed

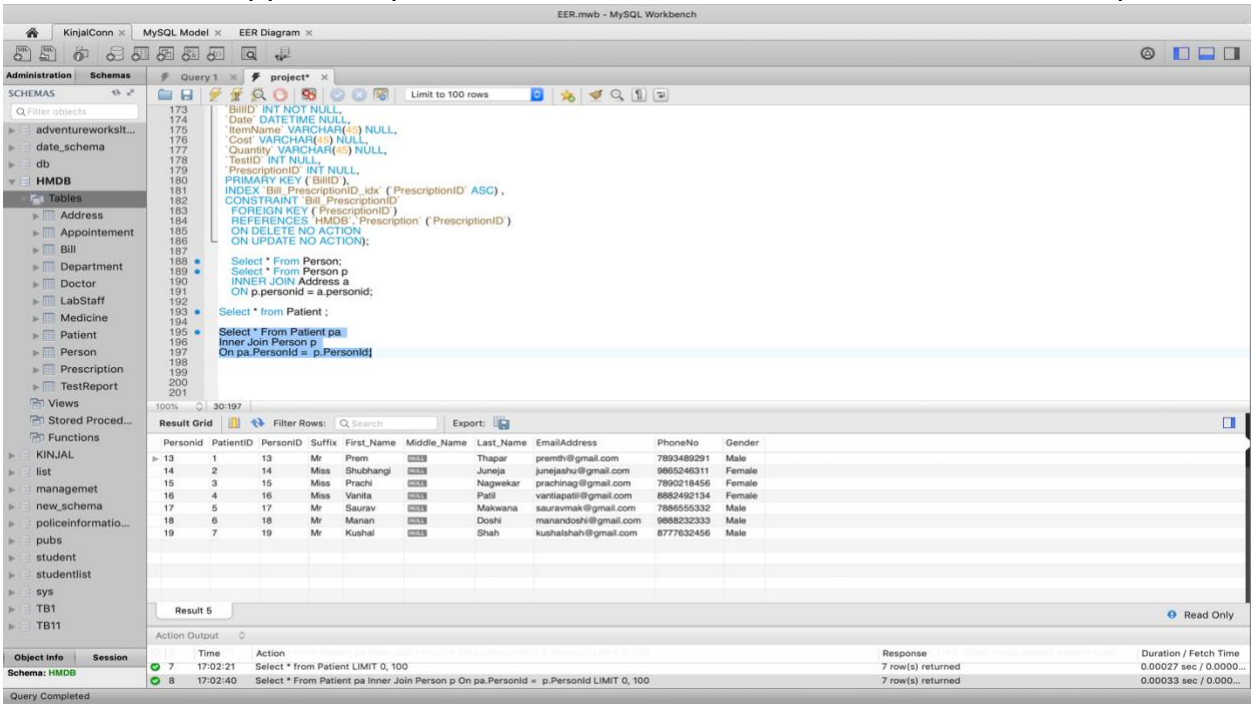
3. Join is applied on Person table so that we can full information about each person with his/her address so that it became easy to contact them during case of emergency and easy to backup.



