```sql
DROP DATABASE SoftwareHouse;

CREATE DATABASE SoftwareHouse;

USE SoftwareHouse;

SET SQL_SAFE_UPDATES = 0;

#----------------------------------------% Table Creation %

CREATE TABLE Client (

  ClientID INT NOT NULL ,

  FirstName VARCHAR(255) NOT NULL,

  LastName VARCHAR(255) NOT NULL,

  Email VARCHAR(255) NOT NULL,

  Phone VARCHAR(255) NOT NULL,

  Address VARCHAR(255) NOT NULL,

  PRIMARY KEY (ClientID)

);


CREATE TABLE Employee (

  EmployeeID INT NOT NULL ,

  FirstName VARCHAR(255) NOT NULL,

  LastName VARCHAR(255) NOT NULL,

  Email VARCHAR(255) NOT NULL,

  Phone VARCHAR(255) NOT NULL,

  Address VARCHAR(255) NOT NULL,

  HireDate DATE NOT NULL,

  Salary INT NOT NULL,

  PRIMARY KEY (EmployeeID)

);


CREATE TABLE Project (

  ProjectID INT NOT NULL ,

  Title VARCHAR(255) NOT NULL,

  Description VARCHAR(255) NOT NULL,
```

```sql
   StartDate DATE NOT NULL,

   EndDate DATE NOT NULL,

   ClientID INT NOT NULL,

   PRIMARY KEY (ProjectID)
);


CREATE TABLE Task (

  TaskID INT NOT NULL ,

  Description VARCHAR(255) NOT NULL,

  StartDate DATE NOT NULL,

  EndDate DATE NOT NULL,

  ProjectID INT NOT NULL,

  EmployeeID INT NOT NULL,

  PRIMARY KEY (TaskID)
);


CREATE TABLE Service (

  ServiceID INT NOT NULL AUTO_INCREMENT,

  Name VARCHAR(255) NOT NULL,

  Description VARCHAR(255) NOT NULL,

  PRIMARY KEY (ServiceID)
);


CREATE TABLE Contract (

  ContractID INT NOT NULL ,

  ServiceID INT NOT NULL,

  ClientID INT NOT NULL,

  EmployeeID INT NOT NULL,

  StartDate DATE NOT NULL,

  EndDate DATE NOT NULL,

  TermsAndConditions VARCHAR(255) NOT NULL,
```

```sql
  PRIMARY KEY (ContractID)

);


CREATE TABLE Payment (

  PaymentID INT NOT NULL ,

  ContractID INT NOT NULL,

  Amount INT NOT NULL,

  PaymentDate DATE NOT NULL,

  PRIMARY KEY (PaymentID)

);


#----------------------------------------% Adding Foreign Keys %


ALTER TABLE Project

ADD CONSTRAINT FK_Project_ClientID

FOREIGN KEY (ClientID) REFERENCES Client (ClientID)

ON DELETE CASCADE

ON UPDATE CASCADE;


ALTER TABLE Task

ADD CONSTRAINT FK_Task_ProjectID

FOREIGN KEY (ProjectID) REFERENCES Project (ProjectID)

ON DELETE CASCADE

ON UPDATE CASCADE;


ALTER TABLE Task

ADD CONSTRAINT FK_Task_EmployeeID

FOREIGN KEY (EmployeeID) REFERENCES Employee (EmployeeID)

ON DELETE CASCADE

ON UPDATE CASCADE;
```

```sql
ALTER TABLE Contract

ADD CONSTRAINT FK_Contract_ServiceID

FOREIGN KEY (ServiceID) REFERENCES Service (ServiceID)

ON DELETE CASCADE

ON UPDATE CASCADE;


ALTER TABLE Contract

ADD CONSTRAINT FK_Contract_ClientID

FOREIGN KEY (ClientID) REFERENCES Client (ClientID)

ON DELETE CASCADE

ON UPDATE CASCADE;


ALTER TABLE Contract

ADD CONSTRAINT FK_Contract_EmployeeID

FOREIGN KEY (EmployeeID) REFERENCES Employee (EmployeeID)

ON DELETE CASCADE

ON UPDATE CASCADE;


ALTER TABLE Payment

ADD CONSTRAINT FK_Payment_ContractID

FOREIGN KEY (ContractID) REFERENCES Contract (ContractID)

ON DELETE CASCADE

ON UPDATE CASCADE;


#----------------------------------------% Inserting Data %


# Client

INSERT INTO Client (ClientID, FirstName, LastName, Email, Phone, Address)

VALUES

(1, 'John', 'Doe', 'johndoe@gmail.com', '123-456-7890', '123 Main Street'),

(2, 'Jane', 'Smith', 'janesmith@gmail.com', '555-667-8901', '456 Elm Street'),
```

(3, 'Michael', 'Jones', 'michaeljones@gmail.com', '789-012-3456', '789 Oak Street'),

(4, 'Sarah', 'Williams', 'sarahwilliams@gmail.com', '901-234-5678', '101 Maple Street'),

