



Parkbud.ca

Ali Alaghbandrad
Nick Xenos
Philip Ranieri

What is Parkbud?

Parkbud is a crowdsourced parking rule database that allows users to submit and view parking rules for any given location in Canada.

The concept came from the lack of available tools or directories where users could easily look up parking rules without going outside.

Parkbud depends on user submissions and has Admin functions in order to moderate submissions and disputes, providing up to date and accurate parking rules.

Tools Used

Google Maps - Maps , Places Geocoding APIs

Twig - Frontend templates

Slim - Backend

MySql - Database

The MoSCoW Method

Must Have

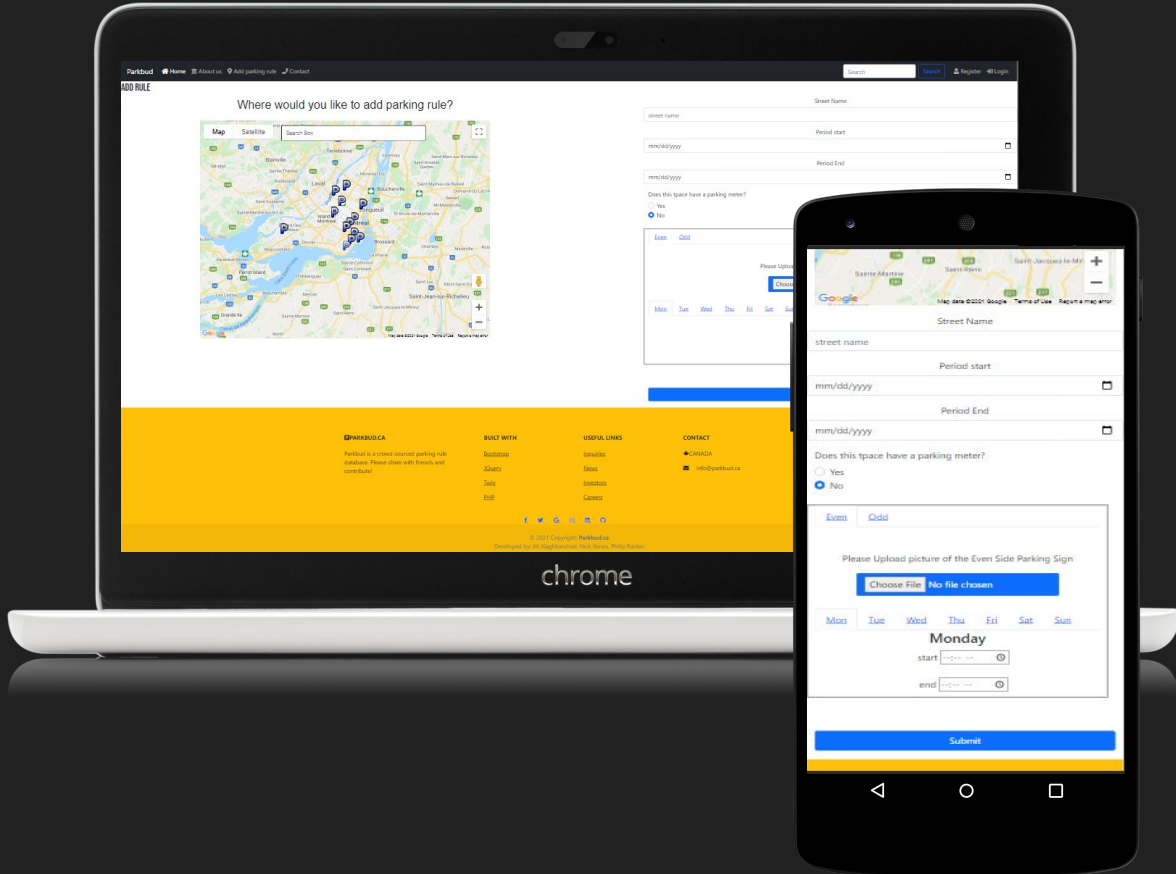
Should Have

Could Have

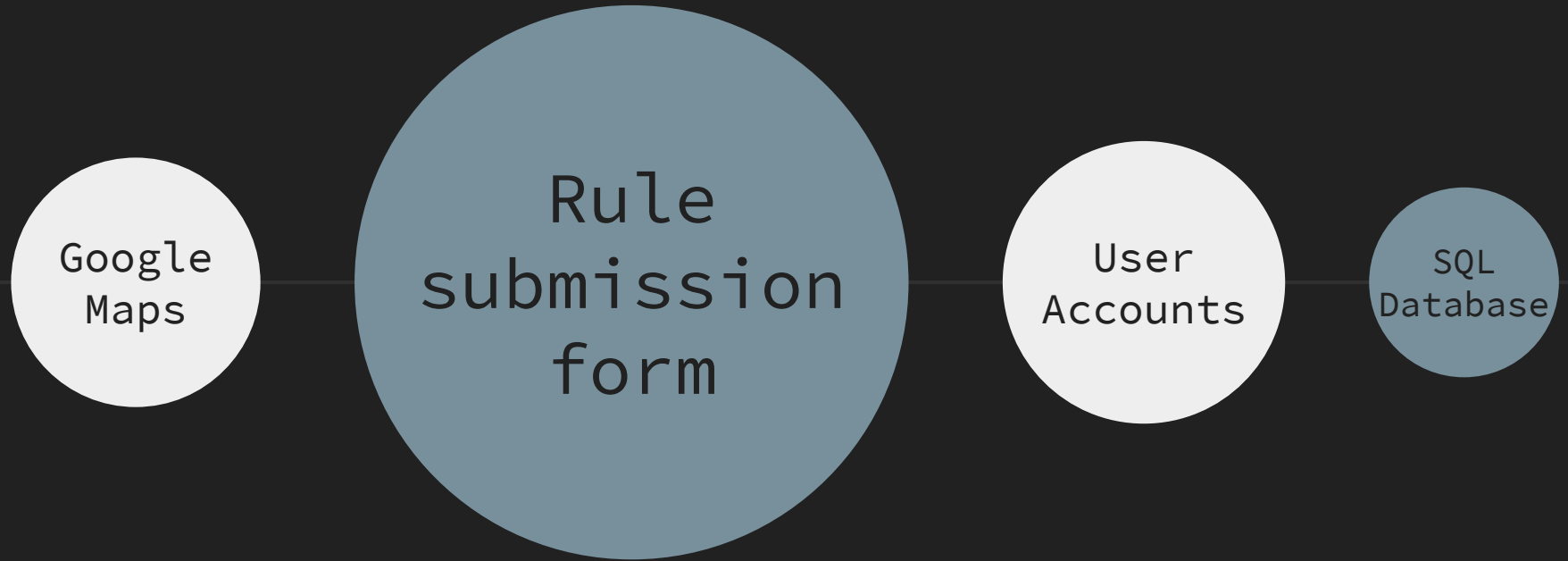
Won't Have

Responsiveness

Anticipating mostly mobile usage, it was important to make sure that Parkbud be intuitive in both desktop and mobile form.



How it Works



What is a Parking rule?

The Period : usually season where certain rules may apply contains start and end dates

The Side : Each side of the street has specific rules

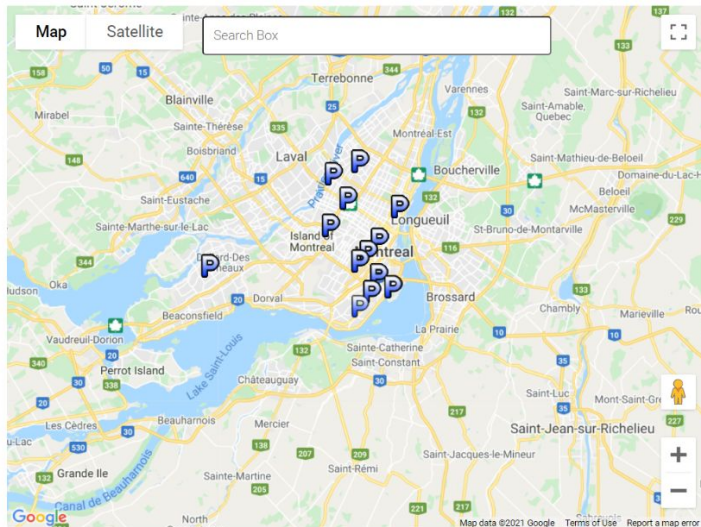
The Day: rules usually apply to specific days

The Time: time where parking is prohibited determined by start and end times for each day.

The Coordinates: location of applicable parking rules

ADD RULE

Where would you like to add parking rule?



Street Name

Period start

Period End

Does this tpcae have a parking meter?

☐ Yes

☒ No

[Even](#) [Odd](#)

Please Upload picture of the Even Side Parking Sign

[Choose File](#) No file chosen

[Mon](#) [Tue](#) [Wed](#) [Thu](#) [Fri](#) [Sat](#) [Sun](#)

Monday

start --:-- -- ⌚

end --:-- -- ⌚

Submit

Google Analytics



Maps JavaScript API

Google

Maps for your website



Places API

Google

Get detailed information about 100 million places



Roads API

Google

Snap-to-road functionality to accurately trace GPS breadcrumbs.



Directions API

Google

Directions between multiple locations.

