

Wei Wang  
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# Car Rental Service



# Screenshots (user)

## 1. Index/Reservation

enterprise

[Login](#) or [Register](#)

[Reservation](#) [Profile](#) [Orders](#) [Map](#)

### START A RESERVATION

Welcome, please select datetime and store(s).

1. PICK-UP TIME

RENT DAYS

05/18/2020

12:30 PM

1

2. RETURN TIME

05/19/2020

12:30 PM

3. PICK-UP LOCATION (Postal Code, City)

X1X or city name

☐ Return to a different location

Map

Satellite

## 2. Car Selection

### CHOOSE A VEHICLE CLASS

Filters

VEHICLE TYPE

Cars

SUVs

Vans

Trucks

Total from

CAD 79.98

CAD 138.98

CAD 325.98

CAD 446.98

NUMBER OF PASSENGERS

2

4

CAD 79.98

CAD 79.98

CAD 89.98

CAD 268.98

CAD 99.98

CAD 119.98

CAD 208.98

CAD 338.98

Economy

Chevrolet Spark or similar

CAD 79.98

4 People

2 Bags

SELECT

Intermediate

Kia Forte or similar

CAD 99.98

5 People

3 Bags

SELECT

Standard

Volkswagen Jetta or similar

CAD 119.98

5 People

4 Bags

SELECT

Sporty

MINI Countryman or similar

CAD 159.98

5 People

3 Bags

SELECT

## 3. Review & Reserve

### REVIEW & RESERVE

#### Rental Details

DATES & TIMES

Mon 18. May 2020 @ 13:20 PM  
Tue 19. May 2020 @ 13:20 PM

MODIFY

PICK-UP & RETURN LOCATION

Montreal Anjou Fortier Ford  
7000 Boul. Louis-h. Lafontaine  
Anjou , QC H1M 2X3

MODIFY

Economy

Chevrolet Spark or similar

VEHICLE

Time And Distance 1 Day(s) @ CAD 79.98 / Day  
Unlimited Kilometres

MODIFY

CAD 79.98

Included

\* Required to complete your reservation

First Name \*

Tom

Last Name \*

Miller

Phone Number \*

5148797982

Email Address \*

Tmiller@gmail.com

Driver's License \*

G8394-98312-31244

Complete Your Booking

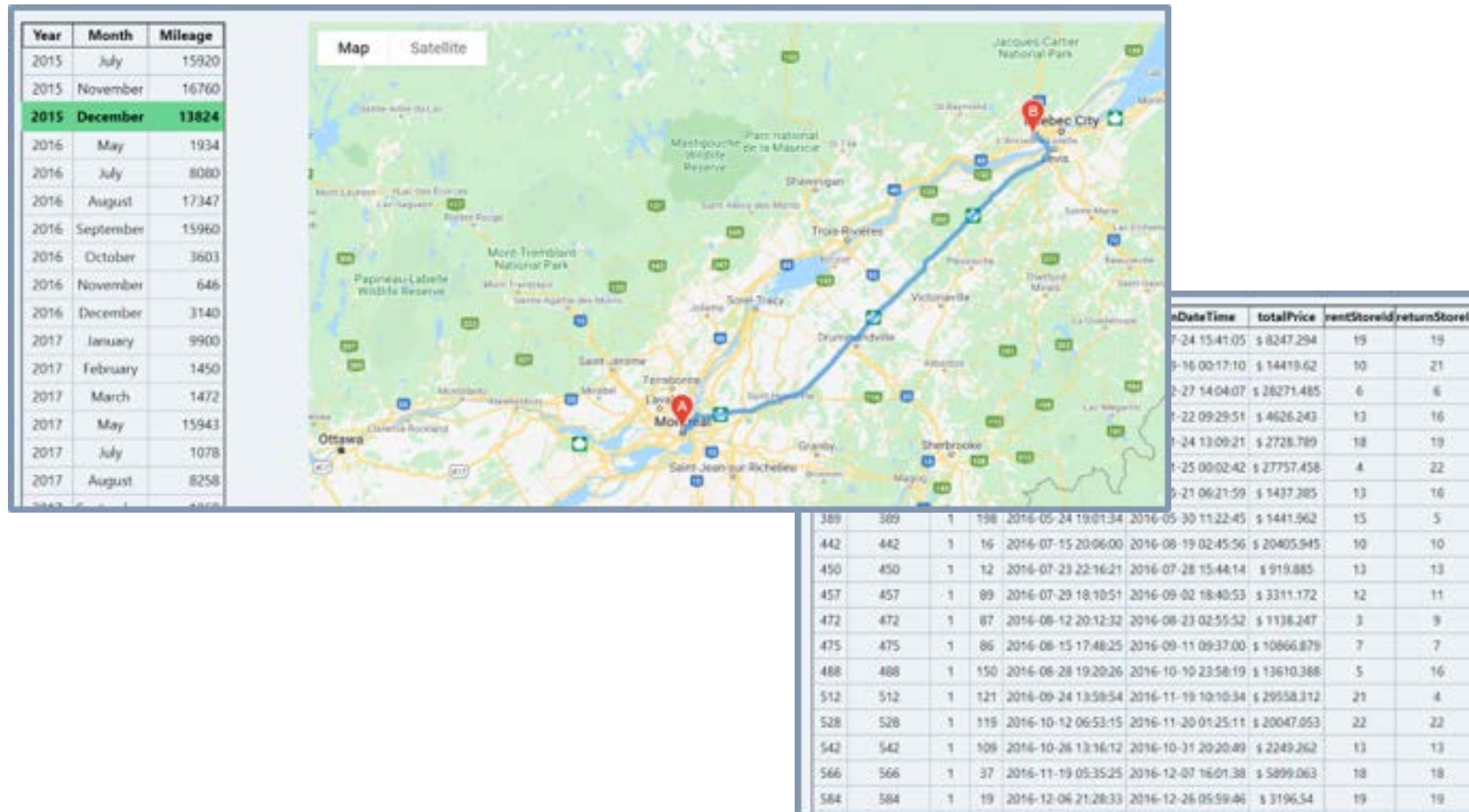
You will be charged when you pick up your rental.

CAD 91.95

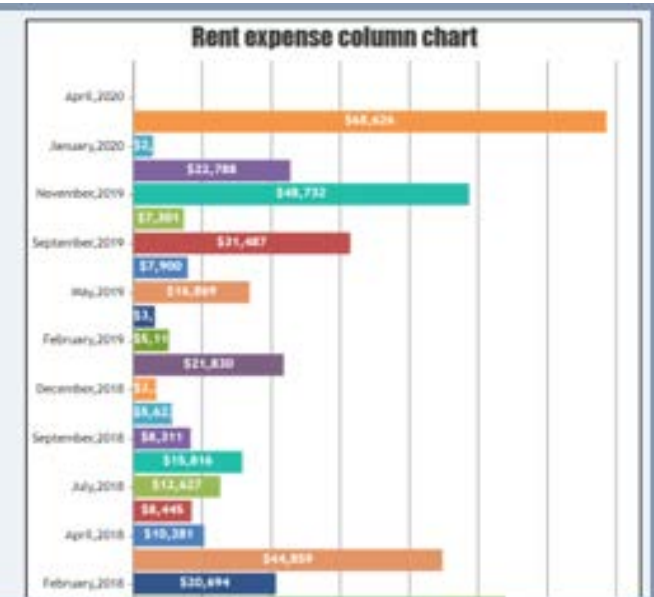
RESERVE ORDER

# Screenshots (user)

#### 4. Map (User History)



## 5. Orders (User History)



# Screenshots (admin)

- Store, Car, CarType, Reservation, Order List

!!Admin Logo!!


