

Microsoft 365 Development: Atomic Component Design

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Working with SharePoint since 2007

Microsoft MVP, Office Apps and Services since 2017

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Open-source project co-maintainer: PnPjs & hTWOo



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SYMPRAXIS
CONSULTING

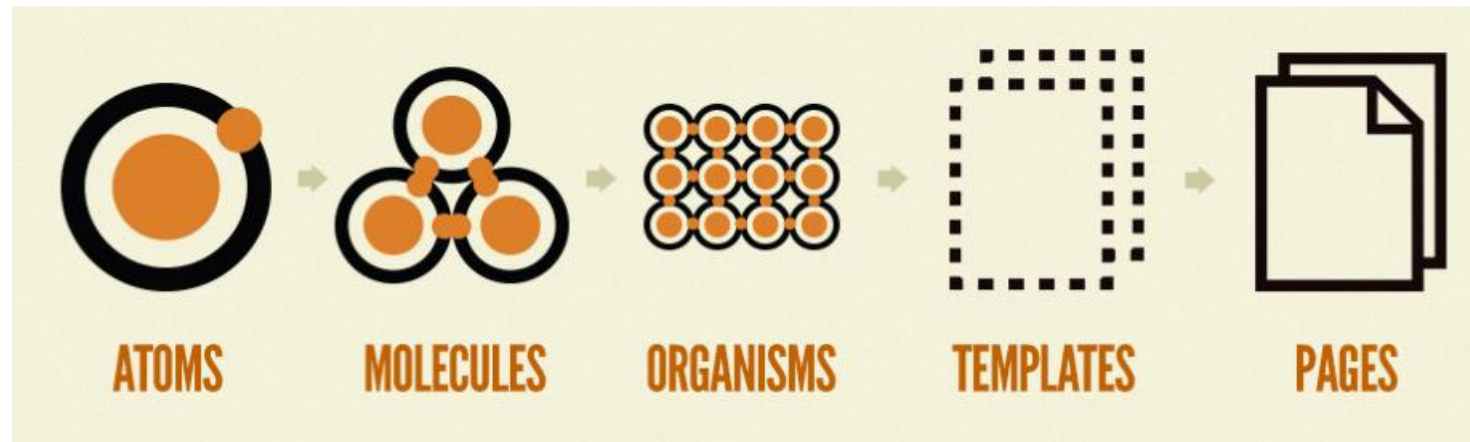


Agenda

- ◆ What is Atomic Design
- ◆ Utilizing a Design Framework
- ◆ Build a simple example from scratch
- ◆ Review more complex examples

What is Atomic Design

- ♦ Atomic design is a methodology for creating design systems. There are five distinct levels in atomic design*



*Atomic Design | Brad Frost

Atoms

- ✦ Atoms are the basic building blocks of matter. Applied to web interfaces, atoms are our HTML tags, such as a form label, an input or a button.

SEARCH THE SITE	LABEL
ENTER KEYWORD	INPUT
SEARCH	BUTTON

Molecules

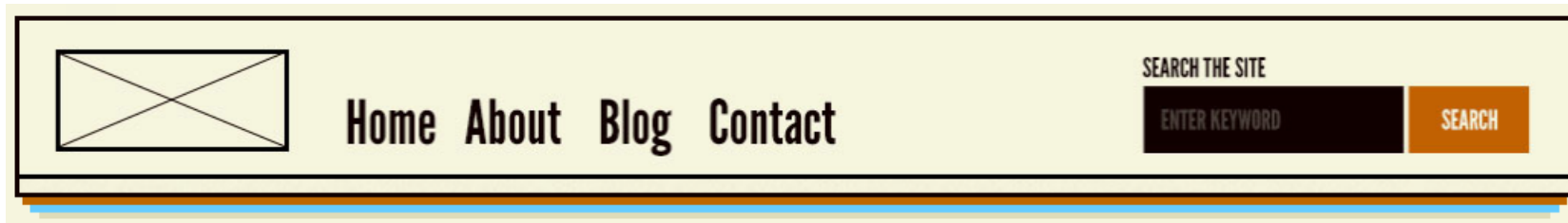
- ◆ Molecules are groups of atoms bonded together and are the smallest fundamental units of a compound.