Traffic



Errors



Median latency



Filter Filter

Name	↓ Requests	Errors (%)	Latency, median (ms)	Latency, 95% (ms)
Places API	3,251	0	42	108
Maps JavaScript API	2,659	0	23	61

```
<!-- Async script executes immediately and must be after any DOM elements used in callback. -->
```

```
<script async defer src="https://maps.googleapis.com/maps/api/js?key=AIzaSyCaIDYagxIULOH3ghDCLMJvuGLGQ9hXJh8&libraries=places&callback=initMap" type="text/javascript"></script>
```

```
function initMap() {
```

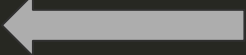
```
  map = new google.maps.Map(document.getElementById("map"), {  
    center: { lat: 45.484173, lng: -73.610487 },  
    zoom: 10,  
    mapTypeId: "roadmap",  
  });
```

```
  // Create the search box and link it to the UI element.
```

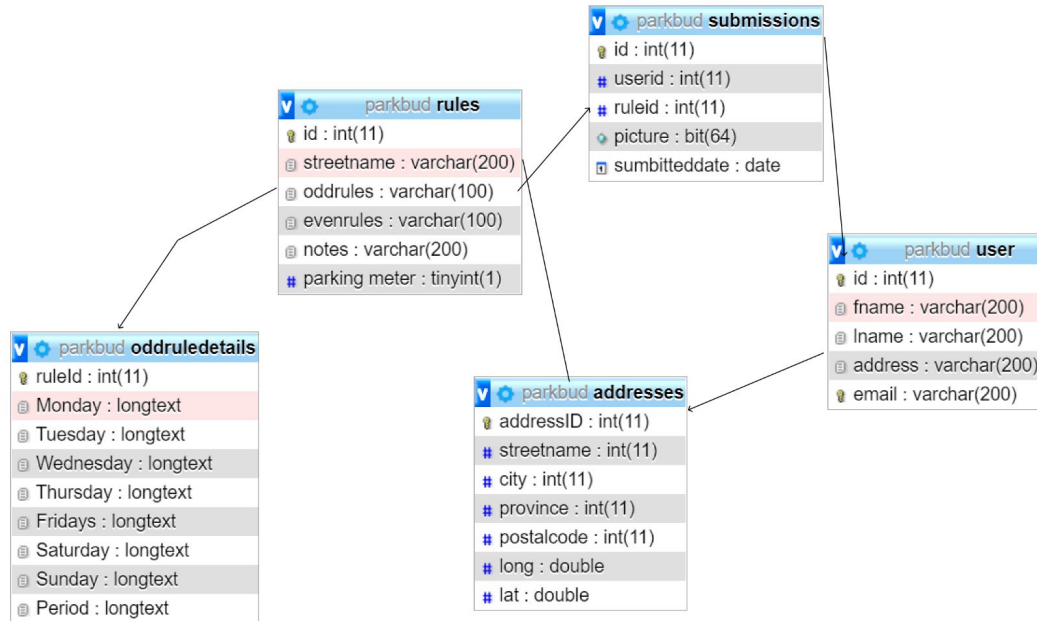
```
  const input = document.getElementById("pac-input");  
  const searchBox = new google.maps.places.SearchBox(input);  
  map.controls[google.maps.ControlPosition.TOP_LEFT].push(input);  
  // Bias the SearchBox results towards current map's viewport.  
  map.addListener("bounds_changed", () => {  
    searchBox.setBounds(map.getBounds());  
  });
```

Loading in the existing rules

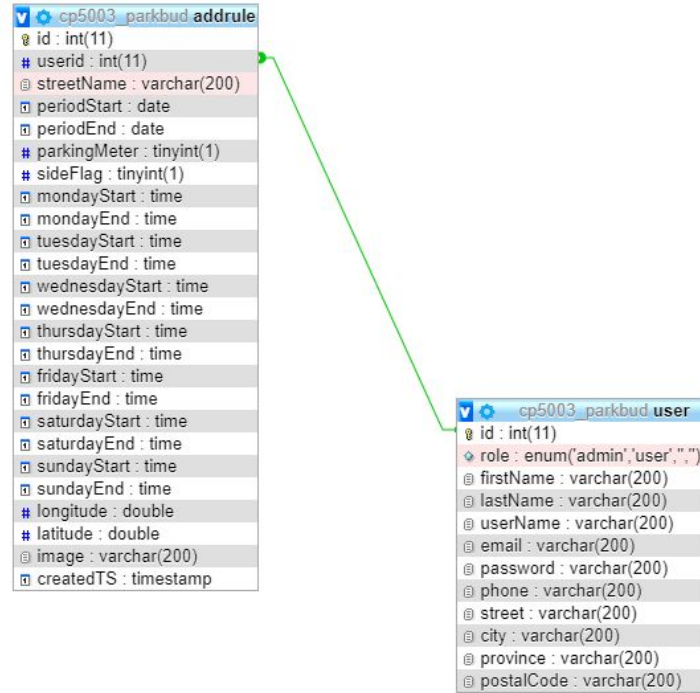
```
{% for rule in rulesList %}
features.push(
{
  placeName: '<b>Parking rule:</b> <br>Street name: {{rule.streetName}} <br>',
  periodStartEnd: 'Period :<br> <b>From {{rule.periodStart}} To {{rule.periodEnd}}</b><br> These are the time where Parking is',
  streetSide: '{{rule.sideFlag}}',
  parkingMeterEvenOdd: '{% if rule.parkingMeter != 0 %}There is a parking Meter here {% else %} There is no Parking Meter Here',
  evenDays: '<div style="display: {% if rule.sideFlag == 0 %}inline;" {% else %} none;" {% endif %}><span style="font-weight:',
  oddDays: '<div style="display: {% if rule.sideFlag == 1 %}inline;" {% else %} none;" {% endif %}><span style="font-weight:',
  createdAt: 'Posted on: {{rule.createdTS}}',
  image: '{{rule.image}}',
  position: new google.maps.LatLng(
    {{rule.latitude}},
    {{rule.longitude}}
  ),
  type: "parking",
});
```



