

Web Development Spring 2021  
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Crash City/Place

(Political Jurisdiction)



Crash

Location

(minutes.seconds + compass direction)

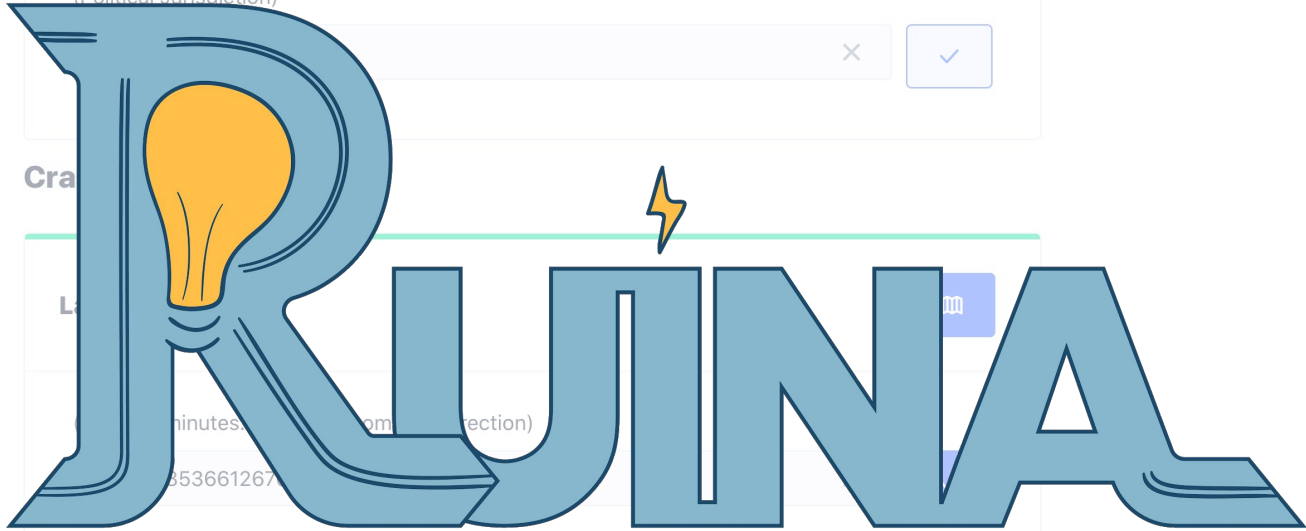
353661267

Longitude



(degrees.minutes.seconds + compass direction)

-71.10974404960871





- User authentication
- Quick view of all your reports
- Search for & sort reports
- See reports in detail
- Amend severity
- Check off which reports have been reviewed