Hello, admin [Go To Customer Page](#) [Logout](#)

[Stores](#) [Cars](#) [Car Types](#) [Reservations](#) [Orders](#)

Search here... (Only current page records for the moment)

ID	USER	CAR TYPE	START DATE	RETURN DATE	PRICE PER DAY	NET FEE	RENT STORE	RETURN STORE
1895	1	2	2020-05-19 16:40:00	2020-05-21 16:40:00	89.98	179.96	17	17
1897	4	1	2020-05-17 23:30:00	2020-05-18 23:30:00	79.98	79.98	16	16
1896	1	21	2020-05-17 17:00:00	2020-05-18 17:00:00	506.98	506.98	17	17
1894	1	2	2020-05-17 16:40:00	2020-05-22 16:40:00	89.98	449.9	17	17
1893	18	19	2020-05-15 23:52:29	2020-05-26 13:45:39	458.98	5048.78	13	13
1892	24	9	2020-05-15 13:01:16	2020-06-18 03:27:15	269.98	9179.32	14	13
1891	9	6	2020-05-14 13:54:38	2020-06-15 15:35:23	159.98	5279.34	16	16
1890	25	14	2020-05-13 02:06:39	2020-06-18 19:14:19	208.98	7732.26	6	6
1889	25	12		2020-05-15 18:44:22	138.98	555.92	14	14
1888	12	6		2020-06-01 09:00:38	159.98	3519.56	16	5
1887	11	1		2020-07-02 11:17:10	79.98	4238.94	1	21
1886	3	6		2020-06-17 12:07:26	159.98	6399.2	8	8
1885	4	9		2020-06-09 20:11:25	269.98	8909.34	8	8
1884	17	6		2020-06-22 22:21:32	159.98	7679.04	16	16
1883	24	3		2020-05-26 18:33:28	99.98	2099.58	14	3
1882	20	19		2020-05-29 01:07:15	458.98	11474.5	7	7
1881	4	19		2020-05-13 16:02:43	458.98	4589.8	14	13
1880	1	6		2020-06-28 08:05:57	159.98	9118.86	11	11
1879	4	1		2020-05-10 03:12:31	79.98	639.84	11	11
1878	24	17		2020-06-25 06:39:43	318.98	17543.9	3	21

ID: 14  
CATEGORY: SUV  
SUBTYPE: Standard SUV  
DESCRIPTION: Ford Edge or similar  
PASSENGERS: 5  
BAGS: 5  
DAILYPRICE: 208.98

