

COS30043

Interface Design and Development

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TECHNOLOGY

Lecture 8 – API 2 & Pagination

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Content



- RESTful API Example
- Pagination with Client-Side Data



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An RESTful API Example Application

In this example, we can read/insert/update/delete data in database tables in VueJs through a representational state transfer application programming interfaces (RESTful API).

The backend:

- Create the database table
- Write server side scripting to query the database and handle the GET/POST/PUT/DELETE requests

The front end (we focus on the front end)

- Send requests
- Display the data and error messages

You can download the sample code from Canvas.

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Content

- RESTful API Example



- Pagination with Client-Side Data



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Pagination with Client-Side Data

- Uses *vuejs-paginate* to implement pagination
- Requires that the entire data is stored in memory as an array/object
- Needs a custom filter to remove the part of the array that is not to be displayed
- Requires `<paginate>` element to show the pagination links

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Pagination with Client-Side Data

- *vuejs-paginate*: A Vue.js component to make pagination.
- How to reference it?
 - Download to local
`<script src="js/vuejs-paginate.js"></script>`
 - CDN
`<script src="https://unpkg.com/vuejs-paginate-next@latest/dist/vuejs-paginate-next.umd.js"></script>`
- How to create paginate component in Vue?

```
components: {  
    paginate: VuejsPaginateNext,  
}
```

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Vuejs-paginate configuration

```
<paginate
  :page-count= "12"
  :page-range= "5"
  :margin-pages="1"
  :click-handler="clickCallback"
  :prev-text=" 'Prev Page' "
  :next-text="'Next Page' "
  :container-class="'pagination'"
  :page-class="'page-item'"
  :active-class="'currentPage'" >
</paginate>
```

N.B. The attributes used above are examples of some of the many attributes available for vuejs-paginate library.

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Unit Descriptions

Code	Description
COS20001	9 User-Centred Design
TNE10005	10 Network Administration

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Vuejs-paginate configuration

```
<paginate
  :page-count= "12"
  :page-range= "5"
  :margin-pages="1"
  :click-handler="clickCallback"
```

:page-count -- Total count of pages. required
:page-range -- number of pages displayed, default 3. It is recommended to use an odd number, so that the same number of pages are displayed before and after the active page
:margin-pages -- The number of displayed pages for margins. default: 1

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CSS class name for tag li of each page element.

Vuejs-paginate configuration

```
<paginate
...
:click-handler="clickCallback"
:prev-text=" 'Prev Page' "
:next-text="'Next Page'"
:container-class="'pagination'"
:page-class="'page-item' "
:active-class="'currentPage'" >
```

:click-handler -- The method to call when page clicked. Use clicked page number as parameter.

:container-class -- CSS class name for the layout.

:page-class -- CSS class name for tag li of each page element.

:active-class -- CSS class name for active page element.

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COS20001	9 User-Centred Design
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Example: HTML– Table

```
<v-table>
<template v-slot:default>
<thead>
  <tr>
    <th>Code</th>
    <th>Description</th>
    <th>Credit Points</th>
    <th>Type</th>
  </tr>
</thead>
<!-- Using v-for to loop units and list them -->
```

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Example: HTML– Table

```
<tbody>
  <tr v-for="unit in getItem"
:key="unit.code" >
    <td>{{unit.code}}</td>
    <td>{{unit.desc}}</td>
    <td>{{unit.cp}}</td>
    <td>{{unit.type}}</td>
  </tr>
</tbody>
</template>
</v-table>
```

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Component – Page Control Methods

```
computed:{
  // function that filters the
  units according to the search fields
  filteredUnits: function(){
    return
    this.units.filter(unit=>

    unit.code.toLowerCase().match((this.f
    Unit.code.toLowerCase())) &&
```

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Component – Page Control Methods

```
unit.desc.toLowerCase().match((this.fUnit.desc.toLowerCase())) &&
```

```
unit.type.match((this.fUnit.type.trim()))
```

```
);  
},
```

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Component – Page Control Methods

```
getItems: function() {  
    let current =  
this.currentPage * this.perPage;  
    let start = current -  
this.perPage;  
    return  
this.filteredUnits.slice(start,  
current);  
},
```

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Component – Page Control Methods

```
getPageCount: function() {  
    return  
    Math.ceil(this.filteredUnits.length /  
    this.perPage);  
    } },  
methods:{  
    clickCallback: function(pageNum){  
        this.currentPage = Number(pageNum);  
    }  
}
```

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WHAT'S NEXT?
- SINGLE PAGE APPLICATION



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