Backend



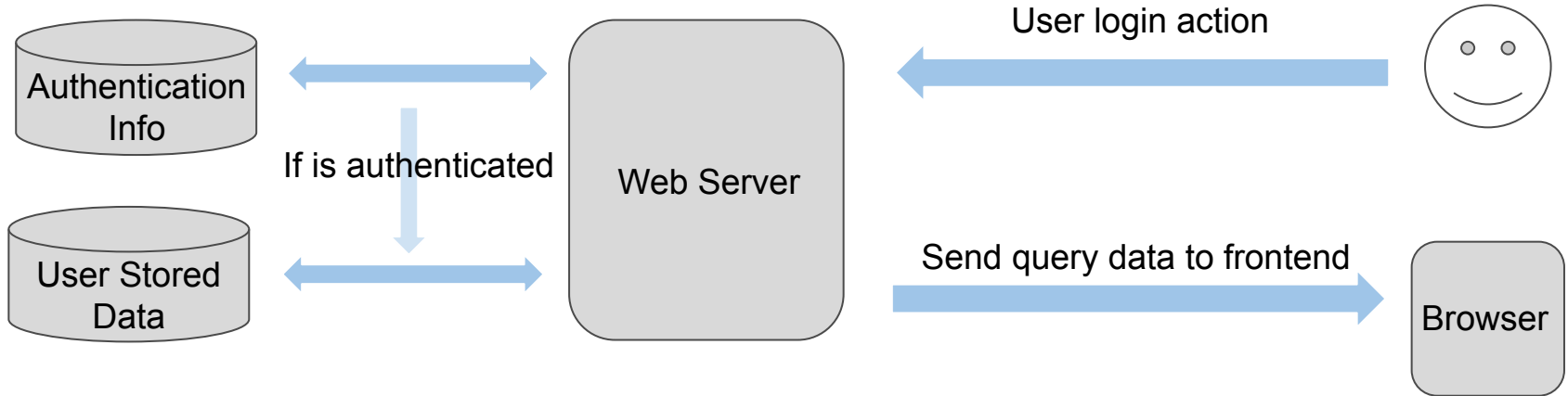
Frontend Styling



Database

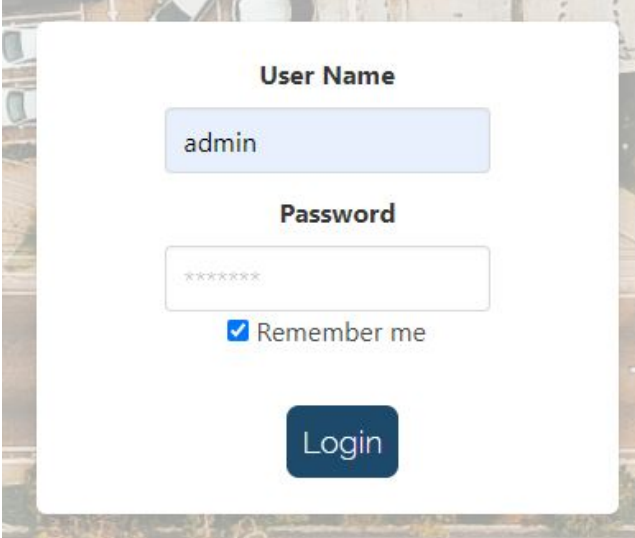
# Live demo of the website

# Authentication



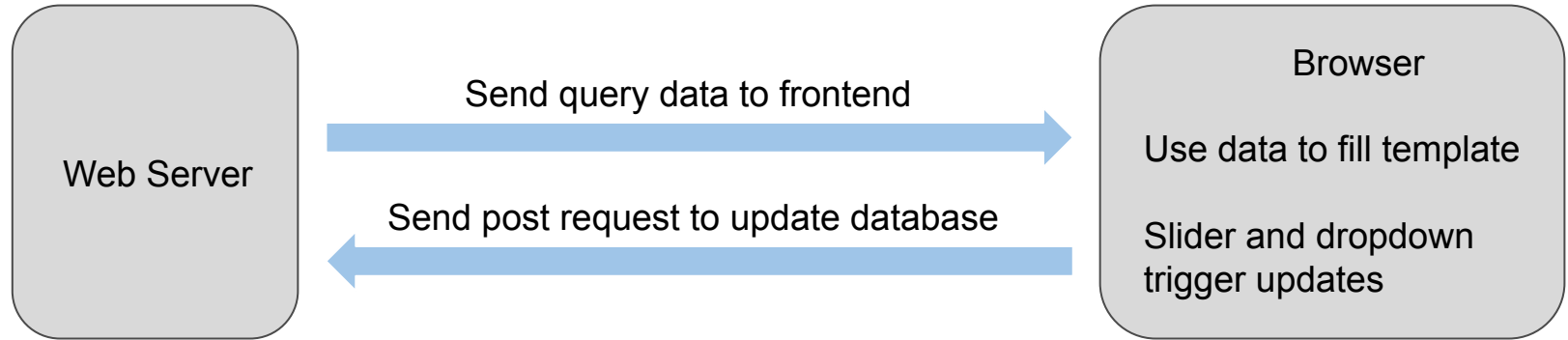
# Remember me option

- ❖ Fresh login
  - User has the option to have the web page memorize its login credential
- ❖ User login with login credential
  - Validate credential with database values



The image shows a login form with a white background and a light blue border. At the top, the text "User Name" is displayed in bold. Below it is a light blue input field containing the text "admin". Underneath the first field, the text "Password" is displayed in bold. Below it is a white input field with a light blue border, containing a series of asterisks "\*\*\*\*\*". Below the password field, there is a checkbox with a blue checkmark and the text "Remember me". At the bottom of the form is a dark blue button with the word "Login" in white text.

