From a customer request to a DDC v1.0

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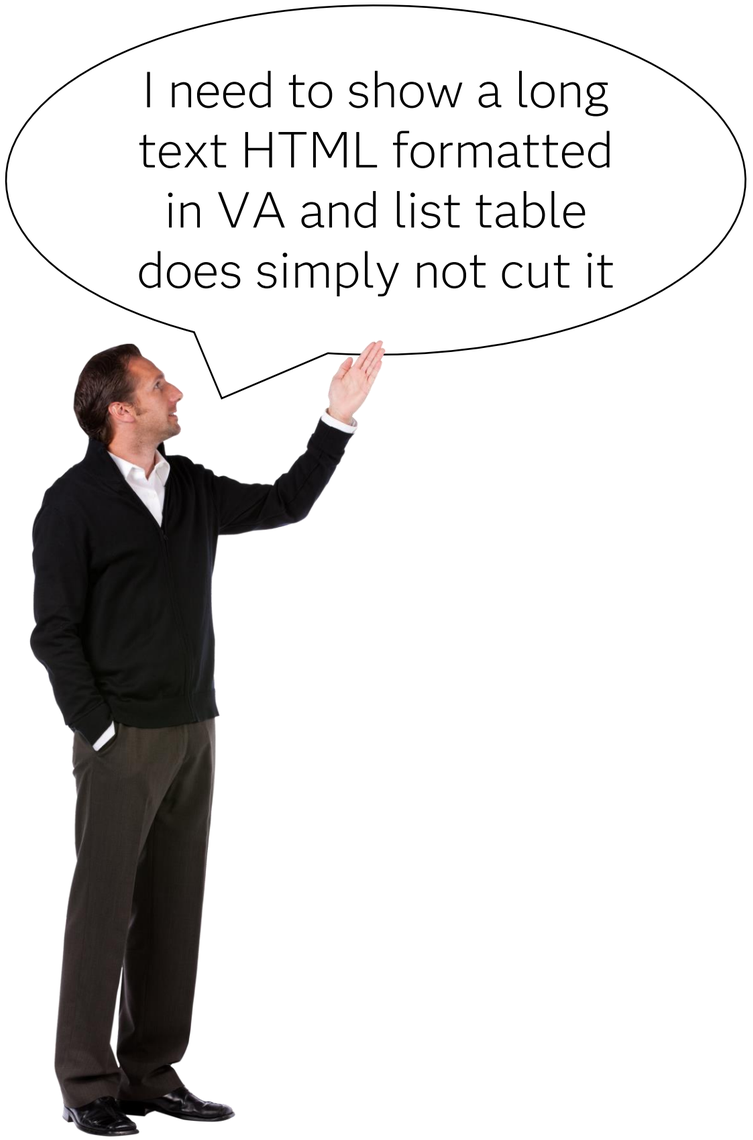
The customer request




```
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<p><strong>Pellentesque habitant morbi tristique</strong> senectus et netus et malesuada fames ac turpis egestas. Vestibulum to
Quisque sit amet est et sapien ullamcorper pharetra. Vestibulum erat wisi, condimentum sed, <code>commodo vitae</code>, orna
facilisis. Ut felis.</p>

<h2>Header Level 2</h2>

<ol>
  <li>Lorem ipsum dolor sit amet, consectetuer adipiscing elit.</li>
  <li>Aliquam tincidunt mauris eu risus.</li>
</ol>

<blockquote><p>Lorem ipsum dolor sit amet, consectetur adipiscing elit. Vivamus magna. Cras in mi at felis aliquet congue. Ut a e
