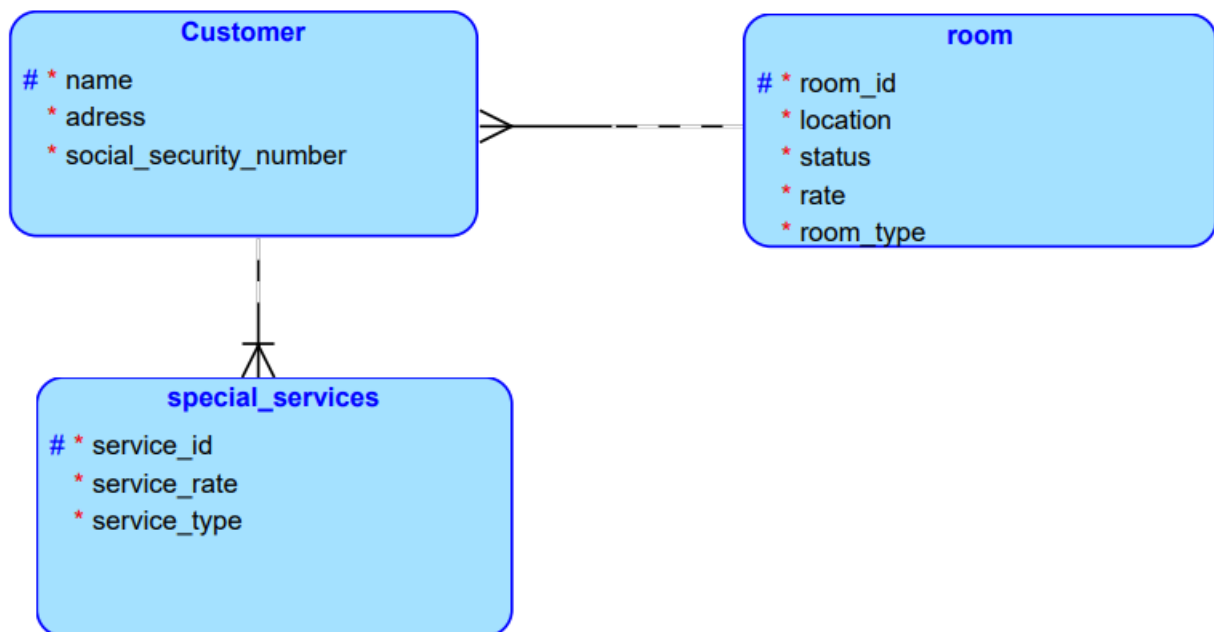Akhliddin Akhmadjonov
Student id 404816 Group 3

Task 3

3. SunRise hotel is located in Palm Beach. The hotel keeps a detailed database of the rooms and special services offered, as well as a database of employees and customers. Keeping a detailed database of the rooms facilitates the management of the hotel's everyday activities. The hotel keeps the following information about each customer: social security number, name, and address. For every room, the following information is recorded: room identification number, location (first floor, second floor, etc.), status (available or not available), rate, and room type (regular or luxurious). The hotel offers special services to customers, if requested. For the special services, the following information is recorded: identification number, rate, and service type. A customer may occupy exactly one room, and a room may be occupied by more than one customer as long as there is no overlap. Additionally, a customer may use more than one special service. Make suitable assumptions for the remaining relationships, and draw an E-R diagram for the SunRise hotel database.

Lab. 4

Lab 7

CREATE TABLE customers (
  social_security_number VARCHAR(11) PRIMARY KEY,
  name VARCHAR(255) NOT NULL,
  address VARCHAR(255) NOT NULL
);

CREATE TABLE rooms (

```sql
  room_id NUMBER PRIMARY KEY,
  location VARCHAR(255) NOT NULL,
  status VARCHAR(255) NOT NULL,
  rate NUMBER NOT NULL,
  room_type VARCHAR(255) NOT NULL
);

CREATE TABLE services (
  service_id NUMBER PRIMARY KEY,
  rate NUMBER NOT NULL,
  service_type VARCHAR(255) NOT NULL
);

CREATE TABLE CustomerRooms (
  customer_id CHAR(9),
  room_id INT,
  PRIMARY KEY (customer_id, room_id),
  FOREIGN KEY (customer_id) REFERENCES Customers(social_security_number),
  FOREIGN KEY (room_id) REFERENCES Rooms(room_id)
);

CREATE TABLE CustomerServices (
  customer_id CHAR(9),
  service_id INT,
  PRIMARY KEY (customer_id, service_id),
  FOREIGN KEY (customer_id) REFERENCES Customers(social_security_number),
  FOREIGN KEY (service_id) REFERENCES SpecialServices(service_id)
);

INSERT INTO Customers (social_security_number, name, address)
VALUES ('777-97-2233', 'John Cena', '223 St Park');

INSERT INTO Customers (social_security_number, name, address)
VALUES ('901-01-0189', 'Alisa Schmidt', '32 Piotrkowska Street');

INSERT INTO Customers (social_security_number, name, address)
VALUES ('100-10-1256', 'Didier Drogba', '16 Gdanska');

INSERT INTO Customers (social_security_number, name, address)
VALUES ('102-23-2003', 'Micheal Jordan', '3 Riga');

insert into customer values('John','New York',012344);
insert into customer values('Angel','Vegas',100806);
insert into customer values('Carlos','Mexico',098245);

insert into room values(0123,'first_floor','available',4.5,'regular');
insert into room values(0298,'second_floor','not_available',5,'luxurious');
insert into room values(0377,'third_floor','avaliable',4,'regular');
```

insert into special_services values(02,5,'sauna');
insert into special_services values(05,4.5,'party');
insert into special_services values(23,3,'gym');

DELETE FROM CUSTOMER_SERVICE
WHERE SOCIAL_SECURITY_NUMBER = 777-97-2233 AND SERVICE_ID = 1;

Lab 9

SELECT * FROM customers;
SELECT * FROM rooms;
SELECT * FROM services;

SELECT rent.*
FROM rooms rent
JOIN customer_room cr ON rent.room_id = cr.room_id
WHERE cr.social_security_number = '901-01-0189';

SELECT sauna.*
FROM services sauna
JOIN customer_service cs ON sauna.service_id = cs.service_id
WHERE cs.social_security_number = '100-10-1256';

SELECT c.name, raul.*
FROM customers c
JOIN customer_room cr ON c.social_security_number = craul.social_security_number
JOIN rooms rocky ON raul.room_id = craul.room_id
WHERE raul.room_type = 'regular';