



Clarity Design System

Inspiring builders to create better experiences

How do we empower designers and engineers to build products that are beautiful and functional?

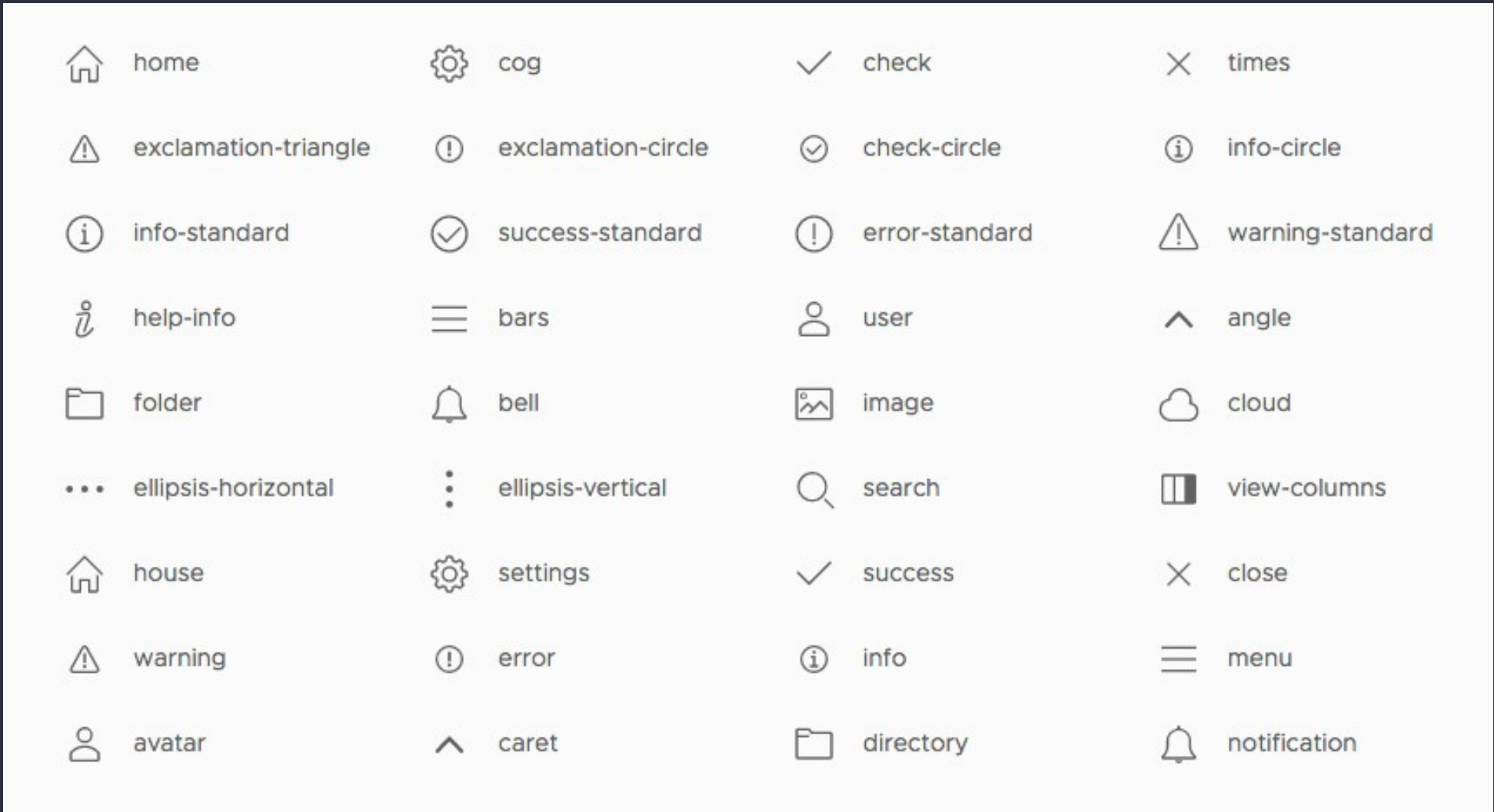
The screenshot displays the vSphere Client interface. The top navigation bar includes the 'vm' logo, 'vSphere Client', a 'Menu' dropdown, a search bar, a refresh icon, the user 'Administrator@VSPHERE.LOCAL', a 'Help' dropdown, and a smiley face icon. The left sidebar shows a list of virtual machines, with 'h5c-v2.10-new' selected. The main content area is titled 'h5c-v2.10-new' and features tabs for 'Summary', 'Monitor', 'Configure', 'Permissions', 'Datastores', and 'Networks'. The 'Summary' tab is active, showing a 'Powered On' status icon, a 'Launch Remote Console' button, and a list of properties: Guest OS (SUSE Linux Enterprise 12 (64-bit)), Compatibility (ESXi 6.0 and later (VM version 11)), VMware Tools (Running, version:2147483647 (Guest Managed)), DNS Name (localhost.localdom), IP Addresses (10.133.235.21), and Host (w1-vcuiqa041.eng.vmware.com). A 'View all 34 IP addresses' link is also present. On the right, resource usage is shown: CPU Usage (71 MHz), Memory Usage (81 MB), and Storage Usage (18.34 GB). Two warning banners are visible: 'Virtual machine Consolidation Needed status' with 'Reset To Green' and 'Acknowledge' buttons, and 'Virtual machine disks consolidation is needed.' Below these are expandable sections for 'VM Hardware' and 'Notes'. At the bottom, the 'Recent Tasks' tab is active, displaying a table of completed tasks.

