

Ledige Biler

Find_available_cars funksjonen håndterer systemet for å finne kun de biler som er ledige mellom 2 datoer (initial_date og final_date). Den vil kun sjekke på de biler som blir sendt inn som parameter.

Initial_booking_overlap og final_booking_overlap leter etter biler som overlapper. Disse blir lagt til i en liste, og disse bilene blir fjernet fra den liste over biler som blir sendt inn i parameter.

Kun de ledige biler blir returnert.

```
def find_available_cars(initial_date, final_date, cars):
    # All reservations of the cars
    # Using car__in to only get 1 of each car.
    car_res = Reservation.objects.filter(car__in=cars)

    # Checking if the dates input is between or same as any dates already reserved.
    initial_overlap = car_res.filter(Q(initial_date__lte=initial_date) & Q(final_date__gte=initial_date))
    final_overlap = car_res.filter(Q(initial_date__lte=final_date) & Q(final_date__gte=final_date))

    available_cars = cars.exclude(id__in=initial_overlap.values("car_id")).exclude(id__in=final_overlap.values("car_id"))

    return available_cars
```

Pris Kalkulator

Figuren under viser koden bak den implementerte priskalkulatoren.

Her ser vi at det er kun leieperioder mellom 1 til 29 dager som blir trenger bli kalkulert.

```
def price_calculator(days, start_price):
    # Round to closest 5
    def round_function(x, base=5):
        return int(base * round(float(x) / base))

    if 0 < days <= 29:
        # Initialize variables
        discount_calculated = 1          # Initialize to 0% discount.
        amount_of_discounts = days / 5  # Number of discount chunks.
        discount = 0.825                # 17.5% discount for each chunk

        # Iterate through the chunks, adding a 17.5% discount to the existing discount.
        for i in range(0, amount_of_discounts):
            discount_calculated *= discount

        final_price = round_function(start_price*days*discount_calculated)

    else:
        # 30 days rented, final price is 2500 for the normal priced cars.
        if start_price == 250:
            final_price = 2500

        # Pricier cars will be a bit more expensive for a 30 day rental.
        else:
            final_price = 2750

    return final_price
```