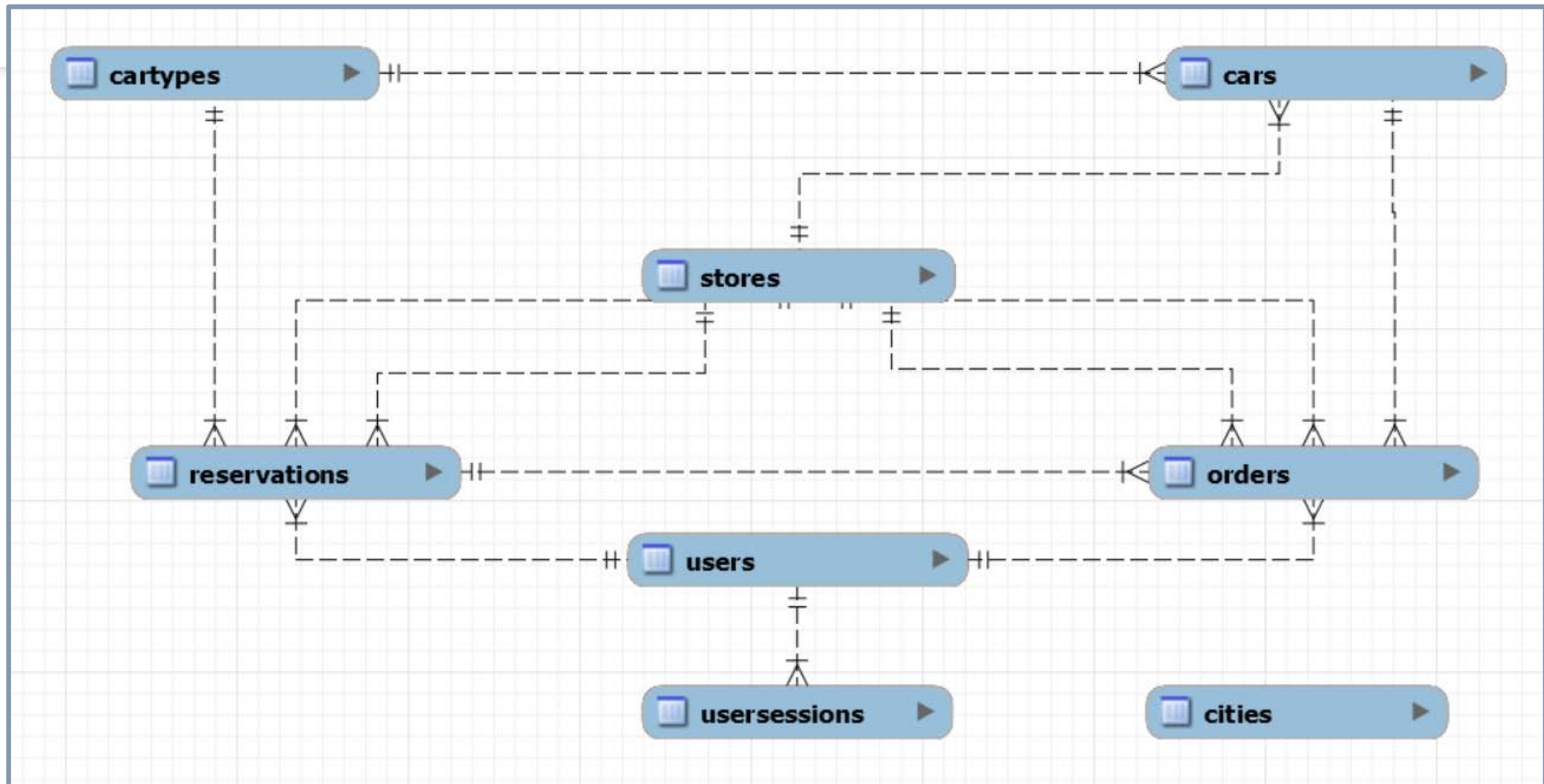


1 2 3 4 5 6 7 8 9 ... next

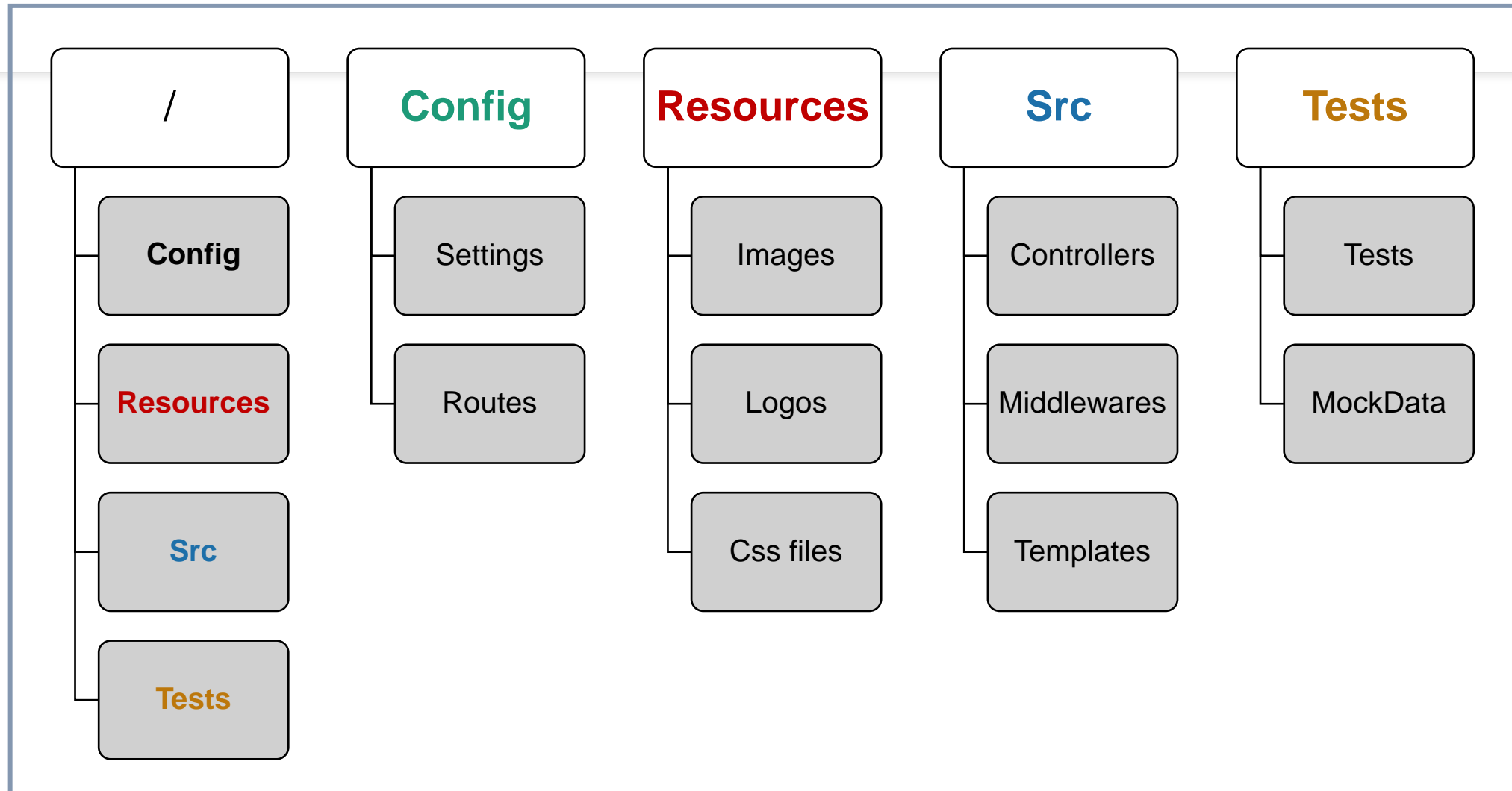
Add new Reservation



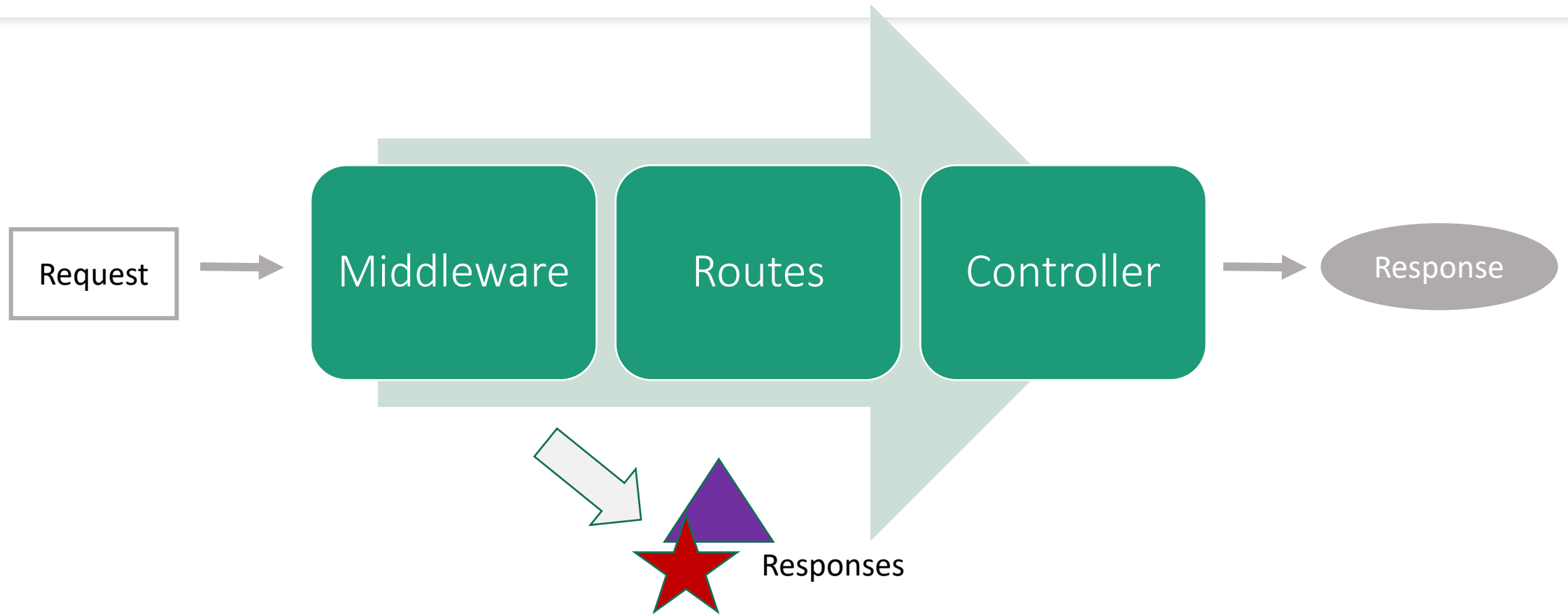
# Database Structure



# Project Structure



# Project Structure



# Project Structure (Controller)

```
$app->get('/', function (Request $request, Response $response, $args = [])  
{  
    $view = Twig::fromRequest($request);  
    return $view->render($response, 'index.html.twig');  
});
```

> In Route



```
$app->get('/', HomeController::class . ':home');
```

> In Route



```
class HomeController  
{  
    public function home(Request $request, Response $response, $args = [])  
    {  
        $view = Twig::fromRequest($request);  
        return $view->render($response, 'index.html.twig');  
    }  
}
```

> In Controller



```

$app->group('/admin', function (RouteCollectorProxy $group) {
    $group->redirect('', '/admin/stores');

    $group->get('/ajax/users/{id:[0-9]+}', UserController::class . ':showToAdmin');

    $group->get('/stores', AdminStoreController::class . ':index');
    $group->get('/ajax/stores', AdminStoreController::class . ':showAll');
    $group->post('/ajax/stores', AdminStoreController::class . ':create');
    $group->get('/ajax/stores/{id:[0-9]+}', AdminStoreController::class . ':show');
    $group->patch('/ajax/stores/{id:[0-9]+}', AdminStoreController::class . ':edit');
    $group->delete('/ajax/stores/{id:[0-9]+}', AdminStoreController::class . ':delete');

    $group->get('/cars', AdminCarController::class . ':index');
    $group->get('/ajax/cars', AdminCarController::class . ':showAll');
    $group->post('/ajax/cars', AdminCarController::class . ':create');
    $group->get('/ajax/cars/{id:[0-9]+}', AdminCarController::class . ':show');
    $group->patch('/ajax/cars/{id:[0-9]+}', AdminCarController::class . ':edit');
    $group->delete('/ajax/cars/{id:[0-9]+}', AdminCarController::class . ':delete');

    $group->get('/cartypes', AdminCarTypeController::class . ':index');
    $group->get('/ajax/cartypes', AdminCarTypeController::class . ':showAll');
    $group->post('/ajax/cartypes', AdminCarTypeController::class . ':create');
    $group->get('/ajax/carTypes/{id:[0-9]+}', AdminCarTypeController::class . ':show');
    $group->patch('/ajax/cartypes/{id:[0-9]+}', AdminCarTypeController::class . ':edit');
    $group->delete('/ajax/cartypes/{id:[0-9]+}', AdminCarTypeController::class . ':delete');

    $group->get('/reservations', AdminReservationController::class . ':index');
    $group->get('/ajax/reservations', AdminReservationController::class . ':showAll');
    $group->post('/ajax/reservations', AdminReservationController::class . ':create');
    $group->get('/ajax/reservations/{id:[0-9]+}', AdminReservationController::class . ':show');
    $group->patch('/ajax/reservations/{id:[0-9]+}', AdminReservationController::class . ':edit');
    $group->delete('/ajax/reservations/{id:[0-9]+}', AdminReservationController::class . ':delete');

    $group->get('/orders', AdminOrderController::class . ':index');
    $group->get('/ajax/orders', AdminOrderController::class . ':showAll');
    $group->post('/ajax/orders', AdminOrderController::class . ':create');
    $group->get('/ajax/orders/{id:[0-9]+}', AdminOrderController::class . ':show');

