CS631 - Morris Health Services Report

Section: 004
Team number: 01

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Project Goal

Develop a comprehensive database management system for Morris Health Services (MHS), comprising three main functionalities: Employee and Facility Management, Patient Management, and Management Reporting. This system will facilitate efficient management of employees, medical facilities, patient records, appointments, billing, and reporting, ultimately enhancing operational efficiency and decision-making at MHS.

Implementation

The project has been developed using PHP for both frontend and backend functionalities, with MySQL employed for database querying. The web application is hosted utilizing XAMPP, while phpMyAdmin is employed for database management purposes.

Technologies Used:

PHP: PHP serves as the core language for both frontend and backend operations. It facilitates dynamic content generation and interacts with the MySQL database to retrieve and manipulate data.

MySQL: MySQL is utilized for querying the database, storing and retrieving data efficiently, and ensuring data integrity.

XAMPP: XAMPP is utilized to locally host the web application during development. It provides a complete environment for running PHP applications, including Apache, MySQL, PHP, and phpMyAdmin.

phpMyAdmin: phpMyAdmin is employed for managing the MySQL database. It provides a user-friendly interface for database administration tasks such as creating, modifying, and deleting databases, tables, and records.

User Interface:

The application is designed with a minimalistic user interface, prioritizing functionality over aesthetics. The focus is on providing seamless database operations without unnecessary visual clutter.
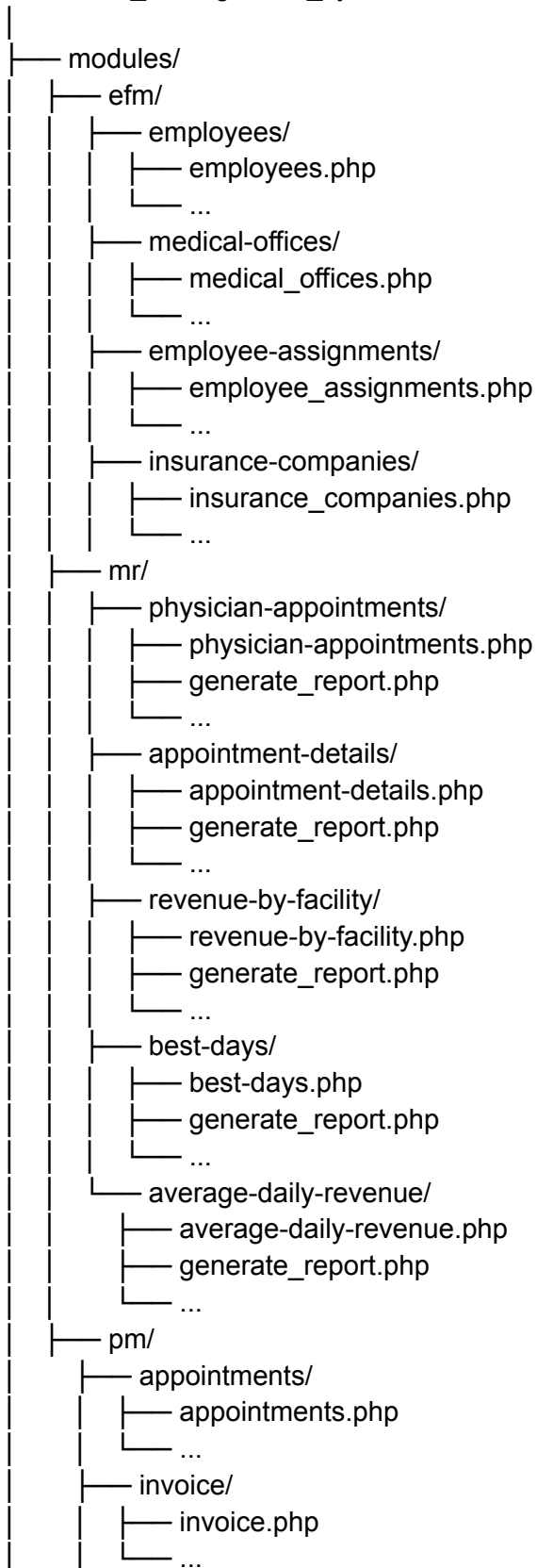
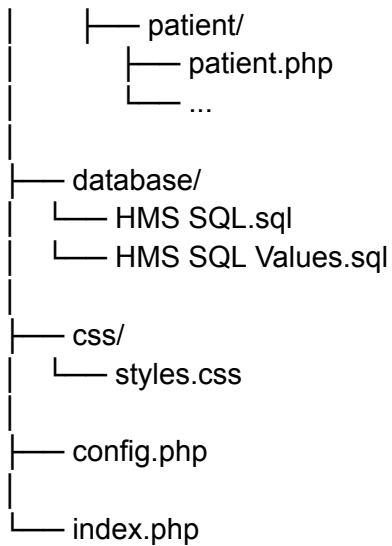Version Control and Collaboration:

Git is utilized for version control, allowing for efficient tracking of code changes and collaboration among team members. GitHub serves as the central repository for storing the project code and facilitates collaboration through features such as branching, pull requests, and issue tracking.

Project Structure:

