CSE 355 – TERM PROJECT DETAILED REPORT

Group Members

Melisa DÖNMEZ 150116030

Rıdvan GÜLCÜ 150117508

Project Name: Hotel Management System Database

About Hotel Management Database System

This database system is about orginize the hotels we have and to keep the necessary records for the booking process. Our hotels needs to maintain the record of customer and reserve rooms beforehand. Customers should be able to know the availability of the rooms on a particular date. There will be different room type and customer should be able to reserve the available rooms according to their need in advance.

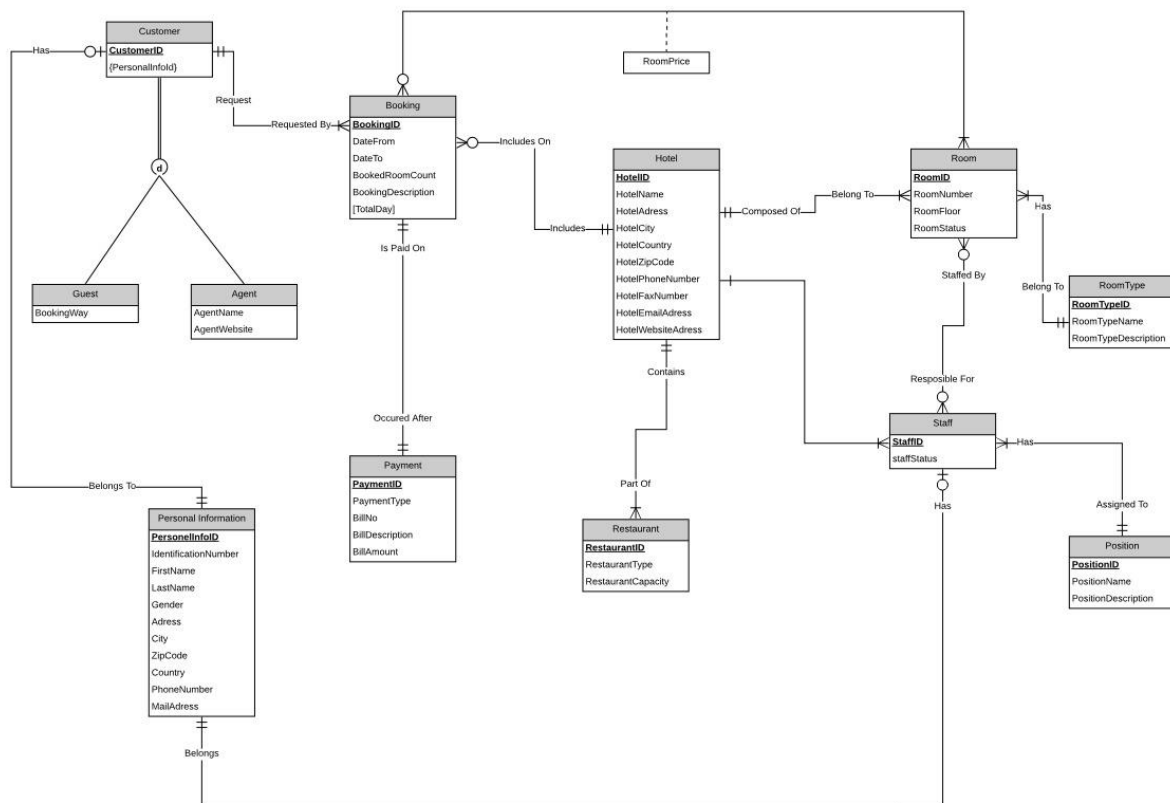A computerised hotel rezervation database allows for:

- To be able to reserve the appropriate room available on customer's requested date which as quickly as possible.
- Regularize the Hotel's payment system and check the last payments.
- Determinig the prices of rooms according to customer density.
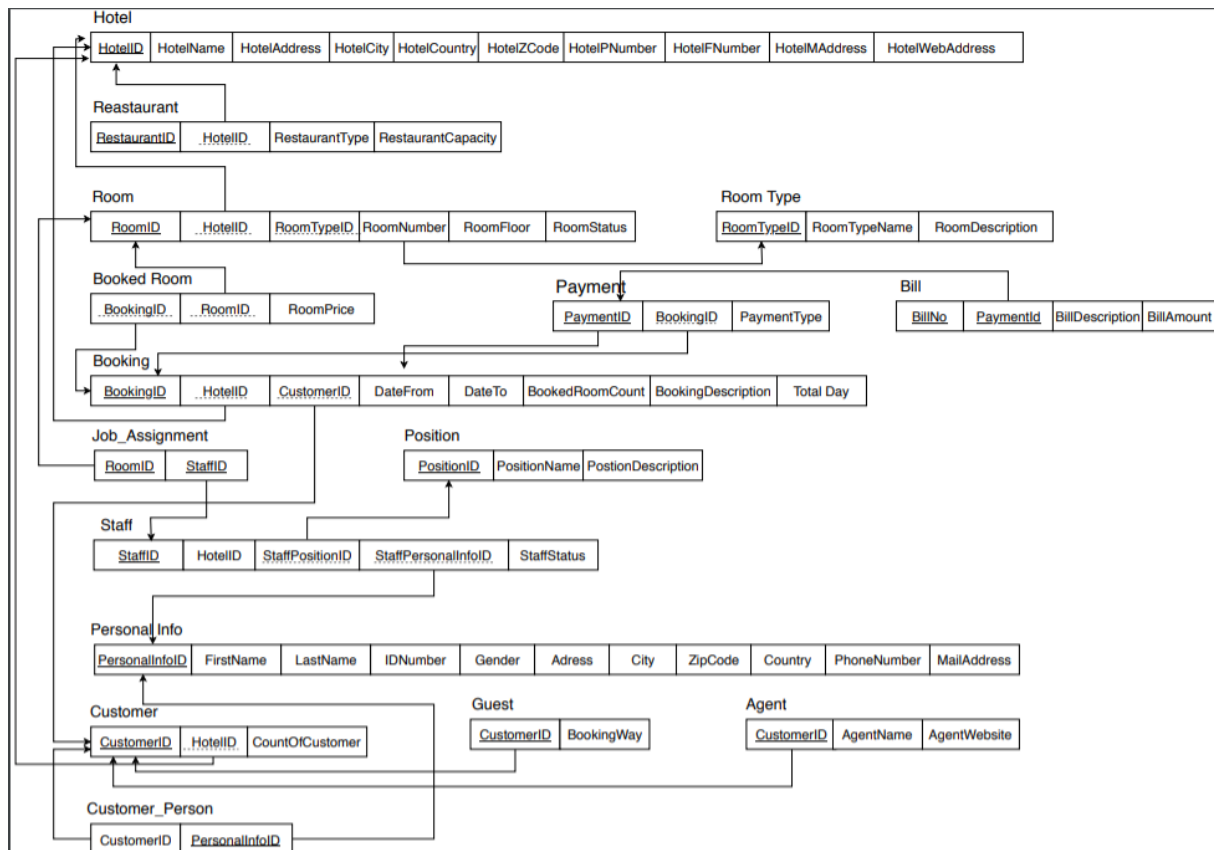- To regularize the duties of the staff.