```

# Project Structure (Route)

# Project Structure (Middleware)

```
$app->get('/ajax/stores/{id:[0-9]+}', function ( ... )  
{  
    // If user login?  
    // if user is admin?  
    ...  
    Return store information  
});
```

Main feature

```
$app->delete('/ajax/stores/{id:[0-9]+}', function ( ... )  
{  
    // If user login?  
    // if user is admin?  
    ...  
    Delete store information  
});
```

Main feature

```
$app->put('/ajax/stores/{id:[0-9]+}', function ( ... )  
{  
    // If user login?  
    // if user is admin?  
    ...  
    Update store information  
});
```

Main feature

```
$app->patch('/ajax/stores/{id:[0-9]+}', function ( ... )  
{  
    // If user login?  
    // if user is admin?  
    ...  
    Update store information  
});
```

Main feature

# Project Structure (Middleware)

> In AuthMiddleware Class

> In Route

```
35
36 $app->group('/admin', function (RouteCollectorProxy $group) {
37     $group->redirect('', '/admin/stores');
38
39     $group->get('/ajax/users/{id:[0-9]+}', UserController::cl
40
41     $group->get('/stores', AdminStoreController::class . ':in
42     $group->get('/ajax/stores', AdminStoreController::class .
43     $group->post('/ajax/stores', AdminStoreController::class
44     $group->get('/ajax/stores/{id:[0-9]+}', AdminStoreControl
45     $group->patch('/ajax/stores/{id:[0-9]+}', AdminStoreContr
46     $group->delete('/ajax/stores/{id:[0-9]+}', AdminStoreCont
47
48     . . . . .
49
50     $group->get('/orders', AdminOrderController::class . ':in
51     $group->get('/ajax/orders', AdminOrderController::class .
52     $group->post('/ajax/orders', AdminOrderController::class
53     $group->get('/ajax/orders/{id:[0-9]+}', AdminOrderControl
54     $group->patch('/ajax/orders/{id:[0-9]+}', AdminOrderContr
55     $group->delete('/ajax/orders/{id:[0-9]+}', AdminOrderController::class . ':delete');
56
57     })->add(AuthMiddleware::mustBeLoginAsAdmin());
58 }
```

```
class AuthMiddleware implements Middleware
{
    public static function mustBeLoginAsAdmin()
    {
        return function (Request $request, RequestHandler $handler) {
            $user = AuthMiddleware::getUserInCurrentSession(session_id());

            $response = $handler->handle($request);

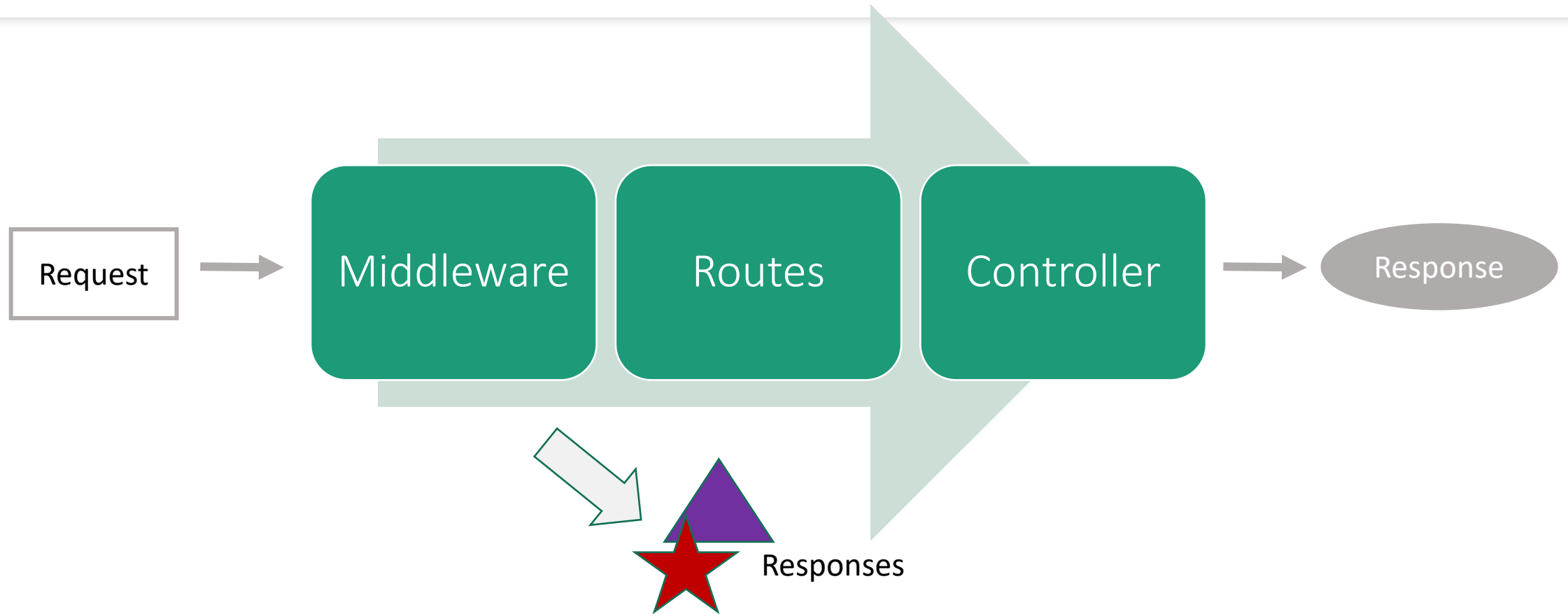
            if(empty($user)){
                return $response->withHeader('Location','/errors/forbidden');
            }

            $role = DB::queryFirstField("SELECT role FROM users WHERE id=%s",$user['id']);

            if($role != 'admin'){
                return $response->withHeader('Location','/errors/forbidden');
            }

            return $response;
        };
    }
}
```