est.</p></blockquote>

<h3>Header Level 3</h3>

<ul>
  <li>Lorem ipsum dolor sit amet, consectetuer adipiscing elit.</li>
  <li>Aliquam tincidunt mauris eu risus.</li>
</ul>

<h1>Mere eksempel tekst</h1>
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<p>Vulputate enim nulla aliquet porttitor lacus luctus. Lorem ipsum dolor sit amet consectetur adipiscing. Amet porttitor eget dolc
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```

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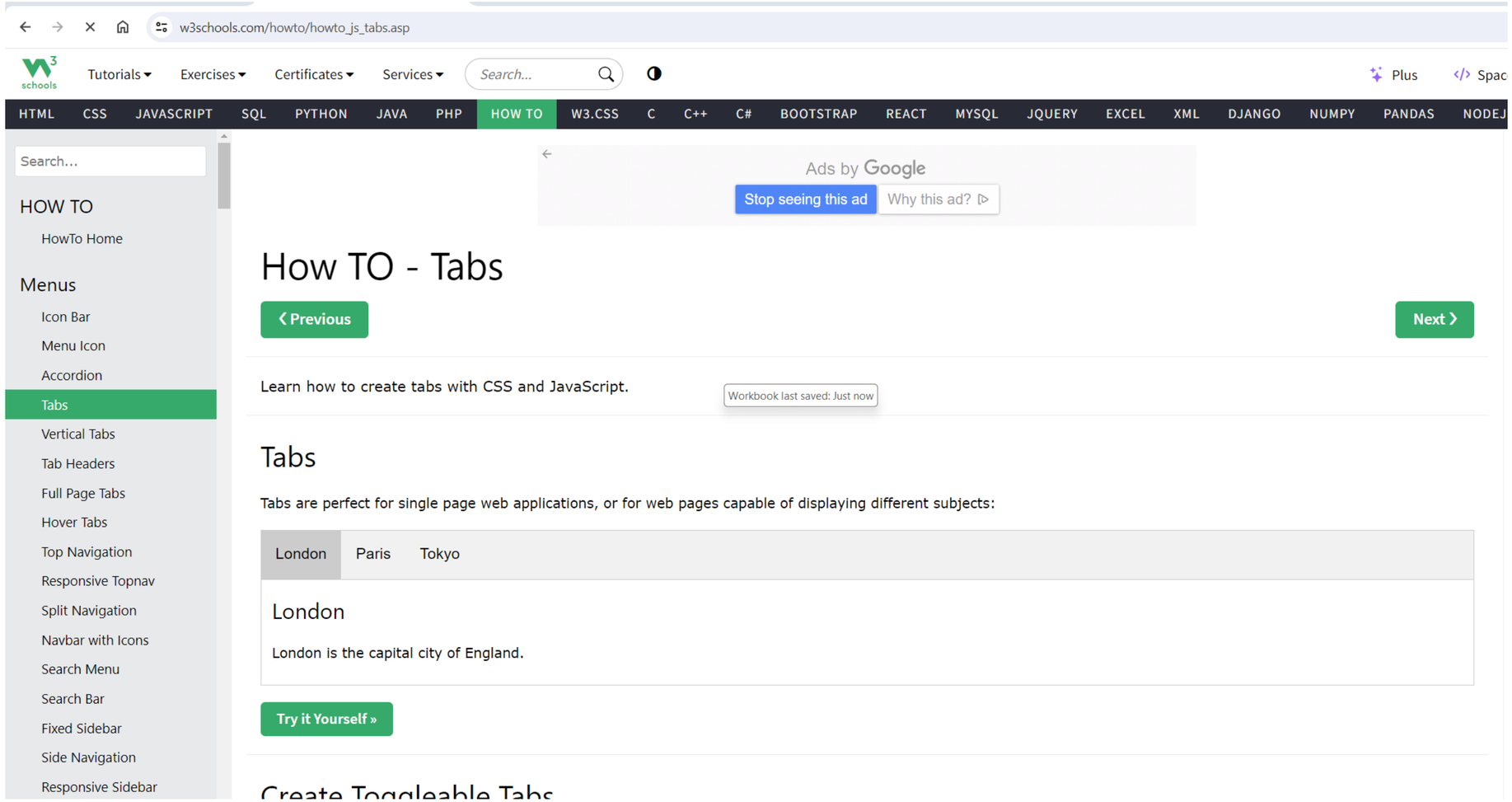
I found this on the internet:

https://www.w3schools.com/howto/howto_js_tabs.asp



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The full code

https://www.w3schools.com/howto/tryit.asp?filename=tryhow_js_tabs

