**The problem:** We need an API that does a rate calculation engine for a carpark

The inputs for this engine are:

1. Car Entry Date and Time

2. Car Exit Date and Time

Based on these 2 inputs the engine program should calculate the correct rate for the customer and display the name of the rate along with the total price to the customer using the following rates:

|  |  |
| --- | --- |
| Name of the Rate | Early Bird |
| Type | Flat Rate |
| Total Price | $13.00 |
| Entry Condition | Enter between 6:00 AM to 9:00 AM |
| Exit Condition | Exit between 3:30 PM to 11:30 PM |

|  |  |
| --- | --- |
| Name of the Rate | Night Rate |
| Type | Flat Rate |
| Total Price | $6.50 |
| Entry Condition | Enter between 6:00 PM to midnight (weekdays) |
| Exit Condition | Exit between 3:30 PM to 11:30 PM |

|  |  |
| --- | --- |
| Name of the Rate | Weekend Rate |
| Type | Flat Rate |
| Total Price | $10.00 |
| Entry Condition | Enter anytime past midnight on Friday to Sunday |
| Exit Condition | Exit any time before midnight of Sunday |

Note: If a customer enters the carpark before midnight on Friday and if they qualify for Night rate on a Saturday morning, then the program should charge the night rate instead of weekend rate.

For any other entry and exit times the program should refer the following table for calculating the total price.

|  |  |
| --- | --- |
| Name of the Rate | Standard Rate |
| Type | Hourly Rate |
| 0-1 Hours | $5.00 |
| 1-2 Hours | $10.00 |
| 2-3 Hours | $15.00 |
| 3+ Hours | $20.00 flat rate **for each calendar day** of parking |

*Note: The customer should get the cheapest deal based on the rules which apply to the time period.*

This test gives you the opportunity to demonstrate your flair for technology and your programming style. The result does not have to be complete but should show your ability to structure and test production quality code.

Submission – via a public GitHub repo (preferred), or Zip up solution files (no binaries please) and send by email.

All the best!

The team at TallyIT

If you have any questions, then please contact us on the email this test came with.