SEARCH THE SITE

ENTER KEYWORD	SEARCH
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Organisms

- ◆ Molecules give us some building blocks to work with, and we can now combine them together to form organisms. Organisms are groups of molecules joined together to form a relatively complex, distinct section of an interface.



Utilizing a Design Framework

- ✦ Choose a flexible framework – Think LEGO blocks
- ✦ When extending a platform, make sure you can customize to adhere to its standards.
- ✦ Completely acceptable to use a design framework that has a component implementation for your DX framework of choice (ReactJS, AngularJS, Vue, etc)

Microsoft 365 Design Framework Options

◆ Fluent UI – FKA Office Fabric UI – FKA Northstar

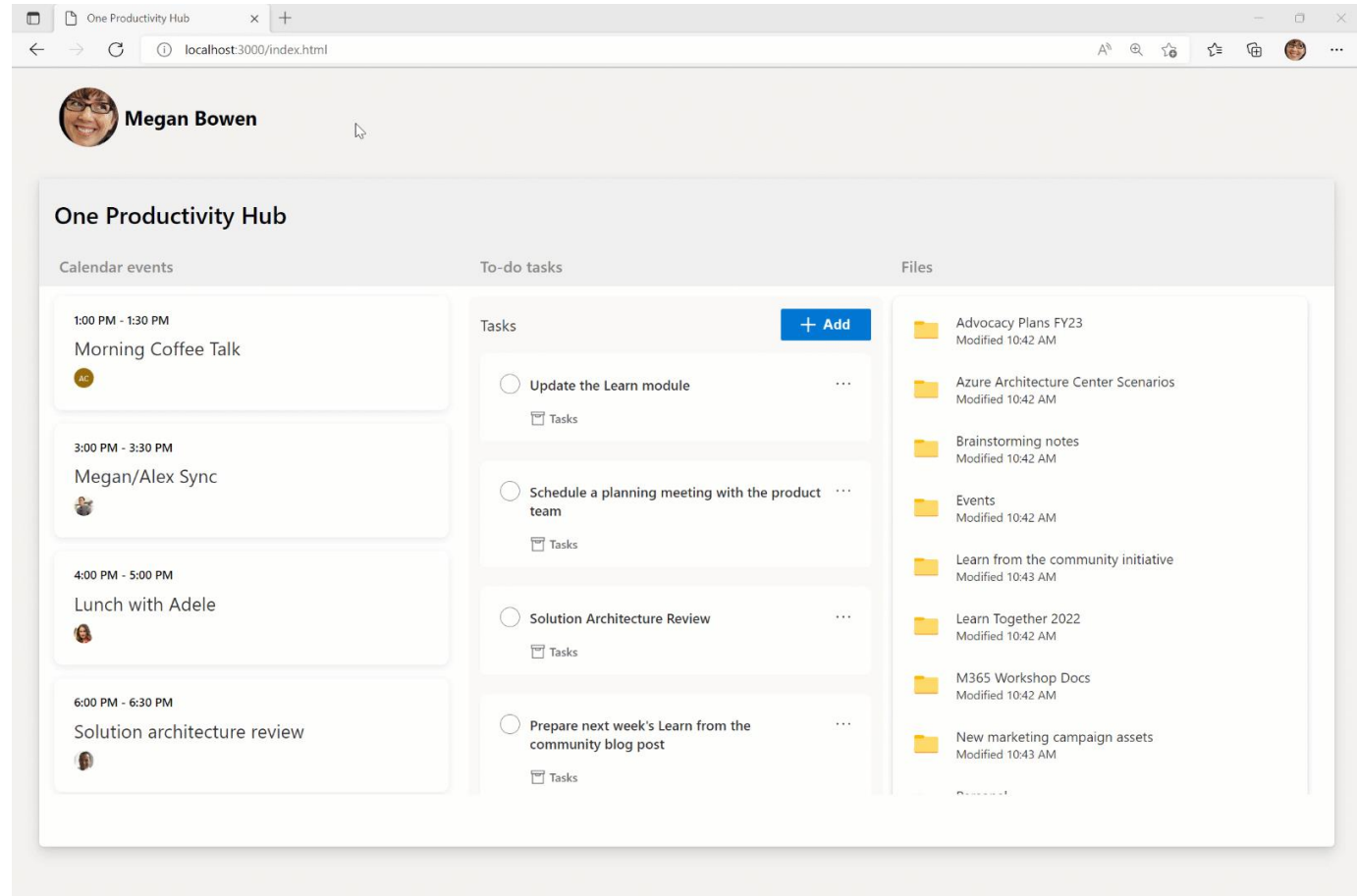
- ◆ CSS Classes and SASS mixins for colors, fonts, icons (font based), animations, grid
- ◆ No HTML/CSS component library
- ◆ Has REACT library – Uses CSS-in-JS
- ◆ Technical debt upgrading between major versions-> Fluent UI GitHub
- ◆ Figma Design Guides

