**Data Model Hotel Booking Room (ER)**

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| **Customers**  1 |
| **C\_Id (int)**  C\_Title (txt)  C\_Name (txt)  C\_Surname (txt)  C\_DateofBirthday(date)  C\_Address (txt)  C\_Town (txt)  C\_Country (txt)  C\_PostalCode (txt)  C\_HomePhone (txt)  C\_MobilePhone (txt)  C\_Email (txt) |

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| **Guests** |
| **G\_Id (int)**  G\_Title (txt)  G\_Name (txt)  G\_Surname (txt)  G\_DateofBirthday(date)  G\_Address (txt)  G\_Town (txt)  G\_Country (txt)  G\_PostalCode (txt)  G\_ContactPhone (txt) |

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| **Bookings**  1 |
| **B\_Id (int)**  C\_Id (int)  H\_Id (int)  B\_DateMade (date)  B\_TimeMade (time)  B\_StartDate(date)  B\_EndDate (date)  Tot\_Pay\_Due\_Date (date)  Tot\_Pay\_Due\_Amount (val)  Tot\_Pay\_Made\_On (date)  B\_Notes\_Comments (txt) |

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**∞**

**∞**

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| **RoomTypes** |
| **R\_Type\_Id (int)**  R\_Type (txt) |

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| **Rooms** |
| **R\_Id (int)**  H\_Id (int)  **∞**  R\_Type\_Id (int)  **∞**  R\_Band\_Id (int)  **∞**  R\_Price\_Id (int)  R\_Floor (int)  R\_AdditionalNotes (txt) |

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| **LinkBookingsRooms**  **∞** |
| **B\_Id (int)**  **R\_Id (int)**  **∞**  **G\_Id (int)** |

**∞**

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| **RoomBands** |
| **R\_Band\_Id (int)**  R\_Band\_Description (txt) |

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| **Payments**  **∞** |
| **P\_Id (int)**  B\_Id (int)  C\_Id (int)  P\_Method\_Id (int)  P\_Amount (val)  P\_Comments (txt) |

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| **RoomPrices** |
| **R\_Price\_Id (int)**  R\_Price (val) |

**∞**

**∞**

**∞**

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| **LinkRoomsFacilities** |
| **R\_Id (int)**  **∞**  **F\_Id (int)**  F\_Details (txt) |

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| **PaymentMethods** |
| **P\_Method\_Id (int)**  P\_Method (txt) |

**∞**

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| **FacilitiesList** |
| **F\_Id (int)**  F\_Description (txt) |

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| **Hotels** |
| **H\_Id (int)**  H\_Name (txt)  H\_Star\_Level (int)  H\_Number\_Rooms (int)  H\_Address (txt)  H\_Town (txt)  H\_Country (txt)  H\_PostalCode (txt)  H\_Phone (txt)  H\_Email (txt)  H\_Services (txt) |

1

**Legend:**

C=Costumers

B=Bookings

G=Guests

H=Hotels

P=Payments

R=Rooms

B=Bands

F=Facilities

I chose the SQL solution to implement a minimum data Model for Hotel Booking. This solution is shown above in the ER(Entity-Relationship) diagram.

In this diagram the Entities required should include:

* Hotels
* Customers
* Guests
* Rooms
* Bookings
* Payments
* Room Types
* Price Room Bands
* Room Facilities

There are many Hotels. Each one of themis composed of a number of rooms divided by types, prices and facilities offered to the customers. Each hotel has its customers (those who have made ​​many bookings rooms and the payments of this with one payment method) and provides its customers with services.

There are also many guests (visitors) looking for a Hotel into web based on location, services offered, star level and price bands of the rooms.

I preferred to use a Framework to implement the application controller, actions and view, for a fast implementation, for developing a secure project of site web in a little time and choosing a correct CRUD rules.

The Framework that I chose is Yii Framework, which is a fast, secure and professional PHP Framework. Yii is a [high-performance](http://www.yiiframework.com/performance/) PHP framework, the best to develop Web 2.0 applications.

This framework is secure because it includes input validation, output filtering, SQL injection and Cross-site scripting prevention. It is also fast because it only loads the needed features. Yii framework has powerful caching support. It is explicitly designed to work efficiently with AJAX. Yii framework is professional because it helps to develop clean and reusable code. Besides, it follows the MVC pattern, ensuring a clear separation of logic and presentation.

Having created tables into MySQL DB, this solution allowed me to create a comprehensive website in a short time, with MVC pattern, and reaching my goals (Data Model for Hotel Booking, application controllers, actions, CRUD rules, views).

Yii also allows generating an automatic code in PHP using Gii modules.

As Yii Framework requires a connection to a DB and the existence of the tables in this, I had previously designed the data model in SQL language, creating the tables necessary to Hotel Booking. Then I run the Gii Module in all the tables in the DB.