```
<!DOCTYPE html>
<html>
<head>
<meta name="viewport" content="width=device-width, initial-scale=1">
<style>
body {font-family: Arial;}

/* Style the tab */
.tab {
  overflow: hidden;
  border: 1px solid #ccc;
  background-color: #f1f1f1;
}

/* Style the buttons inside the tab */
.tab button {
  background-color: inherit;
  float: left;
  border: none;
  outline: none;
  cursor: pointer;
  padding: 14px 16px;
  transition: 0.3s;
  font-size: 17px;
}

/* Change background color of buttons on hover */
.tab button:hover {
  background-color: #ddd;
}

/* Create an active/current tablink class */
.tab button.active {
  background-color: #ccc;
}

/* Style the tab content */
.tabcontent {
  display: none;
  padding: 6px 12px;
  border: 1px solid #ccc;
  border-top: none;
}
</style>
</head>
```

Appearance

```
<body>

<h2>Tabs</h2>
<p>Click on the buttons inside the tabbed menu:</p>

<div class="tab">
  <button class="tablinks" onclick="openCity(event, 'London')">London</button>
  <button class="tablinks" onclick="openCity(event, 'Paris')">Paris</button>
  <button class="tablinks" onclick="openCity(event, 'Tokyo')">Tokyo</button>
</div>

<div id="London" class="tabcontent">
  <h3>London</h3>
  <p>London is the capital ci</p>
</div>

<div id="Paris" class="tabcontent">
  <h3>Paris</h3>
  <p>Paris is the capital of Fra</p>
</div>

<div id="Tokyo" class="tabcontent">
  <h3>Tokyo</h3>
  <p>Tokyo is the capital of Jap</p>
</div>

<script>
function openCity(evt, cityName) {
  var i, tabcontent, tablinks;
  tabcontent = document.getElement sName("tabcontent");
  for (i = 0; i < tabcontent.lengt ; i++) {
    tabcontent[i].style.display = "n
  }
  tablinks = document.getElementsByClas
  for (i = 0; i < tablinks.length; i++) {
    tablinks[i].className = tablinks[i].classN
  }
  document.getElementById(cityName).style.display = "block";
  evt.currentTarget.className += " active";
}
</script>