Data and Requirement Analysis

Our database consist of tables which these tables are Agent, Bill, BookedRoom, Booking, Customer, Customer_Person, Guest, Hotel, JobAssignment, Payment, PersonalInfo, Position, Restaurant, Room, RoomType and Staff. Hotel table keeps information about our hotels like , id, name, country , zip code ect. Id is primary key for Hotel table because our hotels has unique ıd number. Our hotels may have many bookings. We cerated Booking table for it contains a record of important information about the reservation.BookingId, DateFrom and DateTo are important entity in the Booking table and BookingId is also primary key. Room and RoomType tables are about features of the rooms in our hotels. Our hotels have multiple rooms. On the other hand one room can belongs to one hotel. Also we have multiple rooms in one room type. But one room must have only one room type. We have Staff and Position tables. There are a lot staff in charge of different rooms and these staff work in different positions. While more than one staff can be assigned to a single room, a single staff can also be assigned multiple rooms.

Booking is made by customer. Agent or Guest can make more than one booking but only one booking belongs to one Agent or Guest. These customer can be Agent or Guest not both. Also there can't be different type of customer except these in our system. In our database system we have decided to keep a lot of features for customer and staff. Most of these features were needed both customer and staff entity.Because of that we created Personal Information entity to hold important personal information for the customer and staff. All cutomers must pay a fee according to some criteria to stay in our hotels. There are one payment for one booking. Customer can make payment in more than one way. We separated the billing-related features which embedded in the Payment table and then we made the Bill table. Lastly we created Restaurant table for customer to see the restaurant types and capaties.

E-R Diagram

Tables

Hotel										
HotelID	HotelName	HotelAddress	HotelCity	HotelCountry	HotelZCode	HotelPNumber	HotelFNumber	HotelMAddress	HotelWebAddress

Reastaurant			
RestaurantID	HotelID	RestaurantType	RestaurantCapacity

Room					
RoomID	HotelID	RoomTypeID	RoomNumber	RoomFloor	RoomStatus

Room Type		
RoomTypeID	RoomTypeName	RoomDescription

Booked Room		
BookingID	RoomID	RoomPrice

Payment		
PaymentID	BookingID	PaymentType

Bill			
BillNo	PaymentId	BillDescription	BillAmount

Booking							
BookingID	HotelID	CustomerID	DateFrom	DateTo	BookedRoomCount	BookingDescription	Total Day

Job_Assignment	
RoomID	StaffID

Position		
PositionID	PositionName	PostionDescription

Staff				
StaffID	HotelID	StaffPositionID	StaffPersonalInfoID	StaffStatus

Personal Info										
PersonalInfoID	FirstName	LastName	IDNumber	Gender	Adress	City	ZipCode	Country	PhoneNumber	MailAddress

Customer		
CustomerID	HotelID	CountOfCustomer

Guest	
CustomerID	BookingWay

Agent		
CustomerID	AgentName	AgentWebsite

Customer_Person	
CustomerID	PersonalInfoID

Changes: We add HotelID to the Customer table and also we delete paymentID from Booking table.

Information About The Tables and Attributes

We have created 16 tables.These are Agent, Bill, BookedRoom, Booking, Customer, Customer_Person, Guest, Hotel, JobAssignment, Payment, PersonalInfo, Position, Restaurant, Room, RoomType and Staff.

Hotel

We created Hotel table which contains our hotels information. Hotel table attributes are HotelID, HotelName, HotelAddress, HotelCity, HotelCountry, HotelZipCode, HotelPhoneNumber, HotelFaxNumber, HotelEmailAddress, HotelWebsiteAddress. HotelId is primary key because it is unique attribute for all hotels. We need this information for the customer to choose the hotel and make the reservation process correctly. Data from all

remaining tables will change according to selected hotel. We entered three hotels in our database system.

