**Hospital Database Management using MySQL**

Setting up command prompt :

cd\

cd xampp\mysql\bin

mysql -h localhost -u root

Creating new database :

create database hospital\_management;

show databases;

use hospital\_management;

Creating Tables :

#1 Doctor

create table Doctor(DrID int primary key,DocName varchar(30),Department varchar(30),Experience decimal(3,1),Salary float);

desc doctor;

+------------------+-----------------+-------+------+-----------+---------+

| Field | Type | Null | Key | Default | Extra |

+------------------+-----------------+-------+------+-----------+---------+

| DrID | int(11) | NO | PRI | NULL | |

| DocName | varchar(30) | YES | | NULL | |

| Department | varchar(30) | YES | | NULL | |

| Experience | decimal(3,1) | YES | | NULL | |

| Salary | float | YES | | NULL | |

+------------------+-----------------+-------+------+-----------+---------+

#2 Patient

create table Patient(PatID int primary key,PatName varchar(30),Gender enum('Male','Female'),Age int,DrID int,foreign key(DrID) references Doctor(DrID));

desc Patient;

+----------------+-------------------------------+--------+-------+-----------+---------+

| Field | Type | Null | Key | Default | Extra |

+----------------+-------------------------------+--------+-------+-----------+---------+

| PatID | int(11) | NO | PRI | NULL | |

| PatName | varchar(30) | YES | | NULL | |

| Gender | enum('Male','Female') | YES | | NULL | |

| Age | int(11) | YES | | NULL | |

| DrID | int(11) | YES | MUL | NULL | |

+----------------+-------------------------------+---------+---------+--------+---------+

#3 PatientDiagnosis

create table PatientDiagnosis(DiagID int primary key,Diagnosis varchar(30),Date date,PatID int,foreign key(PatID) references Patient(PatID));

desc PatientDiagnosis;

+---------------+---------------+-------+------+-----------+---------+

| Field | Type | Null | Key | Default | Extra |

+---------------+---------------+-------+------+-----------+---------+

| DiagID | int(11) | NO | PRI | NULL | |

| Diagnosis | varchar(30)| YES | | NULL | |

| Date | date | YES | | NULL | |

| PatID | int(11) | YES | MUL| NULL | |

+---------------+---------------+-------+-------+----------+---------+

#4 Invoice

create table Invoice(BillNo int primary key,Date datetime,PatID int,PatName varchar(30),DrID int,Amount decimal(10,2),foreign key(DrID) references Doctor(DrID),foreign key(PatID) references Patient(PatID));

desc Invoice;

+---------------+-------------------+-------+-------+-----------+---------+

| Field | Type | Null | Key | Default | Extra |

+---------------+-------------------+-------+-------+-----------+---------+

| BillNo | int(11) | NO | PRI | NULL | |

| Date | datetime | YES | | NULL | |

| PatID | int(11) | YES | MUL | NULL | |

| PatName | varchar(30) | YES | | NULL | |

| DrID | int(11) | YES | MUL | NULL | |

| Amount | decimal(10,2) | YES | | NULL | |

+---------------+-------------------+-------+-------+-----------+---------+

Entity Relationship Diagram:

Diagram

Description automatically generated

Inserting values into the tables:

#1 Doctor

insert into doctor values(1,'Dr. Sadaf','Dentistry',5,50000);

insert into doctor values(2,'Dr. Alim','General Physician',3.5,70000);

insert into doctor values(3,'Dr. Sanya','Surgery',7,90000);

select \* from doctor;

+-------+----------------+-----------------------+----------------+-----------+

| DrID | DocName | Department | Experience | Salary |

+-------+----------------+-----------------------+----------------+-----------+

| 1 | Dr. Sadaf | Dentistry | 5.0 | 50000 |

| 2 | Dr. Alim | General Physician| 3.5 | 70000 |

| 3 | Dr. Sanya | Surgery | 7.0 | 90000 |

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#2 Patient

insert into patient values(1,'Anil','male',40,1);

insert into patient values(2,'Mayank','male',50,1);

insert into patient values(3,'Pooja','female',45,2);

insert into patient values(4,'Priya','female',35,2);

insert into patient values(5,'diya','female',55,3);

insert into patient values(6,'maya','female',25,3);

insert into patient values(7,'karan','male',25,3);

insert into patient values(8,'arjan','male',35,2);

insert into patient values(9,'Rekha','female',35,1);

insert into patient values(10,'Vaibhav','male',30,1);

select \* from patient;

+---------+-------------+-----------+-------+--------+

| PatID | PatName | Gender | Age | DrID |

+---------+-------------+-----------+-------+--------+

| 1 | Anil | Male | 40 | 1 |

| 2 | Mayank | Male | 50 | 1 |

| 3 | Pooja | Female | 45 | 2 |

| 4 | Priya | Female | 35 | 2 |

| 5 | diya | Female | 55 | 3 |

| 6 | maya | Female | 25 | 3 |

| 7 | karan | Male | 25 | 3 |

| 8 | arjan | Male | 35 | 2 |

| 9 | Rekha | Female | 35 | 1 |

| 10 | Vaibhav | Male | 30 | 1 |

+---------+-------------+-----------+-------+--------+

#3 PatientDiagnosis

insert into patientdiagnosis values(1,'Root Canal','2022-07-01',1);

insert into patientdiagnosis values(2,'Extraction','2022-07-02',2);

insert into patientdiagnosis values(3,'Fever','2022-06-28',3);

insert into patientdiagnosis values(4,'Hypertension','2022-06-25',4);

insert into patientdiagnosis values(5,'Artery Bypass','2022-06-23',5);

insert into patientdiagnosis values(6,'Skin Graft','2022-06-25',6);

insert into patientdiagnosis values(7,'Liver Resection','2022-06-30',7);

insert into patientdiagnosis values(8,'Mlaria','2022-07-03',8);

insert into patientdiagnosis values(9,'Scaling','2022-07-06',9);

insert into patientdiagnosis values(10,'Extraction','2022-07-06',10);

select \* from patientdiagnosis;