The project is structured in alignment with the specified requirements. Each task is segregated into separate pages, ensuring modularity and clarity in functionality. This modular approach facilitates ease of maintenance and scalability of the application.
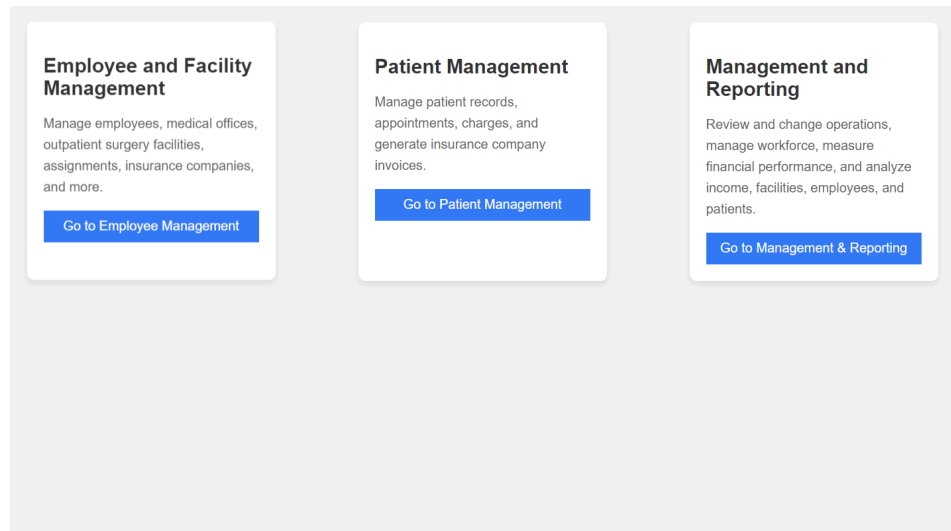
```
healthcare_management_system/
│
├── modules/
│   ├── efm/
│   │   ├── employees/
│   │   │   ├── employees.php
│   │   │   └── ...
│   │   ├── medical-offices/
│   │   │   ├── medical_offices.php
│   │   │   └── ...
│   │   ├── employee-assignments/
│   │   │   ├── employee_assignments.php
│   │   │   └── ...
│   │   ├── insurance-companies/
│   │   │   ├── insurance_companies.php
│   │   │   └── ...
│   ├── mr/
│   │   ├── physician-appointments/
│   │   │   ├── physician-appointments.php
│   │   │   ├── generate_report.php
│   │   │   └── ...
│   │   ├── appointment-details/
│   │   │   ├── appointment-details.php
│   │   │   ├── generate_report.php
│   │   │   └── ...
│   │   ├── revenue-by-facility/
│   │   │   ├── revenue-by-facility.php
│   │   │   ├── generate_report.php
│   │   │   └── ...
│   │   ├── best-days/
│   │   │   ├── best-days.php
│   │   │   ├── generate_report.php
│   │   │   └── ...
│   │   └── average-daily-revenue/
│   │       ├── average-daily-revenue.php
│   │       ├── generate_report.php
│   │       └── ...
│   ├── pm/
│   │   ├── appointments/
│   │   │   ├── appointments.php
│   │   │   └── ...
│   │   ├── invoice/
│   │   │   ├── invoice.php
│   │   │   └── ...
```

```
│       ├── patient/
│       │   ├── patient.php
│       │   └── ...
│       │
│       ├── database/
│       │   └── HMS SQL.sql
│       │   └── HMS SQL Values.sql
│       │
│       ├── css/
│       │   └── styles.css
│       │
│       ├── config.php
│       │
│       └── index.php
```

Users Guide

Steps to Setup Project
1. Download the zip from https://github.com/LakshmanPalli/morris-health-services-app
2. Extract the file in xampp/htdocs
3. Import the SQL files in phpMyAdmin, db name: `morris_healthservice`
4. Browse http://localhost/morris-health-services-app

- The Homepage is structured with 3 modules.
  - Employee and Facility management :
    - To manage Hospital staff and facilities.
  - Patient Management:
    - To manage Patient Entries and appointments
  - Management and Reporting
    - This service serves the admin utilities like generating reports, revenues etc.

- Employee and Facility Management enables us to perform the following:

-
  - Employees:
    - Add and Edit Employees.

Employee List

#	SSN	First Name	Middle Initial	Last Name	Employee ID	Hire Date	Job Class	Address	Salary	FacID	Action
1	234234234	Andrew	F	Martinez	12	2022-12-10 00:00:00	Nurse	909 Elm St, Portland, OR, 97201	70000	2	✏
2	901901901	Ashley	M	Flores	19	2022-09-30 00:00:00	Admin	707 Elm St, El Paso, TX, 79901	65000	4	✏
3	456456456	Christopher	H	Hernandez	14	2023-01-05 00:00:00	Nurse	202 Cedar St, Phoenix, AZ, 85001	65000	4	✏
4	901234567	Daniel	P	Clark	9	2022-09-15 00:00:00	Other_HCP	606 Pine St, Atlanta, GA, 30301	65000	4	✏
5	567890123	David	R	Wilson	5	2022-12-30 00:00:00	Doctor	202 Maple St, Miami, FL, 33001	60000	5	✏

  - Medical Offices
    - List of All the facilities

Facilities

#	Address	Size	Office Count	Room Count	Postal Code	Type	Description	Action
1	123 Main St, New York, NY, 10001	Large	10	20	1234	Hospital	Main Hospital	Edit
2	456 Elm St, Los Angeles, CA, 90001	Medium	8	15	5678	Clinic	Downtown Clinic	Edit
3	789 Oak St, Chicago, IL, 60001	Small	5	10	91011	Urgent Care	City Urgent Care	Edit
4	101 Pine St, Houston, TX, 77001	Large	12	25	121314	Hospital	Regional Hospital	Edit
5	202 Cedar St, Miami, FL, 33001	Medium	8	15	151617	Clinic	Beachside Clinic	Edit

Add Facility

- ○ Employee Assignments
  - ■ Employee Commitments

Employee Assignments

Employee ID	First Name	Last Name	Facility Street	Facility City	Facility State	Facility Zip	Facility Type	Description
11	Jessica	Garcia	123 Main St	New York	NY	10001	Hospital	Main Hospital
1	John	Doe	123 Main St	New York	NY	10001	Hospital	Main Hospital
12	Andrew	Martinez	456 Elm St	Los Angeles	CA	90001	Clinic	Downtown Clinic
2	Jane	Smith	456 Elm St	Los Angeles	CA	90001	Clinic	Downtown Clinic
13	Emily	Lopez	789 Oak St	Chicago	IL	60001	Urgent Care	City Urgent Care
3	Michael	Johnson	789 Oak St	Chicago	IL	60001	Urgent Care	City Urgent Care
14	Christopher	Hernandez	101 Pine St	Houston	TX	77001	Hospital	Regional Hospital
4	Emily	Brown	101 Pine St	Houston	TX	77001	Hospital	Regional Hospital
15	Maria	Gonzalez	202 Cedar St	Miami	FL	33001	Clinic	Beachside Clinic

- ○ Insurance Companies
  - ■ List of Insurance Companies

Insurance Companies

Insurance ID	Name	Address
1	ABC Insurance	123 Main St, New York, NY, 10001
2	XYZ Insurance	456 Elm St, Los Angeles, CA, 90001
3	123 Insurance	789 Oak St, Chicago, IL, 60001
4	456 Insurance	101 Pine St, Houston, TX, 77001
5	789 Insurance	202 Maple St, Miami, FL, 33001

Add Insurance Company

Patient Management enables us to perform the following:

Menu

Patients

Appointments

Invoice

○ Patient:
   ■ List of Patients with edit and add options.