(5, 'David', 'Brown', 'davidbrown@gmail.com', '234-567-8901', '234 Pine Street'),

(6, 'Emily', 'Green', 'emilygreen@gmail.com', '567-890-1234', '345 Elm Street'),

(7, 'Peter', 'White', 'peterwhite@gmail.com', '890-123-4567', '456 Oak Street'),

(8, 'Susan', 'Black', 'susanblack@gmail.com', '012-345-6789', '567 Maple Street'),

(9, 'Thomas', 'Gray', 'thomasgray@gmail.com', '345-678-9012', '789 Oak Street'),

(10, 'Nancy', 'Pink', 'nancypink@gmail.com', '678-901-2345', '101 Maple Street');

SELECT * FROM CLIENT;

Employee

INSERT INTO Employee (EmployeeID, FirstName, LastName, Email, Phone, Address, HireDate, Salary)

VALUES (1, "John", "Doe", "johndoe@example.com", "555-555-1212", "21 Oslo St", "2022-02-01", 52000),

(2, "Jane", "Doe", "janedoe@example.com", "555-555-1212", "23 Greenfield Rd", "2021-04-01", 55000),

(3, "Bob", "Smith", "bobsmith@example.com", "555-555-1212", "143 Main St", "2009-01-01", 80000),

(4, "Sue", "Johnson", "suejohnson@example.com", "555-555-1212", "113 Main Rd", "2021-11-01", 60000),

(5, "Mike", "Brown", "mikebrown@example.com", "555-555-1212", "21 Main Victoria Rd", "2007-11-01", 90000),

(6, "Mary", "Jones", "maryjones@example.com", "555-555-1212", "87 Victoria St", "2018-10-01", 10000),

(7, "Tom", "Wilson", "tomwilson@example.com", "555-555-1212", "122 Main Rd", "2023-08-01", 30000),

(8, "Lisa", "Davis", "lisadavis@example.com","555-555-1212","123 Victoria Road","2021/03/01","40000"),

(9,"Bill","Miller","billmiller@example.com","555.555.1212","139 Main St","2012/08/01","50000"),

(10,"Karen","Taylor","karentaylor@example.com","555.555.1212","256 Victoria St","2020/05/01","20000");

SELECT * FROM Employee;

Project

INSERT INTO Project (ProjectID, Title, Description, StartDate, EndDate, ClientID) VALUES

(1, 'Inventory Manager', 'Develop a new software application to manage inventory.', '2023-01-01', '2023-03-01', 1),

(2, 'Website Developement', 'Design and build a new website to promote products and services.', '2023-02-01', '2023-04-01', 2),

(3, 'Marketing Compaign', 'Implement a new marketing campaign using print, online, and social media.', '2023-03-01', '2023-05-01', 3),

(4, 'Market Research', 'Conduct market research to understand target market and needs.', '2023-04-01', '2023-06-01', 4),

(5, 'White Paper', 'Write a white paper to educate customers about new technology.', '2023-05-01', '2023-07-01', 5),

(6, 'Training Program', 'Create a new training program to train employees on new software application.', '2023-06-01', '2023-08-01', 6),

(7, 'Product', 'Develop a new product to solve a specific problem.', '2023-07-01', '2023-09-01', 7),

(8, 'Customer Support', 'Provide customer support via phone, email, and chat.', '2023-08-01', '2023-10-01', 8),

(9, 'Management', 'Manage a project to develop new software application.', '2023-09-01', '2023-11-01', 9),

(10, 'Website', 'Deliver a project on time and within budget to develop new website.', '2023-10-01', '2023-12-01', 10);

SELECT * FROM Project;

Task

INSERT INTO Task (TaskID, Description, StartDate, EndDate, ProjectID, EmployeeID) VALUES

(1, 'Develop the user interface.', '2023-01-01', '2023-03-01', 1, 1),

(2, 'Develop the database.', '2023-02-01', '2023-04-01', 1, 2),

(3, 'Implement the user stories.', '2023-03-01', '2023-05-01', 1, 3),

(4, 'Write the unit tests.', '2023-04-01', '2023-06-01', 1, 4),

(5, 'Integrate the modules.', '2023-05-01', '2023-07-01', 1, 5),

(6, 'Deploy the application.', '2023-06-01', '2023-08-01', 1, 6),

(7, 'Test the application.', '2023-07-01', '2023-09-01', 1, 7),

(8, 'Fix bugs.', '2023-08-01', '2023-10-01', 1, 8),

(9, 'Release the application.', '2023-09-01', '2023-11-01', 1, 9),

(10, 'Provide support to users.', '2023-10-01', '2023-12-01', 1, 10);

SELECT * FROM Task;

Service

INSERT INTO Service (ServiceID, Name, Description) VALUES

(1, 'Software Development', 'We develop custom software applications to meet your business needs.'),

(2, 'Website Design and Development', 'We design and develop beautiful and functional websites that will help you grow your business.'),

(3, 'Marketing', 'We help you reach your target audience with effective marketing campaigns.'),

(4, 'Consulting', 'We provide expert advice and guidance on a variety of business-related topics.'),

