Parse & Geo-location

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Have you ever gotten excited by the idea of a web project, but found it miserable to make it run and work on a server? With Parse.js, everyone who understand the basics of HTML, CSS, and JavaScript can create dynamic websites and working web apps with ease.

In this tutorial, we will create a location aware todo list.

Getting Started

- Create a parse.com account
- Create an app
- Download js blank project from https://parse.com/docs/downloads

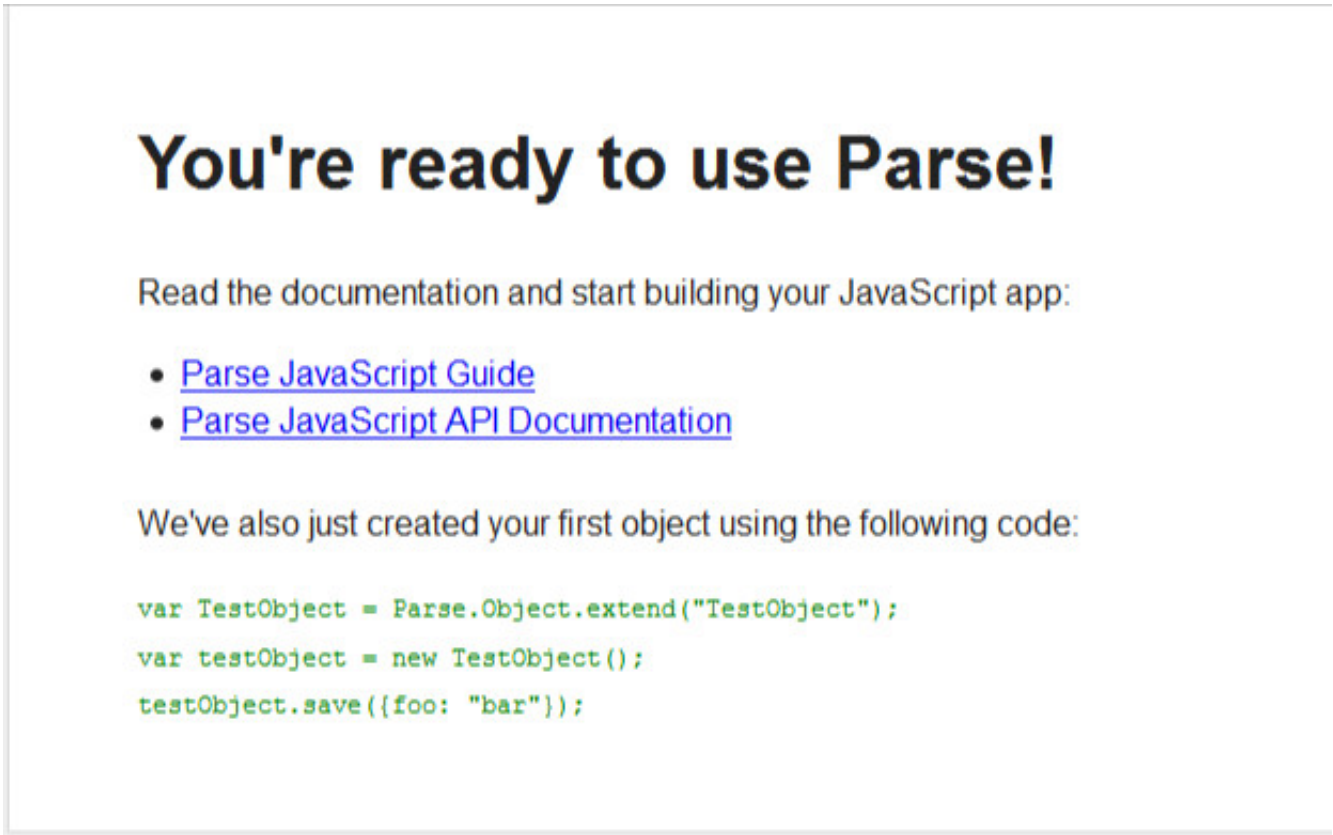
Blank JS Project

markup

```
<!doctype html>
<head>
  <meta charset="utf-8">

  <title>My Parse App</title>
  <meta name="description" content="My Parse App">
  <meta name="viewport" content="width=device-width">
  <link rel="stylesheet" href="css/reset.css">
  <link rel="stylesheet" href="css/styles.css">
  <script type="text/javascript" src="http://ajax.googleapis.com/ajax/libs/jquery/1.7.2/j
query.min.js"></script>
  <script type="text/javascript" src="http://www.parsecdn.com/js/parse-1.5.0.min.js"></sc
ript>
</head>

<body>

  <div id="main">
    <h1>You're ready to use Parse!</h1>

    <p>Read the documentation and start building your JavaScript app:</p>

    <ul>
      <li><a href="https://www.parse.com/docs/js_guide">Parse JavaScript Guide</a></li>
```

```
      <li><a href="https://www.parse.com/docs/js">Parse JavaScript API Documentation</a></
li>
    </ul>

    <div style="display:none" class="error">
      Looks like there was a problem saving the test object. Make sure you've set your ap
plication ID and javascript key correctly in the call to <code>Parse.initialize</code> in
 this file.
    </div>

    <div style="display:none" class="success">
      <p>We've also just created your first object using the following code:</p>

        <code>
          var TestObject = Parse.Object.extend("TestObject");<br/>
          var testObject = new TestObject();<br/>
          testObject.save({foo: "bar"});
        </code>
    </div>
  </div>

  <script type="text/javascript">
    Parse.initialize("APPLICATION_ID", "JAVASCRIPT_KEY");

    var TestObject = Parse.Object.extend("TestObject");
    var testObject = new TestObject();
      testObject.save({foo: "bar"}, {