◆ HTWOO – Open-Source Community Project

- ◆ Pure HTML/CSS solutions
- ◆ REACT component library – provides extendibility to rootElementAttributes (and more)
- ◆ Extendible Style-Guide built on Pattern Labs
- ◆ SVG based Icon Library

Data Bound Component Options

- ◆ Microsoft Graph Toolkit Web Components
 - ◆ Uses FluentUI Web Components built with FAST
- ◆ PnP Reusable React Controls
 - ◆ Uses FluentUI v9
 - ◆ Version 3.x is bound to PnPjs v2.x which is no longer supported



Build a Simple Example



Welcome to your hTWOo Splash card

This shows the base setup of a teams splash card setup and I'am out of futher
text here

Create something

Call for action

<https://lab.n8d.studio/htwoo/htwoo-core/?p=pages-teams-splash-screen>

Build a Simple Example



Component snippet

```
import * as React from "react";

export interface ITemplateProps {}

export interface ITemplateState {}

export class TemplateState implements ITemplateState {
  constructor() {}
}

export default class Template extends React.PureComponent<ITemplateProps, ITemplateState> {
  private LOG_SOURCE: string = "◆Template";

  constructor(props: ITemplateProps){
    super(props);
    this.state = new TemplateState();
  }

  public render(): React.ReactElement<ITemplateProps> {
    try{
      return (
        <div data-component={this.LOG_SOURCE}>
        </div>
      );
    } catch (err) {
      console.error(`${this.LOG_SOURCE} (render) - ${err}`);
      return null;
    }
  }
}
```



