# Solutions-Exercises: AJAX and jQuey AJAX

## 1.Bus Stop

function getInfo(){

const baseServiceUrl = 'https://judgetests.firebaseio.com/businfo/';

let $inputStopId = $('#stopId');

let $divStopName = $('#stopName');

let $ulBuses = $('#buses');

$divStopName.text('');

$ulBuses.empty();

let busStopId = $inputStopId.val();

$.get(baseServiceUrl + busStopId + '.json')

.then(loadBuses)

.catch(displayError);

function loadBuses(stopId){

$divStopName.text(stopId.name);

for(let [busId, time] of Object.entries(stopId.buses)){

let $li = $('<li>').text(`Bus ${busId} arrives in ${time} minutes`);

$ulBuses.append($li);

}

}

function displayError(){

$divStopName.text('Error');

}

}

<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="UTF-8">

<title>Bus Stop</title>

<style>

@import url(https://fonts.googleapis.com/css?family=Open+Sans);

input[type=text] {

padding: 12px 20px;

margin: 8px 0;

display: inline-block;

border: 1px solid #ccc;

border-radius: 4px;

box-sizing: border-box;

}

input[type=button] {

background-color: #4CAF50;

color: white;

padding: 10px 16px;

border: none;

border-radius: 4px;

cursor: pointer;

}

input[type=button]:hover {

background-color: #45a049;

}

body {

margin: auto;

width: 25%;

text-align: center;

padding: 20px;

font-family: 'Open Sans', serif;

}

#stopName {

font-size: 1.5em;

margin: 8px 0;

font-weight: 400;

padding: 0.25em;

border-radius: 4px;

background-color: aquamarine;

}

</style>

<script src="https://code.jquery.com/jquery-3.1.1.min.js"></script>

</head>

<body>

<div id="stopInfo" style="width:20em">

<div>

<label for="stopId">Stop ID: </label>

<input id="stopId" type="text">

<input id="submit" type="button" value="Check" onclick="getInfo()"></div>

<div id="result">

<div id="stopName"></div>

<ul id="buses"></ul>

</div>

</div>

<script>

function getInfo() {

const baseServiceUrl = 'https://judgetests.firebaseio.com/businfo/';

let $inputStopId = $('#stopId');

let $divStopName = $('#stopName');

let $ulBuses = $('#buses');

$divStopName.text('');

$ulBuses.empty();

let busStopId = $inputStopId.val();

$.get(baseServiceUrl + busStopId + '.json')

.then(loadBuses)

.catch(displayError);

function loadBuses(stopId) {

$divStopName.text(stopId.name);

for (let [busId, time] of Object.entries(stopId.buses)) {

let $li = $('<li>').text(`Bus ${busId} arrives in ${time} minutes`);

$ulBuses.append($li);

}

}

function displayError() {

$divStopName.text('Error');

}

}

</script>

</body>

</html>

|  |
| --- |
| function getInfo() { |
|  | let baseServiceUrl = "https://judgetests.firebaseio.com/businfo/"; |
|  | $('#stopName').text(''); |
|  | $('#buses').empty(); |
|  | let busStopId = $('#stopId').val(); |
|  |  |
|  | $.get(baseServiceUrl + busStopId + ".json") |
|  | .then(loadBuses) |
|  | .catch(displayError); |
|  |  |
|  | function loadBuses(busStop) { |
|  | $('#stopName').text(busStop.name); |
|  |  |
|  | for(let bus in busStop.buses){ |
|  | $('#buses').append($('<li>').text(`Bus ${bus} arrives in ${busStop['buses'][bus]} minutes`)); |
|  | } |
|  | } |
|  |  |
|  | function displayError() { |
|  | $('#stopName').text("Error"); |
|  | } |
|  | } |

|  |
| --- |
| <!DOCTYPE html> |
|  | <html lang="en"> |
|  | <head> |
|  | <meta charset="UTF-8"> |
|  | <title>Bus Stop</title> |
|  | <style> |
|  | #stopName { |
|  | font-size: 1.5em; |
|  | font-weight: 400; |
|  | padding: 0.25em; |
|  | background-color: aquamarine; |
|  | } |
|  | </style> |
|  | <script src="https://code.jquery.com/jquery-3.1.1.min.js"></script> |
|  | </head> |
|  | <body> |
|  | <div id="stopInfo" style="width:20em"> |
|  | <div> |
|  | <label for="stopId">Stop ID: </label> |
|  | <input id="stopId" type="text"> |
|  | <input id="submit" type="button" value="Check" onclick="getInfo()"></div> |
|  | <div id="result"> |
|  | <div id="stopName"></div> |
|  | <ul id="buses"></ul> |
|  | </div> |
|  | </div> |
|  | <script src="buses.js"></script> |
|  | </body> |
|  | </html> |