Patient List

Search by first name... [Search] [Reset] [Add]

#	Pid	FName	Minit	LName	Street	City	State	Zip	SSN	Ins_id	Action
1	1	Alice	M	Johnson	123 Oak St	New York	NY	10001	123456789	1	✎
2	2	Bob	N	Smith	456 Elm St	Los Angeles	CA	90001	234567890	2	✎
3	3	Charlie	O	Williams	789 Maple St	Chicago	IL	60001	345678901	3	✎
4	4	David	P	Brown	101 Pine St	Houston	TX	77001	456789012	4	✎
5	5	Emma	Q	Jones	202 Cedar St	Miami	FL	33001	567890123	5	✎
6	6	Frank	R	Davis	303 Elm St	Seattle	WA	98001	123456789	1	✎

○ Appointments:
   ■ List All the appointments with the option to add new appointments.

All Appointments

[Add Appointment]

id	SSN	Pid	FacID	Date_Time	Inv_id	Cost	Action
1	123456789	1	1	2024-04-10 10:00:00	1	334	✎
2	123456789	2	1	2024-04-10 11:00:00	2	400	✎
3	123456789	3	1	2024-04-10 12:00:00	1	600	✎
4	123456789	4	1	2024-04-10 13:00:00	2	200	✎
5	123456789	5	1	2024-04-10 14:00:00	3	200	✎
26	123456789	6	1	2024-04-11 10:00:00	2	200	✎
27	123456789	7	1	2024-04-12 11:00:00	3	600	✎
28	123456789	8	1	2024-04-13 12:00:00	3	300	✎
29	123456789	9	1	2024-04-14 13:00:00	2	500	✎

○ Invoice:

■ List of Invoices and options to get invoices based on date and insurance
company for daily accounting.

All Invoices

Select Date: [2024-04-01 ▾] Select Insurance Company: [1 ▾] [Generate Invoice]
[View Insurance Companies]

Invoice ID	Invoice Date	Invoice Amount	Insurance Company ID	Patient ID
2	2024-04-02	500	2	9
3	2024-04-03	300	3	8
3	2024-04-03	600	3	7
2	2024-04-02	800	2	3
1	2024-04-01	270	1	2
2	2024-04-02	200	2	6
1	2024-04-01	130	1	1
3	2024-04-03	200	3	5
2	2024-04-02	200	2	4
1	2024-04-01	600	1	3
2	2024-04-02	400	2	2
3	2024-04-03	600	3	6
4	2024-04-04	400	4	6
1	2024-04-01	334	1	1
2	2024-04-02	400	2	6
1	2024-04-01	200	1	6
5	2024-04-05		5	

● Management and Reporting enables us to perform the following tasks:
  ○ Revenue by Facility :
    ■ Generates revenue data.

Revenue by Facility

Select Date: dd - mm - yyyy ☐ | Generate Report

- ○ Appointment by Physician:
  - ■ Date wise appointments

Physician Appointments

Select Date: 2024-04-10 ▾

Select Physician: John ▾

Generate Report

- ○ Appointment by Facility :
  - ■ Facility wise appointments.

Appointment Details

From: dd-mm-yyyy 📅 To: dd-mm-yyyy 📅

Select Facility: Main Hospital ▾

Generate Report

○ Best Revenue Days:

Best Revenue Days

Select Month: ---------, ---- 📅 Generate Report

○ Average Daily Revenues:

Average Daily Revenue by Insurance Company

Start Date: dd-mm-yyyy 📅

End Date: dd-mm-yyyy 📅

Generate Report

Entities :

- **Employee** (**SSN**, EmpID, FName, Minit, LName, Street, City, State, Zip, Salary, Hiredate, Jobclass, FacID)
- **Doctor** (**SSN**, Speciality, BO_date)
- **Other_HCP** (**SSN**, JobTitle)
- **Nurse** (**SSN**, Certi)
- **Admin** (**SSN**, JobTitle)
- **Patient** (**Pid**, FName, Minit, LName, Street, City, State, Zip, SSN, Ins_id)
- **Insurance Company** (**Ins_id**, Name, Street, City, State, Zip)
- **Invoice** (**Inv_id**, Inv_date, Ins_id)
- **Facility** (**FacID**, Street, City, State, Zip, Size, Office_Count, Room_Count, P_Code, Date_Time, FacType, Desc)
- **Appointment** (id, **FacID**, **SSN**, **Pid**, **Date_Time**, Inv_id, Cost)
- **Treat** (**SSN**, **Pid**)

SQL Commands that Create Tables

-- Table structure for table `employee`
CREATE TABLE `employee` (
`SSN` varchar(50) NOT NULL CHECK (LENGTH(`SSN`) = 9),
`EmpID` int(10) NOT NULL AUTO_INCREMENT,
`FName` varchar(120) DEFAULT NULL,
`Minit` varchar(50) DEFAULT NULL,
`LName` varchar(50) DEFAULT NULL,
`Street` varchar(50) DEFAULT NULL,
`City` varchar(50) DEFAULT NULL,
`State` varchar(50) DEFAULT NULL,
`Zip` varchar(50) DEFAULT NULL,
`Salary` int(10) DEFAULT NULL,
`Hiredate` DATETIME NULL DEFAULT current_timestamp(),
`Jobclass` varchar(120) DEFAULT NULL,
`FacID` int(10) DEFAULT NULL,
UNIQUE (EmpID),
PRIMARY KEY (`SSN`)
) ENGINE=InnoDB DEFAULT CHARSET=latin1;