	HotelID	HotelName	HotelAdress	HotelCity	HotelCountry	HotelZipCode	HotelPhoneNumber	HotelFaxNumber	HotelEmailAdress	HotelWebsiteAdress
1	6C5F42C0-117B-4B73-88E1-18C1CDF9A11F	Porto Bello	Akdeniz Bulvarı No 12 Konyaaltı	Antalya	Turkey	07070	02422594041	02425418765	portobello@gmail.com	www.portobello.com
2	F6E130E2-0074-4554-986C-8CD2C0432355	Voyage Bodrum	Bardakçı Koyu Bodrum	Muğla	Turkey	48400	02523164443	02523464445	voyagebodrum@gmail.com	www.voyagebodrum.com
3	8EE1E094-C9F7-44C2-8B31-989F80963CA8	Latayna Palm Hotel	Meydankavağı Caddesi No 21	Antalya	Turkey	07200	02423120136	02423125689	lataynapalm@gmail.com	www.latanyapalm.com

Restaurant

We have different type restaurant in database system. Restaurant table attributes are RestaurantId, HotelId, RestaurantType, RestaurantCapacity. RestaurantId is primary key. Hotel and Restaurant have 1:M relationship. Every restaurant must belong to one Hotel. So that HotelId is foreign key of Restaurant table.Restaurants have a specific catagories which they are Steak, Chinese, Turkish, Fast Food, Mexican, Italian and Fish. These are RestaurantType attributes. We enter 14 records for the restaurant table.

	RestaurantID	HotelID	RestaurantType	RestaurantCapacity
1	A75EFB35-F642-4E71-B390-2B8948326CE9	8EE1E094-C9F7-44C2-8B31-989F80963CA8	Turkish	300
2	6BD5FD35-E017-496B-AEA5-2D0138C2258A	F6E130E2-0074-4554-986C-8CD2C0432355	Chinese	200
3	91BA2261-1B29-4717-AB8C-30DE289D2C36	8EE1E094-C9F7-44C2-8B31-989F80963CA8	Fast Food	200
4	217E760F-9EFC-4C46-B059-35E3865DF7A3	F6E130E2-0074-4554-986C-8CD2C0432355	Italian	150
5	EACD4F78-EF6A-4E67-87C5-5C50229FA665	6C5F42C0-117B-4B73-88E1-18C1CDF9A11F	Chinese	150
6	37432544-42FB-40D4-A749-646028727DD9	F6E130E2-0074-4554-986C-8CD2C0432355	Steak	350
7	C9D40568-468D-424A-AA9E-8D68A716C100	8EE1E094-C9F7-44C2-8B31-989F80963CA8	Steak	150
8	5D128CB4-D6CC-4B07-99D3-920EFB487E35	8EE1E094-C9F7-44C2-8B31-989F80963CA8	Chinese	180
9	EE8FAC34-3F20-46BF-998F-A029186A9921	F6E130E2-0074-4554-986C-8CD2C0432355	Turkish	400
10	04709B54-A833-4595-BE2F-B479DB0020E1	8EE1E094-C9F7-44C2-8B31-989F80963CA8	Italian	120
11	E705E69F-1BCA-4998-93A9-B8B2874E9D4E	F6E130E2-0074-4554-986C-8CD2C0432355	Mexican	120
12	292ADBFA-24D3-45EC-BF83-DD638BB7B05A	6C5F42C0-117B-4B73-88E1-18C1CDF9A11F	Turkish	300
13	3DBF293E-BE5D-4460-9701-E53AE1A26FF7	6C5F42C0-117B-4B73-88E1-18C1CDF9A11F	Mexican	100
14	DB5E7485-9316-4F0E-AA09-FFFDE6E63F64	F6E130E2-0074-4554-986C-8CD2C0432355	Fast Food	400

Room Type

We have a lot of room in the every hotel. These room has different room type.Room type table attributes are RoomTypeId, RoomTypeName and RoomDescription. RoomTypeId is primary key becuase every room type has unique room type number. RoomTypeName can be Single, Double, Triple, Quad, Queen, King, Twin, Double-double, Studio and Suite.We entered 10 record for RoomType table.

	RoomTypeID	RoomTypeName	RoomDescription
1	F66BCED3-2938-42D0-8F0D-7FF872E010A3	Twin	A room with two beds.May be occupied by one or mor...
2	4AE49BF9-E2E9-4EB4-A0BC-8FB5B7B52BC7	Double	Aroom assigned two people.May have one or more b...
3	D7706976-6381-4C39-96A8-95AD0C6BE63B	Queen	A room with a queen-sized bed.May be occupied by o...
4	37BF6393-483C-4D9A-989B-AC4AD8EB080D	Single	A room assigned to one person.May have one or mor...
5	48B6D338-D928-4F99-82D9-AD33BC95FE52	Suite	A pariour or living room connected to one or more bed...
6	DDAD38B2-A0DD-4809-B93A-B48A9C315515	Triple	A room assigned three pople.May have two or more b...
7	C54D489A-150B-4CDC-A6B2-BCD8D18E0F3F	Quad	A room assigned four people.May have two or more b...
8	0CD2CA45-2F5B-4DC3-83C8-CDC3A0C6E60C	Double-double	A room with two double bed..May be occupied by one ...
9	C4C50546-7747-4EF9-A374-EA897BD1D22C	King	A room with a king-sized bed.May be occupied by one...
10	74A24F25-AF2E-4C14-9E95-F0FB3E8D0F5E	Studio	A room with a studio bed- acouch the can be converte...

Room

We created Room table for keep information about rooms in the hotels. Room table attributes are RoomId, HotelId, RoomTypeId, RoomNumber, RoomFloor, RoomStatus. RoomId is primary key and it starts form 3000(smallint) and increases one by one. Hotel and Room have 1:M relation. Becuase of that HotelId foreign of Room table. Also Room and RoomType have 1:M realation.Each room has to be a room ype. So RoomTypeId foreign key of Room table. RoomFloor attribute can not be smaller than 0 and more than 40. This is the reason why RoomFloor type tinyint. Finally, RoomStatus represent the whether the rooms are empty or full. If room is empty RoomStatus equal 0 if not 1. Because of that RoomStatus type is bit. Currently Room table have 48 room's records.

