

Step 1: Create classes of objects

The following describes a domain of a database for an international chain of hotels.

*An international chain of hotels would like to create a simple database to store information about its activities. The chain of hotels owns a number of **hotels** in the different countries. A **hotel** is identified by its address that consists of country name, city name, street name and building number. The **hotels** are also described by a unique phone number, unique email address, and unique link to a web site. All **hotels** located in the same country and in the same city have the unique local names. It may happen that two hotels located in two different cities have the same names.*

*A **hotel** has a number of **employees**. An **employee** is described by an employee number which is unique within a **hotel**, first and last name, date of birth and position occupied at a hotel. Each **employee** works at only one **hotel**. It may happen that two or more **employees** working in the different **hotels** have the same employee number.*

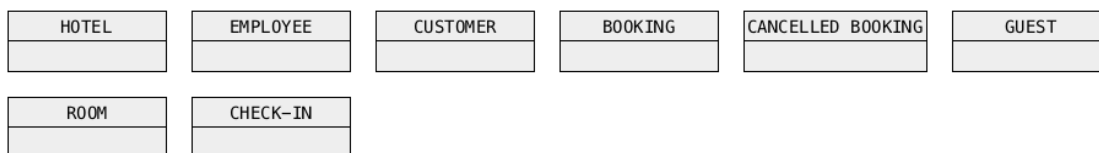
*A **hotel** offers different types of **rooms** for hotel **guests**. A **room** is described by a number unique within a **hotel**, area, type, and price per night.*

*The **customers** book the **rooms** in the **hotels**. A **booking** is described by a room type, a planned arrival date, planned departure date, first and last name of a **customer**, and credit card type and number. A **booking** is identified by booking date and time.*

*When a **booking** is cancelled, a cancellation date, and cancellation reason are appended to its description and a booking is moved to a class of **cancelled bookings**.*

*On arrival day a **hotel** records information about the hotel **guests** who **checked-in**. Such information includes the first and last name of each **customer**, date of birth, nationality, type and number of identification document and **check-in** date and time. Then, the hotel **guests** are assigned to their **rooms**. Of course, the hotel **guests** who **checked-in** a **hotel** must have a valid **booking** performed beforehand.*

*On check-out date a **hotel** records a bill, i.e. total amount of money charged for a stay and the services used in a **hotel**.*



Step 2: Create associations and association classes

The following describes a domain of a database for an international chain of hotels.

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A hotel has a number of employees. An employee is described by an employee number which is unique within a hotel, first and last name, date of birth and position occupied at a hotel. Each employee works at only one hotel. It may happen that two or more employees working in the different hotels have the same employee number.

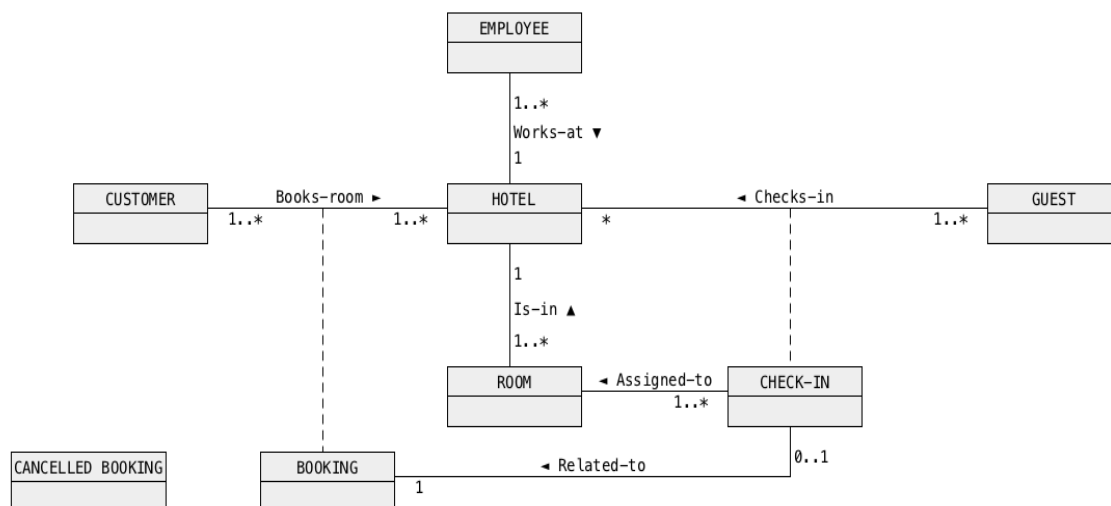
A hotel offers different types of rooms for hotel guests. A room is described by a number unique within a hotel, area, type, and price per night.

The customers book the rooms in the hotels. A booking is described by a room type, a planned arrival date, planned departure date, first and last name of a customer, and credit card type and number. A booking is identified by booking date and time.

