

WEB TECHNOLOGIES

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Definition of problem

Rent a car agency website where user can make online reservations. User is picking two dates, pick up date and drop off date, and gets all cars that are available in required period. User can see details about cars, and price of reservation. Also, user can add extras, such as GPS, Second driver and child seat, which has its own price. One page is dedicated to user reservations, where he can list and cancel reservations.

Solution

In my solution, I used Laravel framework and MySQL database. Rent a car agency has cars, which have their unique identification number, name, model, transmission, number of seats, number of doors, state of air condition. User, with unique identification number, email and password, can log in and make a reservation. Reservation has starting and ending time, as well as keys to user and car. One reservation can refer to one car and one user, while user can make many reservations, and car can have many reservations. I used sessions to remember starting day and ending day of reservation, so that data won't be lost while changing pages.

The price of the rent depends on car and number of days. The user inputs the dates at the home page, and can change it at the search page. Pick up date cannot be before today and drop off date cannot be before day after pick up date. Search method returns all cars that are available in the requested period of time. Method checks every reservation to see if particular car is available. While making reservation, user can see details about car and add extras such as GPS, Second driver and child seat, which has its own price. After submitting reservation, user can see all its reservations and cancel them.

A guest user can search for available cars, see the price, but cannot make a reservation.

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1 cars

Creation: Jun 04, 2019 at 01:52 AM

Column	Type	Attributes	Null	Default	Extra	Links to	Comments	MIME
id	bigint(20)	UNSIGNED	No		auto_increment			
name	varchar(191)		No					
price	double		No					
image_path	varchar(191)		No					
created_at	timestamp		Yes	NULL				
updated_at	timestamp		Yes	NULL				
model	varchar(191)		No					
fuel	varchar(191)		No					
numberOfPassengers	int(11)		No					
airCondition	tinyint(1)		No					
doors	int(11)		No					
transmission	varchar(191)		No					
category	varchar(20)		No					

2 migrations

Creation: May 29, 2019 at 04:09 PM

Column	Type	Attributes	Null	Default	Extra	Links to	Comments	MIME
id	int(10)	UNSIGNED	No		auto_increment			
migration	varchar(191)		No					
batch	int(11)		No					

3 password_resets

Creation: May 29, 2019 at 04:09 PM

Column	Type	Attributes	Null	Default	Extra	Links to	Comments	MIME
email	varchar(191)		No					
token	varchar(191)		No					
created_at	timestamp		Yes	NULL				

4 reservations

Creation: Jun 04, 2019 at 01:11 AM

Column	Type	Attributes	Null	Default	Extra	Links to	Comments	MIME
id	bigint(20)	UNSIGNED	No		auto_increment			
start_date	date		No					
ending_date	date		No					
user_id	bigint(20)	UNSIGNED	No			-> users.id ON UPDATE RESTRICT ON DELETE RESTRICT		
numberOfDays	int(11)		No					
price	double		No					
created_at	timestamp		Yes	NULL				
updated_at	timestamp		Yes	NULL				
car_id	bigint(20)	UNSIGNED	No			-> cars.id ON UPDATE RESTRICT ON DELETE RESTRICT		

5 users

Creation: Jun 04, 2019 at 01:41 AM

Column	Type	Attributes	Null	Default	Extra	Links to	Comments	MIME
id	bigint(20)	UNSIGNED	No		auto_increment			
name	varchar(191)		No					
email	varchar(191)		No					
email_verified_at	timestamp		Yes	NULL				
password	varchar(191)		No					
remember_token	varchar(100)		Yes	NULL				
created_at	timestamp		Yes	NULL				
updated_at	timestamp		Yes	NULL				

migrations
id
migration
batch

password_resets
email
token
created_at

cars
id
name
price
image_path
created_at
updated_at
model
fuel
numberOfPassengers
airCondition
doors
transmission
category

reservations
id
start_date
ending_date
user_id
numberOfDays
price
created_at
updated_at
car_id

users
id
name
email
email_verified_at
password
remember_token
created_at
updated_at