Test cases

# Edge cases

## TEST CASE 001: Test scenario when is leap year.

Given that I navigate to <http://adam.goucher.ca/parkcalc/index.php>

And I select the **Economy-Parking** option from *Choose a Lot* dropdown

And I enter **12:00 AM** and **2/1/2016** in the *Choose Entry Date and Time* section

And I enter **12:00 AM** and **3/1/2016** in the *Choose Leaving Date and Time* section

When I click ***Calculate***

Then the **COST** is equal to **$ 225.00**

And the **DURATION** is **(29 Days, 0 Hours, 0 Minutes)**

**Observation:** When is not leap year (e.g. 2/1/2017 to 3/1/2017) the COST is $216.00 and DURATION is (28 Days, 0 Hours, 0 Minutes).

It would be good to do the same verification but using years. For example, 1/1/2015 through 1/1/2017 using short-term parking will have a **COST** of $ 19,008.00 and DURATION (*731 Days*, 0 Hours, 0 Minutes) whereas the same period but not including the leap year like 1/1/2017 to 1/1/2019 will be $ **18,982.00** and (*730 Days*, 0 Hours, 0 Minutes). There is one day of difference.

## TEST CASE 002: Test Scenario for Daylight Saving Time

Given that I navigate to <http://adam.goucher.ca/parkcalc/index.php>

And I select the **Long-Term Surface Parking-Parking** option from *Choose a Lot* dropdown

And I enter **09:30 PM** and **3/12/2016** in the *Choose Entry Date and Time* section

And I enter **11:15 PM** and **3/13/2016** in the *Choose Leaving Date and Time* section

When I click ***Calculate***

Then the **COST** is equal to **$ 14.00**

And the **DURATION** is **(1 Days, 1 Hours, 45 Minutes)**

**Observation:** When is no Daylight saving time if we chose the same data range the cost and duration will be different. For example, If we select the same parameters except with the year (let’s use 2016) the **COST** would be $ 12.00 and **DURATION** (1 Days, 0 Hours, 45 Minutes). There is one hour of difference.

## Test case 003: Test scenario for lower bound and upper bound costs

### Lower Bound:

Given that I navigate to <http://adam.goucher.ca/parkcalc/index.php>

And I select the **Economy-Parking** option from *Choose a Lot* dropdown

And I select **today’s date** in the *Choose Entry Date and Time* section

And I enter **today’s date + hour + 1 min** in the *Choose Leaving Date and Time* section

When I click ***Calculate***

Then the **COST** is equal to **$ 3.00**

And the **DURATION** is **(0 Days, 1 Hours, 1 Minutes)**

### Upper Bound

Given that I navigate to <http://adam.goucher.ca/parkcalc/index.php>

And I select the **Economy-Parking** option from *Choose a Lot* dropdown

And I select **today’s date** in the *Choose Entry Date and Time* section

And I enter **today’s date + hour + 31 min** in the *Choose Leaving Date and Time* section

When I click ***Calculate***

Then the **COST** is equal to **$ 4.00**

And the **DURATION** is **(0 Days, 1 Hours, 31 Minutes)**

# Invalid inputs

## TEST Case 004: Test Scenario for invalid time input

Given that I navigate to <http://adam.goucher.ca/parkcalc/index.php>

And I select the **Any-Parking** option from *Choose a Lot* dropdown

And I enter **an invalid time** like **empty field** or **25:00 PM** or **-1:00 AM** and **2/1/2016** in the *Choose Entry Date and Time* section

And I enter **12:00 AM** and **3/1/2016** in the *Choose Leaving Date and Time* section

When I click ***Calculate***

Then an error message should be displayed related to the invalid input.

**Observation:** We can create separate test cases for each case or use Data Driven test and use a data source file to store all different invalid inputs combinations.

## Test case 005: Test Scenario for invalid date input

Given that I navigate to <http://adam.goucher.ca/parkcalc/index.php>

And I select the **Any-Parking** option from *Choose a Lot* dropdown

And I enter **10:00 AM** and **15/1/2016** in the *Choose Entry Date and Time* section

And I enter **11:00 AM** and **an invalid date** like **empty field** or **15/15/2017** in the *Choose Leaving Date and Time* section

When I click ***Calculate***

Then an error message should be displayed related to the invalid input.

**Observation:** We can create separate test cases for each case or use Data Driven test and use a data source file to store all different invalid inputs combinations.

# Positive test

## Test Case 006: TEst scenarios for valid inputs

Given that I navigate to <http://adam.goucher.ca/parkcalc/index.php>

And I select the **{parking}** option from *Choose a Lot* dropdown

And I enter {**entry\_time}** and **{valid\_date}** in the *Choose Entry Date and Time* section

And I enter **{exit\_time}** and **{valid\_date}** in the *Choose Leaving Date and Time* section

When I click ***Calculate***

Then the **COST** is equal to **{cost}**

And the **DURATION** is **{duration}**

**Observation:** Here the idea is to test basic functionality of the web application using valid inputs. We know based on the inputs what is the expected output. We could use Data Driven to store all possible combination for valid inputs and their outputs to reduce the code we need to write or create one test as per scenario.