Database Initial Design



Database Final



Admin

Users Management: view users


Only Admin can
see/edit/delete all
users

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List of users

You are logged in as **emmarichson**

ID	Role	First name	Last name	Username	Email	Phone	Address	Registered at	Actions
21	user	John	Smith	johnsmith	john@yahoo.com	777-999-4480	6720 Orlando Street , Ottawa , ON , L2E 3S8	2021-05-26	edit delete
22	admin	Emma	Richson	emmarichson	emma@yahoo.com	333-666-2222	3075 Anthony Street , Ottawa , ON , E3H 2A3	2021-05-26	edit delete
23	user	Joe	Janathan	joejanathan	joe@email.com	666-444-8888	3080 Avenue Park , Toronto , ON , L7S 6A7	2021-05-26	edit delete
24	user	Adel	Kidman	adel1	adel@gmail.com	999-333-2222	44 Ave North , Toronto , ON , L7S 8G2	2021-05-26	edit delete
26	user	Nick	Xenos	xenos	nxenos@me.com	514-975-6456	150 Chemin de la Pointe-Sud , verdun , QC , H3E 0A7	2021-05-26	edit delete
27	user	Jamshid	Ebrahimi	jamshid1	jamshid@yahoo.com	545-333-8822	490 McTavish Street , Halifax , NS , M2S 6W2	2021-05-26	edit delete

**PARKBUD.CA**

Parkbud is a crowd sourced parking rule database. Please share with friends and contribute!

BUILT WITH

- [Bootstrap](#)
- [jQuery](#)
- [Twig](#)
- [PHP](#)

USEFUL LINKS

- [Inquiries](#)
- [News](#)
- [Investors](#)
- [Careers](#)

