Kingdom of Saudi Arabia

Ministry of Education

Imam Abdulrahman bin Faisal

University

Computer Science department

College of Science and Humanities

Database Concepts & Design

Project: Interactive room System

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**Instructors:**

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**1.0 Introduction**

In our project, we aim on designing a database using MySQL workbench for an interactive halls system that’s work on providing reservation service for the available halls in the system by filling the required information from the user to be updated for choosing the preferable date and time beside the nature of the reservation. The system owner will have the authority to perform many processes such as, adding, deleting, and updating the database. The user of the system will be asked to insert the required information and after that will be upgraded to be able to make a reservation for a certain hall. The reservation can be for the entire hall or part of it.

## **2.0 Functionalities**

- Maintenance of the reservation details inside the database which prevent it from being lost.

- Support the scalability and flexibility of the database since it will handle many modifying processes.

- the relationships between the database felids will improve the efficiency and will facilitate the retrieving prosses from the database.

### **3.0 Entity Relationship Diagram**

Diagram

Description automatically generated

Discerption

#### **4.0 Schema**

##### **5.0 Tables**

create database InteractiveRooms;

use InteractiveRooms;

create table Manager (

mangerId numeric(10) not null,

mang\_firstName varchar(10) not null,

mang\_middleName varchar(10) not null,

mang\_lastName varchar(10) not null,

email varchar(25),

maangerPassword varchar(10) not null,

primary key (mangerId));

create table InteractiveRooms (

RoomId numeric(10) not null,

SectionName1 varchar(35) ,

SectionName2 varchar(35) ,

SectionName3 varchar(35) ,

SectionCapacity1 numeric(5) ,

SectionCapacity2 numeric(5) ,

SectionCapacity3 numeric(5) ,

RoomCapacity numeric(5) ,

ManagerId numeric(10),

primary key (RoomId)

);

create table InteractiveRoomName (

roomname\_NUM numeric(10) not null,

room\_Id numeric(10),

RoomName varchar(35) not null,

primary key (roomname\_NUM));

create table Users (

userId numeric(10) not null,

user\_firstName varchar(10) not null,

user\_middleName varchar(10) not null,

user\_lastName varchar(10) not null,

email varchar(25),

userPassword varchar(10),

Birthdate date,

primary key(userId));

create table UserJob (

user\_Id numeric(10) not null,

jobTitle varchar(25) not null,

primary key(user\_Id));

create table Appointment(

appointmentId numeric(10),

appointmentDate date not null,

userId numeric(10),

primary key(appointmentId));

create table Timeslot (

SlotNumber numeric(10) not null,

Hours time not null,

appointment\_Id numeric(10) ,

Booking\_status boolean default false,

primary key(SlotNumber));

create table creatAppointment (

appointNumb serial NOT NULL,

appointment\_Id numeric(10),

room\_Id numeric(10),

primary key(appointNumb)

);

alter table InteractiveRooms

add constraint Fk\_Mid

foreign key (managerID) references Manager (mangerId) on delete set null;

alter table InteractiveRoomName

add constraint roomid

foreign key (room\_Id) references InteractiveRooms(RoomId) on delete set null;

alter table UserJob

add constraint Fk\_useId

foreign key (user\_Id ) references Users(userId);

alter table Timeslot

add constraint Fk\_timeS

foreign key (appointment\_Id) references Appointment (appointmentId) on delete CASCADE;

alter table creatAppointment

add constraint Fk\_app

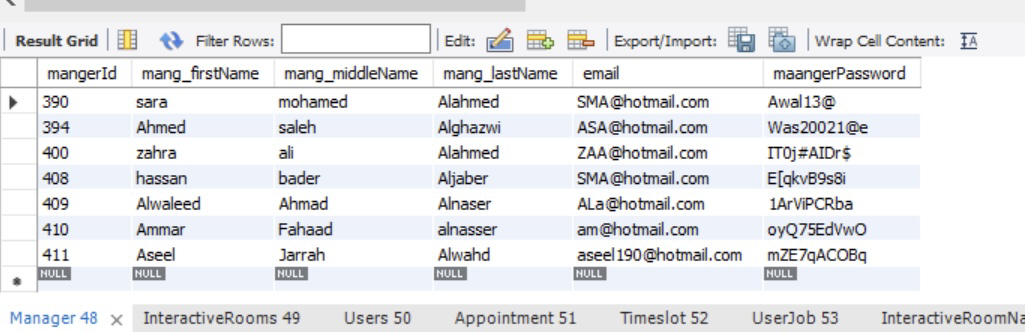
foreign key (Appointment\_Id) references Appointment (appointmentId) on delete set null;

