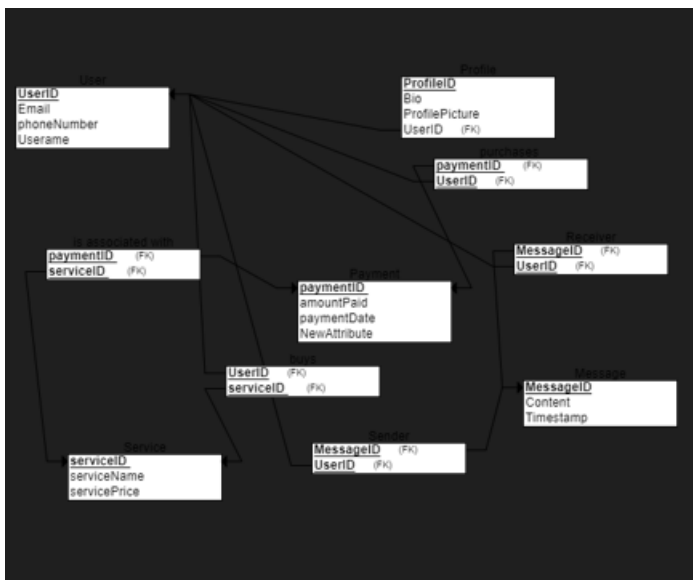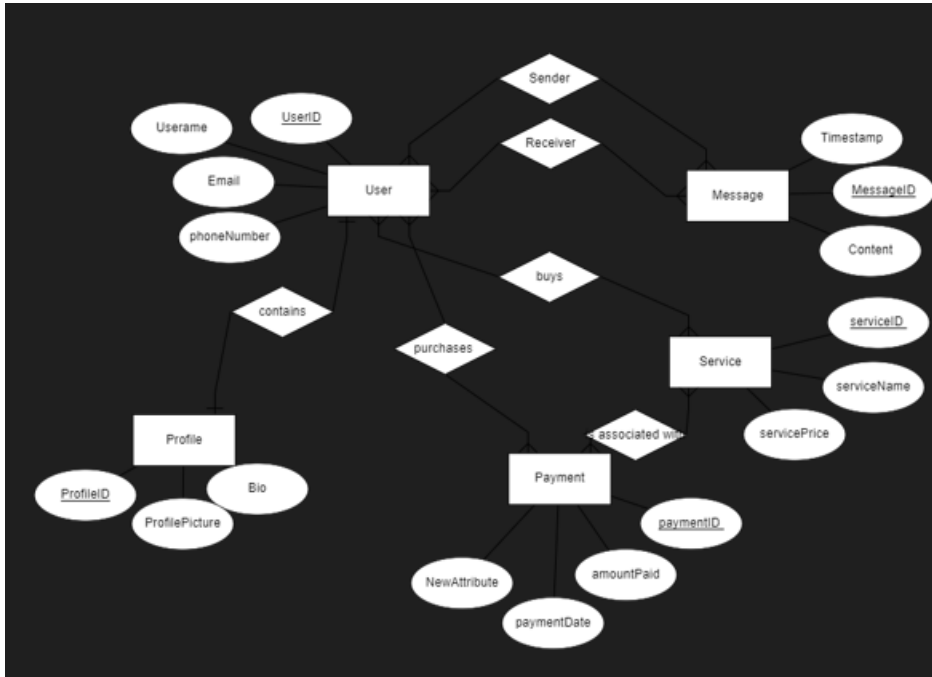Name : Moneeb Ahmed Al-ALawneh

