

Developing React Web Parts



Agenda

- Designing and Developing React Web Parts
- Web Part Properties versus React Component State
- Leveraging the Office UI Fabric React Library
- Developing Web Parts using the SharePoint REST API
- Designing Web Parts to Manage SharePoint Lists



What is the Office UI Fabric?

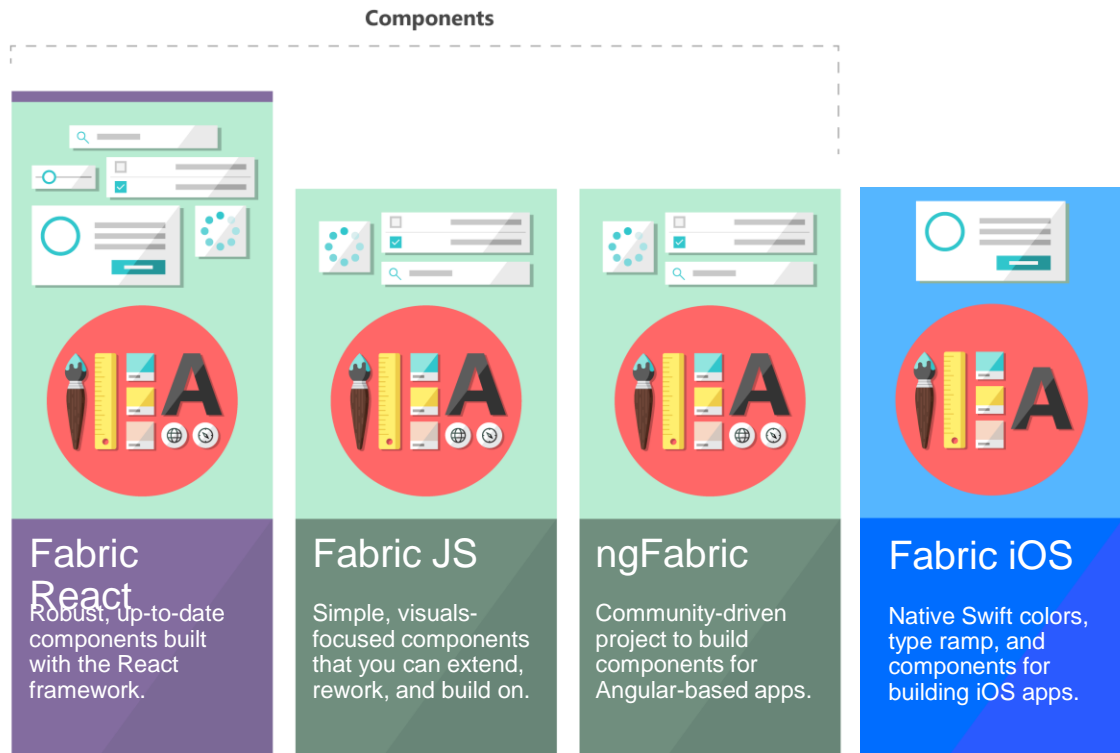
- Office UI Fabric is responsive, mobile-first, front-end style framework
 - Built by Microsoft to style Office 365, OneDrive and SharePoint sites
 - All about styling instead of JavaScript
 - Can be used by 3rd party developers



Fabric Core

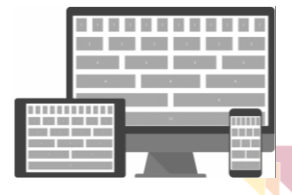
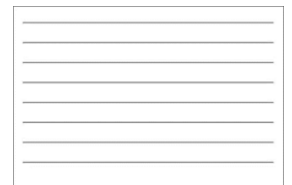
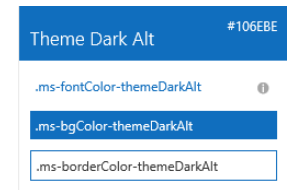
Core elements of the design language including icons, colors, type, and the grid

or



Fabric Core styling

- Fonts and typography
 - Segoe font family + type ramp
 - Official Office 365 iconography
- Color
 - Official Office 365 color palette
- Branded assets
 - Product symbols + product filetype symbols
- Animations
 - Official Office 365 selection of easings and animations
- Responsive grid
 - Tailored to Office 365 silhouettes



Styles

- The Office UI Fabric provides styles for..
 - Typography
 - Color
 - Icons
 - Animations
 - Responsive Grid
 - Localization



Typography

- Base font classes
 - Fabric includes 10 base font classes
 - Each base class sets a default size, weight, and color.