alter table creatAppointment

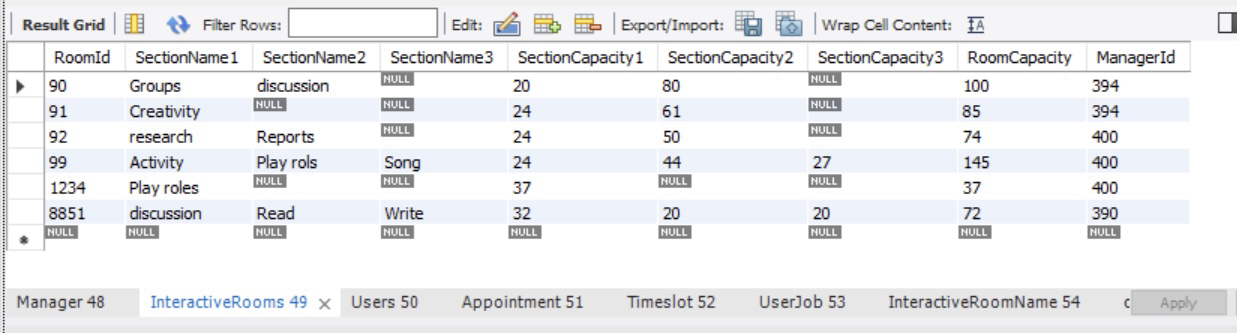
add constraint Fk\_ap

foreign key (room\_Id) references InteractiveRooms (roomId) on delete set null;

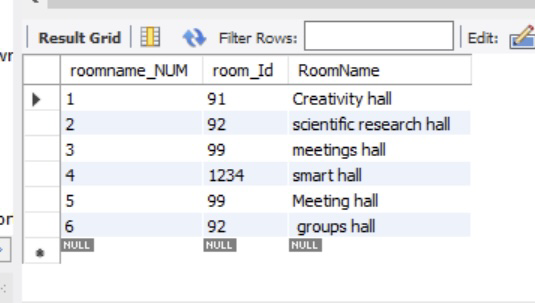
###### **6.0 Data in table**

-Manager table

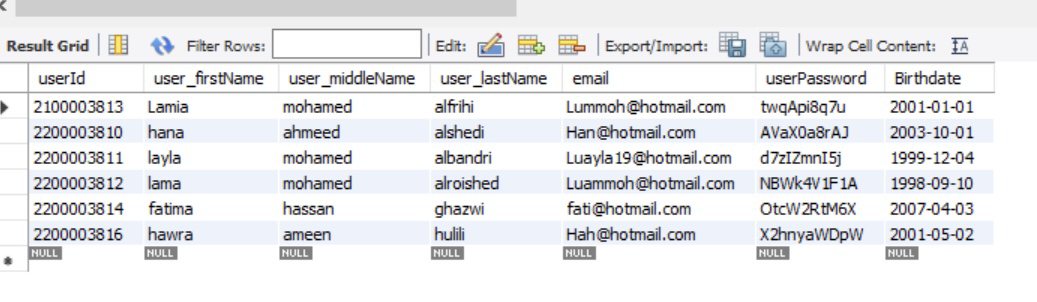
- InteractiveRooms table



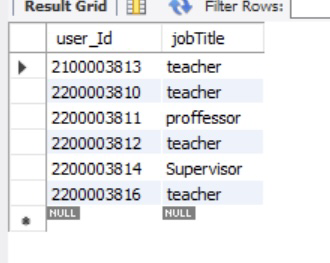
- InteractiveRoomName table



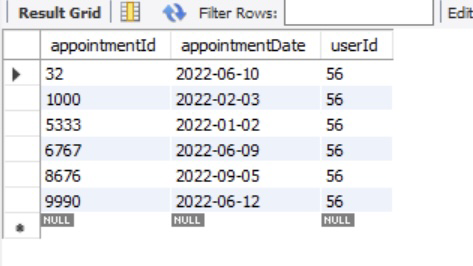
- Users table

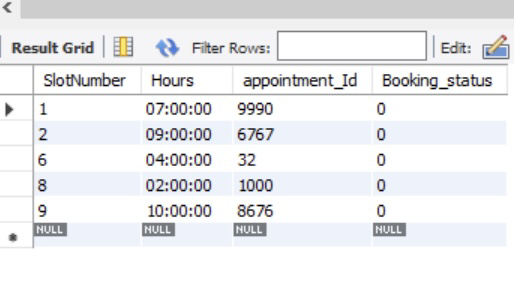


- UserJob table

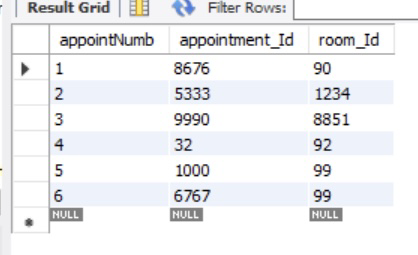


- Appointment table



- Timeslot table

- creatAppointment table



**7.0 Advanced Quires**

- Union

Graphical user interface, text, application

Description automatically generated

Graphical user interface, table

Description automatically generated

- Intersect

Graphical user interface, text, application

Description automatically generated

Table

Description automatically generated

- Distinct

Text

Description automatically generated with low confidence

Graphical user interface, application, table

Description automatically generated

-  aggregate functions

sum

Text

Description automatically generated with medium confidence

Graphical user interface

Description automatically generated with medium confidence

Min

Text

Description automatically generated

Table

Description automatically generated with medium confidence

-in

Logo, company name

Description automatically generated

Graphical user interface, application, table

Description automatically generated with medium confidence

-between

A picture containing graphical user interface

Description automatically generated

Graphical user interface, table

Description automatically generated

-isNull

Graphical user interface

Description automatically generated with medium confidence

Table

Description automatically generated

-like

Logo

Description automatically generated with low confidence

Graphical user interface, application, table

Description automatically generated

-not like



Graphical user interface, table

Description automatically generated