1. Draw the ER diagram or Schema diagram for the previous scenario :

2. Create all the required tables for the system :

```sql
CREATE TABLE Users (

    userID INT PRIMARY KEY,

    userName VARCHAR2(100),

    userEmail VARCHAR2(100),

    phoneNumber VARCHAR2(15)

);


CREATE TABLE Profile (

    profileID INT PRIMARY KEY,

    bio VARCHAR2(500),

    profilePicture VARCHAR2(255),

    userID INT,

    FOREIGN KEY (userID) REFERENCES Users(userID)

);


CREATE TABLE Message (

    messageID INT PRIMARY KEY,

    content VARCHAR2(500),

    sentTime TIMESTAMP DEFAULT CURRENT_TIMESTAMP,

    senderID INT,

    receiverID INT,

    FOREIGN KEY (senderID) REFERENCES Users(userID),

    FOREIGN KEY (receiverID) REFERENCES Users(userID)

);
```

```sql
CREATE TABLE Service (

    serviceID INT PRIMARY KEY,

    serviceName VARCHAR2(100),

    servicePrice DECIMAL(10, 2)

);


CREATE TABLE Payment (

    paymentID INT PRIMARY KEY,

    amountPaid DECIMAL(10, 2),

    paymentDate DATE,

    userID INT,

    serviceID INT,

    FOREIGN KEY (userID) REFERENCES Users(userID),

    FOREIGN KEY (serviceID) REFERENCES Service(serviceID)

);
```

3. Add 3 records for each table using DML commands :

```sql
INSERT INTO Users (userID, userName, userEmail, phoneNumber) VALUES (1, 'Moneeb',
'moneeb@gmail.com', '1234567890');

INSERT INTO Users (userID, userName, userEmail, phoneNumber) VALUES (2, 'Husam',
'husam@gmail.com', '0987654321');

INSERT INTO Users (userID, userName, userEmail, phoneNumber) VALUES (3, 'Raseel',
'raseel@gmail.com', '1122334455');


INSERT INTO Profile (profileID, bio, profilePicture, userID) VALUES (1, 'Bio of Moneeb', 'profile1.jpg',
1);
```

INSERT INTO Profile (profileID, bio, profilePicture, userID) VALUES (2, 'Bio of Husam', 'profile2.jpg', 2);

INSERT INTO Profile (profileID, bio, profilePicture, userID) VALUES (3, 'Bio of Raseel', 'profile3.jpg', 3);

INSERT INTO Message (messageID, content, sentTime, senderID, receiverID) VALUES (1, 'Hello!', CURRENT_TIMESTAMP, 1, 2);

INSERT INTO Message (messageID, content, sentTime, senderID, receiverID) VALUES (2, 'How are you?', CURRENT_TIMESTAMP, 2, 1);

INSERT INTO Message (messageID, content, sentTime, senderID, receiverID) VALUES (3, 'Good Morning!', CURRENT_TIMESTAMP, 3, 1);

INSERT INTO Service (serviceID, serviceName, servicePrice) VALUES (1, 'Service A', 100.00);

INSERT INTO Service (serviceID, serviceName, servicePrice) VALUES (2, 'Service B', 150.00);

INSERT INTO Service (serviceID, serviceName, servicePrice) VALUES (3, 'Service C', 200.00);

INSERT INTO Payment (paymentID, amountPaid, paymentDate, userID, serviceID) VALUES (1, 100.00, TO_DATE('2023-01-01', 'YYYY-MM-DD'), 1, 1);

INSERT INTO Payment (paymentID, amountPaid, paymentDate, userID, serviceID) VALUES (2, 150.00, TO_DATE('2023-02-01', 'YYYY-MM-DD'), 2, 2);

INSERT INTO Payment (paymentID, amountPaid, paymentDate, userID, serviceID) VALUES (3, 200.00, TO_DATE('2023-03-01', 'YYYY-MM-DD'), 3, 3);

Tables :

	USERID	USERNAME	USEREMAIL	PHONENUMBER
1	1	Moneeb	moneeb@gmail.com	1234567890
2	2	Husam	husam@gmail.com	0987654321
3	3	Raseel	raseel@gmail.com	1122334455

	PAYMENTID	AMOUNTPAID	PAYMENTDATE	USERID	SERVICEID
1	1	100	01-JAN-23	1	1
2	2	150	01-FEB-23	2	2
3	3	200	01-MAR-23	3	3

	MESSAGEID	CONTENT	SENTTIME	SENDERID	RECEIVERID
1	1	Hello!	20-OCT-24 05.07.37.763000000 PM	1	2
2	2	How are you?	20-OCT-24 05.07.37.768000000 PM	2	1
3	3	Good Morning!	20-OCT-24 05.07.37.775000000 PM	3	1

	PROFILEID	BIO	PROFILEPICTURE	USERID
1	1	Bio of Moneeb	profile1.jpg	1
2	2	Bio of Husam	profile2.jpg	2
3	3	Bio of Raseel	profile3.jpg	3