Position

We have a lot of staff and these staff has different position. We created a position table to keep detailed information about the positions of our employees. Position table attributes are PositionId, PostionName and PositionDescription. PositionId is primary key bacause every Position have unique number and PositionId can not be null. We entered 10 records for the position table.

	PositionID	PositionName	PositionDescription
1	D445E8DF-2884-438F-9A44-011BFAF933F8	Barman	Interact with customers,take orders for drinks and ...
2	E3C4EDA6-9B1D-4041-B069-170DBE3EAB28	Bell Hop	Duties often include opening the front door,movin...
3	6680BCAC-3229-4864-B35B-33EF8B76ED82	Security	Protects hotel guests, other staffs and properties.
4	DBC8C869-9E66-46D2-953D-4D7571263D87	Receptionist	Welcome guests as they arrive hotel and do chec...
5	7B9EF71F-2F8F-480D-8A59-4DA632E30688	Chef	Cooks guest's orders according to their prefe.
6	4A80DE4F-DC40-40FB-A8B7-806AB81CCC5F	Valet	Parking the guest's cars.
7	1EB47B73-CB6A-4FF2-AEA9-99EBB554F305	Manager	Manage all hotel operations and all staffs.
8	4A956AE6-19C9-43B3-896B-A35BB8E59101	Waiter	Provide the perfect service Experience for every g...
9	3A6F7312-05EF-4371-AED2-CE824F3B14CA	HouseKeeper	Clean corridors, lobbies, stairways,elevators, and l...
10	89DAD7B2-5A14-46AC-9A02-DF1CBE67B8DE	Supervisor	Supervise operations in all hotel departmants.

PersonalInfo

There are different types of people in our system such as customer and staff. We need a record of some personal information for these people. Becuase of that we created PersonalInfo table to keep detailed information for the customer and staff. PersonalInfo

tables attributes are PeronalInfId, FirstName, LastName, IdentificationNumber, Gender, Address, City, Zipcode, Country, PhoneNumber and MailAddress. PersonalInfoId primary key of this table and it starts form 3000(smallint) and increases one by one.IdentificationNumbe, ZipCode and PhoneNumber types char becuase they have fixed size. Remains attributes size can change therefore thier types varchar. Currently PersonalInfo table have 50 records.

Staff

There are a lot of staff in our hotels. Staff table contains information about the employees.These information StaffId, HotelId, StaffPersonalId, StaffPositionId and StaffStatus. StafId is primary key and it starts form 500(smallint) and increases one by one. HotelId is foreign key because we need information on which hotel the staff works. Staff and Personal Information have 1:1 relationship. One staff can has one personal information and one personal information can belongs to one staff. This relationship optional because if there is a personal information it does not have to belong Staff it can belong Customer. There is a mandatory relation in the staff side. Because of that StaffPersonalInfoID foreign key of Staff table. Staff and Position have M:1 relationship.Staff can has a one position and Position can assigned to one or more than one staff. There is a mandatory relation between Staff and Position.Because of that StaffPositionID is a foreign key of Staff table. Lastly, StaffStatus attributes keeps information about whether the employee has been dismissed. Type of this attributes is bit and default value 1. If employee is dismissed it changes to 0. Currently Staff table have 30 records.

JobAssignment

Room and Staff has M:M relationship.One room responsible for one or more than one staff and also Staff can staffed by one or more than one room. Because of the M:M relationship we created JobAssignment table. JobAssignment table has RoomId and StaffID as a primary key. Because of JobAssignment is associative entity, RoomId and StaffId is also foreign key. Currently JobAssignment table have 11 records.

	RoomID	StaffID
1	2000	500
2	2001	500
3	2004	500
4	2004	505
5	2005	505
6	2017	510
7	2020	510
8	2020	515
9	2043	520
10	2043	525
11	2045	520

Customer

We created Customer table to categorize and keep information about customers who will make rezervations. Customer table attributes are CustomerId and CountOfCustomer. CustomerId is primary key because every customer have a unique customer ıd and can not be null. CountOfCustomer(tinyint) keeps the number of people make the rezervation. We entered 10 records for Customer table.

	CustomerID	CountOfCustomer
1	F232FFC3-120F-4678-823E-1ED3DEAA926B	1
2	1CC56975-1044-4865-B417-41B0844BBD05	2
3	A68F1EF8-F867-4CE1-BA55-5DC6A099057B	2
4	470F2B58-B09B-40D5-ADA2-78EBFB482511	1
5	C6DE586A-C120-4C70-97F8-839CF8B67EA3	2
6	203CE208-712D-47FF-B9F2-87DD1253A572	1
7	8DCC2461-8824-4CB4-9D8E-A08FE401D6CD	2
8	BD6ABB7D-BBB4-4A51-A5A9-B71A76CD6A48	4
9	AC038F4B-948D-409F-9865-D4CBB5EF7EDF	3
10	8E339FD6-A50C-4AD0-955D-F169E94374B4	2

Agent & Guest

Customer entity has two subtype entity which name is Guest and Agent. There is a disjoint relationship between subtype and supertype entity. This means that customer can be Guest or Agent not both. Guest table has primary key GuestCustomerID and Agent table has primary key AgentCustomerID. We created two table for this subtype entities. Also we added primary key of Customer table as a primary key of Guest and Agent tables. Other attribute of Guest table is BookingWay(varchar : size can be change) and it can be Web Site, Phone, and Mobile App. Agent table has AgentName and AgentWebsite attributes in addition to AgentCustomerId. Variable types varchar becuase their size can be changeable.We entered 5 records for Agent and 5 records for Guest table totaly 10 records created for Customer table.

Customer_Person

Customer table has multivalued attribute which name is personInfoId. We create Customer_Person table for the multivalued attribute. Customer_person table has two primary key CustomerID and PersonalInfoID. Also these are foreign key. Currently Customer_Person table have 20 records.