Task Name	Target	Status	Initiator	Queued For	Start Time	Completion Time	Server
Rename virtual machine	h5c-v2.5	✓ Completed	VSPHERE.LOCAL\Ad...	12 ms	11/22/2016, 1:54:22 PM	11/22/2016, 1:54:23 PM	wdc-vcuiqa-dhcp195....
Reconfigure virtual machine	h5c-v2.5	✓ Completed	VSPHERE.LOCAL\Ad...	334 ms	11/22/2016, 1:54:03 PM	11/22/2016, 1:54:10 PM	wdc-vcuiqa-dhcp195....
Power Off virtual machine	h5c-v2.3	✓ Completed	VSPHERE.LOCAL\Ad...		11/22/2016, 1:53:16 PM	11/22/2016, 1:53:22 PM	wdc-vcuiqa-dhcp195....

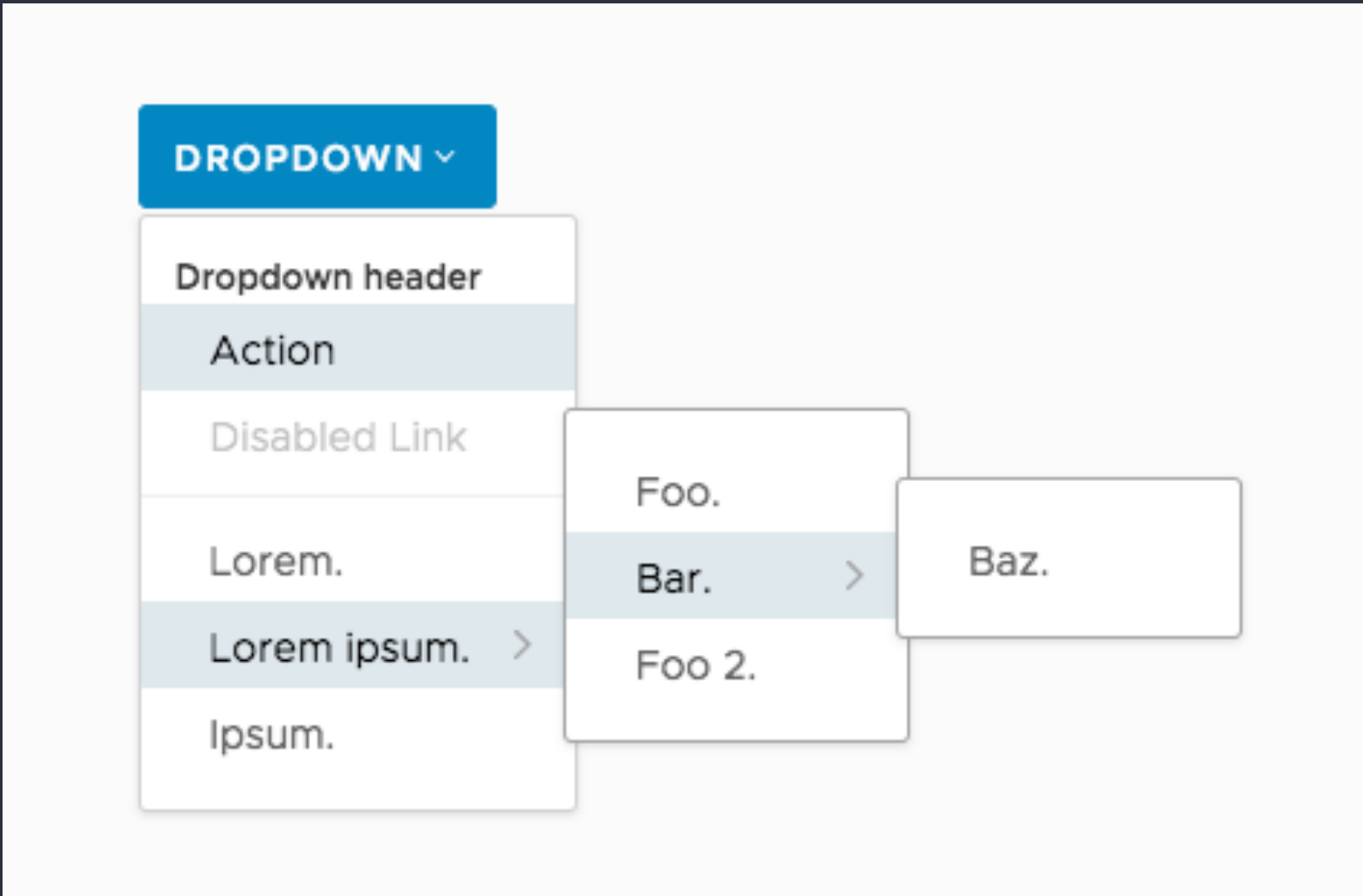
At the bottom left of the 'Recent Tasks' section is a dropdown menu set to 'All'. At the bottom right is a 'More Tasks' link.