# Project Structure



# Unit Test ( PHPUnit & GuzzleHttp )

```
9 class UserControllerTest extends TestCase
10 {
11     protected $client;
12     protected $faker;
13
14     /**
15      * This method is called before the first test of this test class
16      */
17     public static function setUpBeforeClass(): void
18     {
19         DB::$user = 'carrental';
20         DB::$password = 'QFzyVmD4mYO8Ah8G';
21         DB::$dbName = 'carrental';
22         DB::$port = 3333;
23     }
24
25     protected function setUp():void
26     {
27         $this->faker = Faker\Factory::create();
28         $this->client = new GuzzleHttp\Client([
29             'base_uri' => 'http://project.ipd20:8888',
30             'http_errors' => false,
31             'cookies' => true
32         ]);
33     }
34
35     protected function tearDown(): void
36     {
37         DB::query("DELETE FROM users");
38     }
39 }
```

```
/**
 * @test
 */
public function userCanSeeOnlyItsProfile(){
    $johnDoe = [
        'email' => 'johndoe@example.com',
        'password' => 'q1w2E3',
    ];
    $this->createUser($johnDoe);
    $johnId = $this->getUserId($johnDoe['email']);

    $janeDoe = [
        'email' => 'janedoe@example.com',
        'password' => 'q1w2E3'
    ];
    $this->createUser($janeDoe);
    $janeId = $this->getUserId($janeDoe['email']);

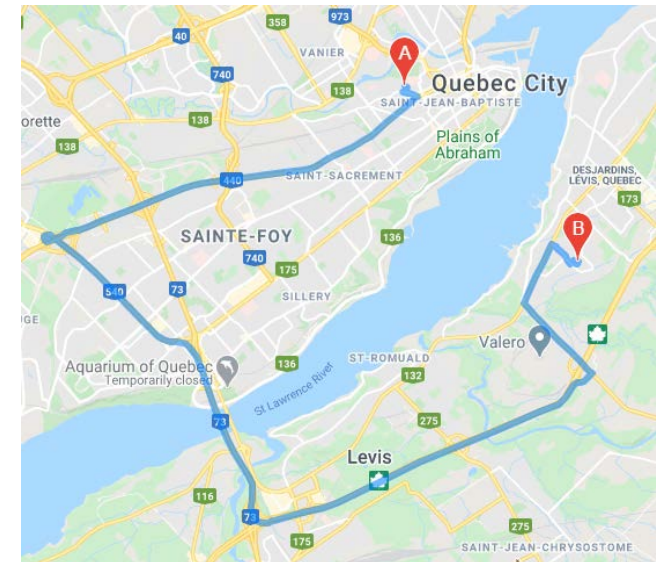
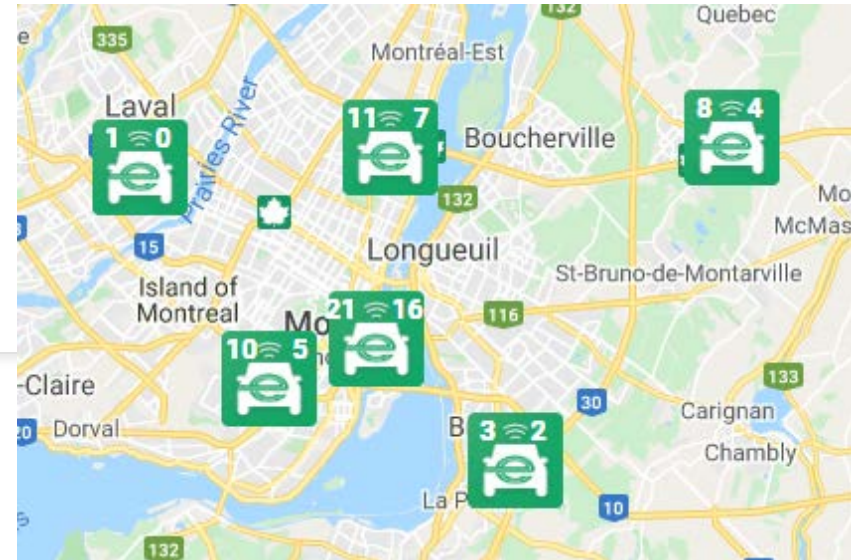
    $janeResponse = $this->client->post('/login',[
        'form_params' => $janeDoe
    ]);

    $janeResponse = $this->client->request('GET','/profile/' . $johnId);
    $this->assertEquals(403,$janeResponse->getStatusCode());

    $janeResponse = $this->client->request('GET','/profile/' . $janeId);
    $this->assertEquals(200,$janeResponse->getStatusCode());
}
```

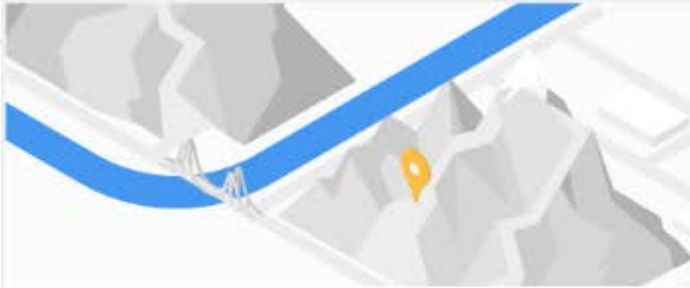
# Map requirements

- Display stores on google map.
- Use company logo as markers.
- Show details of a selected store.
- Retrieve and update available car number on the markers.
- Draw routes of finished orders on google map.  
(apply locations of different stores).





# Google Map API



## Maps

Build customized, agile experiences that bring the real world to your users with static and dynamic maps, Street View imagery, and 360° views.

[LEARN MORE](#)



## Routes

Help your users find the best way to get from A to Z with comprehensive data and real-time traffic.

[LEARN MORE](#)



## Places

Help users discover the world with rich location data for over 150 million places. Enable them to find specific places using phone numbers, addresses, and real-time signals.

[LEARN MORE](#)

# Google Maps

## Enabled APIs Last 30 days

API	Requests
Maps JavaScript API	1,514
Directions API	325
Street View Static API	0
Maps Static API	0
Maps SDK for iOS	0
Maps Embed API	0

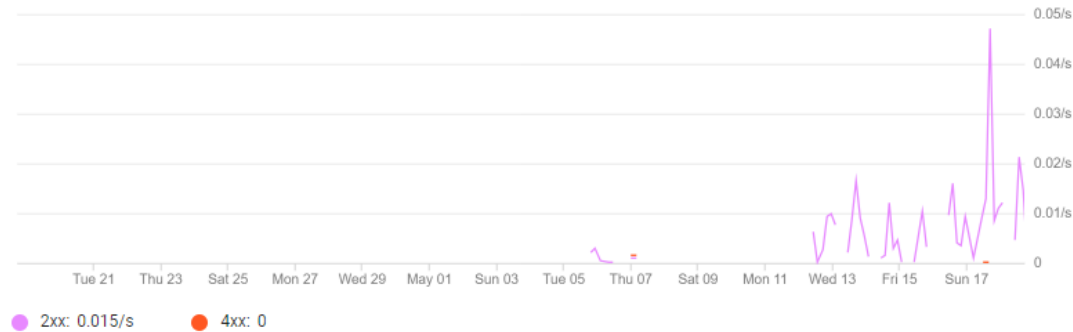
→ View all APIs (7)

## Community support

Select Maps API

→ Go to Maps support

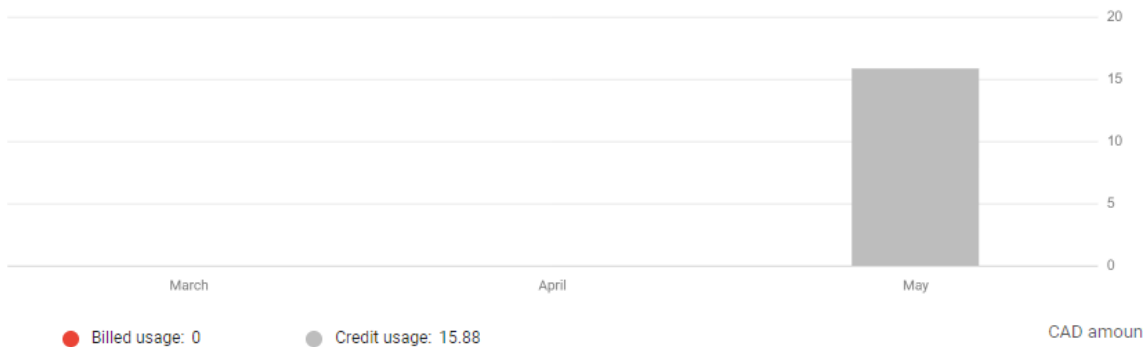
## Traffic by response code Last 30 days



