

# Database Management Systems (DBMS-1000)

## Assignment #2 - Create Database Tables

You will be writing a script consisting of several SQL statements. These statements will create and alter a series of tables.

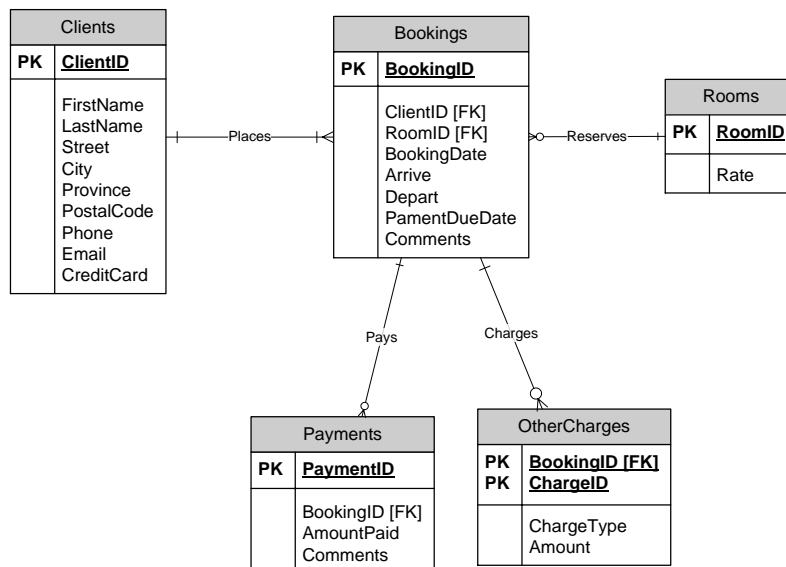
Marks

### Tables:

- 12.5 • Bookings(BookingID, ClientID, RoomID, BookingDate, Arrive, Depart, PaymentDueDate, Comments)
- 19 • Clients(ClientID, FirstName, LastName, Street, City, Province, PostalCode, Phone, Email, CreditCard)
- 10 • OtherCharges(BookingID, ChargeID, ChargeType, Amount)
- 8 • Payments(PaymentID, BookingID, AmountPaid, Comments)
- 9.5 • Rooms(RoomID, Rate)

16 Relationships can be determined by the following ERD:

Full Attribute ERD



All relationships on the ERD must have a foreign key defined. In addition, make sure the following processing is performed automatically by the DBMS:

- 1 • A client cannot be deleted if they still have any bookings.
- 1 • If a booking is deleted then all associated entries for that booking should be deleted as well.

## Database Management Systems (DBMS-1000)

### Assignment #2 - Create Database Tables

Columns in the tables:

DATA ITEM (COLUMN NAME)	TYPE	RESTRICTIONS
Amount	Decimal – 5 digits, 2 decimals	
AmountPaid	Decimal – 9 digits, 2 decimals	
Arrive	Date	Must be specified
BookingDate	Date	
BookingID	Integer – Up to 15 digits	
ChargeID	Integer – up to 3 digits	
ChargeType	Character - 11	Must be specified and be one of 'Phone', 'RoomService', 'Other'
City	Character – Up to 20	
ClientID	Integer – Up to 10 digits	
Comments	Character – Up to 200	
CreditCard	Character - 25	Cannot contain duplicates, Required
Depart	Date	
Email	Character – Up to 200	Either Email or Phone for a client is required
FirstName	Character – 20	Must be specified
LastName	Character – Up to 50	Must be specified
PaymentDueDate	Date	
PaymentID	Integer – Up to 10 digits	
Phone	Character - 12	Either Phone or Email for a client must be specified
PostalCode	Character - 7	
Province	Character – 2 digits	
Rate	Decimal – 7 digits, 2 decimals	Required; Must be from \$25 to \$99
RoomID	Integer – Up to 5 digits	Required; Must be in the range 2000-29000
Street	Character – Up to 40 characters	

# Database Management Systems (DBMS-1000)

## Assignment #2 - Create Database Tables

All SQL statements must run successfully to be awarded marks, so make sure you run them before you hand them in! If an SQL statement does not run successfully, it will not be checked and given a mark of zero.

*The following standards are to be used when coding:*

- A comment that consists of your name and student number, course and section, date and assignment number must be placed as the first 4 lines (Comments are indicated by placing dashes '--' in the first two columns of the line)
- Keywords are in Uppercase
- Names are coded in camel case (First letter of each word capitalized)
- Each clause is placed on a line by itself

*Assignment Specific Instructions:*

- Tables are created in the script alphabetically by name
- Primary Key column(s) are always specified first (columns listed alphabetically by name)
- Foreign Key column(s) are always specified last (columns listed alphabetically by name)
- Non-key column(s) are placed between the Primary and Foreign keys (columns listed alphabetically by name)
- Place all constraints except 'FOREIGN KEY' on the CREATE TABLE statement
  - o Code PRIMARY KEY constraints first
  - o Code CHECK constraints second
  - o Code UNIQUE constraints last
- Define FOREIGN KEYs using ALTER TABLE. Make sure all tables are created before attempting to ALTER any foreign key on.
  - o Define FOREIGN KEYs in alphabetical order of the table they are created ON
  - o If there is more than one FOREIGN KEY on a table, order these keys in alphabetical order of the table they REFERENCE
  - o Use a separate ALTER statement for each foreign key.

*Submission Instructions*

- The file must be an SQL script (which ends with the suffix '.sql'), which is simply a text file (created in Notepad or an equivalent editor). No other type of file is acceptable.
- DO NOT compress the file into any sort of archive, submit the SQL Script directly to the appropriate LEARN drop box.
- Submission of an invalid file type (any file type other than an SQL script) results in an immediate mark of zero.