vSphere Client (HTML5)

Clarity - Inspiring builders to create better experiences



SVG Icons



Components

In November of 2016,
Clarity decided to **go public**.

Clarity's Open Source Journey

Since November 15th 2016...

**Mads Fog**
@Hazenet

Follow

Holy hell, this is super awesome:
github.com/vmware/clarity. Super work by the [@VMwareClarity](#) team. Will be useful in future projects [#vExpert](#)

**vmware/****clarity**

clarity - UX guidelines, HTML/CSS framework, and Angular components working together to craft exceptional experiences
github.com

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9:32 AM - 15 Nov 2016

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22

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**Boemska**
@boemskats

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Hey [@VMwareClarity](#), we are LOVING your work - your project is beautiful and its arrival is perfectly timed vmware.github.io/clarity/


5:37 AM - 31 Jul 2017

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**Sara Steiert**
@salomonelli

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New favorite UI framework ❤️
github.com/vmware/clarity [@VMware](#) [#clarity](#) [#frontend](#)

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clarity - UX guidelines, HTML/CSS framework, and Angular components working together to craft exceptional experiences
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**Laco**
@laco0416

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I'm getting started vmware/clarity w/ Angular 4.0. very beautiful UI and clear API. I love it!
laco0416.github.io/clarity-angular...

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8:38 PM - 28 Mar 2017

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3

**Raiko Mesterheide**
@raimes

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HTML5 Clarity looks so great! LAB Time...
vRealize Operations 6.6: "I'm too sexy for my skin!"



vRealize Operations 6.6: "I'm too sexy for my skin!" - VMwar...
vRealize Operations Manager 6.6 new user interface!
blogs.vmware.com

10:01 AM - 15 Jun 2017

**Mark Peek**
@markpeek

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Great to see VMware open source Project Clarity. Congrats to the [@VMwareClarity](#) team! [#ClarityIsHere](#)

Project Clarity [@VMwareClarity](#)

Clarity Design System: UX Guidelines/Patterns, HTML, CSS, and Angular 2 Components fully Open Source vmware.github.io/clarity/index... [#ClarityIsHere](#)

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10:17 AM - 15 Nov 2016

2

Clarity's Open Source Journey

Since November 15th 2016...

1900+

Stars on GitHub

500+

Pull Requests

40+

Weekly Release

1,000,000+

Page Views

174+

Countries

120+

Languages

Engage with Us!




<http://clarity.design>



@VMwareClarity

Hands-on: Building an application with Clarity

 The picture can't be displayed.

Hands-on: Building an application with Clarity

In this training session you'll learn how to..

- Create an Angular +Clarity application
- Work with navigation and routing
- Create components
- Write and inject services
- Retrieve data using HTTP

Getting started with Clarity seed

- **Prerequisite:** Install Node.js, IDE such as Visual Studio Code (Optional)

install angular-cli globally

```
npm install -g @angular/cli
```

clone the latest version of Clarity seed

```
git clone https://github.com/vmware/clarity-seed.git
```

```
cd clarity-seed
```

install the project's dependencies

```
npm install
```

start the application - it will watch for file changes for live-reload

```
ng serve
```