## 2.Bus Schedule

function solve() {

const baseUrl = 'https://judgetests.firebaseio.com/schedule/';

let currentStopId = 'depot';

let currentStop;

let spanInfo = $('.info');

function depart() {

$.ajax({

method: 'GET',

url: baseUrl + currentStopId + '.json',

success: loadStop

});

}

function arrive() {

spanInfo.text(`Arriving at ${currentStop.name}`);

currentStopId = currentStop.next;

switchButtons('arrive', 'depart');

}

function loadStop(data) {

currentStop = data;

spanInfo.text('Next stop ' + currentStop.name);

switchButtons('depart', 'arrive');

}

function switchButtons(disable, enable) {

$(`#${disable}`).attr('disabled', true);

$(`#${enable}`).attr('disabled', false);

}

return { depart, arrive };

}

<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="UTF-8">

<title>Bus Schedule</title>

<style>

@import url(https://fonts.googleapis.com/css?family=Open+Sans);

input[type=text] {

padding: 12px 20px;

margin: 8px 0;

display: inline-block;

border: 1px solid #ccc;

border-radius: 4px;

box-sizing: border-box;

}

input[type=button] {

padding: 10px 16px;

border: none;

border-radius: 4px;

cursor: pointer;

}

body {

margin: auto;

width: 25%;

text-align: center;

padding: 20px;

font-family: 'Open Sans', serif;

}

#schedule {

text-align: center;

width: 400px;

}

input {

width: 120px;

}

#info {

background-color: aquamarine;

border: 1px none black;

border-radius: 4px;

margin: 0.25em;

}

.info {

font-size: 1.5em;

padding: 0.25em;

}

</style>

<script src="https://code.jquery.com/jquery-3.1.1.min.js"></script>

</head>

<body>

<div id="schedule">

<div id="info"><span class="info">Not Connected</span></div>

<div id="controls">

<input id="depart" value="Depart" type="button" onclick="result.depart()">

<input id="arrive" value="Arrive" type="button" onclick="result.arrive()" disabled="true">

</div>

</div>

<script>

function solve() {

const baseUrl = 'https://judgetests.firebaseio.com/schedule/';

let currentStopId = 'depot';

let currentStop;

let spanInfo = $('.info');

function depart() {

$.ajax({

method: 'GET',

url: baseUrl + currentStopId + '.json',

success: loadStop

});

}

function arrive() {

spanInfo.text(`Arriving at ${currentStop.name}`);

currentStopId = currentStop.next;

switchButtons('arrive', 'depart');

}

function loadStop(data) {

currentStop = data;

spanInfo.text('Next stop ' + currentStop.name);

switchButtons('depart', 'arrive');

}

function switchButtons(disable, enable) {

$(`#${disable}`).attr('disabled', true);

$(`#${enable}`).attr('disabled', false);

}

return { depart, arrive };

}

let result = solve();

</script>

</body>

</html>

<!DOCTYPE html>

<html lang="en">

<head>

    <meta charset="UTF-8">

    <title>Bus Schedule</title>

    <style>

        @import url(https://fonts.googleapis.com/css?family=Open+Sans);

        input[type=text] {

            padding: 12px 20px;

            margin: 8px 0;

            display: inline-block;

            border: 1px solid #ccc;

            border-radius: 4px;

            box-sizing: border-box;

        }

        input[type=button] {

            padding: 10px 16px;

            border: none;

            border-radius: 4px;

            cursor: pointer;

        }

        body {

            margin: auto;

            width: 25%;

            text-align: center;

            padding: 20px;

            font-family: 'Open Sans', serif;

        }

        #schedule {

            text-align: center;

            width: 400px;

        }

        input {

            width: 120px;

        }

        #info {

            background-color: aquamarine;

            border: 1px none black;

            border-radius: 4px;

            margin: 0.25em;

        }

        .info {

            font-size: 1.5em;

            padding: 0.25em;

        }

    </style>

    <script src="https://code.jquery.com/jquery-3.1.1.min.js"></script>

</head>

<body>

    <div id="schedule">

        <div id="info"><span class="info">Not Connected</span></div>

        <div id="controls">

            <input id="depart" value="Depart" type="button" onclick="result.depart()">

            <input id="arrive" value="Arrive" type="button" onclick="result.arrive()" disabled="true">