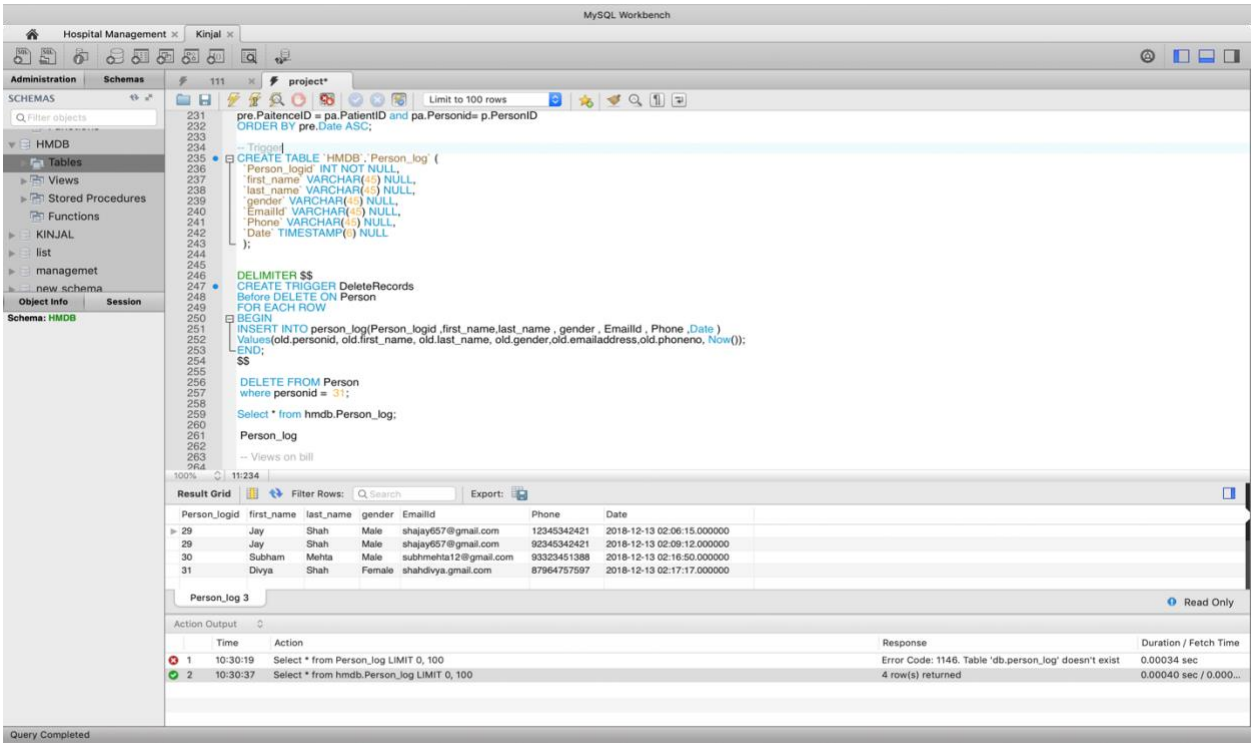
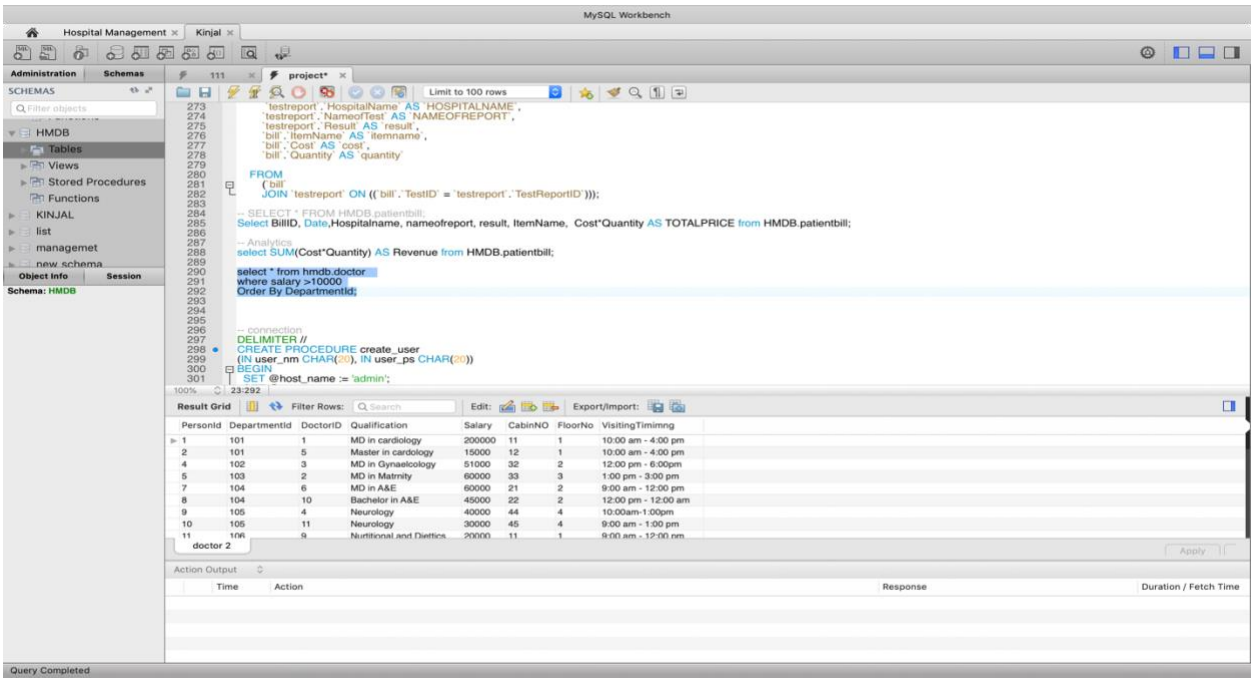
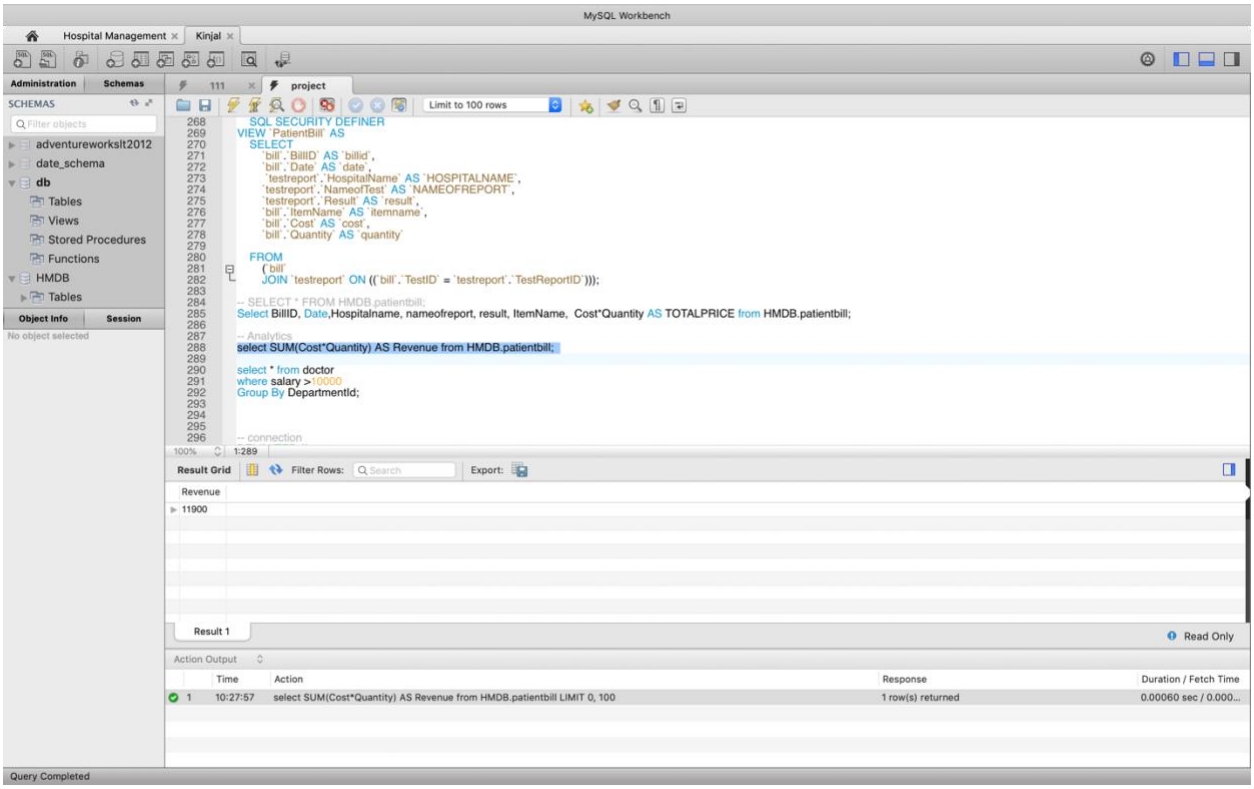
4. Doctor Information is generated using inner join on person and department tables.



5. Inner Join is applied to patient table to have full information about the patient.



6. **Trigger** is happening on delete of record from my person table.



7. **Analytics** is done on total revenue of hospital and salary of doctor which is greater than 10000.