Angular-cli

- Command line interface tool for speedy Angular code generation

install angular-cli globally

```
npm install -g @angular/cli
```

generating a new component

```
ng g component my-new-component
```

generating a new service

```
ng g service my-new-service
```

to learn more about Angular-CLI commands and their usages

```
ng help
```

Creating a component

generating a new component
ng g component test

add a new route in app.routing.ts

```
export const ROUTES: Routes = [  
  ...  
  {path: 'test', component: TestComponent}  
];
```

add a new navigation link in the template app.component.html

```
<div class="header-nav" [clr-nav-level]="1">  
  ...  
  <a class="nav-link" href="#" [routerLink]="['/test']" routerLinkActive="active">  
    <span class="nav-text">Test</span></a>  
</div>
```


Setting up the page

- A **grid** provides a structure of rows and columns for aligning content
- Clarity uses a 12-column, responsive grid
- Replace the content of [home.component.html](#) with the following:

```
<div class="row">  
  <div class="col-sm-12 col-md-8">  
    <span>span 1</span>  
  </div>  
  <div class="col-sm-12 col-md-4">  
    <span>span 2</span>  
  </div>  
</div>
```

Adding a datagrid

- Add the following to the first column div in `home.component.html`:

```
<h3>Pick your Star Wars captain</h3>
<clr-datagrid>
  <clr-dg-column>User ID</clr-dg-column>
  <clr-dg-column>Name</clr-dg-column>

  <clr-dg-row *ngFor="let user of users">
    <clr-dg-cell>{{user.id}}</clr-dg-cell>
    <clr-dg-cell>{{user.name}}</clr-dg-cell>
  </clr-dg-row>

  <clr-dg-footer>{{users.length}} users</clr-dg-footer>
</clr-datagrid>
```

- Define users in `home.component.ts`:

```
users = [ {id: 1, name: "Alice" }, {id: 2, name: "Bob" }];
```

Fetching data through a service

- We'll be using The Star Wars API to fetch data: <https://swapi.co/>

generating a new service

ng g service people

use Angular's Http module to call this API in people.service.ts

```
import {Injectable} from '@angular/core';
```

```
import {Http} from '@angular/http';
```

```
import 'rxjs/add/operator/map';
```

```
@Injectable()
```

```
export class PeopleService {
```

```
  constructor(private http: Http) {}
```

```
  get(page: number = 1) {
```

```
    let restUrl = `https://swapi.co/api/people/?page=${page}`;
```

```
    return this.http.get(restUrl).map(data => data.json());
```

```
  }
```

Consuming our service in the component

- In `home.component.ts`:

```
import {PeopleService} from "../people.service";
```

```
@Component({
```

```
  ...
```

```
  providers: [PeopleService]
```

```
})
```

```
export class HomeComponent {
```

```
  currentPage = 1;
```

```
  people = [];
```

```
  constructor(private peopleService: PeopleService) {
```

```
    this.peopleService.get(this.currentPage).subscribe( data => {
```

```
      console.log(data);
```

```
      this.people = data.results;
```

```
    });
```

```
  }
```

```
}
```

Populating datagrid

- Modify `home.component.html` to display data from the service call:

```
<clr-datagrid>
  <clr-dg-column>Name</clr-dg-column>
  <clr-dg-column>Birth Year</clr-dg-column>
  <clr-dg-column>Gender</clr-dg-column>

  <clr-dg-row *ngFor="let person of people">
    <clr-dg-cell>{{person.name}}</clr-dg-cell>
    <clr-dg-cell>{{person.birth_year}}</clr-dg-cell>
    <clr-dg-cell>{{person.gender}}</clr-dg-cell>
  </clr-dg-row>

  <clr-dg-footer>{{people.length}} people</clr-dg-footer>
</clr-datagrid>
```


Adding pagination - footer

- Modify the footer in `home.component.html`:

```
<clr-dg-footer>
  {{pg.firstItem + 1}}- {{pg.lastItem + 1}} of {{pg.total}} people
  <clr-dg-pagination #pg [(clrDgPage)]="currentPage"
    [clrDgPageSize]="10" [clrDgTotalItems]="total">
  </clr-dg-pagination>
</clr-dg-footer>
```

- Define total in `home.component.ts`:

```
...
total = 0;

constructor(private peopleService: PeopleService) {
  this.peopleService.get(this.currentPage).subscribe( data => {
    ...
    this.total = data.count;
  });
}
```

Fetching data for another page - template

- Add datagrid's properties in `home.component.html`:

```
<clr-datagrid
  (clrDgRefresh)="refresh($event)" [clrDgLoading]="loading">
  ...
  <clr-dg-row *ngFor="let person of people">
    <clr-dg-cell>{{person.name}}</clr-dg-cell>
    ...
  </clr-dg-row>
  ...
</clr-datagrid>
```

