

# Designing and Developing PowerApps Portals



# Agenda

- PowerApps Portal Architecture
  - Portal Editor
  - Portal Management App
  - Portal Configuration
  - Developing Web Templates



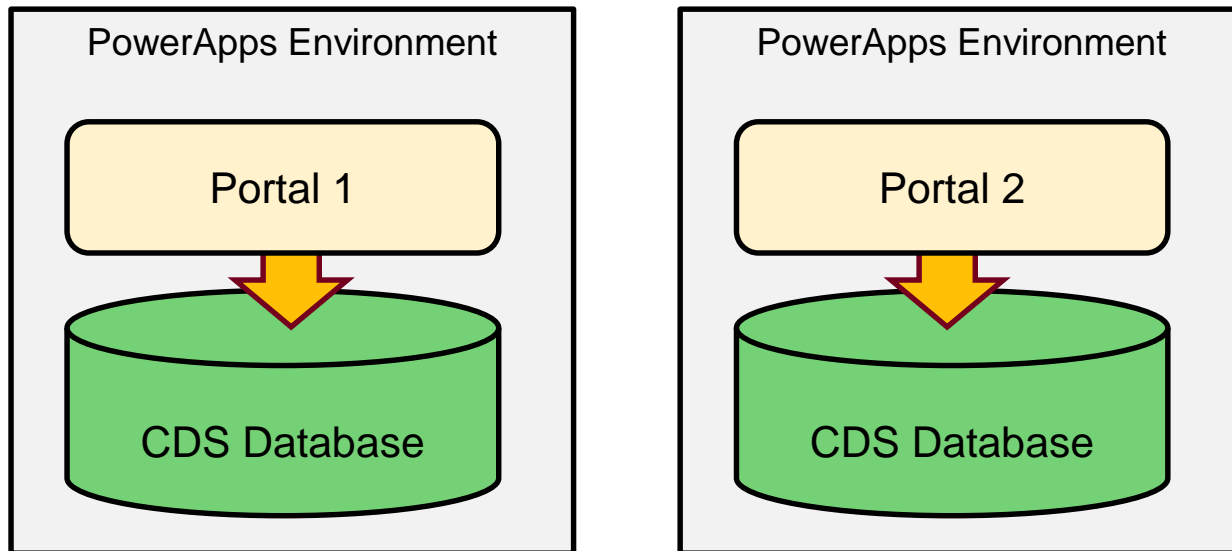
# PowerApps Portals

- PowerApps portals provide web development platform
  - Create websites for anonymous users and/or authenticated user
  - Allows for authentication through LinkedIn, Facebook, Twitter, etc.
- Portal content managed by business users
  - Portal Editor used to add pages and author content
  - Portal Management app created along with portal
- Portal can be customized by web developers
  - Portal can be extended with custom web templates
  - Web templates can be written to access CDS entities



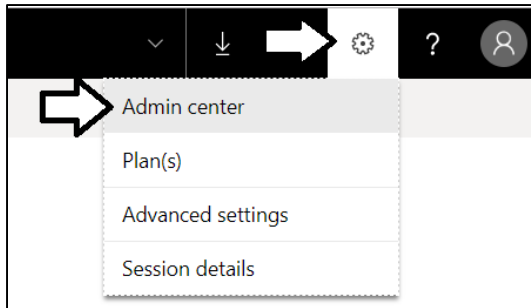
# PowerApps Portal Architecture

- PowerApps portals built on Common Data Service
  - You must create a environment with CDS database to create portal
  - CDS used to track data for pages, templates and site content
  - Creating portals triggers installation of several ADX solutions