</body>
</html>
```

3 buttons defined

Text in tabs

Code that hides everything and afterwards show the text for the selected button

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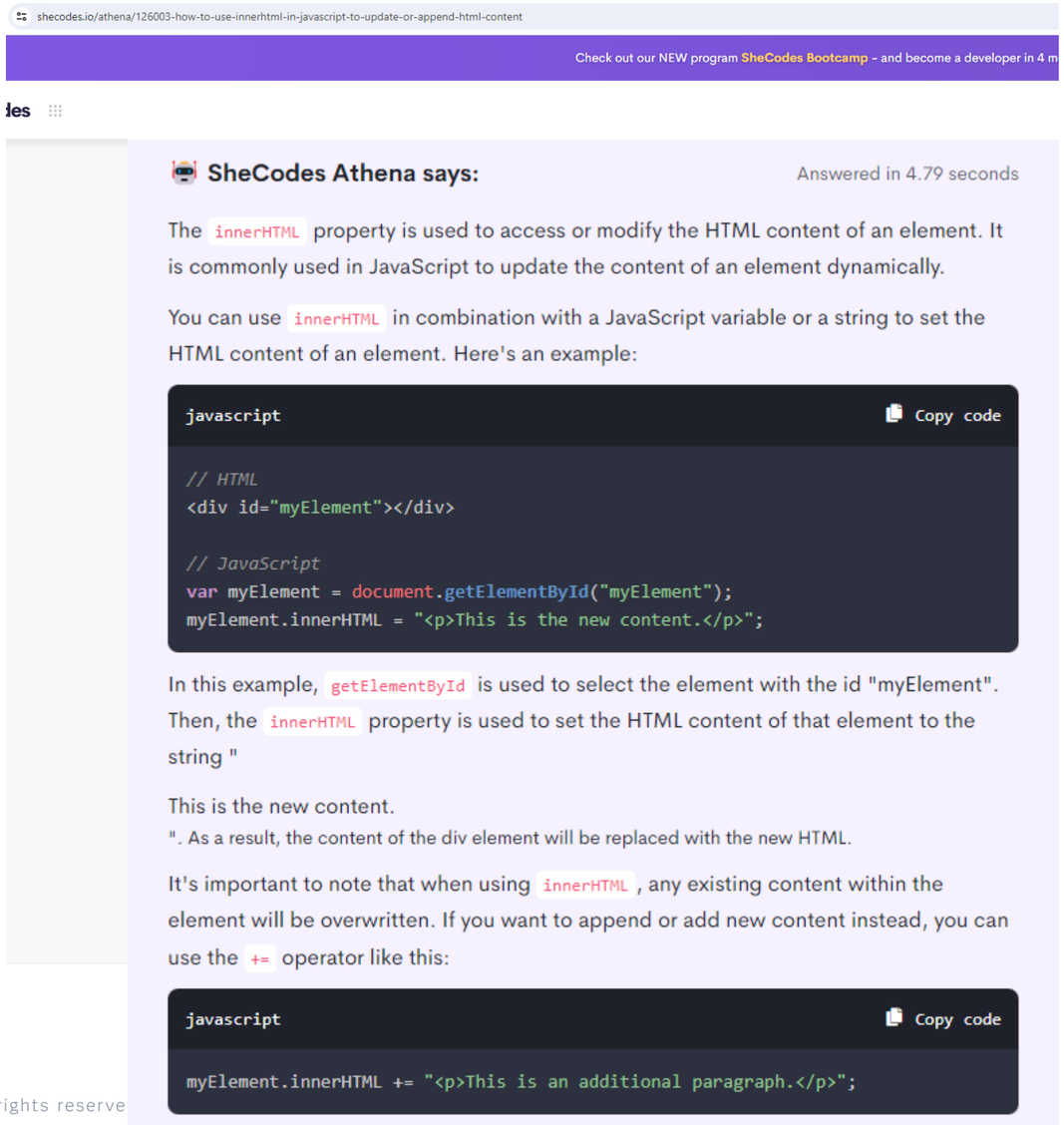
How to build the html on-the-fly

https://www.shecodes.io/athena/126003-how-to-use-innerhtml-in-javascript-to-update-or-append-html-content



Note use of += is not best practice (but it works)

Refer to this instead

https://stackoverflow.com/questions/11515383/why-is-element-innerhtml-bad-code

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Applying Stack overflow to the html tab object

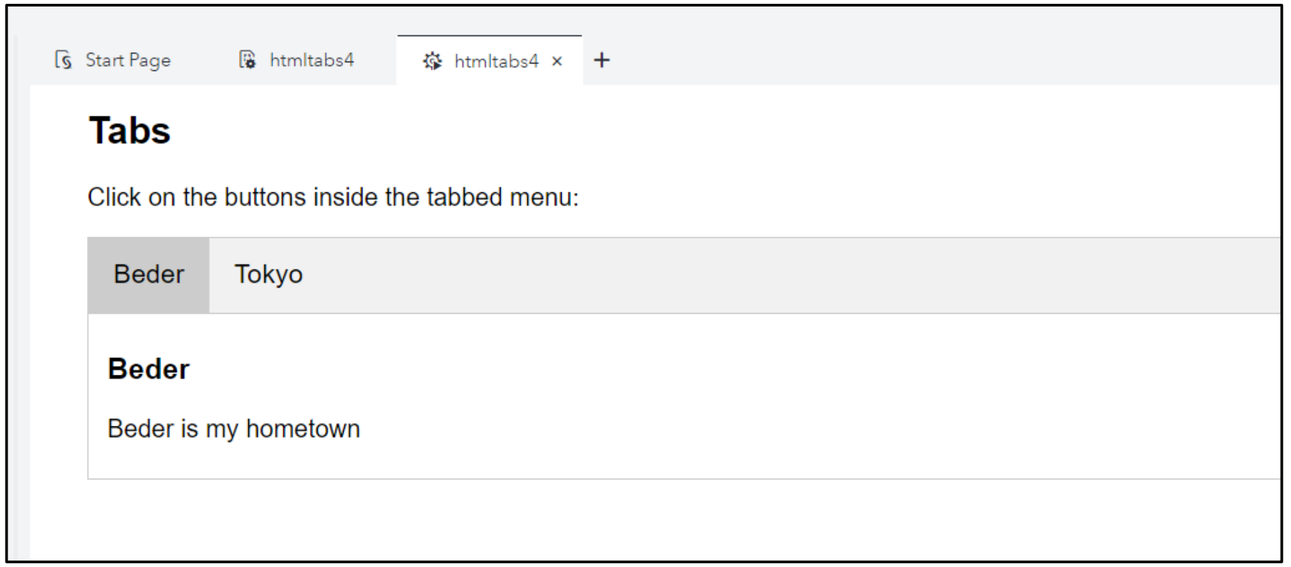
Dynamically create the tabs