Booking

We cerated Booking table for it contains a record of important information about the reservation.Booking table attributes are BookingId, HotelId, CustomerId, DateTo, DateFrom, BookedRoomCount, BookingDescription. BookingId is primary key because every booking have unique booking ıd. Booking and Customer have M:1 relationship. Customer request many bookings but specific booking can requested by only one customer. There is a mandatory relationship between Customer and Booking tables. Because of that CustomerID isforeign key of Booking table. Booking and Hotel has M:1 relationship. Booking can includes one specific hotel but hotel can have many bookings. There is a mandatory relationship between Hotel and Booking tables. Because of that HotelID is foreign key of Booking table. DateTo and DateFrom keeps the check-in and check-out dates. We entered 10 records for Booking table.

BookedRoom

Booking and Room have M:M relationship and RoomPrice is relationship attribute.So create a new table named BookedRoom.RoomPrice is column of this table. BookedRoom has composite primary key. BookingID and RoomID are together become primary key of BookedRoom. RoomID and BookingID is also foreign key of BookedRoom. In addition to primary and foreign key BookedRoom have RoomPrice attribute. It keeps the price of the booked room and type is smallmoney. We entered 17 records for the BookedRoom table.

	BookingID	RoomID	RoomPrice
1	DB38D56B-8CA3-4595-9227-15C9E4FB9044	2000	100,00
2	DB38D56B-8CA3-4595-9227-15C9E4FB9044	2004	130,00
3	131B63BB-7106-4B05-BDFA-4F3B261C17CC	2012	200,00
4	0FEF5399-41A7-4274-B5F0-5D07BF62522D	2024	250,00
5	0FEF5399-41A7-4274-B5F0-5D07BF62522D	2026	270,00
6	AD2AF28C-B992-4C4F-A461-619C7F767AAC	2013	150,00
7	C1E5425F-1F47-44E2-946D-691F2CB6E1C8	2007	180,00
8	C1E5425F-1F47-44E2-946D-691F2CB6E1C8	2008	120,00
9	3C3CEED5-FD13-49B4-841B-749CCE3B8E43	2027	290,00
10	3C3CEED5-FD13-49B4-841B-749CCE3B8E43	2028	400,00
11	588A7F66-33CC-4B68-9632-B6F11DA15AAC	2022	210,00
12	588A7F66-33CC-4B68-9632-B6F11DA15AAC	2023	220,00
13	7C5D04F2-9F5C-45A8-A879-C9873137C835	2014	170,00
14	7C5D04F2-9F5C-45A8-A879-C9873137C835	2017	140,00
15	43BC2A88-DD22-470E-88A5-E9E64541795E	2020	160,00
16	43BC2A88-DD22-470E-88A5-E9E64541795E	2021	200,00
17	2B33AF7E-74C9-49C5-B111-FDC7379E31DB	2003	200,00

Payment

We created Payment table keeping the information about which payment method will be use for the rezervation. Payment table attributes are PaymentId, BookingId and PaymentType. Booking and Payment have 1:1 relationship. One specific booking occurred after one payment and one specific payment is paid on one booking. PaymentID primary key and BookingId foreign key of Payment table. PaymentType can be Credit Card, Cash, PayPal and Bank Transfer.

Variable types of these payment types is varchar, their size can be changeable. Currently Payment table have 10 records.

	PaymentID	BookingID	PaymentType
1	CFCD3D97-B275-448C-9614-153C10AA32E2	0A06A4B5-4BAD-4FD5-A130-82A3211F5E2B	Paypal
2	30ACB30F-6CCC-4ADB-896E-32A2A7297108	0AA2550B-F765-45AC-9F57-E758B2D20ACE	PayPal
3	6CDB6382-5C5D-46D7-A470-3CE90659D17F	2098CE1E-69DC-48EE-9AE3-2EDC3660436F	Credit Card
4	E0BD64A3-A24B-47EA-9E94-7D27FD97316B	33EB434B-4E74-4FD9-90FE-3F4F5EC56C6F	Credit Card
5	D986B89C-5711-4E9A-9531-962760F5A8D4	23A6A2AD-DD75-431E-9C4C-49FE1434ED90	Credit Card
6	258DDAE2-A395-4AC2-90A7-99D1471D12C8	B1188510-287A-4B22-94AF-2545A454CD69	Bank Transfer
7	03437A43-D2ED-4ABD-A124-9C8D5A34DD07	8CD0464D-4E1E-45BE-9E5A-85EA5759341C	Cash
8	097D0DC1-AAED-4DFD-A5C0-D17815393570	BCD53EF8-8DA2-4234-A6BB-3F4DA3F87CC4	Credit Card
9	92CEFF2D-0127-41AE-8843-E4981F4DC379	724F815A-2805-463E-BEA9-91548FD72B9F	Cash
10	E765CD04-1201-49F3-846C-ECFFAE5F592B	51B746A9-F1A8-4088-8FE7-74A3583F615D	Bank Transfer

Bill

Bill table contains the details of the total fee to be paid. Bill table variables are BillNo, PaymentId, BillDescription, BillAmount,BillNo and PaymentId is primary key. Also ApymentId is foreign key of Bill table. BillDescription variable type is varchar because bill description size changeable. In addition BillAmount variable type smallmoney because it's represent total money of bill. Currently Bill table have 10 records.

Information About Triggers

calculatePrice:
   This trigger to triggered after BookedRoom is on.BookedRoom table contains a fee for each room. Total price must calculated after customer making the reservation. This trigger automotically calculates the total fee by multiplying the number of days and room price.

fillRoom:
    This trigger to triggered after Bill is on.Status of that room changes from 1 to 0 after booking this room. This trigger automatically updates the room status after each reservation.