      success: function(object) {
        $(".success").show();
      },
      error: function(model, error) {
        $(".error").show();
      }
    });
  </script>
</body>

</html>
```

Running it in browser, you get screen like this:



Create the form interface

Remember the things you learn in bootstrap? Let's include bootstrap CDN and create a form to accept user input for new todo creation.

We also inserted 2 alert interface to output success/error message.

```markup
<div id="success" class="alert alert-success"></div>
<div id="error" class="alert alert-danger"></div>

<div class="well">
<form id="form-addTodo" class="form-horizontal">
<div class="form-group">
    <label for="msg" class="col-sm-2 control-label">Add New</label>
    <div class="col-sm-8">
        <input type="text" class="form-control" id="msg" placeholder="Enter a todo here..
.">
    </div>
    <div class="col-sm-2">
        <button type="submit" class="btn btn-primary" id="btn-add">Add</button>
    </div>
</div>
</form>
</div>
```

Create a TODO item

Remember to replace the APPLICATION*ID and JAVASCRIPT*KEY to yours.

```javascript
$( document ).ready(function() {
    Parse.initialize("APPLICATION_ID", "JAVASCRIPT_KEY");
        var todo = new TodoObject();
    TodoObject = Parse.Object.extend("TodoObject");

        // hide the alert interface by default
        $("#success").hide();
        $("#error").hide();

});
```

Now, add a function to save

```
function addItem(msg)
{
    var todo = new TodoObject();
    todo.save({msg:msg, locLong:locLong, locLat:locLat}, {
        success: function(object) {
            $('#form-addTodo #msg').val("");
            $("#success").html('Successfully added todo object: '+msg).show().delay(5000)
.hide(500);
            getList();
        },
        error: function(model, error) {
            $("#error").html('Looks like there was a problem saving the todo object.').sh
ow().delay(5000).hide(500);
        }
    });
}
```

Then, wired the function to button click event

```javascript
$('#btn-add').on('click', function(e){
    addItem($('#form-addTodo #msg').val());
    e.preventDefault();
});
```

Test it in your browser before login to your parse.com account to check the data is stored properly.