-- Create the Doctor subclass table
CREATE TABLE Doctor (
SSN varchar(50) NOT NULL,
Speciality VARCHAR(120) DEFAULT NULL,
BO_date DATE DEFAULT NULL,
PRIMARY KEY (SSN),
CONSTRAINT employee_fk_doctor FOREIGN KEY (SSN) REFERENCES employee(SSN) ON DELETE CASCADE
) ENGINE=InnoDB DEFAULT CHARSET=latin1;

```sql
-- Create the Other_HCP subclass table
CREATE TABLE Other_HCP (
  SSN varchar(50) NOT NULL,
  JobTitle VARCHAR(120) DEFAULT NULL,
  PRIMARY KEY (SSN),
  CONSTRAINT employee_fk_hcp FOREIGN KEY (SSN) REFERENCES employee(SSN) ON DELETE CASCADE
) ENGINE=InnoDB DEFAULT CHARSET=latin1;




-- Create the Nurse subclass table
CREATE TABLE Nurse (
  SSN varchar(50) NOT NULL,
  Certi VARCHAR(120) DEFAULT NULL,
  PRIMARY KEY (SSN),
  CONSTRAINT employee_fk_nurse FOREIGN KEY (SSN) REFERENCES employee(SSN) ON DELETE CASCADE
) ENGINE=InnoDB DEFAULT CHARSET=latin1;




-- Create the Admin subclass table
CREATE TABLE `Admin` (
  SSN varchar(50) NOT NULL,
  JobTitle VARCHAR(120) DEFAULT NULL,
  PRIMARY KEY (SSN),
  CONSTRAINT employee_fk_admin FOREIGN KEY (SSN) REFERENCES employee(SSN) ON DELETE CASCADE
) ENGINE=InnoDB DEFAULT CHARSET=latin1;




-- Table structure for table `Patient`
CREATE TABLE `Patient` (
  `Pid` int(10) NOT NULL AUTO_INCREMENT,
  `FName` varchar(120) DEFAULT NULL,
  `Minit` varchar(50) DEFAULT NULL,
  `LName` varchar(50) DEFAULT NULL,
  `Street` varchar(50) DEFAULT NULL,
  `City` varchar(50) DEFAULT NULL,
  `State` varchar(50) DEFAULT NULL,
  `Zip` varchar(50) DEFAULT NULL,
  `SSN` varchar(50) NOT NULL,
  `Ins_id` int(10) NOT NULL,
  PRIMARY KEY (`Pid`),
  CONSTRAINT patient_fk_doctor FOREIGN KEY (`SSN`) REFERENCES `Doctor` (`SSN`)
) ENGINE=InnoDB DEFAULT CHARSET=latin1;




-- Table structure for table `Insurance Company`
CREATE TABLE `Insurance Company` (
```

```sql
  `Ins_id` int(10) NOT NULL AUTO_INCREMENT,
  `Name` varchar(50) DEFAULT NULL,
  `Street` varchar(50) DEFAULT NULL,
  `City` varchar(50) DEFAULT NULL,
  `State` varchar(50) DEFAULT NULL,
  `Zip` varchar(50) DEFAULT NULL,
  PRIMARY KEY (`Ins_id`)
  ) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4;


-- Table structure for table `Invoice`
CREATE TABLE `Invoice` (
  `Inv_id` int(10) NOT NULL AUTO_INCREMENT,
  `Inv_date` DATE NOT NULL,
  `Ins_id` int(10) DEFAULT NULL,
  PRIMARY KEY (`Inv_id`),
  CONSTRAINT invoice_fk_insurance FOREIGN KEY (`Ins_id`) REFERENCES `Insurance Company` (`Ins_id`)
) ENGINE=InnoDB DEFAULT CHARSET=latin1;


-- Table structure for table `Facility`
CREATE TABLE `Facility` (
  `FacID` int(10) NOT NULL AUTO_INCREMENT,
  `Street` varchar(120) DEFAULT NULL,
  `City` varchar(50) DEFAULT NULL,
  `State` varchar(50) DEFAULT NULL,
  `Zip` varchar(50) DEFAULT NULL,
  `Size` varchar(50) DEFAULT NULL,
  `Office_Count` int(10) NOT NULL,
  `Room_Count` int(10) DEFAULT NULL,
  `P_Code` int(10) DEFAULT NULL,
  `Date_Time` timestamp NULL DEFAULT current_timestamp(),
  `FacType` varchar(120) DEFAULT NULL,
  `Desc` varchar(50) DEFAULT NULL,
  PRIMARY KEY (`FacID`)
) ENGINE=InnoDB DEFAULT CHARSET=latin1;


-- Table structure for table `Appointment`
CREATE TABLE `Appointment` (
  `id` int(10) NOT NULL AUTO_INCREMENT,
  `FacID` int(10) NOT NULL,
  `SSN` varchar(50) NOT NULL,
  `Pid` int(10) NOT NULL, -- Comma added
  `Date_Time` timestamp NULL DEFAULT current_timestamp(),
  `Inv_id` int(10) DEFAULT NULL,
  `Cost` int(10) DEFAULT NULL,
  UNIQUE(`id`),
  PRIMARY KEY (`SSN`, `Pid`, `FacID`, `Date_Time`),
  CONSTRAINT appointment_fk_emp FOREIGN KEY (`SSN`) REFERENCES `Doctor` (`SSN`),
  CONSTRAINT appointment_fk_patient FOREIGN KEY (`Pid`) REFERENCES `Patient` (`Pid`),
  CONSTRAINT appointment_fk_facility FOREIGN KEY (`FacID`) REFERENCES `Facility` (`FacID`),
```

```
  CONSTRAINT appointment_fk_invoice FOREIGN KEY (`Inv_id`) REFERENCES `Invoice` (`Inv_id`)
) ENGINE=InnoDB DEFAULT CHARSET=latin1;


-- Table structure for table `Treat`
CREATE TABLE `Treat` (
 `SSN` varchar(50) NOT NULL,
 `Pid` int(10) NOT NULL,
 PRIMARY KEY (`SSN`, `Pid`),
 CONSTRAINT doctor_fk_treat FOREIGN KEY (`SSN`) REFERENCES `Doctor` (`SSN`),
 CONSTRAINT patient_fk_treated FOREIGN KEY (`Pid`) REFERENCES `Patient` (`Pid`)
) ENGINE=InnoDB DEFAULT CHARSET=latin1;
```