When a booking is cancelled, a cancellation date, and cancellation reason are appended to its description and a booking is moved to a class of cancelled bookings.

On arrival day a hotel records information about the hotel guests who checked-in. Such information includes the first and last name of each customer, date of birth, nationality, type and number of identification document and check-in date and time. Then, the hotel guests are assigned to their rooms. Of course, the hotel guests who checked-in a hotel must have a valid booking performed beforehand.

On check-out date a hotel records a bill, i.e. total amount of money charged for a stay and the services used in a hotel.



Step 3: Create attributes and link attributes

The following describes a domain of a database for an international chain of hotels.

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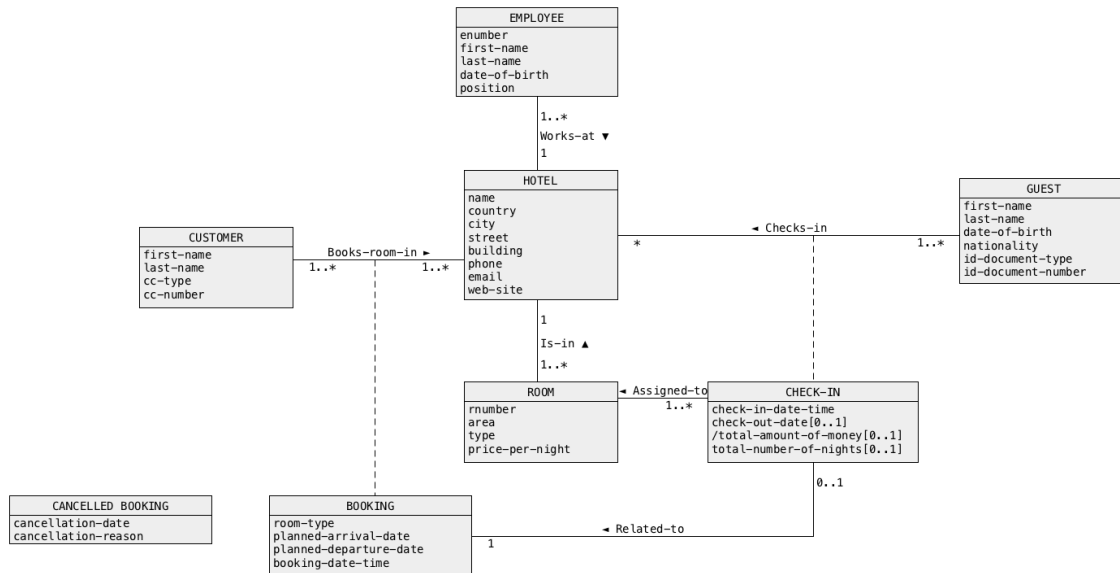
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On arrival day a hotel records information about the hotel guests who checked-in. Such information includes the first and last name of each customer, date of birth, nationality, type and number of identification document and check-in date and time. Then, the hotel guests are assigned to their rooms. Of course, the hotel guests who checked-in a hotel must have a valid booking performed beforehand.

On check-out date a hotel records a bill, i.e. total amount of money charged for a stay and the services used in a hotel.



Step 4: Create identifiers and qualifications

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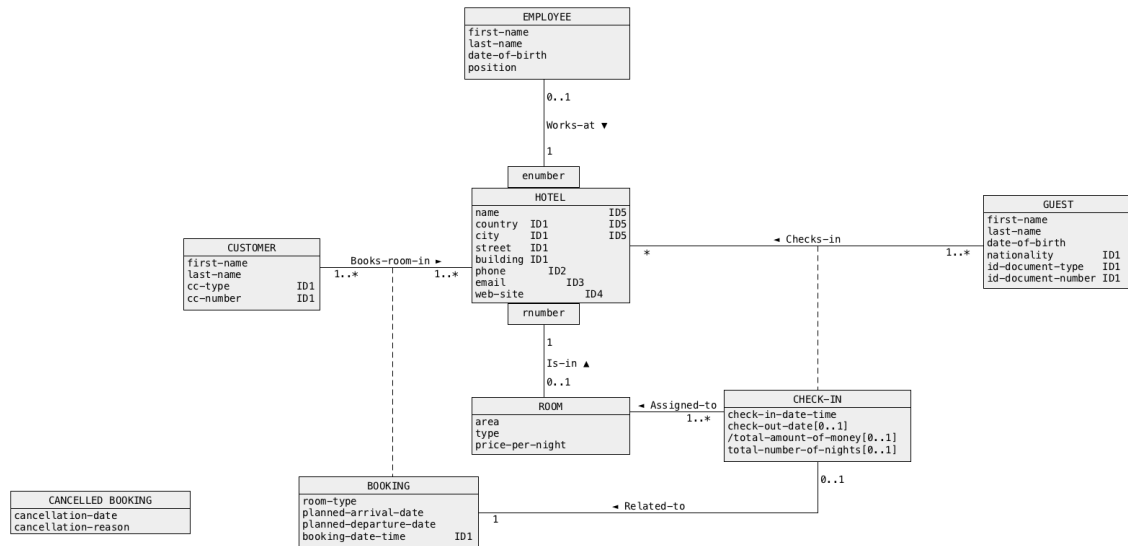
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On arrival day a hotel records information about the hotel guests who checked-in. Such information includes the first and last name of each customer, date of birth, nationality,