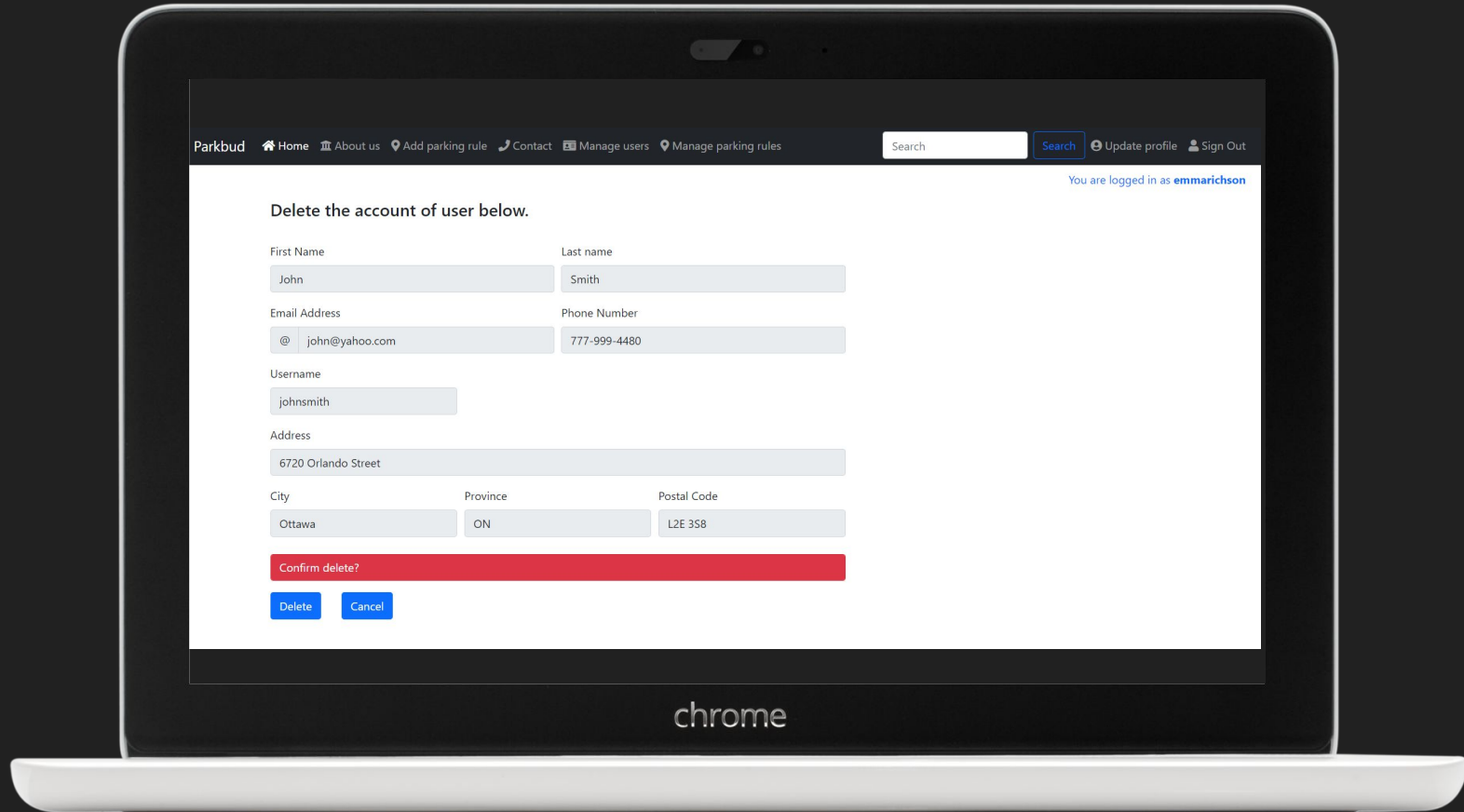
CONTACT

- [CANADA](#)
- [info@parkbud.ca](#)

chrome

Admin

Users Management: delete



Admin

Users Management: edit

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You are logged in as [emmarichs](#)

Please update user's profile.

First Name	Last name	
<input type="text" value="John"/>	<input type="text" value="Smith"/>	
Email Address	Phone Number	
<input type="text" value="@ john@yahoo.com"/>	<input type="text" value="777-999-4480"/>	
Username	Password	Confirm Password
<input type="text" value="johnsmith"/>	<input type="text" value="Password"/>	<input type="text" value="Password"/>
Address (Street number and name)		
<input type="text" value="6720 Orlando Street"/>		
City	Province	Postal Code
<input type="text" value="Ottawa"/>	<input type="text" value="ON"/>	<input type="text" value="L2E 3S8"/>

[Update User Profile](#)

chrome

Admin

Parking Rules Management: view rules

Admin can
see/edit/delete all
rules

Users can only
see/edit/delete their
own rules

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You are logged in as [admin@parkbyd.com](#)

List of parking rules

ID	User ID	Street name	Period start	Period End	Parking Meter	Side Flag (mm/mid)	Monday Start End	Tuesday Start End	Wednesday Start End	Thursday Start End	Friday Start End	Saturday Start End	Sunday Start End	Coordinates (Longitude, Latitude)	Image	Created date	Actions
3	25	Rue Sherbrooke Ouest	2021-05-11	2021-05-30	0	0	22:25:00, 23:25:00	00:00:00, 00:00:00	00:00:00, 00:00:00	00:00:00, 00:00:00	00:00:00, 00:00:00	00:00:00, 00:00:00	00:00:00, 00:00:00	-73.80301108029181, 45.47398031970881		2021-05-20	edit delete
9	23	Rue Sherbrooke Ouest	2021-05-11	2021-05-30	0	0	22:25:00, 23:25:00	00:00:00, 00:00:00	00:00:00, 00:00:00	00:00:00, 00:00:00	00:00:00, 00:00:00	00:00:00, 00:00:00	00:00:00, 00:00:00	-73.80301108029181, 45.47398031970881		2021-05-20	edit delete
4	23	Rue Sherbrooke Ouest	2021-05-17	2021-05-31	0	1	17:00:00, 21:00:00	00:00:00, 00:00:00	00:00:00, 00:00:00	00:00:00, 00:00:00	00:00:00, 00:00:00	00:00:00, 00:00:00	00:00:00, 00:00:00	-73.80301108029181, 45.469118997085		2021-05-20	edit delete