SQL Commands that Populate Tables

```
-- ---------------------------------------------------------


--
-- Dumping data for table `Facility`
--

INSERT INTO Facility (Street, City, State, Zip, Size, Office_Count, Room_Count, P_Code,
FacType, `Desc`)
VALUES
('123 Main St', 'New York', 'NY', '10001', 'Large', 10, 20, 1234, 'Hospital', 'Main Hospital'),
('456 Elm St', 'Los Angeles', 'CA', '90001', 'Medium', 8, 15, 5678, 'Clinic', 'Downtown Clinic'),
('789 Oak St', 'Chicago', 'IL', '60001', 'Small', 5, 10, 91011, 'Urgent Care', 'City Urgent Care'),
('101 Pine St', 'Houston', 'TX', '77001', 'Large', 12, 25, 121314, 'Hospital', 'Regional Hospital'),
('202 Cedar St', 'Miami', 'FL', '33001', 'Medium', 8, 15, 151617, 'Clinic', 'Beachside Clinic');


-- ---------------------------------------------------------


--
-- Dumping data for table `employee`
--
INSERT INTO employee (SSN, FName, Minit, LName, Street, City, State, Zip, Salary, Hiredate,
Jobclass, FacID)
VALUES
(123456789, 'John', 'D', 'Doe', '123 Main St', 'New York', 'NY', '10001', 60000, '2023-01-15',
'Doctor', 1),
(234567890, 'Jane', 'M', 'Smith', '456 Elm St', 'Los Angeles', 'CA', '90001', 70000, '2022-11-20',
'Doctor', 2),
(345678901, 'Michael', 'A', 'Johnson', '789 Oak St', 'Chicago', 'IL', '60001', 55000, '2023-03-10',
'Doctor', 3),
```

```sql
(456789012, 'Emily', 'N', 'Brown', '101 Pine St', 'Houston', 'TX', '77001', 65000, '2023-05-05',
'Doctor', 4),
(567890123, 'David', 'R', 'Wilson', '202 Maple St', 'Miami', 'FL', '33001', 60000, '2022-12-30',
'Doctor', 5),
(678901234, 'Sarah', 'K', 'Taylor', '303 Cedar St', 'Seattle', 'WA', '98001', 75000, '2023-02-18',
'Other_HCP', 1),
(789012345, 'Robert', 'J', 'Miller', '404 Oak St', 'San Francisco', 'CA', '94101', 70000,
'2022-10-05', 'Other_HCP', 2),
(890123456, 'Jennifer', 'L', 'Lee', '505 Elm St', 'Boston', 'MA', '02101', 60000, '2023-04-20',
'Other_HCP', 3),
(901234567, 'Daniel', 'P', 'Clark', '606 Pine St', 'Atlanta', 'GA', '30301', 65000, '2022-09-15',
'Other_HCP', 4),
(912345678, 'Michelle', 'T', 'Adams', '707 Maple St', 'Denver', 'CO', '80201', 70000, '2023-06-10',
'Other_HCP', 5),
(123123123, 'Jessica', 'E', 'Garcia', '808 Pine St', 'San Diego', 'CA', '92101', 60000, '2023-03-25',
'Nurse', 1),
(234234234, 'Andrew', 'F', 'Martinez', '909 Elm St', 'Portland', 'OR', '97201', 70000, '2022-12-10',
'Nurse', 2),
(345345345, 'Emily', 'G', 'Lopez', '101 Oak St', 'Las Vegas', 'NV', '89101', 55000, '2023-05-20',
'Nurse', 3),
(456456456, 'Christopher', 'H', 'Hernandez', '202 Cedar St', 'Phoenix', 'AZ', '85001', 65000,
'2023-01-05', 'Nurse', 4),
(567567567, 'Maria', 'I', 'Gonzalez', '303 Pine St', 'Austin', 'TX', '78701', 60000, '2022-11-30',
'Nurse', 5),
(678678678, 'David', 'J', 'Perez', '404 Elm St', 'San Antonio', 'TX', '78201', 75000, '2023-02-15',
'Admin', 1),
(789789789, 'Jessica', 'K', 'Ramirez', '505 Oak St', 'Dallas', 'TX', '75201', 70000, '2022-10-20',
'Admin', 2),
(890890890, 'Kevin', 'L', 'Torres', '606 Cedar St', 'Fort Worth', 'TX', '76101', 60000, '2023-04-05',
'Admin', 3),
(901901901, 'Ashley', 'M', 'Flores', '707 Elm St', 'El Paso', 'TX', '79901', 65000, '2022-09-30',
'Admin', 4),
(912912912, 'Michael', 'N', 'Rivera', '808 Pine St', 'Seattle', 'WA', '98101', 70000, '2023-06-15',
'Admin', 5);

-- Sample data for Doctor subclass
INSERT INTO Doctor (SSN, Speciality, BO_date)
VALUES
(123456789, 'Cardiology', '1980-05-15'),
(234567890, 'Orthopedics', '1975-09-20'),
(345678901, 'Dermatology', '1983-03-25'),
(456789012, 'Neurology', '1981-11-30'),
(567890123, 'Oncology', '1982-08-05');
```

```sql
-- Sample data for Other_HCP subclass
INSERT INTO Other_HCP (SSN, JobTitle)
VALUES
(678901234, 'Pharmacist'),
(789012345, 'Physician Assistant'),
(890123456, 'Medical Technologist'),
(901234567, 'Radiologic Technologist'),
(912345678, 'Respiratory Therapist');


-- Sample data for Nurse subclass
INSERT INTO Nurse (SSN, Certi)
VALUES
(123123123, 'Certified Nursing Assistant'),
(234234234, 'Nurse Practitioner'),
(345345345, 'Clinical Nurse Specialist'),
(456456456, 'Nurse Anesthetist'),
(567567567, 'Registered Nurse');

-- Sample data for Admin subclass
INSERT INTO Admin (SSN, JobTitle)
VALUES
(678678678, 'HR Coordinator'),
(789789789, 'Office Manager'),
(890890890, 'Billing Coordinator'),
(901901901, 'Executive Assistant'),
(912912912, 'Financial Analyst');

-- --------------------------------------------------------

--
-- Dumping data for table `Insurance Company`
--

INSERT INTO `Insurance Company` (Name, Street, City, State, Zip)
VALUES
('ABC Insurance', '123 Main St', 'New York', 'NY', '10001'),
('XYZ Insurance', '456 Elm St', 'Los Angeles', 'CA', '90001'),
('123 Insurance', '789 Oak St', 'Chicago', 'IL', '60001'),
('456 Insurance', '101 Pine St', 'Houston', 'TX', '77001'),
('789 Insurance', '202 Maple St', 'Miami', 'FL', '33001');

--
-- Dumping data for table `Patient`
```

```sql
--

-- Sample data for Patient table
INSERT INTO Patient (FName, Minit, LName, Street, City, State, Zip, SSN, Ins_id)
VALUES
('Alice', 'M', 'Johnson', '123 Oak St', 'New York', 'NY', '10001', 123456789, 1),
('Bob', 'N', 'Smith', '456 Elm St', 'Los Angeles', 'CA', '90001', 234567890, 2),
('Charlie', 'O', 'Williams', '789 Maple St', 'Chicago', 'IL', '60001', 345678901, 3),
('David', 'P', 'Brown', '101 Pine St', 'Houston', 'TX', '77001', 456789012, 4),
('Emma', 'Q', 'Jones', '202 Cedar St', 'Miami', 'FL', '33001', 567890123, 5),
('Frank', 'R', 'Davis', '303 Elm St', 'Seattle', 'WA', '98001', 123456789, 1),
('Grace', 'S', 'Miller', '404 Maple St', 'San Francisco', 'CA', '94101', 234567890, 2),
('Hannah', 'T', 'Wilson', '505 Oak St', 'Boston', 'MA', '02101', 345678901, 3),
('Ian', 'U', 'Taylor', '606 Pine St', 'Atlanta', 'GA', '30301', 456789012, 4),
('Julia', 'V', 'Anderson', '707 Cedar St', 'Denver', 'CO', '80201', 567890123, 5);
-- -------------------------------------------------------

--
-- Dumping data for table `Invoice`
--
INSERT INTO `Invoice` (Inv_date, Ins_id)
VALUES
('2024-04-01', 1),   -- Invoice 1 created on 2024-04-01, insurance company 1
('2024-04-02', 2),   -- Invoice 2 created on 2024-04-02, insurance company 2
('2024-04-03', 3),   -- Invoice 3 created on 2024-04-03, insurance company 3
('2024-04-04', 4),   -- Invoice 4 created on 2024-04-04, insurance company 4
('2024-04-05', 5);   -- Invoice 5 created on 2024-04-05, insurance company 5


--
-- Dumping data for table `Appointment`
--

INSERT INTO Appointment (FacID, SSN, Pid, Date_Time, Inv_id, Cost)
VALUES
(1, 123456789, 1, '2024-04-10 10:00:00', 1, 100),
(1, 123456789, 2, '2024-04-10 11:00:00', 2, 110),
(1, 123456789, 3, '2024-04-10 12:00:00', 3, 120),
(1, 123456789, 4, '2024-04-10 13:00:00', 4, 130),
(1, 123456789, 5, '2024-04-10 14:00:00', 5, 140),
(2, 234567890, 1, '2024-04-11 10:00:00', 1, 150),
(2, 234567890, 2, '2024-04-11 11:00:00', 2, 160),
(2, 234567890, 3, '2024-04-11 12:00:00', 3, 170),
(2, 234567890, 4, '2024-04-11 13:00:00', 4, 180),
```