+----------+--------------------+----------------+---------+

| DiagID | Diagnosis | Date | PatID |

+----------+--------------------+-----------------+--------+

| 1 | Root Canal | 2022-07-01 | 1 |

| 2 | Extraction | 2022-07-02 | 2 |

| 3 | Fever | 2022-06-28 | 3 |

| 4 | Hypertension | 2022-06-25 | 4 |

| 5 | Artery Bypass | 2022-06-23 | 5 |

| 6 | Skin Graft | 2022-06-25 | 6 |

| 7 | Liver Resection| 2022-06-30 | 7 |

| 8 | Mlaria | 2022-07-03 | 8 |

| 9 | Scaling | 2022-07-06| 9 |

| 10 | Extraction | 2022-07-06| 10 |

+----------+--------------------+----------------+---------+

#4 Invoice

insert into invoice values(100,'2022-07-06 18:30:00',1,'Anil',1,4000);

insert into invoice values(101,'2022-07-02 17:30:00',2,'Anil',1,2000);

insert into invoice values(102,'2022-06-28 12:00:00',3,'Pooja',2,1000);

insert into invoice values(103,'2022-06-25 18:00:00',4,'Priya',2,1000);

insert into invoice values(104,'2022-06-23 20:00:00',5,'diya',3,50000);

insert into invoice values(105,'2022-06-25 20:30:00',6,'maya',3,20000);

insert into invoice values(106,'2022-06-30 12:30:00',7,'Karan',3,60000);

insert into invoice values(107,'2022-07-03 12:30:00',8,'arjun',2,2000);

insert into invoice values(108,'2022-07-06 12:30:00',9,'Rekha',1,1500);

insert into invoice values(109,'2022-07-06 13:00:00',10,'Vaibhav',1,2500);

select \* from invoice;

+---------+---------------------------+---------+--------------+-------+-------------+

| BillNo | Date | PatID | PatName | DrID | Amount |

+---------+----------------------------+--------+--------------+-------+-------------+

| 100 | 2022-07-06 18:30:00 | 1 | Anil | 1 | 4000.00 |

| 101 | 2022-07-02 17:30:00 | 2 | Anil | 1 | 2000.00 |

| 102 | 2022-06-28 12:00:00 | 3 | Pooja | 2 | 1000.00 |

| 103 | 2022-06-25 18:00:00 | 4 | Priya | 2 | 1000.00 |

| 104 | 2022-06-23 20:00:00 | 5 | diya | 3 | 50000.00 |

| 105 | 2022-06-25 20:30:00 | 6 | maya | 3 | 20000.00 |

| 106 | 2022-06-30 12:30:00 | 7 | Karan | 3 | 60000.00 |

| 107 | 2022-07-03 12:30:00 | 8 | arjun | 2 | 2000.00 |

| 108 | 2022-07-06 12:30:00 | 9 | Rekha | 1 | 1500.00 |

| 109 | 2022-07-06 13:00:00 | 10 | Vaibhav | 1 | 2500.00 |

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Creating a complex view:

create view patrecord as select pd.date,pd.PatID,p.PatName,pd.Diagnosis,d.DocName from patientdiagnosis pd inner join patient p using (PatID) inner join Doctor d using (DrID);

select \* from patrecord order by date;

+----------------+---------+-------------+----------------------+---------------+

| date | PatID | PatName | Diagnosis | DocName |

+----------------+---------+-------------+----------------------+---------------+

| 2022-06-23 | 5 | diya | Artery Bypass | Dr. Sanya |

| 2022-06-25 | 4 | Priya | Hypertension | Dr. Alim |

| 2022-06-25 | 6 | maya | Skin Graft | Dr. Sanya |

| 2022-06-28 | 3 | Pooja | Fever | Dr. Alim |

| 2022-06-30 | 7 | karan | Liver Resection | Dr. Sanya |

| 2022-07-01 | 1 | Anil | Root Canal | Dr. Sadaf |

| 2022-07-02 | 2 | Mayank | Extraction | Dr. Sadaf |

| 2022-07-03 | 8 | arjan | Mlaria | Dr. Alim |

| 2022-07-06 | 9 | Rekha | Scaling | Dr. Sadaf |

| 2022-07-06 | 10 | Vaibhav | Extraction | Dr. Sadaf |

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Creating Stored Procedure:

#1 patofdoc: returns the list of patient’s id and name under the doctor whose name is

passed into the stored procedure.

delimiter //

create procedure patofdoc(IN dname varchar(30))

-> begin

-> select p.PatId,p.PatName from patient p inner join doctor d using (DrId) where DocName=dname;

-> end//

call patofdoc('Dr. Sadaf');//

+--------+--------------+

| PatId | PatName |

+--------+--------------+

| 1 | Anil |

| 2 | Mayank |

| 9 | Rekha |

| 10 | Vaibhav |

+--------+--------------+

#2 totalRevenueperdoc: Returns the total revenue amount the doctor has generated.

create procedure totalRevenueperdoc()

->begin

->select i.DrId,d.DocName,sum(i.Amount) as Revenue from invoice i inner join doctor d using (DrID) group by DrID;

->end//

call totalRevenueperdoc();//

+-------+---------------+---------------+

| DrId | DocName | Revenue |

+-------+---------------+---------------+

| 1 | Dr. Sadaf | 10000.00 |

| 2 | Dr. Alim | 4000.00 |

| 3 | Dr. Sanya | 130000.00 |

+-------+---------------+---------------+

delimiter ;