5	22	Avenue Montmarn	2021-05-11	2021-05-24	0	1	05:18:00, 06:18:00	00:00:00, 00:00:00	00:00:00, 00:00:00	08:00:00, 11:00:00	00:00:00, 00:00:00	00:00:00, 00:00:00	00:00:00, 00:00:00	-73.85177362302916, 45.5148942897085		2021-05-21	edit delete
7	22	Air Bennington	2021-05-11	2021-05-31	0	1	00:00:00, 00:00:00	03:18:00, 05:18:00	00:00:00, 00:00:00	00:00:00, 00:00:00	00:00:00, 00:00:00	00:00:00, 00:00:00	00:00:00, 00:00:00	-73.87865758029148, 45.4604654197085		2021-05-21	edit delete
9	27	Rue d'Allet	2021-05-04	2021-05-24	0	0	21:04:00, 12:04:00	00:00:00, 00:00:00	00:00:00, 00:00:00	00:00:00, 00:00:00	00:00:00, 00:00:00	00:00:00, 00:00:00	00:00:00, 00:00:00	-73.807113802916, 45.66488597085		2021-05-21	edit delete
11	27	Rue Rosewell	2021-05-13	2021-05-25	0	1	16:18:00, 21:18:00	00:00:00, 00:00:00	08:00:00, 07:00:00	00:00:00, 00:00:00	00:00:00, 00:00:00	00:00:00, 00:00:00	00:00:00, 00:00:00	-73.8438192302916, 45.476110197085		2021-05-21	edit delete
12	27	Rue Sherbrooke Ouest	2021-05-05	2021-05-19	0	1	18:23:00, 20:23:00	00:00:00, 00:00:00	00:00:00, 00:00:00	00:00:00, 00:00:00	00:00:00, 00:00:00	00:00:00, 00:00:00	00:00:00, 00:00:00	-73.8074779802916, 45.4751614897085		2021-05-21	edit delete
13	27	Rue Racine	2021-05-06	2021-05-28	0	0	19:25:00, 21:25:00	00:00:00, 00:00:00	00:00:00, 00:00:00	00:00:00, 00:00:00	00:00:00, 00:00:00	00:00:00, 00:00:00	00:00:00, 00:00:00	-73.84881733029181, 45.8714588897085		2021-05-21	edit delete
14	22	Rue St-Hubert	2021-05-08	2021-05-30	0	0	19:52:00, 20:52:00	00:00:00, 00:00:00	00:00:00, 00:00:00	00:00:00, 00:00:00	00:00:00, 00:00:00	00:00:00, 00:00:00	00:00:00, 00:00:00	-73.5948858802916, 45.5301782197085		2021-05-23	edit delete
16	22	Rue Sherbrooke Ouest	2021-05-11	2021-05-30	1	0	22:25:00, 23:25:00	00:00:00, 00:00:00	00:00:00, 00:00:00	00:00:00, 00:00:00	00:00:00, 00:00:00	00:00:00, 00:00:00	00:00:00, 00:00:00	-73.80301108029181, 45.47398031970881		2021-05-23	edit delete

```
if(isset($_SESSION['user'])) {  
    $rulesList = DB::query("SELECT * FROM addrule WHERE userid=%d", $_SESSION['user'][$id]);  
    $user = DB::queryFirstRow("SELECT * FROM user WHERE id=%d", $_SESSION['user'][$id]);  
}
```