```
function addtabs2() {
  console.log('adding tabs');
  document.getElementById("tabbuttons").innerHTML += '<button class="tablinks" onclick="openCity(event, '+"'Beder'"+')">Beder</button>';
  document.getElementById("tabbuttons").innerHTML += '<button class="tablinks" onclick="openCity(event, '+"'Tokyo'"+')">Tokyo</button>';
  document.getElementById("cnt").innerHTML += '<div id="Beder" class="tabcontent"><h3>Beder</h3><p>Beder is my hometown</p></div>';
  document.getElementById("cnt").innerHTML += '<div id="Tokyo" class="tabcontent"><h3>Tokeo</h3><p>Tokyo is the capital of Japan.</p></div>';

  console.log('adding tabs...DONE');

}

</script>
```



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Data Driven Content, the basics

Utility script and the onDataReceived function

```
<html>
<head>
  <meta name="viewport" content="width=device-width, initial-scale=1">
  <script type="text/javascript" src="/SASJobExecution/?_file=/Public/PoCs/UpdateObjPOC/js_utilities/messagingUtil.js"></script>
  <script type="text/javascript" src="/SASJobExecution/?_file=/Public/PoCs/UpdateObjPOC/js_utilities/contentUtil.js"></script>
```

Download from SAS Visual Analytics third party visualizations

Copy from one of the samples

```
async function onDataReceived(resultData)
{
    if (!resultData) return;

    _resultData = resultData;
    _resultName = resultData.resultName;

    let selections = va.contentUtil.initializeSelections(resultData); // good practice to remove eventual brush columns
    if (resultData.columns.length == 0) {
        // it needs at least one column and one row
        document.getElementById("JobResults").innerHTML = "";
        va.messagingUtil.postInstructionalMessage(
            _resultName,
            "Please, make sure at least one data item is assigned to this object's Role pane:\n"+
            "Parameter _job_wait_refresh is optional and sets the waiting time for refresh"
        );
        return;
    }
    resultData.data.forEach((element, index) => {

        // USE THE DATA PASSED TO DDC

        });


}
```

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Combine web page and the DDC skeleton

The JavaScript libraries from SAS

```
<html>
<head>
  <meta name="viewport" content="width=device-width, initial-scale=1">
  <script type="text/javascript" src="/SASJobExecution/?_file=/Public/js_utilities/contentUtil.js"></script>
  <script type="text/javascript" src="/SASJobExecution/?_file=/Public/js_utilities/messagingUtil.js"></script>