→ View metrics

## Billing Last 3 months

**Current bill** **CAS\$0.00**  
May 01 - May 18 Total usage: CAS\$15.88



→ Go to Maps billing report

## Maps

Maps JavaScript API

Maps SDK for Android

Maps SDK for iOS

Maps Static API

Street View Static API

Maps Embed API

Maps URLs

## Routes

Directions API

Distance Matrix API

Roads API

## Places

Places API

Places SDK for Android

Places SDK for iOS

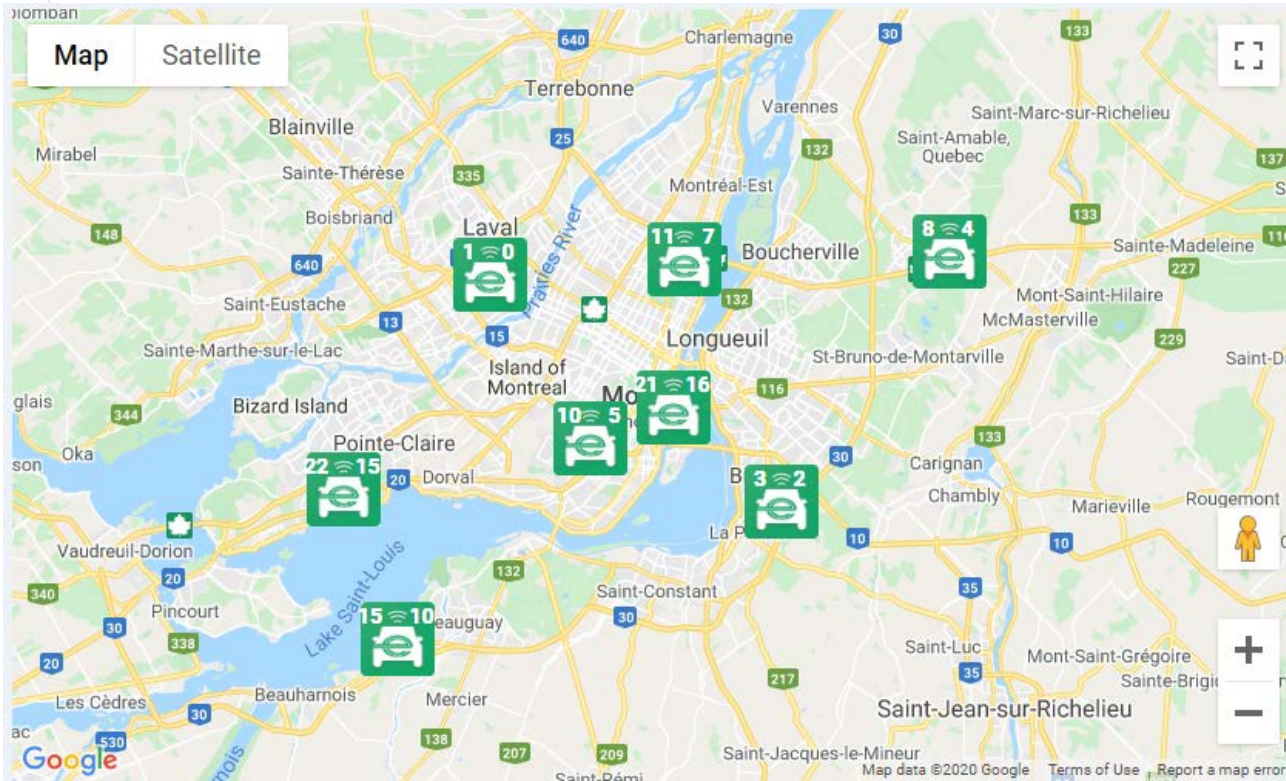
Places Library, Maps JavaScript API

Geocoding API

Geolocation API

Time Zone API

# Google Maps – Maps API



```
function initMap() {  
  map = new google.maps.Map(document.getElementById('googleMap'), {  
    center: defaultLocation,  
    zoom: 10,  
    draggable: true  
  });  
  
  loadAdjacentStores(defaultLocation);  
}  
  
function newLocation(newLat, newLng) {  
  map.setCenter({  
    lat: newLat,  
    lng: newLng  
  });  
}
```

```
<div id="googleMap" class="my-5 w-3/4" style="border: 1px solid #ccc;"></div>
```

```
<script async defer
```

```
  src="https://maps.googleapis.com/maps/api/js?key=AIzaSyF...&region=CA&callback=initMap">
```

```
</script>
```

# Google Maps – Maps API

```
// Adds a marker to the map and push to the array.
function addMarker(location, store) {
    var marker = new google.maps.Marker({
        position: location,
        map: map,
        icon: {
            url: "../../resources/companyimages/enterprise_icon.jpg",
            scaledSize: new google.maps.Size(48, 48),
            origin: new google.maps.Point(0, 0),
            anchor: new google.maps.Point(10, 10),
            labelOrigin: {x: 23, y: 10},
        },
        title: store.storeName,
        animation: google.maps.Animation.DROP,
        label: {
            text: store['carNum'].carNum + '\xa0\xa0\xa0\xa0\xa0' + store['avaCarNum'].carNum,
            fontSize: "14px",
            fontWeight: "bold",
            color: "white"
        }
    });

    var storeInfo = formatStoreInfo(store);

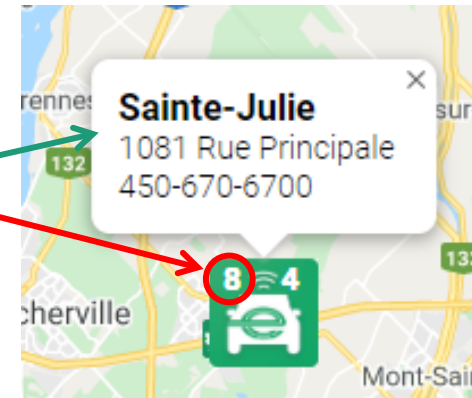
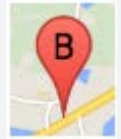
    var infoWindow = new google.maps.InfoWindow({
        content: storeInfo
    })

    marker.addListener('mouseover', function () {
        infoWindow.open(map, marker);
    })
    marker.addListener('mouseout', function () {
        infoWindow.open(map, marker);
        setTimeout(function () {
            infoWindow.close()
        }, 500);
    })
}
```

```
var marker;

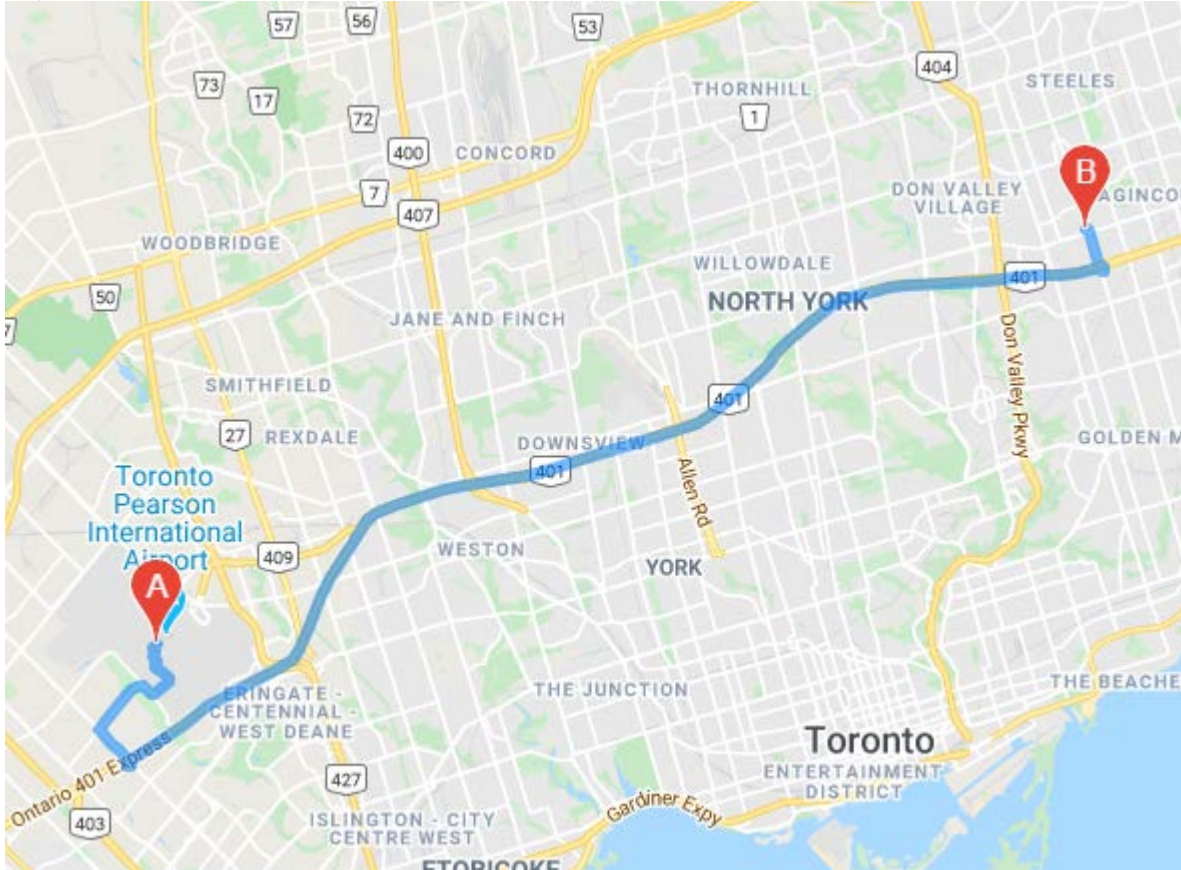
function initMap() {
    var map = new google.maps.Map(document.getElementById('map'), {
        zoom: 13,
        center: {lat: 59.325, lng: 18.070}
    });

    marker = new google.maps.Marker({
        map: map,
        draggable: true,
        animation: google.maps.Animation.DROP,
        position: {lat: 59.327, lng: 18.067}
    });
    marker.addListener('click', toggleBounce);
}
```