chrome

Admin

Parking Rules Management: delete

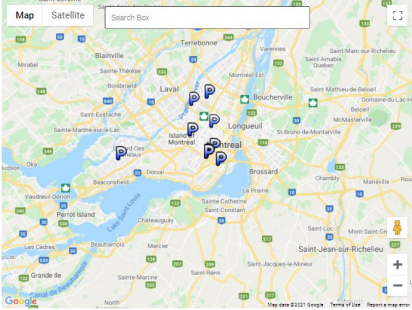
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DELETE PARKING RULE

Where would you like to edit parking rule?

Map

Satellite



Street Name

Rue Sherbrooke Ouest

Period start

05/11/2021

Period End

05/30/2021


Does This Space have a parking meter?

☐ Yes

☒ No

[Even](#) [Odd](#)

Please Upload picture of the Even Side Parking Sign



[View fullsize content image](#)

Choose File

No file chosen

[Mon](#) [Tue](#) [Wed](#) [Thu](#) [Fri](#) [Sat](#) [Sun](#)

Monday

start 10:25 PM

end 11:25 PM

Confirm delete?

Delete

Cancel

chrome

Admin

Parking Rules Management: edit

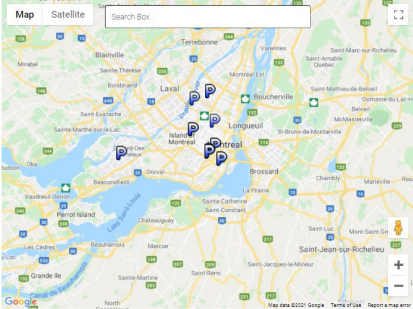
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EDIT PARKING RULE

Where would you like to edit parking rule?

Map

Satellite



Street Name

Period start

Period End


Does This Space have a parking meter?

☒ Yes

☐ No

[Even](#) [Odd](#)

Please Upload picture of the Even Side Parking Sign



[View fullsize correct image](#)

[Choose File](#) [No file chosen](#)

[Mon](#) [Tue](#) [Wed](#) [Thu](#) [Fri](#) [Sat](#) [Sun](#)

Monday

start

end

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chrome

Challenges

Parking meter & Even/Odd side

```
function sideRole(role) {  
  $("#sideFlag").val(role)  
}  
  
function checkRadio(id) {  
  if(id == "yesPm"){  
    console.log("Choice: ", 1);  
    $("#pmVal").val(1);  
  } else if (id == "noPm"){  
    console.log("Choice: ", 0);  
    $("#pmVal").val(0);  
  }  
}
```

Does this tpace have a parking meter?