Information About Views

showBookings:
   We created showbooking view to obtain all bookings information in all hotels. We used inner join to combining rows from two or more tables. In addition we used order by to sort result by Hotel name.

	HotelName	RoomNumber	DateFrom	DateTo	RoomPrice	RoomTypeName
1	Latayna Palm Hotel	303	2018-10-25	2018-01-02	200,00	King
2	Latayna Palm Hotel	305	2019-10-03	2019-10-07	170,00	Double-double
3	Latayna Palm Hotel	102	2019-10-03	2019-10-07	140,00	Single
4	Latayna Palm Hotel	304	2019-10-24	2019-10-27	150,00	Twin
5	Porto Bello	101	2019-01-14	2019-01-25	100,00	Single
6	Porto Bello	105	2019-01-14	2019-01-25	130,00	Double
7	Porto Bello	203	2018-05-03	2018-05-12	180,00	Triple
8	Porto Bello	204	2018-05-03	2018-05-12	120,00	Triple
9	Porto Bello	104	2019-03-24	2019-03-29	200,00	Double
10	Voyage Bodrum	105	2019-09-14	2019-09-25	160,00	Double
11	Voyage Bodrum	201	2019-09-14	2019-09-25	200,00	Double
12	Voyage Bodrum	202	2019-08-18	2019-08-25	210,00	Double
13	Voyage Bodrum	203	2019-08-18	2019-08-25	220,00	Triple
14	Voyage Bodrum	302	2019-01-14	2019-02-01	290,00	Queen
15	Voyage Bodrum	303	2019-01-14	2019-02-01	400,00	King
16	Voyage Bodrum	204	2019-06-18	2019-06-20	250,00	Triple
17	Voyage Bodrum	301	2019-06-18	2019-06-20	270,00	Quad

showRooms:

We created showRooms view to obtain all rooms information in all hotels. We used inner join to combining rows from two or more tables. In addition we used order by to sort result by Hotel name.

	HotelName	RoomNumber	RoomFloor	RoomTypeName	RoomStatus
1	Latayna Palm Hotel	101	1	Single	0
2	Latayna Palm Hotel	102	1	Single	1
3	Latayna Palm Hotel	103	1	Double	0
4	Latayna Palm Hotel	104	1	Double	0
5	Latayna Palm Hotel	105	1	Double	1
6	Latayna Palm Hotel	201	2	Double	1
7	Latayna Palm Hotel	202	2	Double	1
8	Latayna Palm Hotel	203	2	Triple	1
9	Latayna Palm Hotel	204	2	Triple	1
10	Latayna Palm Hotel	205	2	Triple	0
11	Latayna Palm Hotel	301	3	Quad	1
12	Latayna Palm Hotel	302	3	Queen	1
13	Latayna Palm Hotel	303	3	King	1
14	Latayna Palm Hotel	304	3	Twin	0
15	Latayna Palm Hotel	305	3	Double-double	0
16	Latayna Palm Hotel	401	4	Suite	0
17	Porto Bello	101	1	Single	1
18	Porto Bello	102	1	Single	0
19	Porto Bello	103	1	Double	0
20	Porto Bello	104	1	Double	1
21	Porto Bello	105	1	Double	1
22	Porto Bello	201	2	Double	0
23	Porto Bello	202	2	Double	0
24	Porto Bello	203	2	Triple	1
25	Porto Bello	204	2	Triple	1
26	Porto Bello	205	2	Triple	0
27	Porto Bello	301	3	Quad	0
28	Porto Bello	302	3	Queen	0
29	Porto Bello	303	3	King	1
30	Porto Bello	304	3	Twin	1
31	Porto Bello	305	3	Double-double	1
32	Porto Bello	401	4	Suite	0
33	Voyage Bodrum	101	1	Single	0
34	Voyage Bodrum	102	1	Single	0
35	Voyage Bodrum	103	1	Double	0
36	Voyage Bodrum	104	1	Double	0

showStaffs:

We created showStaffs view to obtain all staff information in all hotels. We used inner join to combining rows from two or more tables. In addition we used order by to sort result by Hotel name and Position Name.

	HotelName	Staff Poisiton	Staff Full Name	Gender	PhoneNumber
1	Latayna Palm Hotel	Barman	Barney Wren	Male	0-441-700-2400
2	Latayna Palm Hotel	Bell Hop	Chuck Blackburn	Male	1-144-616-3712
3	Latayna Palm Hotel	Chef	Maxwell Little	Male	0-178-824-8663
4	Latayna Palm Hotel	HouseKeeper	Lucas Robinson	Male	5-180-526-1850
5	Latayna Palm Hotel	HouseKeeper	Maxwell Nelson	Male	1-873-213-8023
6	Latayna Palm Hotel	Manager	Willow Olson	Female	2-854-316-8626
7	Latayna Palm Hotel	Receptionist	Ramon Ebbs	Male	3-773-067-2010
8	Latayna Palm Hotel	Security	Josh Andersson	Male	7-313-460-8214
9	Latayna Palm Hotel	Supervisor	Carmella Garner	Female	4-426-145-2085
10	Latayna Palm Hotel	Waiter	Bart Dunbar	Male	4-557-045-6333
11	Porto Bello	Barman	Rick Nicholls	Male	5-205-626-6241
12	Porto Bello	Bell Hop	Roger Grady	Male	8-721-337-6143
13	Porto Bello	Chef	Tom Overson	Male	1-380-156-4272
14	Porto Bello	HouseKeeper	Hayden Ulyatt	Male	3-543-135-6715
15	Porto Bello	HouseKeeper	Josh Russell	Male	6-807-482-0881
16	Porto Bello	Manager	Rocco James	Male	0-100-015-6470
17	Porto Bello	Receptionist	Barney Saunde...	Male	2-461-477-6565
18	Porto Bello	Security	Mike Chappell	Male	8-807-112-3541
19	Porto Bello	Supervisor	Anthony Willson	Male	6-273-028-8825
20	Porto Bello	Waiter	Holly Edwards	Female	5-067-181-6336
21	Voyage Bodrum	Barman	Cassidy Gordon	Female	2-323-460-8507
22	Voyage Bodrum	Bell Hop	Mary West	Female	5-826-884-8501
23	Voyage Bodrum	Chef	Enoch Phillips	Male	8-703-727-8860
24	Voyage Bodrum	HouseKeeper	Stacy Hilton	Female	1-257-085-8066
25	Voyage Bodrum	HouseKeeper	Gwenyth Oakley	Female	8-845-453-4063
26	Voyage Bodrum	Manager	Leslie Hunt	Female	3-471-862-0737
27	Voyage Bodrum	Receptionist	Lorraine Bentley	Female	7-542-443-6447
28	Voyage Bodrum	Security	Olivia Vernon	Female	5-436-701-5058
29	Voyage Bodrum	Supervisor	Doug Rodgers	Male	1-585-713-0656
30	Voyage Bodrum	Waiter	Wade Booth	Male	5-558-286-1846