Define



Define

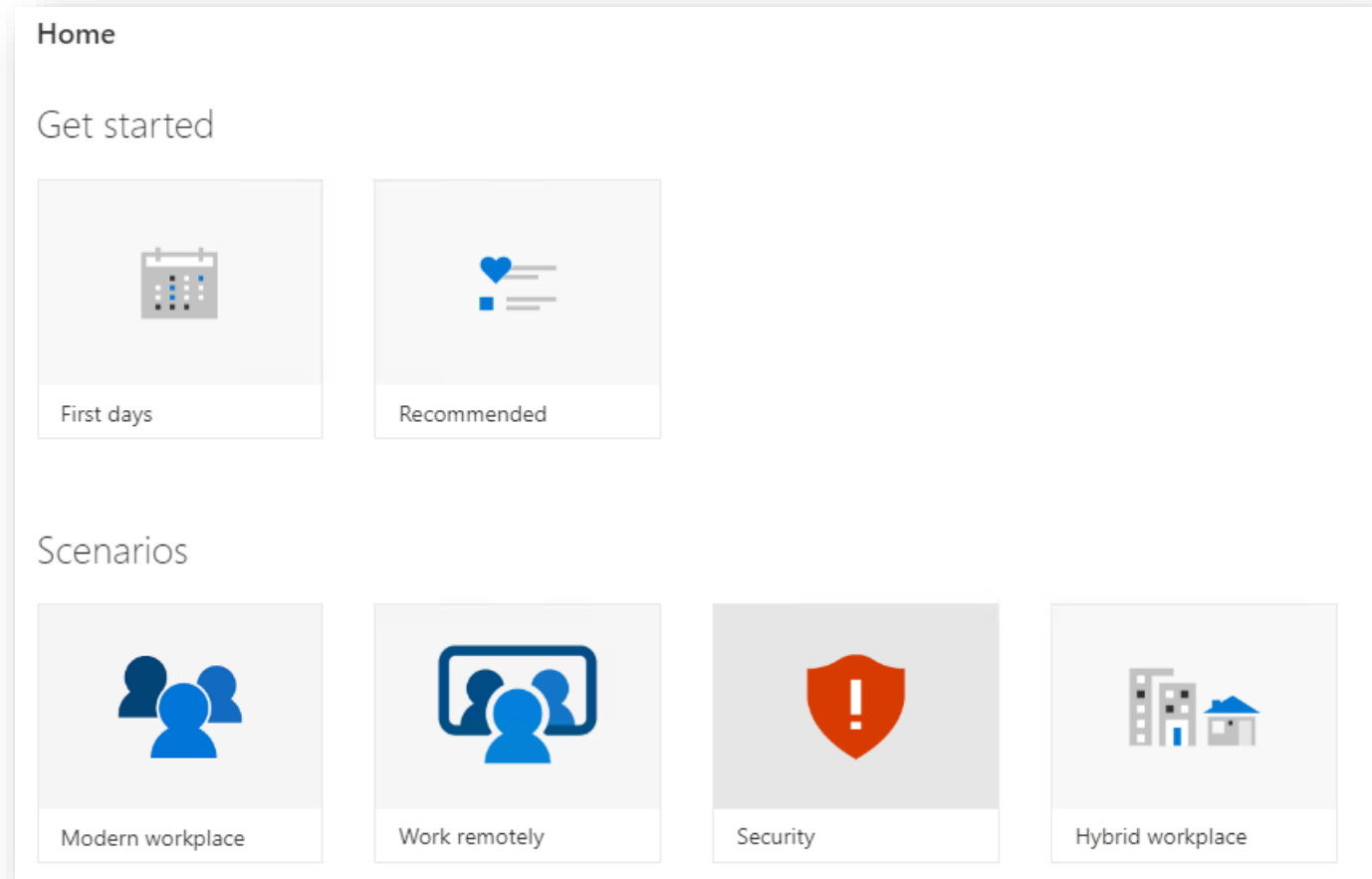


Define

Demo

Component Guidelines – NOT Rules

◆ Repeated objects



Component Guidelines – NOT Rules

✦ UX behavior isolation

Microsoft 365 learning pathways


SharePoint Success Site

Julie's Content Pack

...


?

Category ▾



Custom Content Pack

Custom Content Packs are an advanced feature and should only be used by Admins with experience administrating web content. Untrustworthy content sources may introduce unsafe content into your site. You... should only add sources that you trust. For more information, see Partner Guidance in the learning pathways documentation.



SharePoint Success Site

Add the SharePoint Success Site content pack to access playlists that support training new SharePoint Site owners on how to create high-impact sites.

Content Pack Id/Partner Id *

9c9e1780-2eba-4451-9f97-10e952a07994

Display Name *

Base URL *

The base url for the CDN must end in a (/).

Save

Cancel

A new browser tab has been started that will allow you to provision the new content pack. When you have successfully done so, click 'Complete' below to update the alternate content list. If you have an error or choose not to install the content pack, please click 'Cancel'; you can come back at any time.

Complete

Cancel

Component Guidelines – NOT Rules

◆ Reusability

Home > Recommended

Excel

All Playlists Assets

Add a trend or moving average line to a chart
Playlist: Charts

Analyze and format
Playlist: Excel Quick Start

Analyze your data quickly
Playlist: Charts

Automatically number rows
Playlist: Common use of functions

Available number formats in Excel
Playlist: Formatting

1 2 3 4 5 >>

Playlist Assets

+ New Asset Excel

Current Playlist: Search Results

Add Selected Assets

- ☐ Add a trend or moving average line to a chart
Technology: Excel
- ☐ Add a watermark in Excel
Technology: Excel
- ☐ Add or remove a secondary axis in a chart in Excel
Technology: Excel
- ☐ Add or remove titles in a chart
Technology: Excel
- ☐ Align or rotate text in a cell
Technology: Excel

1 2 3 4 5 >>

Resources

Atomic Design | Brad Frost:

<https://bradfrost.com/blog/post/atomic-web-design/>

Pattern Labs

<https://patternlab.io/>

HTWOO Home:

<https://lab.n8d.studio/htwoo/>

Including 3rd Party CSS in SharePoint Framework:

<https://n8d.at/update-on-how-to-include-3rd-party-css-in-sharepoint-framework>

Component Snippet:

<https://symp.info/component-snippet>



<https://julieturner.net/me>