☐ Yes
☒ No

[Even](#) [Odd](#)

Please Upload picture of the Even Side Parking Sign

[Choose File](#) No file chosen

[Mon](#) [Tue](#) [Wed](#) [Thu](#) [Fri](#) [Sat](#) [Sun](#)

Monday

start:

end:

chrome

Challenges

Parking meter & Even/Odd side

```
<div class="form-check">
  <input onclick="checkRadio(id);" class="form-check-input" type="radio" name="parkingMeter"
  id="yesPm" value="1">
  <label class="form-check-label" for="parkingMeter">Yes</label>
</div>

<div class="form-check">
  <input onclick="checkRadio(id);" class="form-check-input" type="radio" name="parkingMeter"
  id="noPm" value="0" checked>
  <label class="form-check-label" for="parkingMeter">No</label>
</div>

<!-- TABS -->
<div class="ruleSect row form-group">
  <nav class="tabBar">
    <ul class="nav nav-tabs" id="side-tabs" role="tab">
      <li class="nav-item nav-link active">
        <a onclick="sideRole(0);" id="nav-home-tab" data-toggle="tab" href="#a" role="tab"
        aria-controls="nav-home" aria-selected="true">Even</a>
      </li>
      <li class="nav-item nav-link">
        <a onclick="sideRole(1);" id="nav-profile-tab" data-toggle="tab" href="#b" role="tab"
        aria-controls="nav-profile" aria-selected="false">Odd</a>
      </li>
    </ul>
  </nav>
```

chrome

Does this tspace have a parking meter?

☐ Yes

☒ No

[Even](#) [Odd](#)

Please Upload picture of the Even Side Parking Sign

[Choose File](#) No file chosen

[Mon](#) [Tue](#) [Wed](#) [Thu](#) [Fri](#) [Sat](#) [Sun](#)

Monday

start

end

Challenges

Search box & map marker connection

```
const input = document.getElementById('pac-input');

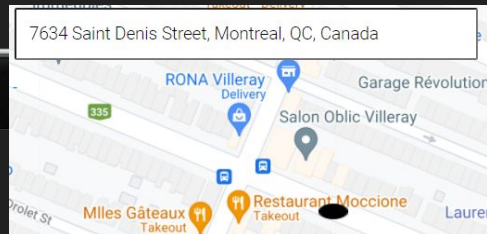
const searchBox = new google.maps.places.SearchBox(input);
map.controls[google.maps.ControlPosition.TOP_LEFT].push(input);

var autocomplete = new google.maps.PlacesAutocomplete(input);

google.maps.event.addListener(autocomplete, 'place_changed',
function () {var place = autocomplete.getPlace();

$("#longitude").val(place.geometry.viewport.La.g)
$("#latitude").val(place.geometry.viewport.Ua.g)
$("#streetname").val(place.address_components[1].short_name)

});
```



