

Hotel Reservation

Divers Hotel is a 5 stars hotel having 150 rooms, those rooms are divided into 10 Room types (Sea View, Pool View, Garden View, Royal Suite, etc.) Each room has different price per night depending on the season and public holidays.

The hotel offers its guests Three meal plans, **Half Board**, **Full Board** and **All Inclusive**. Each Meal plan has a different price **Per Person Per Season**, for example: **Full Board** Meal Plan costs 20 USD per night per person in the low season and 30 USD per night per person in the high season.

Guests can chose the meal plan and room type when making reservation.

Your Task is:

- A- **Create MS SQL Server Database** that will capture the above requirements to store info about rooms, meal plans and their seasonal rates. *(Please clarify column names, data types and column relations)*
- B- **Use Entity Framework or any other .Net based ORM of your choice to connect to the database**
- C- **Create a C# class** that expose a single method named **"GetReservationTotal"** to take the following parameters:
(check-in date, check-out date, number of guests, room type, Meal plan)
And returns as output the total price for reservation.
- D- **Create a single web page** with a user-friendly interface to capture user reservation parameters input and return the reservation total amount. User interface should accept the below user input:
 - Name, Email, Country, Adults, Children, Room Type, Meal Plan, Check-in and Checkout dates

Please assume the following:

- All Room Types can accommodate up to 2 adults and two children only.
- We should be able to add more room types and update rate intervals and prices **without** changing the Database Schema or the **GetReservationTotal** function implementation.
- Meal plan rates are per person. Children and Adults have the same rate.
- We should be able to modify/add/remove meal plans and their prices anytime without code changing

Use the below data provided by Hotel Reservation Department:

A- Room Rates

Room Type	From	To	Rate Per Room
Standard Room	1/1/2021	15/1/2021	\$80
Standard Room	16/1/2021	30/4/2021	\$50
Sea View Room	1/1/2021	15/1/2021	\$120
Sea View Room	16/1/2021	31/3/2021	\$90
Sea View Room	1/4/2021	30/4/2021	\$100

B- Meal Plans

Meal Plan	Low Season (1/1/2021 – 30/5/2021) (Rate Per Person)	High Season (1/6/2021 – 31/12/2021) (Rate Per Person)
Half Board	5	10
Full Board	20	25
All Inclusive	25	30