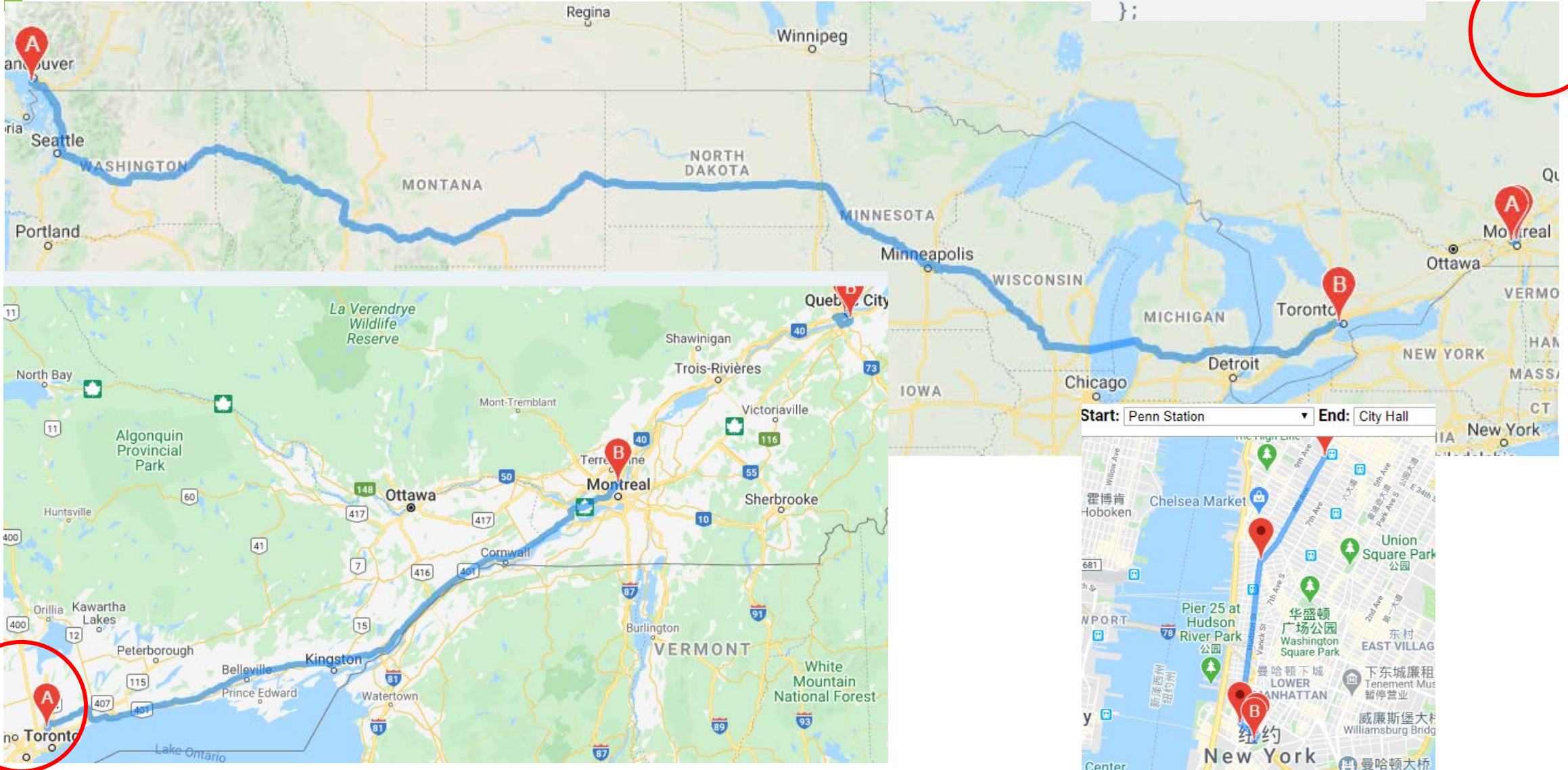
# Google Maps – Directions API



```
function calculateRoute(mapOrigin, mapDestination, index) {  
    directionsDisplay[index] = new google.maps.DirectionsRenderer({  
        map: map  
    });  
  
    var request = {  
        origin: mapOrigin,  
        destination: mapDestination,  
        travelMode: 'DRIVING'  
    };  
  
    directionsService.route(request, function (result, status) {  
        if (status === "OK") {  
            directionsDisplay[index].setDirections(result);  
            bounds.union(result.routes[0].bounds);  
            map.fitBounds(bounds);  
        }  
    });  
}  
  
function clearRoutes() {  
    for (let i = 0; i < directionsDisplay.length; i++) {  
        var route = directionsDisplay[i];  
        if (route != null) {  
            route.setMap(null);  
        }  
    }  
    directionsDisplay = [];  
}
```

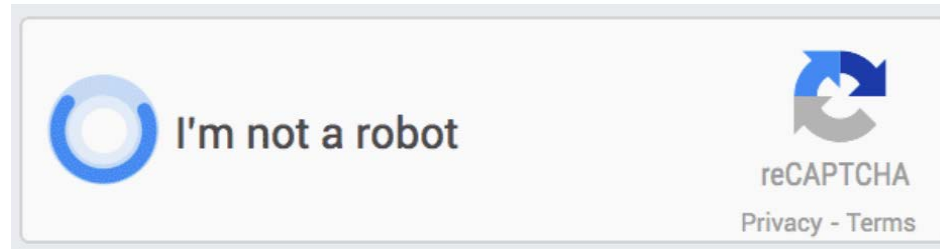
# Google Maps – Directions API

```
var NEW_ZEALAND_BOUNDS = {  
  north: -34.36,  
  south: -47.35,  
  west: 166.28,  
  east: -175.81,  
};
```







# ReCaptcha - V2















→ Select all images with **crosswalks**

Email  Tmiller@gmail.

Password  .....