<style>
  .....
</style>
</head>
<body>

<h2>Forklarende tekst for valgt enhed</h2>
<p>Click on the buttons inside the tabbed menu:</p>

<div id="tabbuttons" class="tab">
</div>

<div id="cnt" >
</div>

<script>
    "use strict";

    // Global variables
    let _resultData = null;
    let _resultName = null;
    let _optionalNode = null;

    async function onDataReceived(resultData)
    {
        var tablinks;
        if (!resultData) return;

        _resultData = resultData;
        _resultName = resultData.resultName;

        //var json = syntaxHighlight(resultData);

        let selections = va.contentUtil.initializeSelections(resultData); // good practice to remove eventual brush columns
        if (resultData.columns.length == 0) {
            // it needs at least one column and one row
            document.getElementById("JobResults").innerHTML = "";
            va.messagingUtil.postInstructionalMessage(
                _resultName,
                "Needs data, add tab title as first role and tabtext as second role\n"
            );
            return;
        }

        resultData.data.forEach((element, index) => {

            // BUILD WEB PAGE USING YOUR DATA, referencing the columns element[0], e

        });
    }


function openCity(evt, cityName) {
  var i, tabcontent, tablinks;
```

Web page with placeholders for buttons and content, original hardcoded content is removed

The OnDataRecievedFunction

NEXT we are going to put the logic to build buttons and tabs here

The JavaScript to make a specific button visible, it does not care what the ID's of the tags are, so no changes needed here

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Adding the logic using the data passed to the DDC

```
async function onDataReceived(resultData)
{
    var tablinks;
    if (!resultData) return;

    _resultData = resultData;
    _resultName = resultData.resultName;

    //var json = syntaxHighlight(resultData);

    console.log(resultData);

    let selections = va.contentUtil.initializeSelections(resultData); // good practice to remove eventual brush columns
    if (resultData.columns.length == 0) {
        // it needs at least one column and one row
        document.getElementById("JobResults").innerHTML = "";
        va.messagingUtil.postInstructionalMessage(
            _resultName,
            "Needs data, add tab title as first role and tabtext as second role\n"
        );
        return;
    }

    idx=1;
    ididx="";
    document.getElementById("tabbuttons").innerHTML='';
    document.getElementById("cnt").innerHTML='';
    resultData.data.forEach((element, index) => {
        ididx="id"+idx;
        document.getElementById("tabbuttons").innerHTML += '<button class="tablinks" onclick="openCity(event, '+"'"+ididx+"'"+')">'+element[0]+'</button>';
        document.getElementById("cnt").innerHTML += '<div id="'+ididx+'" class="tabcontent">'+element[1]+'</p></div>';
        idx=idx+1;
    });
    document.getElementById('id1').style.display = "block";
    tablinks = document.getElementsByClassName("tablinks");
    tablinks[0].className += " active";

}
```

Loop over data and insert buttons and tab content named id1, id2, id3…

Make the first one active and the content visible

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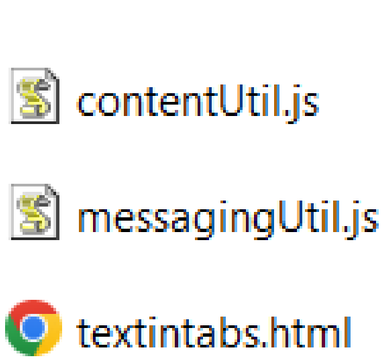
Move the code to Viya 3.5

/opt/sas/viya/home/var/www/html/htmlcommons/tabs



References in html changed to

```
<html>
<head>
  <meta name="viewport" content="width=device-width, initial-scale=1">
  <script type="text/javascript" src="./messagingUtil.js"></script>
  <script type="text/javascript" src="./contentUtil.js"></script>

<style>
```

URL used in data driven object in the options menu

http://[Viya-server]/htmlcommons/tabs/textintabs.html

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