IZMIR INSTITUTE OF TECHNOLOGY DEPARTMENT OF COMPUTER ENGINEERING

TERM PROJECT:

“HOTEL MANAGEMENT SYSTEM DATABASE”

By: **GROUP 18**

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All Entities and Their Attributes

Customer (customerID, first_name, last_name, gender, birth_date, nationalID, age, address, phone)

Employee (employeeID, first_name, last_name, gender, birth_date, age, address, phone)

EmployeeType (type_name, salary)

Booking (bookingID, bookerID, customers, booking_date, enter_date, exit_date)

Room (roomID, status, phone)

RoomType (type_name, description)

Image (image_name)

RoomPrice(date_from, date_to, price)

Comment(commentID, description, score)

Relationship Sets

r_room_type (type_name, roomID); // total participation one-to-many

r_book_room (roomID, bookingID); // many-to-many

r_bill (bookingID, customerID, bill_time, paid_time, total_price, exp_time, payment_method, status());

// total participation many-to-many

r_book_item(bookingID, customerID) // many-to-many

r_image (image_name); // one-to-many

r_employee_type (employeeID, employee_type); // total participation one-to-many

r_room_comment (roomID, commentID); // one-to-many

r_emp_comment (employeeID, commentID); // one-to-many

r_comments (customerID, commentID): // one-to-many

r_price_season(type_name, date_from, date_to); // one-to-many

r_emp_book (bookingID, employeeID); // one-to-many

ER Diagram

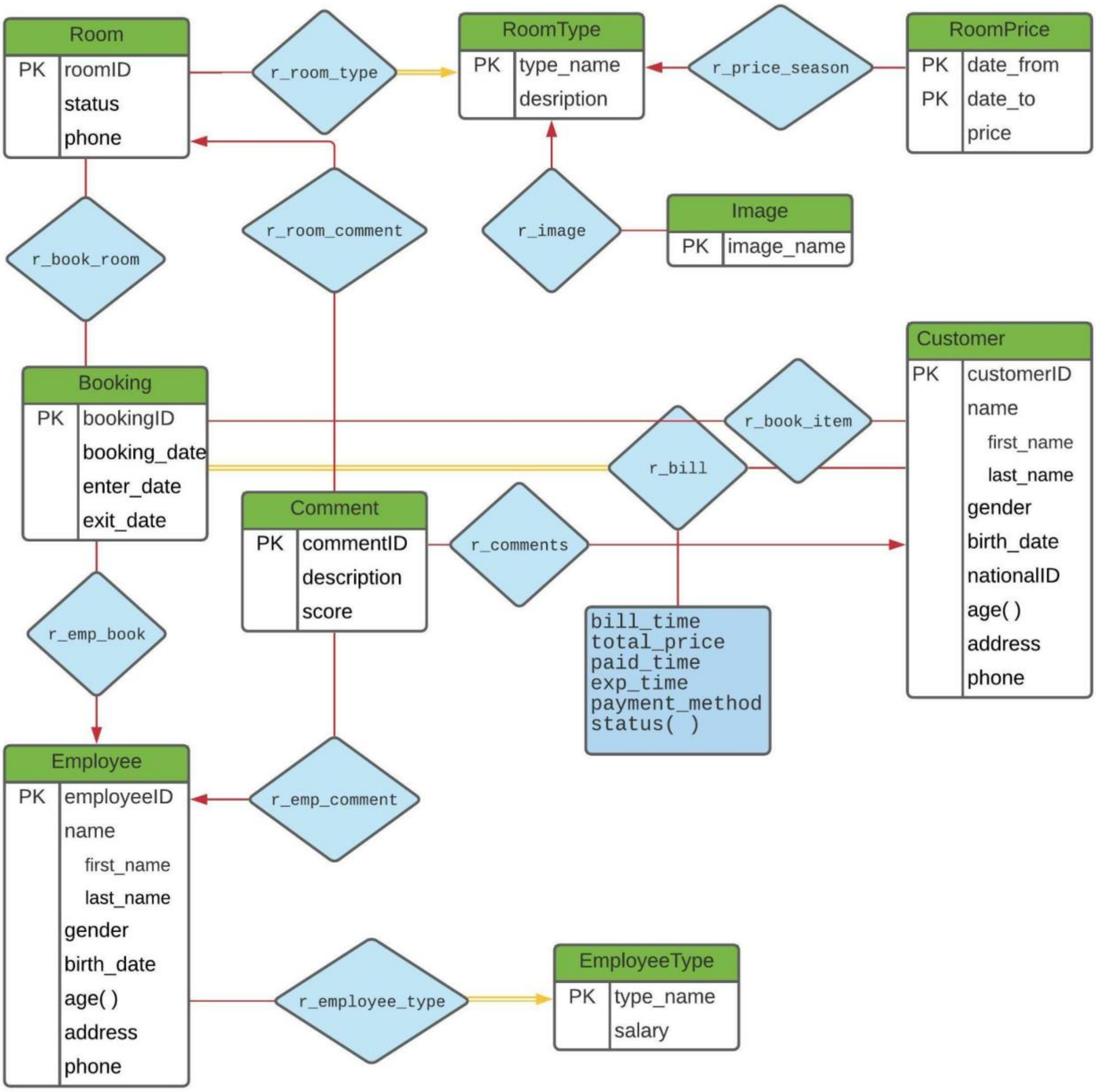


Diagram Link

System Users

- People who want to stay at hotel,
- Person who wants to run and manage a hotel,
- People who want to work in a hotel (receptionist…) .

Business Rules

Room/ Room Type

- A room cannot have more than one room type.
- A room type can describe more than one room.

Room/ Booking

- A booking may contain more than one room.
- A room may be included in more than one booking.

Booking/ Customer - (r_bill)

- A customer can make many booking

Booking/ Customer - (r_book_item)

- A booking may include many customer

Room Type/ Image

- A room type may have many images.
- An image must be for one room type.

Employee/Employee Type

- An employee must have one employee type.

Room/ Comment

- A comment must have one room.
- A room may have many comments.

Employee/ Comment

- A comment must have one employee.
- An employee may have many comments.

Comment/ Customer

- A comment must have one customer.
- A customer may make many comments.

PriceSeason/ Room Type

- A room must have one price season.
- A price season may be used by many room types.

Employee/Booking

- An employee may be in relation with may booking.
- A booking may not be booked by more than one employee.

Relational Schemas

ERD to Relational Schema