Data direction	Syntax
data source (class) to view target (html)	{{expression}} or [target]="expression"
view target (html) to data source (class)	(target)="statement"
Two-way	[(target)]="expression"

Fetching data for another page - component

- Define variables and refresh function in `home.component.ts`:

```
export class HomeComponent {  
  ...  
  selected;  
  loading = true;  
  constructor(private peopleService: PeopleService) {}  
  refresh(state: State) {  
    this.loading = true;  
    this.peopleService.get(this.currentPage).subscribe( data => {  
      ...  
      this.loading = false;  
    });  
  }  
}
```

Enabling selection

- Add datagrid's properties for selection in `home.component.html`:

```
<clr-datagrid [(clrDgSingleSelected)]="selected"  
  (clrDgRefresh)="refresh($event)" [clrDgLoading]="loading">  
  ...  
  <clr-dg-row *ngFor="let person of people" [clrDgItem]="person">  
    ...  
  </clr-dg-row>  
  ...  
</clr-datagrid>
```

Displaying selection (1)

- Add a card to the other column in `home.component.html`:

```
<ng-container *ngIf="selected">
  <h3>You've selected</h3>
  <div class="card">
    <div class="card-header">
      {{selected.name}}
    </div>
    <div class="card-block">
      ...
    </div>
    <div class="card-footer">
      ...
    </div>
  </div>
</ng-container>
```


Displaying selection (2)

- Fill out card-block with data in `home.component.html`:

```
<div class="card">
  ...
  <div class="card-block">
    <ul>
      <li>Height: {{selected.height}}</li>
      <li>Mass: {{selected.mass}}</li>
      <li>Hair Color: {{selected.hair_color}}</li>
      <li>Eye Color: {{selected.eye_color}}</li>
    </ul>
  </div>
  ...
</div>
```

Displaying selection (3)

- Fill out card-block with data in `home.component.html`:

```
<div class="card">
```

```
...
```

```
<div class="card-footer">
```

```
<div class="row">
```

```
<div class="col-sm-6 col-md-6">
```

```
<dr-icon shape="car"></dr-icon>
```

```
{{selected.vehicles.length}} vehicles
```

```
</div>
```

```
<div class="col-sm-6 col-md-6">
```

```
<dr-icon shape="plane"></dr-icon>
```

```
{{selected.starships.length}} starships
```

```
</div>
```

```
</div>
```

```
</div>
```

```
</div>
```

Extra - adding a tooltip

- A tooltip can provide more information to the user:

```
<clr-dg-  
column>  
Birth Year  
<clr-tooltip>  
  <clr-icon clrTooltipTrigger shape="info-circle"></clr-icon>  
  <clr-tooltip-content clrPosition="right" clrSize="md" *drIfOpen>  
    <span>BBY - Before the Battle of Yavin</span>  
  </clr-tooltip-content>  
</clr-tooltip>  
</clr-dg-column>
```

Extra - adding an alert inside the card

```
<div class="card-block">
  <clr-alert *ngIf="selected.starships.length == 0"
    [clrAlertSizeSmall]="true" [clrAlertType]="warning">
    <div class="alert-item">
      <span class="alert-text">
        {{selected.name}} has no starships. May be difficult to get around.
      </span>
    </div>
  </clr-alert>
  ...
</div>
```

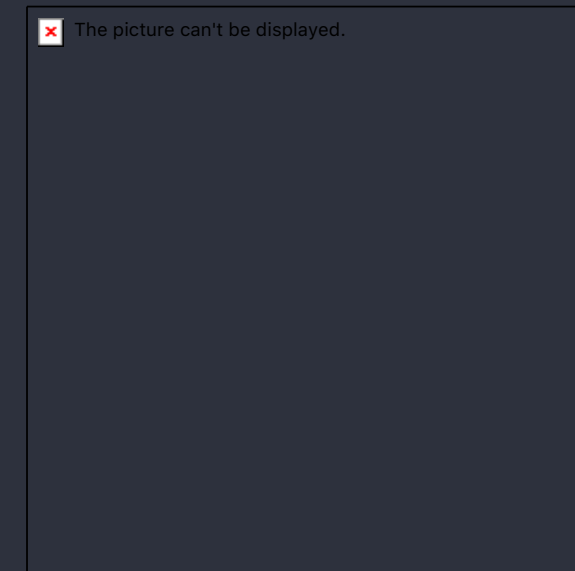
The Final Product



Resources



git.io/vmworld-clarity



bit.ly/vmworld-clarity

Thank You!

Q&A