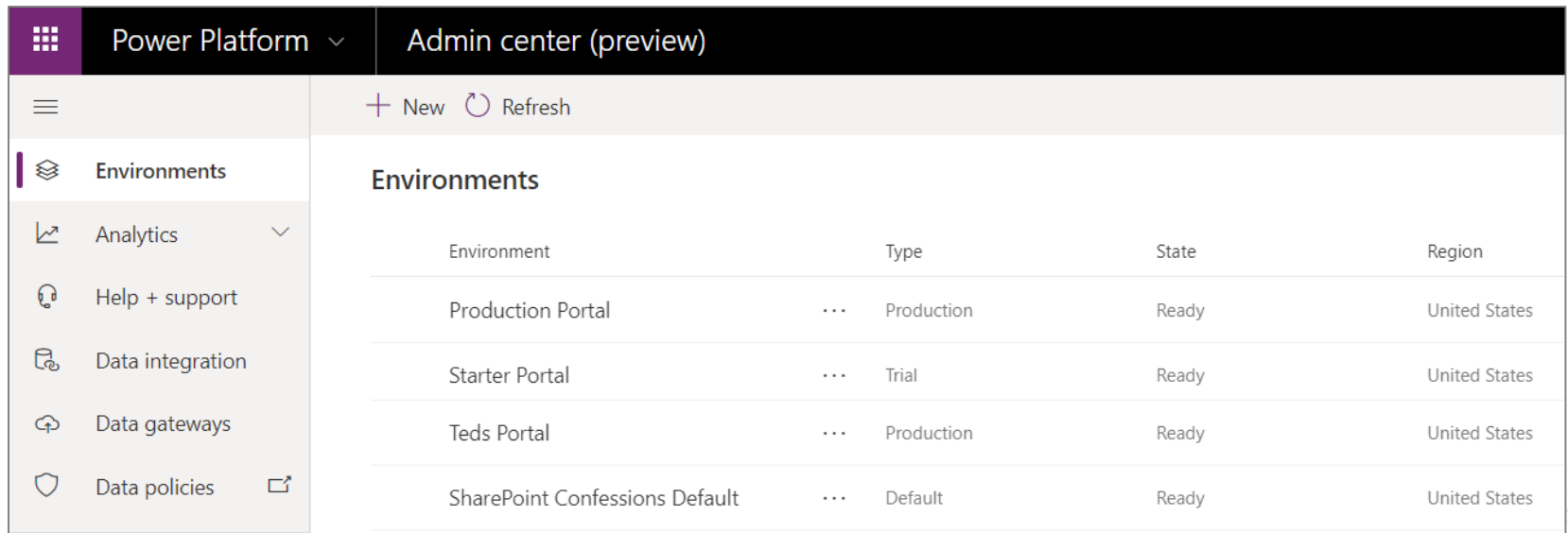


# This Isn't Your Father's PowerApps Admin Center

- Navigate to the new PowerApps admin center



- Admin center allows you to create and manage environments

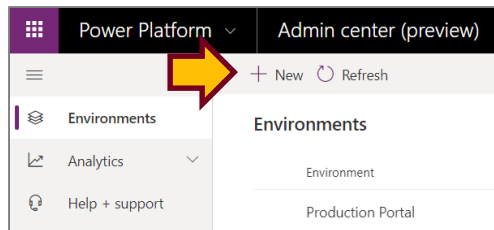


The screenshot shows the Power Platform Admin center (preview) interface. The left sidebar contains navigation links: Environments, Analytics, Help + support, Data integration, Data gateways, and Data policies. The main content area is titled 'Environments' and features a table with the following data:

| Environment                    | Type       | State | Region        |
|--------------------------------|------------|-------|---------------|
| Production Portal              | Production | Ready | United States |
| Starter Portal                 | Trial      | Ready | United States |
| Teds Portal                    | Production | Ready | United States |
| SharePoint Confessions Default | Default    | Ready | United States |

# Creating a New Environment

- Use New command in the new admin center



### New environment

**Name \***

**Type ⓘ \***

Trial

**Region \***

Local environments can provide quicker data access.

United States - Default

**Purpose**

Describe the environment purpose

**Create a database for this environment? ⓘ**

☒ Yes

Next

Cancel

### Add database

**Language \***

Default language for user interfaces in this environment

English

**Currency \***

Reports will use this currency

USD (US\$)

**Enable Dynamics 365 apps**

In addition to PowerApps. [Learn more](#)

☐ No

**Deploy sample apps and data**

☐ No

**Security group**

Restrict environment access to people in this security group. Otherwise, everyone can access. [Learn more](#)

Save

Cancel



# Configuring Environment Features

The screenshot displays the Power Platform Admin center interface. The top navigation bar includes the Power Platform logo, a dropdown menu, and the text "Admin center (preview)". The left sidebar contains a menu with "Environments" (selected) and "Admin centers". The main content area shows the breadcrumb "Environments > Starter Portal > Settings". Under the "Product" section, the "Features" link is highlighted. The right sidebar lists various configuration options under "Email", "Services", and "Data management".