(2, 234567890, 5, '2024-04-11 14:00:00', 5, 190),
(3, 345678901, 1, '2024-04-12 10:00:00', 1, 200),
(3, 345678901, 2, '2024-04-12 11:00:00', 2, 210),
(3, 345678901, 3, '2024-04-12 12:00:00', 3, 220),
(3, 345678901, 4, '2024-04-12 13:00:00', 4, 230),
(3, 345678901, 5, '2024-04-12 14:00:00', 5, 240),
(4, 456789012, 1, '2024-04-13 10:00:00', 1, 125),
(4, 456789012, 2, '2024-04-13 11:00:00', 2, 150),
(4, 456789012, 3, '2024-04-13 12:00:00', 3, 175),
(4, 456789012, 4, '2024-04-13 13:00:00', 4, 200),
(4, 456789012, 5, '2024-04-13 14:00:00', 5, 100),
(5, 567890123, 1, '2024-04-14 10:00:00', 1, 50),
(5, 567890123, 2, '2024-04-14 11:00:00', 2, 60),
(5, 567890123, 3, '2024-04-14 12:00:00', 3, 70),
(5, 567890123, 4, '2024-04-14 13:00:00', 4, 80),
(5, 567890123, 5, '2024-04-14 14:00:00', 5, 90),
(1, 123456789, 6, '2024-04-11 10:00:00', 1, 100),
(1, 123456789, 7, '2024-04-12 11:00:00', 2, 100),
(1, 123456789, 8, '2024-04-13 12:00:00', 3, 100),
(1, 123456789, 9, '2024-04-14 13:00:00', 4, 100),
(2, 234567890, 6, '2024-04-10 10:00:00', 1, 100),
(2, 234567890, 7, '2024-04-12 11:00:00', 2, 100),
(2, 234567890, 8, '2024-04-13 12:00:00', 3, 100),
(2, 234567890, 9, '2024-04-14 13:00:00', 4, 100),
(3, 345678901, 6, '2024-04-10 10:00:00', 1, 100),
(3, 345678901, 7, '2024-04-11 11:00:00', 2, 100),
(3, 345678901, 8, '2024-04-13 12:00:00', 3, 100),
(3, 345678901, 9, '2024-04-14 13:00:00', 4, 100),
(4, 456789012, 6, '2024-04-10 10:00:00', 1, 100),
(4, 456789012, 7, '2024-04-11 11:00:00', 2, 100),
(4, 456789012, 8, '2024-04-12 12:00:00', 3, 100),
(4, 456789012, 9, '2024-04-14 13:00:00', 4, 100),
(5, 567890123, 6, '2024-04-15 10:00:00', 1, 100),
(5, 567890123, 7, '2024-04-16 11:00:00', 2, 100),
(5, 567890123, 8, '2024-04-17 12:00:00', 3, 100),
(5, 567890123, 1, '2024-04-18 13:00:00', 1, 100),
(5, 567890123, 2, '2024-04-19 13:00:00', 2, 100),
(5, 567890123, 3, '2024-04-15 13:00:00', 3, 100),
(5, 567890123, 4, '2024-04-16 13:00:00', 4, 100),
(5, 567890123, 6, '2024-04-17 13:00:00', 1, 100),
(5, 567890123, 7, '2024-04-18 13:00:00', 2, 100),
(5, 567890123, 8, '2024-04-19 13:00:00', 3, 100),
(5, 567890123, 6, '2024-04-15 11:00:00', 1, 100),
(5, 567890123, 7, '2024-04-16 12:00:00', 2, 100),

```
(5, 567890123, 8, '2024-04-17 13:00:00', 3, 100),
(5, 567890123, 1, '2024-04-18 14:00:00', 1, 100),
(5, 567890123, 2, '2024-04-19 15:00:00', 2, 100),
(5, 567890123, 3, '2024-04-15 12:00:00', 3, 100),
(5, 567890123, 4, '2024-04-16 14:00:00', 4, 100),
(5, 567890123, 6, '2024-04-17 15:00:00', 1, 100),
(5, 567890123, 7, '2024-04-18 16:00:00', 2, 100),
(5, 567890123, 8, '2024-04-19 17:00:00', 3, 100),
(5, 567890123, 6, '2024-04-15 15:00:00', 1, 100),
(5, 567890123, 7, '2024-04-16 16:00:00', 2, 100),
(5, 567890123, 8, '2024-04-17 17:00:00', 3, 100),
(5, 567890123, 1, '2024-04-18 18:00:00', 1, 100),
(5, 567890123, 2, '2024-04-19 09:00:00', 2, 100),
(5, 567890123, 3, '2024-04-15 10:00:00', 3, 100),
(5, 567890123, 4, '2024-04-16 11:00:00', 4, 100),
(5, 567890123, 6, '2024-04-17 12:00:00', 1, 100),
(5, 567890123, 7, '2024-04-18 15:00:00', 2, 100),
(5, 567890123, 8, '2024-04-19 10:00:00', 3, 100);


-- Sample data for Treat table
INSERT INTO Treat (SSN, Pid)
VALUES
(123456789, 1),   -- Employee 123456789 treats patient 1
(234567890, 2),   -- Employee 234567890 treats patient 2
(345678901, 3),   -- Employee 345678901 treats patient 3
(456789012, 4),   -- Employee 456789012 treats patient 4
(567890123, 5);   -- Employee 567890123 treats patient 5


-- -------------------------------------------------------
```
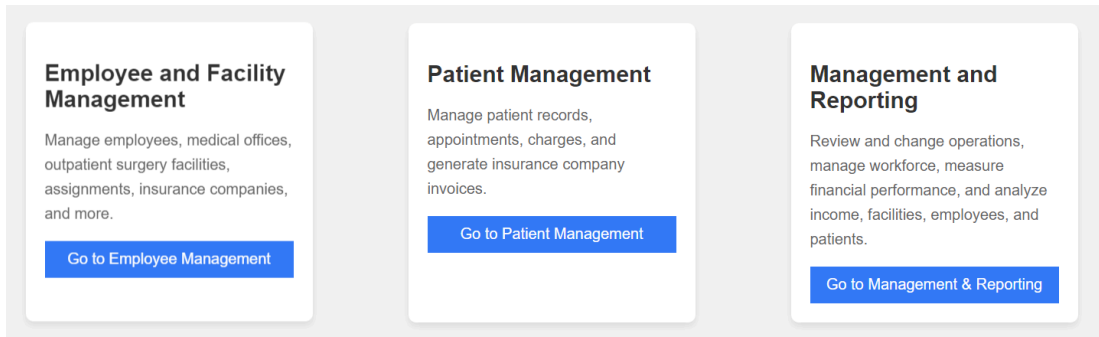
Source Code:

https://github.com/LakshmanPalli/morris-health-services-app

Use of the Program - Snapshots of the Application

1. http://localhost/morris-health-services-app/

Employee and Facility Management

Manage employees, medical offices, outpatient surgery facilities, assignments, insurance companies, and more.

Go to Employee Management

Patient Management

Manage patient records, appointments, charges, and generate insurance company invoices.

Go to Patient Management

Management and Reporting

Review and change operations, manage workforce, measure financial performance, and analyze income, facilities, employees, and patients.

Go to Management & Reporting

2. Employee and Facility Management:
   http://localhost/morris-health-services-app/employee_facility_management.php
   a. http://localhost/morris-health-services-app-main/modules/efm/employees/employees.php
   b. http://localhost/morris-health-services-app-main/modules/efm/employee-assignments/employee_assignments.php
   c. http://localhost/morris-health-services-app-main/modules/efm/insurance-companies/insurance_companies.php

Employee List

Search by first name... Search Reset Add

#	SSN	First Name	Middle Initial	Last Name	Employee ID	Hire Date	Job Class	Address	Salary	FacID	Action
1	234234234	Andrew	F	Martinez	12	2022-12-10 00:00:00	Nurse	909 Elm St, Portland, OR, 97201	70000	2	✎
2	901901901	Ashley	M	Flores	19	2022-09-30 00:00:00	Admin	707 Elm St, El Paso, TX, 79901	65000	4	✎
3	456456456	Christopher	H	Hernandez	14	2023-01-05 00:00:00	Nurse	202 Cedar St, Phoenix, AZ, 85001	65000	4	✎
4	901234567	Daniel	P	Clark	9	2022-09-15 00:00:00	Other_RCP	606 Pine St, Atlanta, GA, 30301	65000	4	✎
5	567890123	David	R	Wilson	5	2022-12-30 00:00:00	Doctor	202 Maple St, Miami, FL, 33001	60000	5	✎
6	678678678	David	J	Perez	16	2023-02-15 00:00:00	Admin	404 Elm St, San Antonio, TX, 78201	75000	1	✎
7	345345345	Emily	G	Lopez	13	2023-05-20 00:00:00	Nurse	101 Oak St, Las Vegas, NV, 89101	55000	3	✎
8	456789012	Emily	N	Brown	4	2023-05-05 00:00:00	Doctor	101 Pine St, Houston, TX, 77001	65000	4	✎
9	234567890	Jane	M	Smith	2	2022-11-20 00:00:00	Doctor	456 Elm St, Los Angeles, CA, 90001	70000	2	✎

2a: List of Employees

Employee Assignments

Employee ID	First Name	Last Name	Facility Street	Facility City	Facility State	Facility Zip	Facility Type	Description
11	Jessica	Garcia	123 Main St	New York	NY	10001	Hospital	Main Hospital
1	John	Doe	123 Main St	New York	NY	10001	Hospital	Main Hospital
12	Andrew	Martinez	456 Elm St	Los Angeles	CA	90001	Clinic	Downtown Clinic
2	Jane	Smith	456 Elm St	Los Angeles	CA	90001	Clinic	Downtown Clinic
13	Emily	Lopez	789 Oak St	Chicago	IL	60001	Urgent Care	City Urgent Care
3	Michael	Johnson	789 Oak St	Chicago	IL	60001	Urgent Care	City Urgent Care
14	Christopher	Hernandez	101 Pine St	Houston	TX	77001	Hospital	Regional Hospital
4	Emily	Brown	101 Pine St	Houston	TX	77001	Hospital	Regional Hospital
15	Maria	Gonzalez	202 Cedar St	Miami	FL	33001	Clinic	Beachside Clinic
5	David	Wilson	202 Cedar St	Miami	FL	33001	Clinic	Beachside Clinic