Step 1:

Customer (customerID, first_name, last_name, gender, birth_date, nationalID, age, address, phone)

Employee (employeeID, first_name, last_name, gender, birth_date, age, address, phone)

EmployeeType (type_name, salary)

Booking (bookingID, bookerID, customers, booking_date, enter_date, exit_date)

Room (roomID, status, phone)

RoomType (type_name, description)

Image (image_name)

RoomPrice(date_from, date_to, price)

Comment(commentID, description, score)

r_room_type (type_name, roomID); // total participation one-to-many

r_book_room (roomID, bookingID); // many-to-many

r_bill (bookingID, customerID, bill_time, paid_time, total_price, exp_time, payment_method, status());

// total participation many-to-many

r_book_item(bookingID, customerID) // many-to-many

r_image (image_name); // one-to-many

r_employee_type (employeeID, employee_type); // total participation one-to-many

r_room_comment (roomID, commentID); // one-to-many

r_emp_comment (employeeID, commentID); // one-to-many

r_comments (customerID, commentID): // one-to-many

r_price_season(type_name, date_from, date_to); // one-to-many

r_emp_book (bookingID, employeeID); // one-to-many

Step 2:

Customer (customerID, first_name, last_name, gender, birth_date, nationalID, age, address, phone)

Employee (employeeID, first_name, last_name, gender, birth_date, age, address, phone, type_name)

EmployeeType (type_name, salary)

Booking (bookingID, bookerID, booking_date, enter_date, exit_date, employeeID)

Room (roomID, status, phone, type_name)

RoomType (type_name, description)

Image (image_name, type_name)

RoomPrice(date_from, date_to, price, type_name)

Comment(commentID, description, score, roomID, employeeID, customerID)

r_room_type ~~(type_name, roomID); // total participation one-to-many~~

r_book_room (roomID, bookingID); // many-to-many

r_bill (bookingID, customerID, bill_time, paid_time, total_price, exp_time, payment_method, status());

// total participation many-to-many

r_book_item(bookingID, customerID) // many-to-many

r_image ~~(image_name); // one-to-many~~

r_employee_type ~~(employeeID, employee_type); // total participation one-to-many~~

r_room_comment ~~(roomID, commentID); // one-to-many~~

r_emp_comment ~~(employeeID, commentID); // one-to-many~~

r_comments ~~(customerID, commentID); // one-to-many~~

r_price_season~~(type_name, date_from, date_to); // one-to-many~~

r_emp_book ~~(bookingID, employeeID); // one-to-many~~

Step 3:

Customer (customerID, first_name, last_name, gender, birth_date, nationalID, age, address, phone)

Employee (employeeID, first_name, last_name, gender, birth_date, age, address, phone, type_name)

EmployeeType (type_name, salary)