        </div>

    </div>

    <script>

        function solve() {

            const baseUrl = 'https://judgetests.firebaseio.com/schedule/';

            let currentStopId = 'depot';

            let currentStop;

            function depart() {

                $.ajax({

                    url: baseUrl + currentStopId + '.json',

                    method: 'GET',

                    success: loadStop,

                })

            }

            function arrive() {

                $('.info').text(`Arriving at ${currentStop.name}`);

                currentStopId = currentStop.next;

                switchBtns('arrive', 'depart');

            }

            function loadStop(data) {

                currentStop = data;

                $('.info').text(`Next stop ${currentStop.name}`);

                switchBtns('depart', 'arrive');

            }

            function switchBtns(disable, enable) {

                $(`#${disable}`).attr('disabled', true);

                $(`#${enable}`).attr('disabled', false);

            }

            return {

                depart,

                arrive

            };

        }

        let result = solve();

    </script>

</body>

</html>

|  |
| --- |
| function schedule() { |
|  | let nextStopId = "depot"; |
|  | let currentStopName = undefined; |
|  |  |
|  | function depart() { |
|  | $('#depart').attr("disabled", true); |
|  |  |
|  | $.get("https://judgetests.firebaseio.com/schedule/" + nextStopId + ".json") |
|  | .then(nextStop) |
|  | .catch(displayError); |
|  | } |
|  |  |
|  | function nextStop(nextStop) { |
|  | $('.info').text(`Next stop ${nextStop.name}`); |
|  | currentStopName = nextStop.name; |
|  | nextStopId = nextStop.next; |
|  | $('#arrive').removeAttr("disabled"); |
|  | } |
|  |  |
|  | function arrive() { |
|  | $('#arrive').attr("disabled", true); |
|  | $('.info').text(`Arriving at ${currentStopName}`); |
|  | $('#depart').removeAttr("disabled"); |
|  | } |
|  |  |
|  | function displayError() { |
|  | $('.info').text("Error"); |
|  | $('#arrive').attr("disabled", true); |
|  | $('#depart').attr("disabled", true); |
|  | } |
|  |  |
|  | return { |
|  | depart, |
|  | arrive |
|  | }; |
|  | } |

|  |
| --- |
| <!DOCTYPE html> |
|  | <html lang="en"> |
|  | <head> |
|  | <meta charset="UTF-8"> |
|  | <title>Bus Schedule</title> |
|  | <style> |
|  | #schedule { text-align: center; width: 400px; } |
|  | input { width: 120px; } |
|  | #info { background-color:aquamarine; border:1px solid black; margin:0.25em; } |
|  | .info { font-size: 1.5em; padding: 0.25em; } |
|  | </style> |
|  | <script src="https://code.jquery.com/jquery-3.1.1.min.js"></script> |
|  | </head> |
|  | <body> |
|  | <div id="schedule"> |
|  | <div id="info"><span class="info">Not Connected</span></div> |
|  | <div id="controls"> |
|  | <input id="depart" value="Depart" type="button" onclick="result.depart()"> |
|  | <input id="arrive" value="Arrive" type="button" onclick="result.arrive()" disabled="true"> |
|  | </div> |
|  | </div> |
|  | <script src="schedule.js"></script> |
|  | <script> |
|  | let result = schedule(); |
|  | </script> |
|  | </body> |
|  | </html> |

## 3.Messenger

function attachEvents(){

//const baseUrl = 'https://messanger-6eff2.firebaseio.com/messenger';

const baseUrl = 'https://messenger-947fb.firebaseio.com/messenger';

$('#submit').click(createMessage);

$('#refresh').click(loadMessages);

loadMessages();

function createMessage(){

let author = $('#author').val();

let content = $('#content').val();

let timestamp = Date.now();

let message = {author, content, timestamp};

$.post(baseUrl + '.json', JSON.stringify(message)).then(loadMessages);

}

function loadMessages(){

$.get(baseUrl + '.json').then(displayMessages);

}

function displayMessages(messages){

let $textareaMessages = $('#messages');

$textareaMessages.empty();

let sortedMessages = {};

Object.keys(messages).sort((a, b) => a.timestamp - b.timestamp).forEach(mk => sortedMessages[mk] = messages[mk]);

for(let messageKey of Object.keys(sortedMessages)){

$textareaMessages.append(sortedMessages[messageKey]['author'] + ': ' + sortedMessages[messageKey]['content'] + '\n');