(5, 'Training', 'We offer a variety of training programs to help you and your employees develop the skills you need to succeed.'),

(6, 'Support', 'We provide 24/7 support to ensure that your software applications and websites are always up and running.'),

(7, 'Security', 'We help you protect your data from unauthorized access.'),

(8, 'Cloud Computing', 'We help you move your business to the cloud so you can save money and improve efficiency.'),

(9, 'Data Analytics', 'We help you make sense of your data so you can make better business decisions.'),

(10, 'Mobile App Development', 'We develop mobile apps that will help you reach your target audience on their mobile devices.');

SELECT * FROM Service;

Contract

INSERT INTO Contract (ContractID, ServiceID, ClientID, EmployeeID, StartDate, EndDate, TermsAndConditions) VALUES

(1, 1, 1, 1, '2023-01-01', '2023-03-01', 'This is the contract terms and conditions for Inventory Manager Project.'),

(2, 2, 2, 2, '2023-02-01', '2023-04-01', 'This is the contract terms and conditions for Website Developement.'),

(3, 3, 3, 3, '2023-03-01', '2023-05-01', 'This is the contract terms and conditions for Marketing Compaign.'),

(4, 4, 4, 4, '2023-04-01', '2023-06-01', 'This is the contract terms and conditions for Market Research.'),

(5, 5, 5, 5, '2023-05-01', '2023-07-01', 'This is the contract terms and conditions for White Paper.'),

(6, 6, 6, 6, '2023-06-01', '2023-08-01', 'This is the contract terms and conditions for Training Program.'),

(7, 7, 7, 7, '2023-07-01', '2023-09-01', 'This is the contract terms and conditions for Product.'),

(8, 8, 8, 8, '2023-08-01', '2023-10-01', 'This is the contract terms and conditions for Customer Support.'),

(9, 9, 9, 9, '2023-09-01', '2023-11-01', 'This is the contract terms and conditions for Management.'),

(10, 10, 10, 10, '2023-10-01', '2023-12-01', 'This is the contract terms and conditions for Website.');

SELECT * FROM Contract;

Payment

INSERT INTO Payment (PaymentID, ContractID, Amount, PaymentDate) VALUES

(1, 1, 1000, '2023-01-01'),

(2, 2, 2000, '2023-02-01'),

(3, 3, 3000, '2023-03-01'),

(4, 4, 4000, '2023-04-01'),

(5, 5, 5000, '2023-05-01'),

(6, 6, 6000, '2023-06-01'),

(7, 7, 7000, '2023-07-01'),

```
(8, 8, 8000, '2023-08-01'),

(9, 9, 9000, '2023-09-01'),

(10, 10, 10000, '2023-10-01');


SELECT * FROM Payment;


#---------------------------------------% Updation %


# Client


UPDATE Client

SET FirstName = 'James'

WHERE ClientID = 1;

UPDATE Client

SET Address = '781 Oak Street'

WHERE ClientID = 2;

UPDATE Client

SET Phone = '555-555-1314'

WHERE ClientID = 3;


# Employee


# Update the employee's name.

UPDATE Employee

SET FirstName = 'John',

LastName = 'Doe'

WHERE EmployeeID = 1;


# Update the employee's department.

UPDATE Employee

SET Address = '21 Brookfield St'
```

```
WHERE EmployeeID = 2;


# Update the employee's salary.

UPDATE Employee

SET Salary = 100000

WHERE EmployeeID = 3;


#Project


UPDATE Project

SET Title = "Inventory Management System"

WHERE ProjectID = 1;


UPDATE Project

SET Description = "Only Build a new website to promote products and services."

WHERE ProjectID = 2;


UPDATE Project

SET StartDate = "2023-06-01"

WHERE ProjectID = 3;


# Task


UPDATE task

SET EndDate = "2023-12-01"

WHERE TaskID = 8;


UPDATE task

SET Description = "Developing backend."

WHERE TaskID = 2;
```

```sql
UPDATE task
SET EndDate = "2023-09-01"
WHERE TaskID = 3;
```

Service

```sql
UPDATE Service
SET Name = 'Software Developement Service'
WHERE ServiceID = 1;
```

```sql
UPDATE Service
SET Description = 'New Description'
WHERE ServiceID = 2;
```

```sql
UPDATE Service
SET Name = 'Cyber Security'
WHERE ServiceID = 7;
```

Contract

```sql
UPDATE Contract
SET EndDate = '2023-03-01'
WHERE StartDate = '2023-01-01';
```

```sql
UPDATE Contract
SET TermsAndConditions = 'This is the new contract terms and conditions for Service 1.'
WHERE ServiceID = 1;
```

```sql
UPDATE Contract
SET EmployeeID = 2
```

WHERE ClientID = 2;

Payment

```sql
UPDATE Payment
SET Amount = 2000
WHERE ContractID = 1;


UPDATE Payment
SET PaymentDate = '2023-03-01'
WHERE PaymentID = 5;


UPDATE Payment
SET PaymentDate = '2023-06-01'
WHERE Amount > 5000;
```