2b: Employee Assignments for Facility

Insurance Companies

Insurance ID	Name	Address
1	ABC Insurance	123 Main St, New York, NY, 10001
2	XYZ Insurance	456 Elm St, Los Angeles, CA, 90001
3	123 Insurance	789 Oak St, Chicago, IL, 60001
4	456 Insurance	101 Pine St, Houston, TX, 77001
5	789 Insurance	202 Maple St, Miami, FL, 33001

[Add Insurance Company]

2c: Insurance Company

3. Patient Management:

http://localhost/morris-health-services-app/patient_management.php

    a. http://localhost/morris-health-services-app-main/modules/pm/Patient/patients.php

    b. http://localhost/morris-health-services-app-main/modules/pm/appointments/appointments.php

    c. http://localhost/morris-health-services-app-main/modules/pm/invoice/Invoice.php

Patient List

Search by first name... [Search] Reset Add

#	Pid	FName	Minit	LName	Street	City	State	Zip	SSN	Ins_id	Action
1	1	Alice	M	Johnson	123 Oak St	New York	NY	10001	123456789	1	✎
2	2	Bob	N	Smith	456 Elm St	Los Angeles	CA	90001	234567890	2	✎
3	3	Charlie	O	Williams	789 Maple St	Chicago	IL	60001	345678901	3	✎
4	4	David	P	Brown	101 Pine St	Houston	TX	77001	456789012	4	✎
5	5	Emma	Q	Jones	202 Cedar St	Miami	FL	33001	567890123	5	✎
6	6	Frank	R	Davis	303 Elm St	Seattle	WA	98001	123456789	1	✎
7	7	Grace	S	Miller	404 Maple St	San Francisco	CA	94101	234567890	2	✎

3a: Patients List

All Appointments

[Add Appointment]

id	SSN	Pid	FacID	Date_Time	Inv_id	Cost	Action
1	123456789	1	1	2024-04-10 10:00:00	1	100	⇒
2	123456789	2	1	2024-04-10 11:00:00	2	110	⇒
3	123456789	3	1	2024-04-10 12:00:00	3	120	⇒
4	123456789	4	1	2024-04-10 13:00:00	4	130	⇒

3b: Appointments List

All Invoices

Select Date: [2024-04-01 ▾] Select Insurance Company: [1 ▾] [Generate Invoice]

[View Insurance Companies]

Invoice ID	Invoice Date	Invoice Amount	Insurance Company ID	Patient ID
3	2024-04-03	100	3	8
2	2024-04-02	100	2	2
2	2024-04-02	100	2	2
3	2024-04-03	100	3	8
3	2024-04-03	100	3	8

3c: Invoice Generator

4. Management and Reporting:
   http://localhost/morris-health-services-app/management_reporting.php
   a. http://localhost/morris-health-services-app-main/modules/mr/revenue_by_facility/revenue_by_facility.php
   b. http://localhost/morris-health-services-app-main/modules/mr/physician_appointments/physician_appointments.php
   c. http://localhost/morris-health-services-app-main/modules/mr/appointment_details/appointment_details.php
   d. http://localhost/morris-health-services-app-main/modules/mr/best_days/best_days.php
   e. http://localhost/morris-health-services-app-main/modules/mr/average_daily_revenue/average_daily_revenue.php

Revenue by Facility

Select Date: [mm/dd/yyyy] [Generate Report]

4a) Input for Revenue Facility (Top) and Output of Revenue Facility (Bottom)

Revenue by Facility for Date: 2024-04-12

Facility ID	Facility Name	Street	City	Total Revenue
1	Main Hospital	123 Main St	New York	100
2	Downtown Clinic	456 Elm St	Los Angeles	100
3	City Urgent Care	789 Oak St	Chicago	1100
4	Regional Hospital	101 Pine St	Houston	100
Total Revenue				1400

4b) Physician Appo. Output (Left) ,
4c) Facility Appo. Output(Right)

Physician Appointments on 2024-04-10 with Dr.John

Date and Time	Physician Name	Patient Name	Facility Name	Facility Type	Facility Address
2024-04-10 10:00:00	John Doe	Alice Johnson	Main Hospital	Hospital	123 Main St, New York, NY, 10001
2024-04-10 11:00:00	John Doe	Bob Smith	Main Hospital	Hospital	123 Main St, New York, NY, 10001
2024-04-10 12:00:00	John Doe	Charlie Williams	Main Hospital	Hospital	123 Main St, New York, NY, 10001
2024-04-10 13:00:00	John Doe	David Brown	Main Hospital	Hospital	123 Main St, New York, NY, 10001
2024-04-10 14:00:00	John Doe	Emma Jones	Main Hospital	Hospital	123 Main St, New York, NY, 10001

Appointment Details

Date	Physician	Patient	Facility
2024-04-10 10:00:00	John Doe	Alice Johnson	Main Hospital
2024-04-10 11:00:00	John Doe	Bob Smith	Main Hospital
2024-04-10 12:00:00	John Doe	Charlie Williams	Main Hospital
2024-04-10 13:00:00	John Doe	David Brown	Main Hospital

Top 5 Revenue Days

4d) Top 5 Revenue Days in the Month
4e) Average Daily Revenue by Insurance Company

Date	Total Revenue
2024-04-12	1400
2024-04-11	1150
2024-04-13	1050
2024-04-10	900
2024-04-14	750

Report: Average Daily Revenue by Insurance Company

Insurance Company	Appointment Date	Average Daily Revenue
ABC Insurance	2024-04-10	$100.00
ABC Insurance	2024-04-11	$125.00
ABC Insurance	2024-04-12	$200.00
ABC Insurance	2024-04-13	$125.00
ABC Insurance	2024-04-14	$50.00

Revisions Made

1. Removed Out-patient surgery facilities, and Any additional necessary entities tasks from employee facility management
2. Out-patient surgery facilities have been included in medical offices of Employee Facility Management
3. Removed Invoice Detail entity, and updated Appointment schema with inv_id, cost as attributes