Booking (bookingID, bookerID, booking_date, enter_date, exit_date, employeeID)

Room (roomID, status, phone, type_name)

RoomType (type_name, description)

Image (image_name, type_name)

RoomPrice(date_from, date_to, price, type_name)

Comment(commentID, description, score, roomID, employeeID, customerID)

r_book_room (roomID, bookingID); // many-to-many

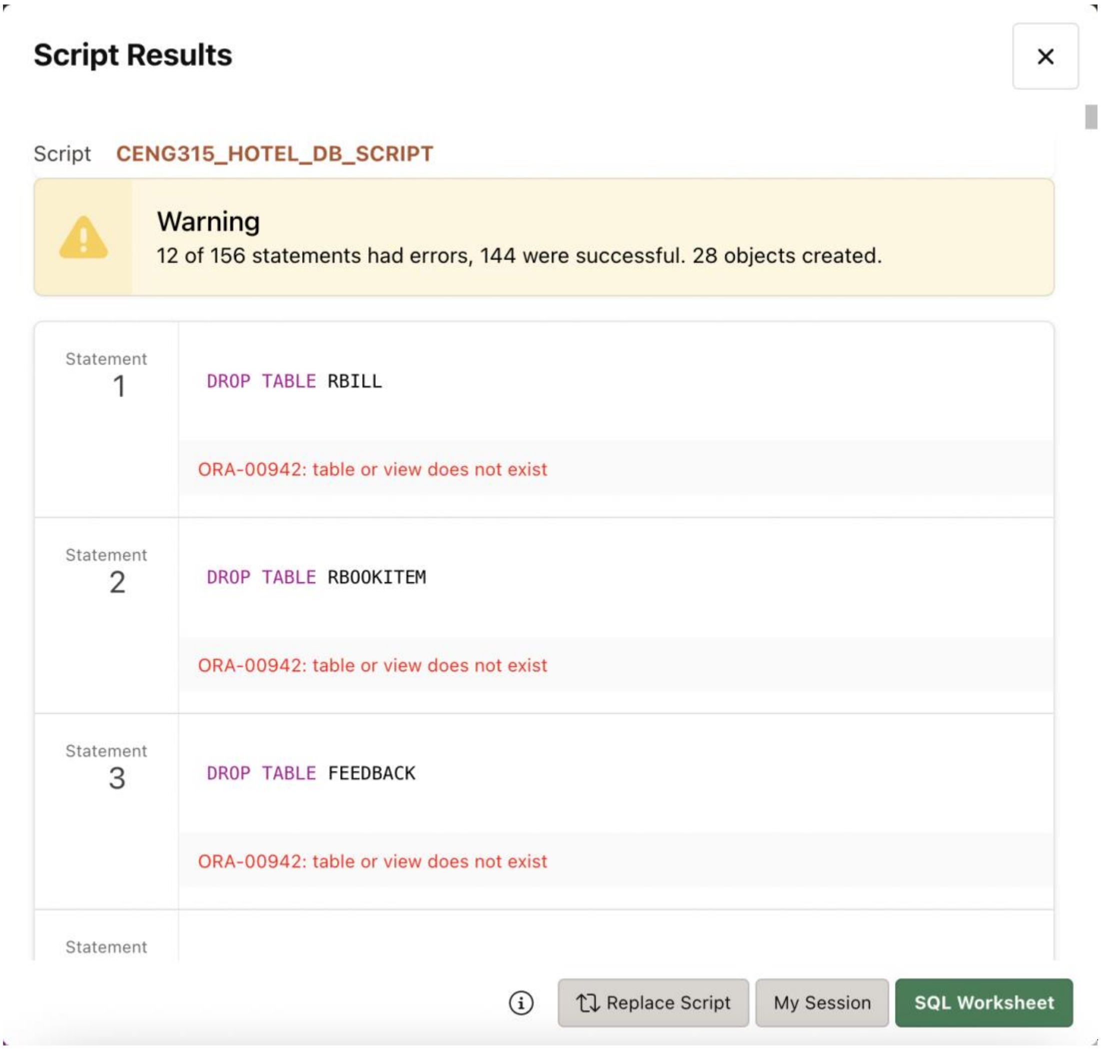
r_bill (bookingID, customerID, bill_time, paid_time, total_price, exp_time, payment_method, status());

// total participation many-to-many

r_book_item(bookingID, customerID) // many-to-many

Screenshots

1) After executing script in oracle live sql. (There are 12 statements that tries to drop tables before creation. That is the reason of 12 warnings.)



Script Results

Script CENG315_HOTEL_DB_SCRIPT

Warning
12 of 156 statements had errors, 144 were successful. 28 objects created.