	SERVICEID	SERVICENAME	SERVICEPRICE
1	1	Service A	100
2	2	Service B	150
3	3	Service C	200

4. Update 1 record from each table using DML commands :

UPDATE Users SET UserEmail = 'moneeb_updated@gmail.com' WHERE userID = 1;

UPDATE Profile SET bio = 'Updated Bio of Moneeb' WHERE profileID = 1;

UPDATE Message SET content = 'Updated Message' WHERE messageID = 1;

UPDATE Service SET servicePrice = 120.00 WHERE serviceID = 1;

UPDATE Payment SET amountPaid = 110.00 WHERE paymentID = 1;

Tables after updating :

	USERID	USERNAME	USEREMAIL	PHONENUMBER
1	1	Moneeb	moneeb_updated@gmail.com	1234567890
2	2	Husam	husam@gmail.com	0987654321
3	3	Raseel	raseel@gmail.com	1122334455

	MESSAGEID	CONTENT	SENTTIME	SENDERID	RECEIVERID
1	1	Updated Message	20-OCT-24 05.07.37.763000000 PM	1	2
2	2	How are you?	20-OCT-24 05.07.37.768000000 PM	2	1
3	3	Good Morning!	20-OCT-24 05.07.37.775000000 PM	3	1

	PAYMENTID	AMOUNTPAID	PAYMENTDATE	USERID	SERVICEID
1	1	110	01-JAN-23	1	1
2	2	150	01-FEB-23	2	2
3	3	200	01-MAR-23	3	3

	PROFILEID	BIO	PROFILEPICTURE	USERID
1	1	Updated Bio of Moneeb	profile1.jpg	1
2	2	Bio of Husam	profile2.jpg	2
3	3	Bio of Raseel	profile3.jpg	3

	SERVICEID	SERVICENAME	SERVICEPRICE
1	1	Service A	120
2	2	Service B	150
3	3	Service C	200

5. Delete 1 record from each table using DML commands :

DELETE FROM Payment WHERE paymentID = 3;

DELETE FROM Message WHERE messageID = 3;

DELETE FROM Profile WHERE profileID = 3;

DELETE FROM Users WHERE userID = 3;

Tables after Delete :

	USERID	USERNAME	USEREMAIL	PHONENUMBER
1	1	Moneeb	moneeb_updated@gmail.com	1234567890
2	2	Husam	husam@gmail.com	0987654321

	PAYMENTID	AMOUNTPAID	PAYMENTDATE	USERID	SERVICEID
1	1	110	01-JAN-23	1	1
2	2	150	01-FEB-23	2	2

	MESSAGEID	CONTENT	SENTTIME	SENDERID	RECEIVERID
1	1	Updated Message	20-OCT-24 05.07.37.763000000 PM	1	2
2	2	How are you?	20-OCT-24 05.07.37.768000000 PM	2	1

	PROFILEID	BIO	PROFILEPICTURE	USERID
1	1	Updated Bio of Moneeb	profile1.jpg	1
2	2	Bio of Husam	profile2.jpg	2

6. Modify 1 of the table's names using DDL commands :

ALTER TABLE Profile RENAME TO UserProfile;

7. Modify 2 columns' names with their datatypes using DDL commands :

ALTER TABLE Users RENAME COLUMN userEmail TO emailAddress;

Table before Rename Colum:

	USERID	USERNAME	USEREMAIL	PHONENUMBER
1	1	Moneeb	moneeb_updated@gmail.com	1234567890
2	2	Husam	husam@gmail.com	0987654321

Table after Rename Colum:

	USERID	USERNAME	EMAILADDRESS	PHONENUMBER
1	1	Moneeb	moneeb_updated@gmail.com	1234567890
2	2	Husam	husam@gmail.com	0987654321

ALTER TABLE Payment MODIFY amountPaid DECIMAL(12, 2);

Table before :

	PAYMENTID	AMOUNTPAID	PAYMENTDATE	USERID	SERVICEID
1	1	110	01-JAN-23	1	1
2	2	150	01-FEB-23	2	2

Table after :

	PAYMENTID	AMOUNTPAID	PAYMENTDATE	USERID	SERVICEID
1	1	110	01-JAN-23	1	1
2	2	150	01-FEB-23	2	2

8. Create the class diagram for the system :