Class	Size	Weight	Color
.ms-font-su	42px	Segoe UI Light	ms-color-neutralPrimary
.ms-font-xxl	28px	Segoe UI Light	ms-color-neutralPrimary
.ms-font-xl	21px	Segoe UI Light	ms-color-neutralPrimary
.ms-font-l	17px	Segoe UI Semilight	ms-color-neutralPrimary



Typography

- Helper font classes
 - There are helper font classes to change the text weight.

Class	Weight
<code>.ms-fontWeight-light</code>	Light
<code>.ms-fontWeight-semilight</code>	Semilight
<code>.ms-fontWeight-regular</code>	Regular
<code>.ms-fontWeight-semibold</code>	Semi Bold



Color

- Includes 9 theme colors and 11 neutral colors.
 - Helper classes for text, border, background, and hover states.
 - Color classes act as hooks into the Office 365 theming system

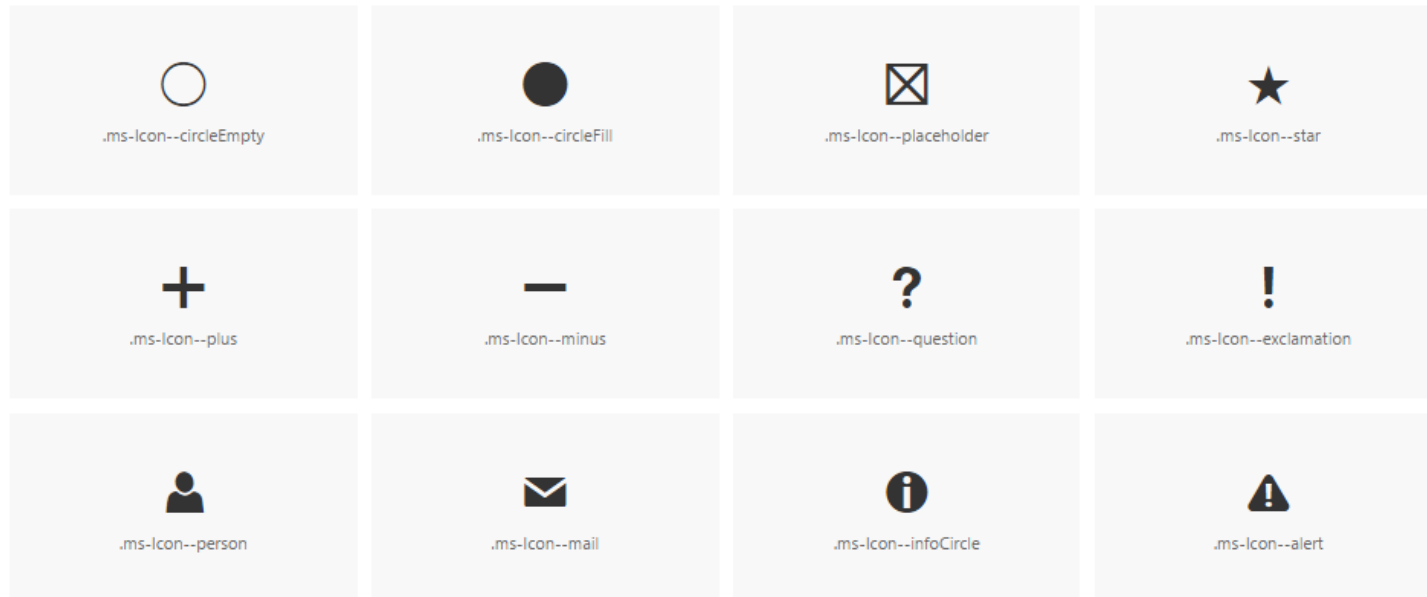
Theme colors		Neutral colors	
themeDarker	#00457b	black	#000000
themeDark	#005a9e	neutralDark	#212121
themeDarkAlt	#105ebe	neutralPrimary	#333333
themePrimary	#0078d7	neutralPrimaryAlt	#3c3c3c
themeSecondary	#2b88d8	neutralSecondary	#666666
themeTertiary	#71a1e5	neutralTertiary	#a6a6a6
themeLight	#c7e0f4	neutralTertiaryAlt	#c8c8c8
themeLighter	#deeef9	neutralLight	#eaeaea
themeLighterAlt	#f9f9f9	neutralLighter	#f4f4f4
		neutralLighterAlt	#f9f9f9
		white	#ffffff