Information About Stored Procedures

createGuestCustomer:

Guest entity is subtype of Customer entity. Every created Guest also have to be in the Customer. This procedures provides that we do not have to perform two operation separately. Whenever a Guest is created it's also created for the Customer.

createAgentCustomer:

This procedure goal same as the createGuestCustomer procedure. Agent entity is subtype of Customer entity. Every created Agent also have to be in the Customer. This procedures provides that do not have to perform two operation separately. Whenever a Agent is created it's also created for the Customer.

assignJob:

There are rooms where evry staff is responsible in our hotels. When staff assigned to the rooms it must be checked whether they are assigned to the rooms in the hotels where they work. This procedure allows this control and assign staff to the right rooms. If this procedure completed successful it returns 1 otherwise returns 0.

fireStaff:

This procedure makes the status zero of the dismissed staff which ıd's equal to parameter of the procedure ıd's. Important point of this procedure is that the dismissed staff is not deleted from database.

Computed Columns

We created computed column in the Booking table. TotalDay column represent the difference between DateFrom to DateTo. This columns calculated using DateTo and DateFrom columns in this table.

	BookingID	HotelID	CustomerID	DateFrom	DateTo	BookedRoomCount	BookingDescription	TotalDay
1	38733FCB-C858-41A0-890C-171A33A28F29	58103D45-7281-401E-9306-4494C07F89DA	ADA09316-7E31-4F2B-93AE-B1BFD6B6369D	2019-03-24	2019-03-29	1	A good description	5
2	E51DD396-75A8-4F6C-8FED-74688E504F14	41C93E6D-A9E7-445C-A73A-20C405EEA2F3	90534CDE-8240-4229-9D2C-326DF5767324	2019-10-03	2019-10-07	2	A good description	4
3	A26F3B1E-14B4-4AF4-8F8D-9479839C2180	58103D45-7281-401E-9306-4494C07F89DA	A593BBB7-9A0A-4578-B4BB-8CF9288FABF8	2019-01-14	2019-01-25	2	A good description	11
4	3D80A3C9-4846-4333-ADF1-9AD091ADDF48	41C93E6D-A9E7-445C-A73A-20C405EEA2F3	5DC4F031-9FDB-49C8-87B2-461DB5F1396C	2018-10-02	2018-10-25	1	A good description	23
5	3D96A607-4B73-4CB4-9B88-B2DA251FAE81	B5857A99-6C2C-4DF6-9577-75A7612E0F84	2CCAE97A-FAD3-4447-85E0-C0D6915B77DB	2019-08-18	2019-08-25	2	A good description	7
6	10667C0F-26CF-49B0-A934-BA59D0286A69	B5857A99-6C2C-4DF6-9577-75A7612E0F84	7DAD1E5D-BEE8-4BDC-A951-7218DD5A3988	2019-06-18	2019-06-20	2	A good description	2
7	617CB0F0-1D37-42E9-9B57-D1BD083307AD	B5857A99-6C2C-4DF6-9577-75A7612E0F84	996659D3-DF56-40AB-9D40-DEFE91AD2B6D	2019-01-14	2019-02-01	2	A good description	18
8	9A7B8CF5-AF84-4FB8-A41D-DA5443B71C35	41C93E6D-A9E7-445C-A73A-20C405EEA2F3	B61B5AF0-C626-43A9-A1F2-9A79DF513428	2019-10-24	2019-10-27	1	A good description	3
9	8A33A09E-FB8D-486D-B843-E6FD10DB0705	B5857A99-6C2C-4DF6-9577-75A7612E0F84	BF3E957C-81A7-49D5-B6F6-232B58EF1663	2019-09-14	2019-09-25	2	A good description	11
10	BD81036A-396E-47CE-905B-F7913CC8609A	58103D45-7281-401E-9306-4494C07F89DA	9D4EE90B-4ECF-4469-97C5-B6E8E581C4B8	2018-05-03	2018-05-12	2	A good description	9

Web Application

There are 3 different hotels and their location on the main page. We received names and locations of hotels from database using select * in the hotel repository. User should click on the hotel picture to see reservations and their other information.