}

}

}

<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="UTF-8">

<title>Messenger</title>

<style>

@import url(https://fonts.googleapis.com/css?family=Open+Sans);

body {

margin: auto;

width: 25%;

text-align: center;

padding: 20px;

font-family: 'Open Sans', serif;

}

input[type=text] {

padding: 12px 20px;

margin: 8px 0;

display: inline-block;

border: 1px solid #ccc;

border-radius: 4px;

box-sizing: border-box;

}

input[type=button] {

background: #4CAF50;

color: white;

padding: 10px 16px;

border: none;

border-radius: 4px;

cursor: pointer;

display: block;

}

input[type=button]:hover {

background: #45a049;

}

label {

display: inline-block;

width: 5em;

}

#author, #content {

width: 30em;

}

#controls {

width: 38em;

}

#submit, #refresh {

display: inline-block;

}

#submit {

margin: 32px;

}

</style>

<script src="https://code.jquery.com/jquery-3.1.1.min.js"></script>

</head>

<body>

<div id="main">

<textarea id="messages" cols="80" rows="12" disabled="true"></textarea>

<div id="controls">

<label for="author">Name: </label><input id="author" type="text"><br>

<label for="content">Message: </label><input id="content" type="text">

<input id="submit" type="button" value="Send">

<input id="refresh" type="button" value="Refresh">

</div>

</div>

<script src="03Messenger.js"></script>

<script>

attachEvents();

</script>

</body>

</html>

|  |
| --- |
| function attachEvents() { |
|  | let baseServiceUrl = "https://messanger-6eff2.firebaseio.com/messenger"; |
|  |  |
|  | function loadMessages() { |
|  | $.get(baseServiceUrl + ".json") |
|  | .then(displayMessages); |
|  | } |
|  |  |
|  | function displayMessages(messages) { |
|  | $('#messages').empty(); |
|  | let orderedMessages = {}; |
|  | messages = Object.keys(messages).sort((a,b) => a.timestamp - b.timestamp).forEach(k => orderedMessages[k] = messages[k]); |
|  | for(let message of Object.keys(orderedMessages)){ |
|  | $('#messages').append(`${orderedMessages[message]['author']}: ${orderedMessages[message]['content']}\n`); |
|  | } |
|  | } |
|  |  |
|  | function createMessage() { |
|  | let data = { |
|  | author:$('#author').val(), |
|  | content: $('#content').val(), |
|  | timestamp: Date.now() |
|  | }; |
|  |  |
|  | $.post(baseServiceUrl + ".json", JSON.stringify(data)) |
|  | .then(loadMessages) |
|  | } |
|  |  |
|  | $('#submit').click(createMessage); |
|  | $('#refresh').click(loadMessages); |
|  |  |
|  | loadMessages(); |
|  | } |

|  |
| --- |
| <!DOCTYPE html> |
|  | <html lang="en"> |
|  | <head> |
|  | <meta charset="UTF-8"> |
|  | <title>Messenger</title> |
|  | <style> |
|  | label { display: inline-block; width: 5em; } |
|  | #author, #content { width: 30em; } |
|  | </style> |
|  | <script src="https://code.jquery.com/jquery-3.1.1.min.js"></script> |
|  | </head> |
|  | <body> |
|  | <div id="main"> |
|  | <textarea id="messages" cols="80" rows="12" disabled="true"></textarea> |
|  | <div id="controls"> |
|  | <label for="author">Name: </label><input id="author" type="text"><br> |
|  | <label for="content">Message: </label><input id="content" type="text"> |
|  | <input id="submit" type="button" value="Send"> |
|  | <input id="refresh" type="button" value="Refresh"> |
|  | </div> |
|  | </div> |
|  | <script src="messenger.js"></script> |
|  | <script> |
|  | attachEvents(); |
|  | </script> |
|  | </body> |
|  | </html> |

## 4.Phonebook

function attachEvents(){

$('#btnLoad').click(loadContacts);

$('#btnCreate').click(createContact);

let baseServiceUrl = 'https://phonebook-nakov-c90d5.firebaseio.com/phonebook';

function loadContacts(){

$('#phonebook').empty();

$.get(baseServiceUrl + '.json').then(displayContacts).catch(displayError);

}

function displayContacts(contacts){

for(let key in contacts){

let person = contacts[key]['person'];

let phone = contacts[key]['phone'];

let $li = $('<li>');

$li.text(person + ': ' + phone + ' ');

$('#phonebook').append($li);

$li.append($('<button>Delete</button>').click(deleteContact.bind(this, key)));