Power Platform ▾ Admin center (preview)

Environments > Starter Portal > Settings

**Product**

- Behavior
- Features
- Languages ↗
- Privacy + Security

**Business**

- Business closures ↗
- Calendar ↗
- Currencies ↗
- Regional formatting ↗

**Users + permissions**

- Business units ↗
- Hierarchy security ↗
- Positions ↗
- Security roles ↗
- Teams ↗
- Users ↗

**Email**

- Email settings
- Email tracking
- Mailboxes ↗
- Server profiles ↗

**Services**

- Microsoft Social Engagement ↗

**Data management**

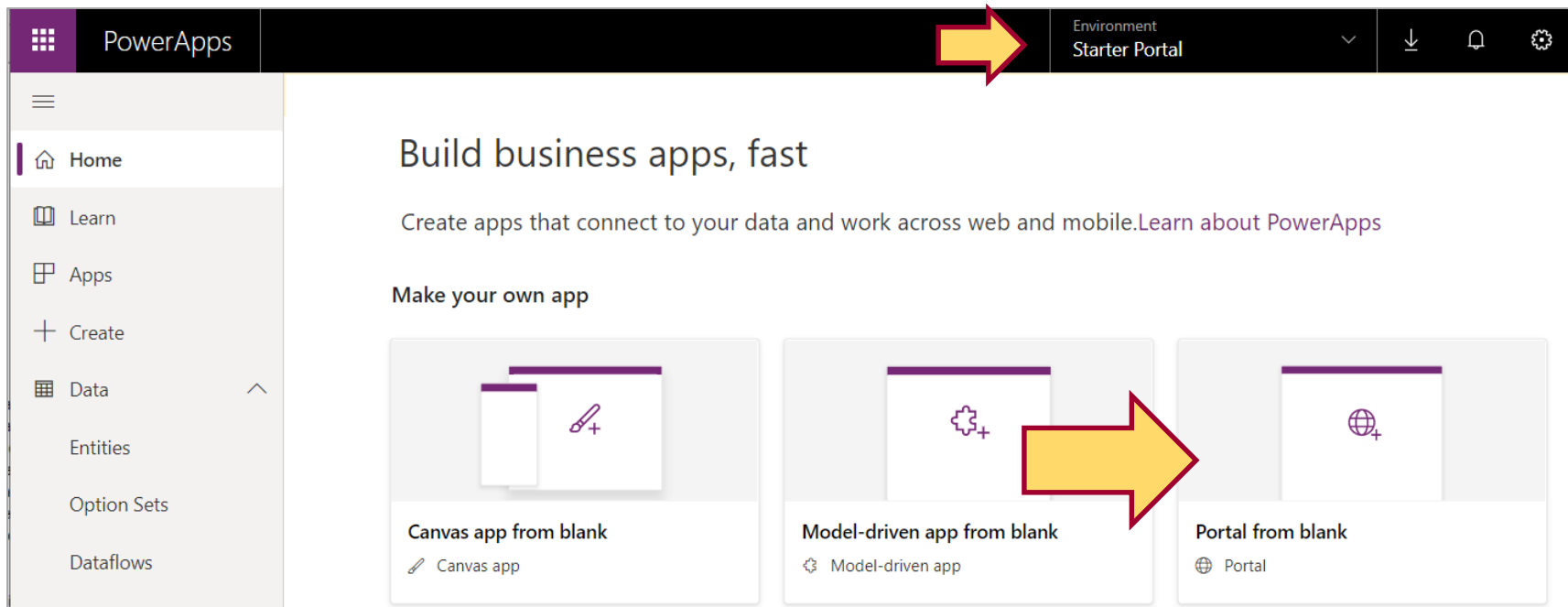
- Announcements ↗
- Auto numbering ↗
- Automatic record creation policies ↗
- Bulk deletion ↗
- Data import wizard ↗
- Data maps ↗
- Duplicate detection ↗
- Mobile configuration ↗
- Templates ↗





# Creating a New PowerApps Portal

- New portal created using PowerApps Maker Portal
  - Select your target environment
  - Create portal using **Portal from blank** template







# Providing Portal Provisioning Data

- Portal requires Name and unique address

**Portal from blank**



Create a website to share data with external and internal users. This template comes with sample pages to get you quickly started. [Learn more](#)

 Portal

① We'd need to install certain prerequisites for try portals, use an environment with them installed or create a new one using [Create new environment](#)

Name \*  
Teds Starter Portal

Address \* ①  
TedsStarterPortal

✓ TedsStarterPortal.powerappsportals.com

Language  
English

By clicking on Create, you agree to our [Privacy Statement](#) and the [Terms of service](#).