After user click the hotel picture he/she show this page. This page will display information about the hotel which selected.
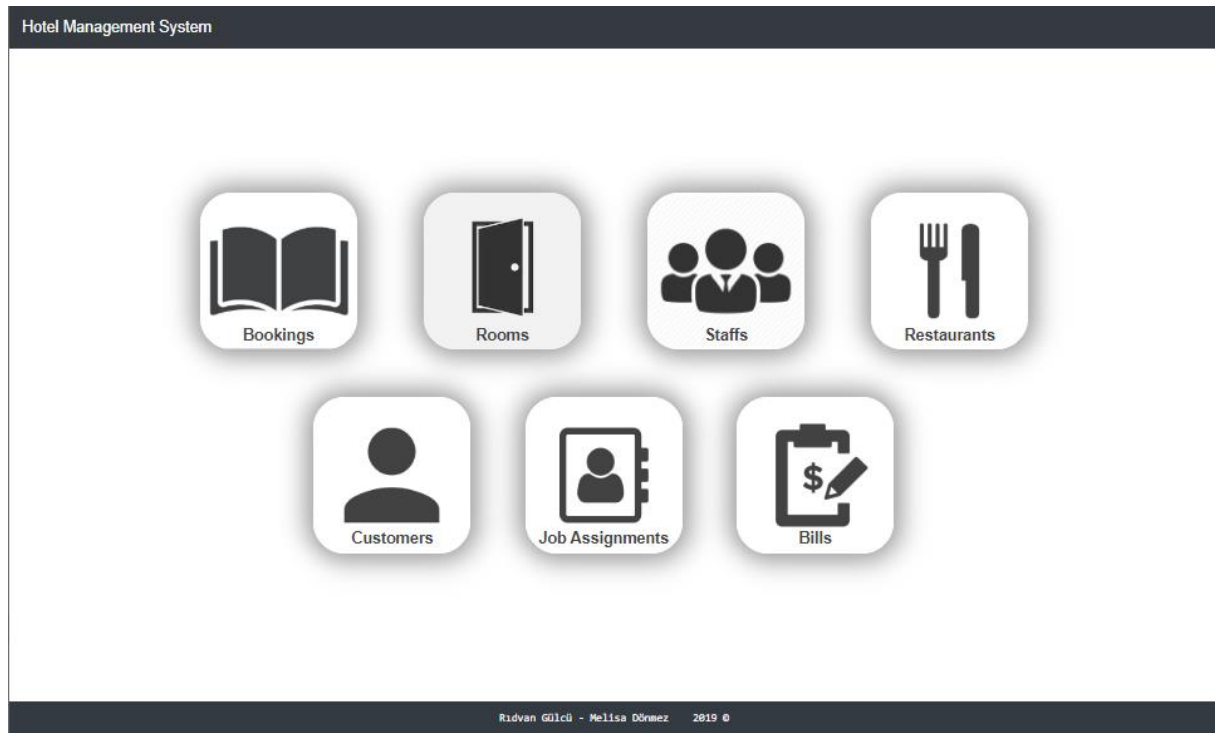
After clicking bookings image, page will open to add and remove rezervastion. This page will Show variables in the booking table. We reached this infomation by requesting sql in the booking repository. User can add booking by clicking the Add Booking button. But if there is not enough room in this hotel user will see the error message. Also user can return the previous page clicking the Back button.
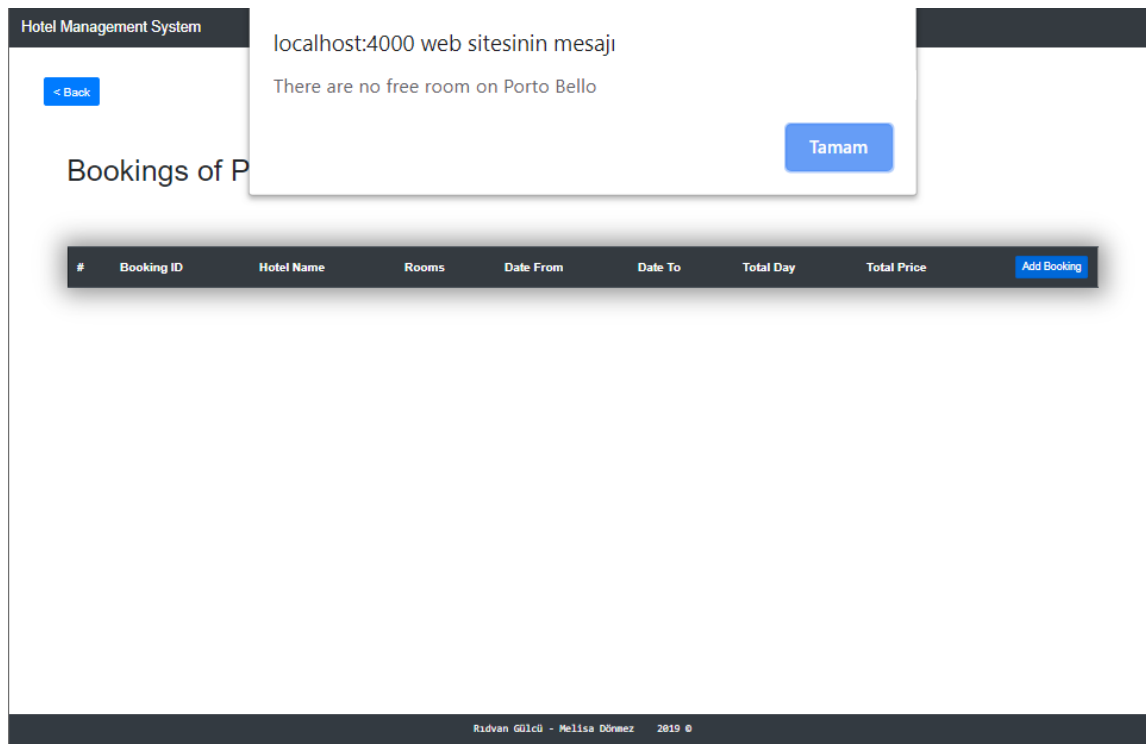
In order to add reservation to the system, user must first add a room to the hotel. To do this user should click room image from the hotel properties page. We used stored procedure for get all rooms from hotel which room blongs.