}

}

function displayError(e){

$('#phonebook').append($('<li>Error</li>'));

}

function createContact(){

let newContactJSON = JSON.stringify({

person: $('#person').val(),

phone: $('#phone').val()

});

$.post(baseServiceUrl + '.json', newContactJSON).then(loadContacts).catch(displayError);

$('#person').val('');

$('#phone').val('');

}

function deleteContact(key){

let request = {

method: 'DELETE',

url: baseServiceUrl + '/' + key + '.json'

};

$.ajax(request).then(loadContacts).catch(displayError);

}

}

<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="UTF-8">

<title>Phonebook</title>

<script src="https://code.jquery.com/jquery-3.1.1.min.js"></script>

<link rel="stylesheet" type="text/css" href="style.css">

<style>

@import url(https://fonts.googleapis.com/css?family=Open+Sans);

body {

font-family: 'Open Sans',serif;

}

input[type=text] {

padding: 12px 20px;

margin: 8px 0;

display: inline-block;

border: 1px solid #ccc;

border-radius: 4px;

box-sizing: border-box; }

button {

background-color: #4CAF50;

color: white;

padding: 14px 20px;

margin: 8px 0;

border: none;

border-radius: 4px;

cursor: pointer;

}

button:hover {

background-color: #45a049;

}

</style>

</head>

<body>

<h1>Phonebook</h1>

<ul id="phonebook"></ul>

<button id="btnLoad">Load</button>

<h2>Create Contact</h2>

Person: <input type="text" id="person"/>

<br>

Phone: <input type="text" id="phone"/>

<br>

<button id="btnCreate">Create</button>

<script src="04Phonebook.js"></script>

<script>

attachEvents();

</script>

</body>

</html>

|  |
| --- |
| function attachEvents() { |
|  | $('#btnLoad').click(loadContacts); |
|  | $('#btnCreate').click(createContact); |
|  |  |
|  | let baseServiceUrl = "https://phonebook-nakov.firebaseio.com/phonebook"; |
|  |  |
|  | function loadContacts() { |
|  | $('#phonebook').empty(); |
|  | $.get(baseServiceUrl + ".json") |
|  | .then(displayContacts) |
|  | .catch(displayError); |
|  | } |
|  |  |
|  | function displayContacts(contacts) { |
|  | for(let key in contacts){ |
|  | let person = contacts[key]['person']; |
|  | let phone = contacts[key]['phone']; |
|  |  |
|  | $('#phonebook') |
|  | .append($('<li>').text(person + ': ' + phone + ' ') |
|  | .append($('<button>').text('Delete').click(function () { |
|  | deleteContact(key) |
|  | }))); |
|  | } |
|  | } |
|  |  |
|  | function displayError(err) { |
|  | $('#phonebook').append($('<li>').text("Error")); |
|  | } |
|  |  |
|  | function createContact() { |
|  | let newContactJSON = JSON.stringify({ |
|  | person: $('#person').val(), |
|  | phone: $('#phone').val() |
|  | }); |
|  |  |
|  | $.post(baseServiceUrl + '.json', newContactJSON) |
|  | .then(loadContacts) |
|  | .catch(displayError); |
|  |  |
|  | $('#person').val(''); |
|  | $('#phone').val(''); |
|  | } |
|  |  |
|  | function deleteContact(key) { |
|  | let request = { |
|  | method: 'DELETE', |
|  | url: baseServiceUrl + '/' + key + '.json' |
|  | }; |
|  |  |
|  | $.ajax(request) |
|  | .then(loadContacts) |
|  | .catch(displayError); |
|  | } |
|  | } |

|  |
| --- |
| <!DOCTYPE html> |
|  | <html lang="en"> |
|  | <head> |
|  | <meta charset="UTF-8"> |
|  | <title>Phonebook</title> |
|  | <script src="https://code.jquery.com/jquery-3.1.1.min.js"></script> |
|  | </head> |
|  | <body> |
|  | <h1>Phonebook</h1> |
|  | <ul id="phonebook"></ul> |
|  | <button id="btnLoad">Load</button> |
|  |  |
|  | <h2>Create Contact</h2> |
|  | Person: <input type="text" id="person"/> |
|  | <br> |
|  | Phone: <input type="text" id="phone"/> |
|  | <br> |
|  | <button id="btnCreate">Create</button> |
|  | <script src="phonebook.js"></script> |
|  | <script> |
|  | attachEvents(); |
|  | </script> |
|  | </body> |
|  | </html> |