Create Cancel

Name \*

Teds Starter Portal

Address \* ①

TedsStarterPortal

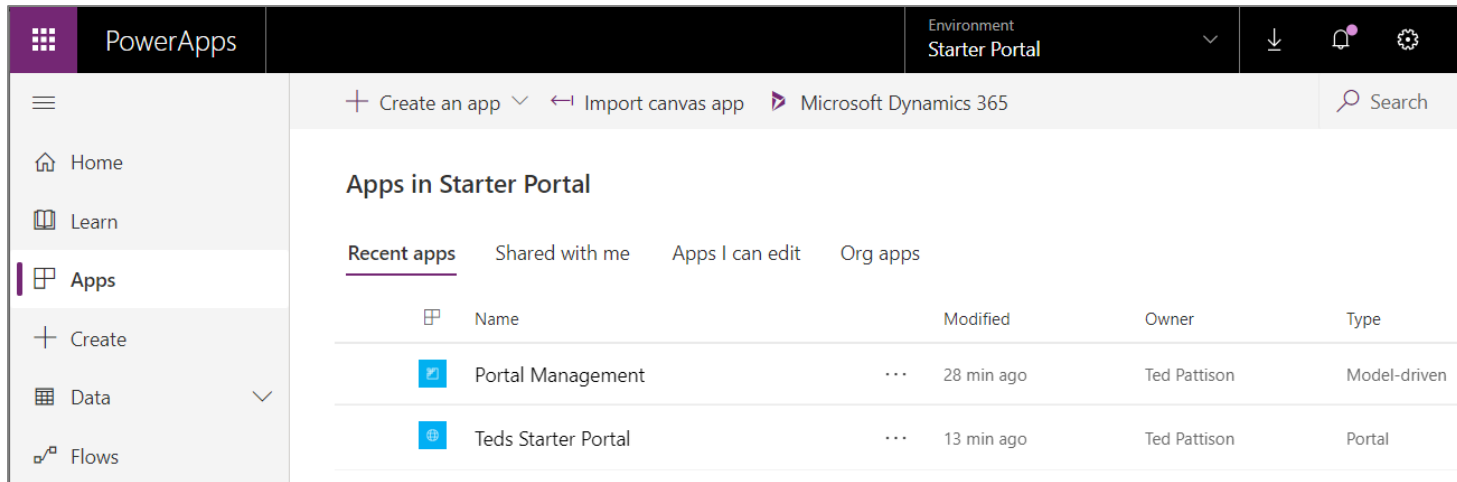
.powerappsportals.com

✓ TedsStarterPortal.powerappsportals.com

| Environment  |   |   |   |      |
|--|---|---|---|------|
| Starter Portal   | ▼ | ↓ | 🔔 | ⚙️ ? |
| <div>Portal provisioning in progress</div> <p>Your portal Teds Starter Portal is currently being provisioned and this can take time. You'll be notified via Notifications pane once it is provisioned.</p> |   |   |   |      |

# Portal Apps

- Provisioning a portal creates two applications
  - PowerApps portal
  - Model-driven app named **Portal Management**