☐

   **VERIFY**

```
<div {#data-type="image"#} class="g-recaptcha inline-block"
| data-sitekey="6LcKJ7...Re6U6k"></div>

<script src="https://www.google.com/recaptcha/api.js?explicit&hl=en" async defer></script>

$app->post('/recaptcha', function (Request $request, Response $response, array $args) {

    $params = json_decode($request->getBody()->getContents(), assoc: true);
    $secret = "6LcKJ7...";
    $captcha = $params['captcha'];
    $verify = file_get_contents("https://www.google.com/recaptcha/api/siteverify?secret=
    $captcha_success = json_decode($verify);

    if ($captcha_success->success == false) {
        return $response->withStatus(400);
    }
    $response->withStatus(200);
    $response->getBody()->write(json_encode(['success' => 'true', 'msg' => 'reCaptcha v
    return $response;

});
```

# CanvasJS

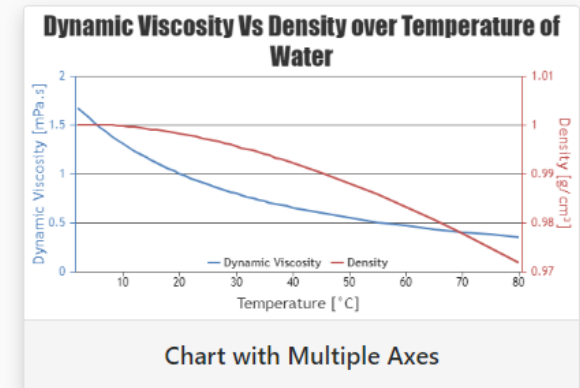
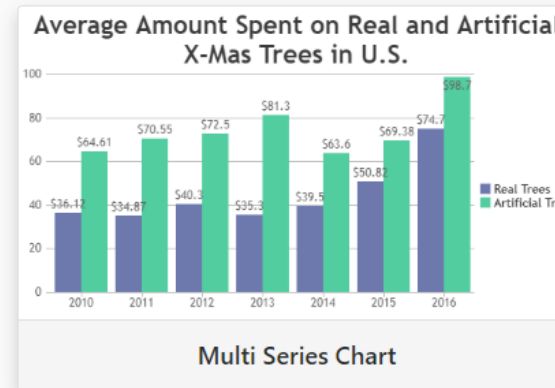
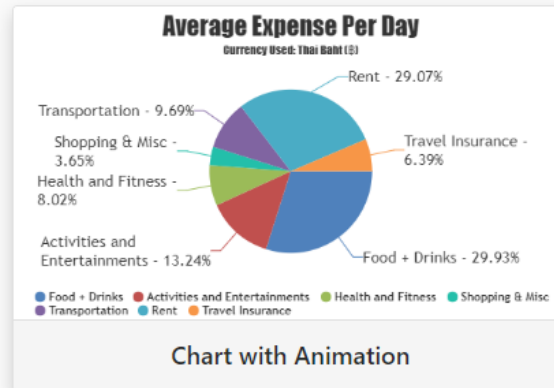
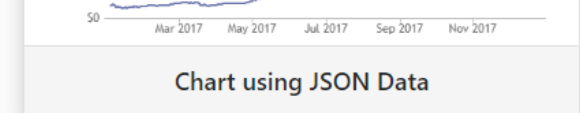
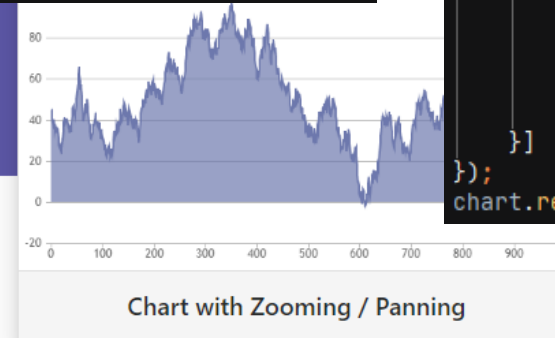
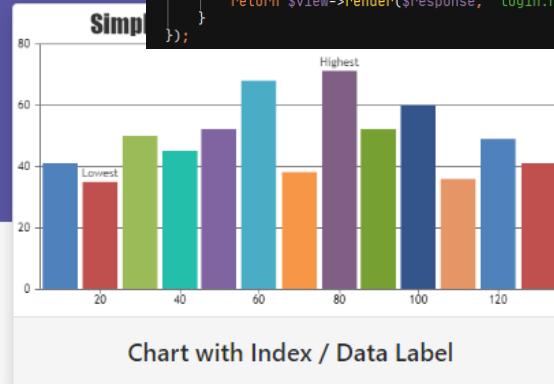
```
$app->get('/summary/orders', function (Request $request, Response $response, array $args) {
    $view = Twig::fromRequest($request);
    if (isset($_SESSION['userId'])) {
        $userId = $_SESSION['userId'];
        $orders = DB::query("SELECT * FROM orders WHERE userId = %s", $userId);
        $rawData = DB::query("SELECT monthname(createdTS) as 'Month',
                                year(createdTS) as 'Year',
                                SUM(totalPrice) as 'Exp'
                                FROM orders
                                WHERE userId=%s
                                GROUP BY month(createdTS),
                                year(createdTS)
                                ORDER BY createdTS", $userId);

        $dataPoints = [];
        foreach ($rawData as $point) {
            array_push($dataPoints, array('Y' => $point['Exp'], 'Label' => $point['Month']));
        }

        return $view->render($response, 'summary_orders.html.twig', [
            'orders' => $orders,
            'keyList' => [
                'id', 'reservationId', 'userId', 'carId', 'createdTS', 'returnDateTime', 'totalPrice'
            ],
            'dataPoints' => json_encode($dataPoints, $options: JSON_NUMERIC_CHECK)
        ]);
    } else {
        return $view->render($response, 'login.html.twig', []);
    }
});
```

```
var chart = new CanvasJS.Chart("chartContainer", {
    animationEnabled: true,
    title: {
        text: "Rent expense column chart",
        fontSize: 28
    },
    axisY: {
        prefix: "$",
        labelFontSize: 10
    },
    axisX: {
        labelFontSize: 14
    },
    data: [{
        type: "bar",
        yValueFormatString: "$#,##0",
        indexLabel: "{y}",
        indexLabelPlacement: "inside",
        indexLabelFontWeight: "bolder",
        indexLabelFontColor: "white",
        indexLabelFontSize: 14,
        dataPoints: [{ dataPoints|raw }]
    }]
});
chart.render();
```

- LINE CHARTS
- AREA CHARTS
- COLUMN & BAR CHARTS
- PIE & FUNNEL CHARTS
- FINANCIAL CHARTS
- SCATTER & BUBBLE CHARTS
- BOX & WHISKER CHARTS
- COMBINATION CHARTS
- DYNAMIC CHARTS
- DATA BINDING
- REACT, ANGULAR, JQUERY
- SERVER SIDE TECHNOLOGIES



# Toastr

```
toastr.options = {  
  "closeButton": false,  
  "debug": false,  
  "newestOnTop": true,  
  "progressBar": true,  
  "positionClass": "toast-top-center",  
  "preventDuplicates": false,  
  "showDuration": "300",  
  "hideDuration": "1000",  
  "timeOut": "4000",  
  "extendedTimeOut": "1000",  
  "showEasing": "swing",  
  "hideEasing": "linear",  
  "showMethod": "fadeIn",  
  "hideMethod": "fadeOut"  
}
```

## Toastr

Title  
Toastr

Message  
ToastrToastrToastrToastrToastr  
ToastrToastrToastrToastrToastr  
ToastrToastr  
ToastrToastrToastrToastrToastr

☐ Close Button  
☐ Add behavior on toast click  
☐ Debug  
☐ Progress Bar  
☐ Prevent Duplicates  
☐ Add button to force clearing a toast, ignoring focus

Toast type  
☒ Success  
☐ Info  
☐ Warning  
☐ Error

Position  
☐ Top Right  
☐ Bottom Right  
☐ Bottom Left  
☐ Top Left  
☐ Top Full Width  
☐ Bottom Full Width  
☒ Top Center  
☐ Bottom Center

Show Easing  
swing  
Hide Easing  
linear

Show Method  
fadeIn  
Hide Method  
fadeOut

Show Duration  
300  
Hide Duration  
1000  
Time out  
5000  
Extended time out  
1000

```
toastr.error("PICKUP store need select","Store selection error");
```



# Todo

- Improve user authentication
- Improve order/reservation validation etc.
- Add more user functions: password reset etc.
- Admin page validation, search

Thank you!