Challenges

Loading & showing markers and info windows

```
{% for rule in rulesList %}
features.push(
{
  placeName: '<b>Parking rule:</b> <br>Street name: {{rule.streetName}} <br>',
  periodStartEnd: 'Period :<br> <b>From {{rule.periodStart}} To {{rule.periodEnd}}</b><br> These are the time where
  Parking is <span style="color:red">PROHIBITED</span></em></b>',
  streetSide: '{{rule.sideFlag}}',
  parkingMeterEvenOdd: '{% if rule.parkingMeter != 0 %}There is a parking Meter here {% else %} There is no Parking
  Meter Here {% endif %} <br> ',
  evenDays: '<div style="display: {% if rule.sideFlag == 0 %}inline;" {% else %} none;" {% endif %}><span
  style="font-weight: 900">Even Side Rules : <br><br> </span>{% if rule.mondayStart != "00:00:00" %} <b><u>Monday:</
  u></b> {{rule.mondayStart|date('H:i')}} to {{rule.mondayEnd|date('H:i')}} {% else %} <b><u>Monday</u></b>: N/A {%
  endif %} <br>{% if rule.tuesdayStart != "00:00:00" %} <b><u>Tuesday:</u></b> {{rule.tuesdayStart|date('H:i')}} to {{
  rule.tuesdayEnd|date('H:i')}} {% else %} <b><u>Tuesday</u></b>: N/A {% endif %}<br>{% if rule.wednesdayStart !=
  "00:00:00" %} <b><u>Wednesday:</u></b> {{rule.wednesdayStart|date('H:i')}} to {{rule.wednesdayEnd|date('H:i')}} {%
  else %} <b><u>Wednesday</u></b>: N/A {% endif %}<br>{% if rule.thursdayStart != "00:00:00" %} <b><u>Thursday:</u></
  b> {{rule.thursdayStart|date('H:i')}} to {{rule.thursdayEnd|date('H:i')}} {% else %} <b><u>Thursday</u></b>: N/A {%
  endif %}<br>{% if rule.fridayStart != "00:00:00" %} <b><u>Friday:</u></b> {{rule.fridayStart|date('H:i')}} to {{rule.
  fridayEnd|date('H:i')}} {% else %} <b><u>Friday</u></b>: N/A {% endif %}<br>{% if rule.saturdayStart != "00:00:00"
  %} <b><u>Saturday:</u></b> {{rule.saturdayStart|date('H:i')}} to {{rule.saturdayEnd|date('H:i')}} {% else %}
  <b><u>Saturday</u></b>: N/A {% endif %}<br>{% if rule.sundayStart != "00:00:00" %} <b><u>Sunday:</u></b> {{rule.
  sundayStart|date('H:i')}} to {{rule.sundayEnd|date('H:i')}} {% else %} <b><u>Sunday</u></b>: N/A {% endif %}</div>',
  oddDays: '<div style="display: {% if rule.sideFlag == 1 %}inline;" {% else %} none;" {% endif %}><span
  style="font-weight: 900">Odd Side Rules : <br><br> </span>{% if rule.mondayStart != "00:00:00" %} <b><u>Monday:</u></
  b> {{rule.mondayStart|date('H:i')}} to {{rule.mondayEnd|date('H:i')}} {% else %} <b><u>Monday</u></b>: N/A {% endif
  %} <br>{% if rule.tuesdayStart != "00:00:00" %} <b><u>Tuesday:</u></b> {{rule.tuesdayStart|date('H:i')}} to {{rule.
  tuesdayEnd|date('H:i')}} {% else %} <b><u>Tuesday</u></b>: N/A {% endif %}<br>{% if rule.wednesdayStart !=
  "00:00:00" %} <b><u>Wednesday:</u></b> {{rule.wednesdayStart|date('H:i')}} to {{rule.wednesdayEnd|date('H:i')}} {%
  else %} <b><u>Wednesday</u></b>: N/A {% endif %}<br>{% if rule.thursdayStart != "00:00:00" %} <b><u>Thursday:</u></
  b> {{rule.thursdayStart|date('H:i')}} to {{rule.thursdayEnd|date('H:i')}} {% else %} <b><u>Thursday</u></b>: N/A {%
  endif %}<br>{% if rule.fridayStart != "00:00:00" %} <b><u>Friday:</u></b> {{rule.fridayStart|date('H:i')}} to {{rule.
  fridayEnd|date('H:i')}} {% else %} <b><u>Friday</u></b>: N/A {% endif %}<br>{% if rule.saturdayStart != "00:00:00"
  %} <b><u>Saturday:</u></b> {{rule.saturdayStart|date('H:i')}} to {{rule.saturdayEnd|date('H:i')}} {% else %}
  <b><u>Saturday</u></b>: N/A {% endif %}<br>{% if rule.sundayStart != "00:00:00" %} <b><u>Sunday:</u></b> {{rule.
  sundayStart|date('H:i')}} to {{rule.sundayEnd|date('H:i')}} {% else %} <b><u>Sunday</u></b>: N/A {% endif %}</div>',
  createdAt: 'Posted on: {{rule.createdTS}}',
  image: '{{rule.image}}',
  position: new google.maps.LatLng(
```

Parking rule:
Street name: Rue St-Hubert

Period :
From 2021-05-06 To 2021-05-30
These are the time where Parking is **PROHIBITED**

There is no Parking Meter Here

Even Side Rules :

Monday: 19:52 to 20:52
Tuesday: N/A
Wednesday: N/A
Thursday: N/A
Friday: N/A
Saturday: N/A
Sunday: N/A

Posted on: 2021-05-23 14:52:23



Challenges

Loading & showing markers and info windows

```
var contentString = '<p>' + features[i].placeName + '</p>' +  
'<p>' + features[i].periodStartEnd + '</p>' + '</p>' +  
'<p>' + features[i].parkingMeterEvenOdd + '</p>' + '<p>' +  
features[i].evenDays + '</p>' + '<p>' +  
features[i].oddDays + '</p>' + '<p>' +  
features[i].createdAt + '</p>' + '<a href="/uploads/' +  
features[i].image + '"></a>' + '<br><br>' + '<a href="#"  
class="btn btn-danger">Dispute Rule</a>' +  
const infowindow = new google.maps.InfoWindow({  
    content: contentString,  
});
```

chrome

Parking rule:
Street name: Rue St-Hubert

Period :
From 2021-05-06 To 2021-05-30
These are the time where Parking is **PROHIBITED**

There is no Parking Meter Here

Even Side Rules :

Monday: 19:52 to 20:52
Tuesday: N/A
Wednesday: N/A
Thursday: N/A
Friday: N/A
Saturday: N/A
Sunday: N/A

Posted on: 2021-05-23 14:52:23



Backlog

Addressing Bugs

Notes

Notifications

Save parking spot

Special Parking Meter Option

Points For Contributions



Thank You

&

Check Both Sides Before Parking

Members

Phil , Nick & Ali

Trello

<https://trello.com/b/TtMi0ES9/parkbud>

Bitbucket

<https://bitbucket.org/parkbudca/parkbud/src/master/>