type and number of identification document and check-in date and time. Then, the hotel guests are assigned to their rooms. Of course, the hotel guests who checked-in a hotel must have a valid booking performed beforehand.

On check-out date a hotel records a bill, i.e. total amount of money charged for a stay and the services used in a hotel.



Step 5: Create generalizations

The following describes a domain of a database for an international chain of hotels.

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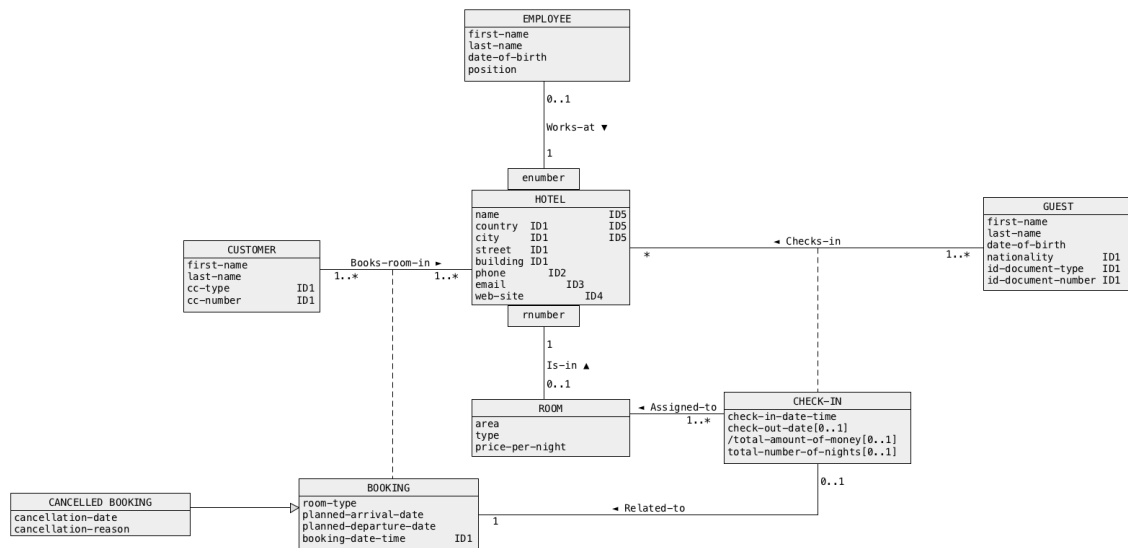
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The customers book the rooms in the hotels. A booking is described by a room type, a planned arrival date, planned departure date, first and last name of a customer, and credit card type and number. A booking is identified by booking date and time.

When a booking is cancelled, a cancellation date, and cancellation reason are appended to its description and a booking is moved to a class of cancelled bookings.

On arrival day a hotel records information about the hotel guests who checked-in. Such information includes the first and last name of each customer, date of birth, nationality, type and number of identification document and check-in date and time. Then, the hotel guests are assigned to their rooms. Of course, the hotel guests who checked-in a hotel must have a valid booking performed beforehand.

On check-out date a hotel records a bill, i.e. total amount of money charged for a stay and the services used in a hotel.



End of solution

Submission

Note, that you have only one submission. So, make it absolutely sure that you submit correct files with the correct contents. No other submission is possible !

Submit a file **solution1.pdf** to Moodle in the following way:

- (1) Access Moodle at **<http://moodle.uowplatform.edu.au/>**
- (2) To login use a **Login** link located in the right upper corner the Web page or in the middle of the bottom of the Web page
- (3) When logged select a site **CSIT115/CSIT815 (S219) Data Management & Security**
- (4) Scroll down to a section **Submissions**
- (5) Click at a link **In this place you can submit the outcomes of Laboratory 2**
- (6) Click at a button **Add Submission**
- (7) Move a file **solution1.pdf** into an area **You can drag and drop files here to add them**. You can also use a link **Add...**
- (8) Click at a button **Save changes**
- (9) Click at a button **Submit assignment**
- (10) Click at the checkbox with a text attached: **By checking this box, I confirm that this submission is my own work, ...** in order to confirm the authorship of your submission
- (11) Click at a button **Continue**

End of specification