Accent colors			
Yellows	Oranges	Reds	Magentas
yellow #ff9900	orange #d95319	redDark #a60000	magentaDark #5c005c
yellowLight #ffff00	orangeLight #e69138	red #e61e23	magenta #5c005c
	orangeLighter #ffcc00		magentaLight #e600e6
Purples	Blues	Teals	Greens
purpleDark #32145a	blueDark #002060	tealDark #004d40	greenDark #004d00
purple #5c2d91	blueMid #0056b3	teal #008064	green #008000
purpleLight #b4a0ff	blue #0078d7	tealLight #00b094	greenLight #90ee90
	blueLight #00b0f2		



Icons

- Fabric uses a custom font for its iconography.
 - Font contains glyphs you can scale, color, and style



Icons

- To use the icons, combine the base **ms-Icon** class with a modifier class for the specific icon.

```
<i class="ms-Icon ms-Icon--mail" aria-hidden="true"></i>
```



.ms-Icon--xCircle



.ms-Icon--mailOpen



.ms-Icon--people



.ms-Icon--bell



.ms-Icon--calendar



.ms-Icon--scheduling



.ms-Icon--event



.ms-Icon--folder



Dialog animations

- When choosing a motion for dialogs, consider the origin and tone of the content.
- For a warning or error dialog, a quick fade in might be appropriate.
- If the dialog appears when a user chooses an item to get more information, a scale-up might be appropriate.

CSS Class	Description	Cubic Bezier	Timing
ms-u-scaleUpIn100	Scale up to 100% and fade in	0.1, 0.9, 0.2, 1	0.167s

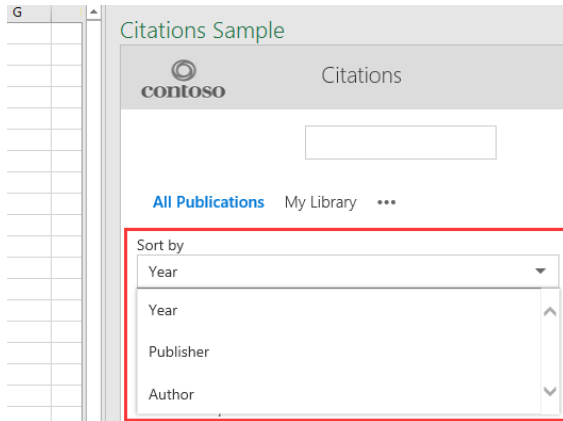


Office UI Fabric Components

- Fabric's components are building blocks for UI
 - All JavaScript is presentational to explain behavior.



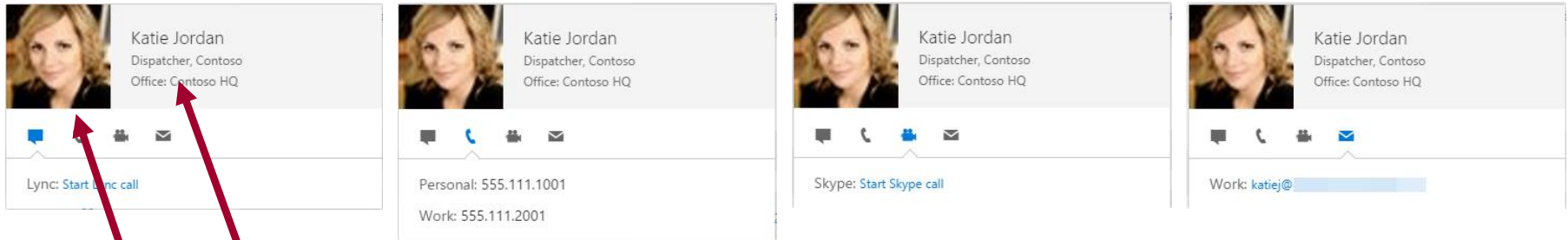
Dropdown



```
<div class="ms-Dropdown" tabindex="0" style="width:80%">
  <i class="ms-Dropdown-caretDown ms-Icon ms-Icon--caretDown"></i>
  <select class="ms-Dropdown-select">
    <option>Year</option>
    <option>Publisher</option>
    <option>Author</option>
  </select>
</div>
```



Persona Card



Bind Data With Server Side or Client Side Code

Property Management Server Side example - <https://github.com/OfficeDev/Property-Inspection-Code-Sample>

```
<div class='details-block'>
  @foreach (var item in Model.members)
  {
    <div class="content-row">
      <div class="ms-Persona ms-Persona ms-Persona--square ms-Persona--xs">
        <div class="ms-Persona-imageArea">
          
        </div>
        <div class="ms-Persona-details">
          <div class="ms-Persona-primaryText">
            @item.displayName
          </div>

```