# Server ↔ Frontend Communication



```
<label class="switch">
    <input type="checkbox"
id="check_{{datum.get('_id')}}"
        {%if datum.get('status') %}
            checked
        {% endif %} >
    <span class="slider round">
    </span>
</label>
```



- ❖ Dynamically build the document using the data on the server



```
<table class="modaltable">
```

```
<thead>
```

```
<th colspan="2">Vehicle {{loop.index}}</th>
```

```
</thead>
```

```
<tbody class="vehicletable">
```

```
{% for key, value in response.items() %}
```

```
<tr>
```

```
<td>{{ key }}</td>
```

```
<td>{{ value }}</td>
```

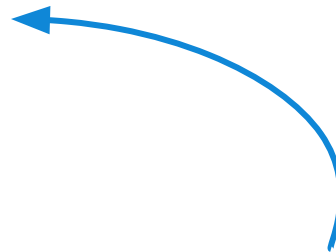
```
</tr>
```

```
{% endfor %}
```

```
</tbody>
```

```
</table>
```

template



data

```
"report-content":
```

```
{ "driver":
```

```
[ {"id": "349", "vehicle": "347", "response": {...},
```

```
{ "id": "342", "vehicle": "341", "response": {...} ],
```

```
"vehicle":
```

```
[ {"id": "347", "driver": "349", "response": {...},
```

```
{ "id": "341", "driver": "342", "response": {...} ]
```

```
}
```

- ❖ Dynamically build the document using the data on the server
- ❖ Update the document based on frontend user interaction
  - Javascript with MVC & ReactJS
  - jQuery
    - a lightweight JavaScript library
    - simplifies a lot of the complicated things from JavaScript
    - `$(selector).action()`
    - `$(".test").hide()` - hides all elements with class="test".

# jQuery with AJAX

```
$(".switch").on("click", function () {  
    var objectID = $(this).next().val();  
    $.ajax({  
        type: "post",  
        url: '{{ url_for("update") }}',  
        data: {  
            "id": objectID,  
        },  
        dataType: 'json',  
        success: function (data) {  
            do_something(true);  
        }  
    })  
})
```



# Table Sorting

Review Status	Date	County	Reporter	Severity
<div><div></div>Reviewed</div>	2/28/2021	Needham	Imogen	<div>Suspected Minor Injury</div> <div>Details</div>
<div><div></div>Reviewed</div>	3/5/2021	Needham	Finoa	<div>Possible Injury</div> <div>Details</div>
<div><div></div>Reviewed</div>	3/5/2021	Needham	Ned	<div>No Apparent Injury</div> <div>Details</div>
<div><div></div>Unreviewed</div>	3/5/2021	Needham	Eric	<div>Suspected Minor Injury</div> <div>Details</div>
<div><div></div>Reviewed</div>	3/5/2021	Needham	Eric	<div>Fatal Injury</div> <div>Details</div>
<div><div></div>Unreviewed</div>	3/18/2021	Suffolk County	David	<div>Fatal Injury</div> <div>Details</div>
<div><div></div>Unreviewed</div>	3/27/2021	Boston	David	<div>Fatal Injury</div> <div>Details</div>
<div><div></div>Reviewed</div>	3/28/2021	Needham	Oscar	<div>Possible Injury</div> <div>Details</div>

# External library we used

Bulma

ENMO OR CHELSEA

# Challenges & Lessons Learned

- ❖ **Challenge:** Trying to access nested elements in MongoDB document
  - **Bonus Challenge** of working with predetermined json format
- ❖ **Lesson:** HTML templating
  - Specifically generalizing out dictionary elements
- ❖ **Lesson:** Authentication system
- ❖ **Lesson:** jQuery - how to update page without reloading
- ❖ **Lesson:** Display & close modal that are dynamically generated

# Continuation

- ❖ More labels in table
  - Specific location
  - Particular facts and conditions
- ❖ Creating index on database for searching
- ❖ Editable modal view page
  - Edit and update every field
- ❖ Connect directly to Ruina
  - Add user identification to Ruina mobile application
- ❖ Improve architecture - incorporating Blueprint, authentication system



# Thank you!