Statement 1

```
DROP TABLE RBILL
```

ORA-00942: table or view does not exist

Statement 2

```
DROP TABLE RBOOKITEM
```

ORA-00942: table or view does not exist

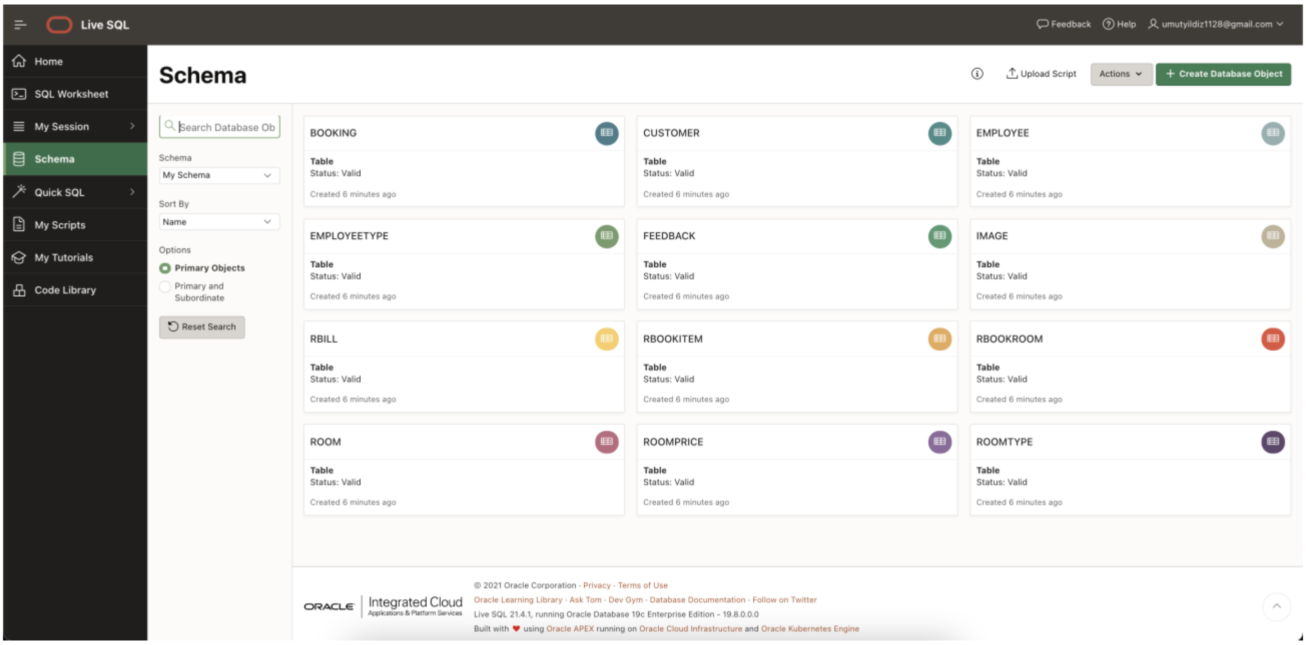
Statement 3

```
DROP TABLE FEEDBACK
```

ORA-00942: table or view does not exist

Statement

2) Schema



Schema

Schema: My Schema

Sort By: Name

Options
● Primary Objects
○ Primary and Subordinate

BOOKING
Table
Status: Valid
Created 6 minutes ago

CUSTOMER
Table
Status: Valid
Created 6 minutes ago

EMPLOYEE
Table
Status: Valid
Created 6 minutes ago

EMPLOYEETYPE
Table
Status: Valid
Created 6 minutes ago

FEEDBACK
Table
Status: Valid
Created 6 minutes ago

IMAGE
Table
Status: Valid
Created 6 minutes ago

RBILL
Table
Status: Valid
Created 6 minutes ago

RBOOKITEM
Table
Status: Valid
Created 6 minutes ago

RBOOKROOM
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Status: Valid
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ROOM
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Status: Valid
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ROOMPRICE
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Status: Valid
Created 6 minutes ago

ROOMTYPE
Table
Status: Valid
Created 6 minutes ago

ORACLE Integrated Cloud Applications & Platform Services

© 2021 Oracle Corporation · Privacy · Terms of Use
Oracle Learning Library · Ask Tom · Dev Gym · Database Documentation · Follow on Twitter
Live SQL 21.4.1, running Oracle Database 19c Enterprise Edition - 19.8.0.0.0
Built with ❤ using Oracle APEX running on Oracle Cloud Infrastructure and Oracle Kubernetes Engine

3) The console output, after script is run in worksheet.

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ORA-00942: table or view does not exist
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