Get stored todo items

First, create the HTML interface.

```markup
<div id="list-todo">
    <h2 class="lead">List TODO <small>Click on the list item to show map location where i
t was recorded.</small></h2>
    <div class="col-sm-7">
        <ul class="list-group"></ul>
    </div>
    <div class="col-sm-5 pull-center text-center">
        <!-- map html goes here -->
    </div>
</div>
```

Second, create a function called getList().

```javascript
function getList()
{
    var query = new Parse.Query(TodoObject);
    query.find({
        success: function(results) {
            // results is an array of Parse.Object.
            $('#list-todo ul').empty();
            for (var i = 0; i < results.length; i++) {
                // This does not require a network access.
                var todo = results[i];
                $('#list-todo ul').append('<li class="list-group-item">'+todo.get('msg')+
'</li>');
            }
        },
        error: function(error) {
            // error is an instance of Parse.Error.
            $("#error").html('Failed to get list of todos').show().delay(5000).hide(500);
        }
    });
}
```

Next, modify the code to call this function when the page load and also after item is stored.

Geo Location Feature

The TODO system is quite complete as user may add item and it automatically listed.

Now, we like to add in a new feature: to record down the location where user posted this TODO and allow it to display as a Google Map image when the todo is clicked in list.

First, replace <!-- map html goes here --> with the following code:

```markup
<p id="map-title"></p>
<div id="map-location"></div>
<span class="text-muted">(p/s: location most likely stay the same unless u walking around
 with computer to record this)</span>
```

Second, modify the javascript code. We need 2 variable to store the longtitude and latitude variable. We also need to prompt user to enable geo location feature in their browser.

Insert the following code outside of the jQuery document ready scope.

```javascript
var locLong, locLat;
window.onload = function(){
    if(navigator.geolocation)
    {
        navigator.geolocation.getCurrentPosition(handleGetCurrentPosition);
    }
    else
    {
        $("#error").html('Please enable geo location in your browser.').show();
    }
}
function handleGetCurrentPosition(location)
{
    locLong = location.coords.latitude;
    locLat = location.coords.longitude;
}
```

Third, modify addItem(msg) function

```javascript
...
todo.save({msg:msg, locLong:locLong, locLat:locLat}, {
...
```

Then, modify getList() function to embed the retrieved todo' location (long and lat) into data-attribute.

```javascript
...
$('#list-todo ul').append('<li class="list-group-item" data-loc-long="'+todo.get('locLong
')+'" data-loc-lat="'+todo.get('locLat')+'">'+todo.get('msg')+'</li>');
...
```

Last, add a new function to display google map image at correct location when todo list item is click. ``` javascript

$('#list-todo').on('click', 'li', function(e){ console.log('yo!'+$(this).data('locLong')+'-'+$(this).data('locLat'));

```
$('#map-title').html('<b>'+$(this).html()+'</b>');

if(($(this).data('locLong')))
{
    var latlon = $(this).data('locLong') + "," + $(this).data('locLat');
    var img_url = "http://maps.googleapis.com/maps/api/staticmap?center="+latlon+"&zoom=1
4&size=400x300&sensor=false";
    //console.log(img_url);
    $('#map-location').html('<img src="'+img_url+'" />');
}
else
{
    $('#map-location').empty();
}
e.preventDefault();
```

}); ```

Final Result

Should be something like this:

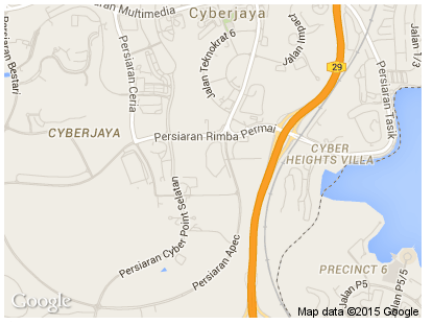
My TODO using parse.com, jquery, bootstrap

Add New | Enter a todo here... | Add

List TODO Click on the list item to show map location where it was recorded.

- Hello World
- Whatsup?
- I am at putrajaya

Hello World



(p/s: location most likely stay the same unless u walking around with computer to record this)

Lab: parse\done\index.html