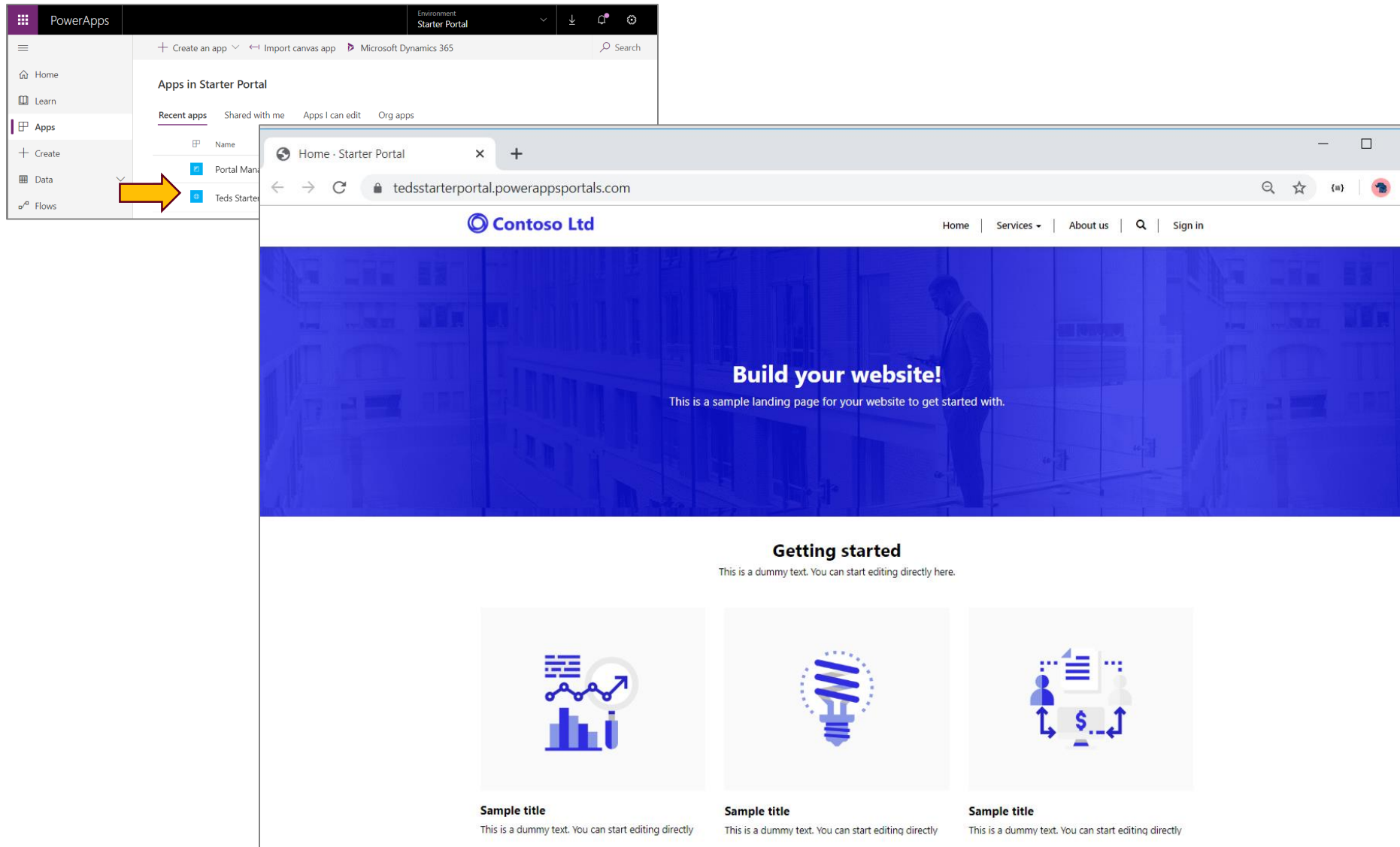


The screenshot shows the PowerApps interface with the 'Apps' tab selected. The main area displays 'Apps in Starter Portal' with a table of recent apps. The table has columns for Name, Modified, Owner, and Type. Two apps are listed: 'Portal Management' (Model-driven) and 'Teds Starter Portal' (Portal).

| Name                | Modified   | Owner        | Type         |
|---------------------|------------|--------------|--------------|
| Portal Management   | 28 min ago | Ted Pattison | Model-driven |
| Teds Starter Portal | 13 min ago | Ted Pattison | Portal       |



# Launching the Portal



The image shows the process of launching a PowerApps portal. On the left, the PowerApps application interface is visible, with a sidebar containing 'Home', 'Learn', 'Apps', 'Create', 'Data', and 'Flows'. A yellow arrow points from the 'Apps' section to the 'Apps in Starter Portal' pane. This pane lists 'Recent apps' including 'Portal Manager' and 'Teds Starter Portal'. On the right, a web browser window displays the 'Home - Starter Portal' page. The browser's address bar shows the URL 'tedsstarterportal.powerappsportals.com'. The page features a blue header with the 'Contoso Ltd' logo and navigation links for 'Home', 'Services', 'About us', and 'Sign in'. The main content area has a blue background with the text 'Build your website!' and 'This is a sample landing page for your website to get started with.' Below this, a section titled 'Getting started' contains three placeholder cards, each with an icon and the text 'Sample title' and 'This is a dummy text. You can start editing directly'.

PowerApps

Environment: Starter Portal

+ Create an app | Import canvas app | Microsoft Dynamics 365

Search

Apps in Starter Portal

Recent apps | Shared with me | Apps I can edit | Org apps

Portal Manager

Teds Starter Portal

Home - Starter Portal

tedsstarterportal.powerappsportals.com

Contoso Ltd

Home | Services | About us | Sign in

**Build your website!**

This is a sample landing page for your website to get started with.

**Getting started**

This is a dummy text. You can start editing directly here.

**Sample title**

This is a dummy text. You can start editing directly

**Sample title**

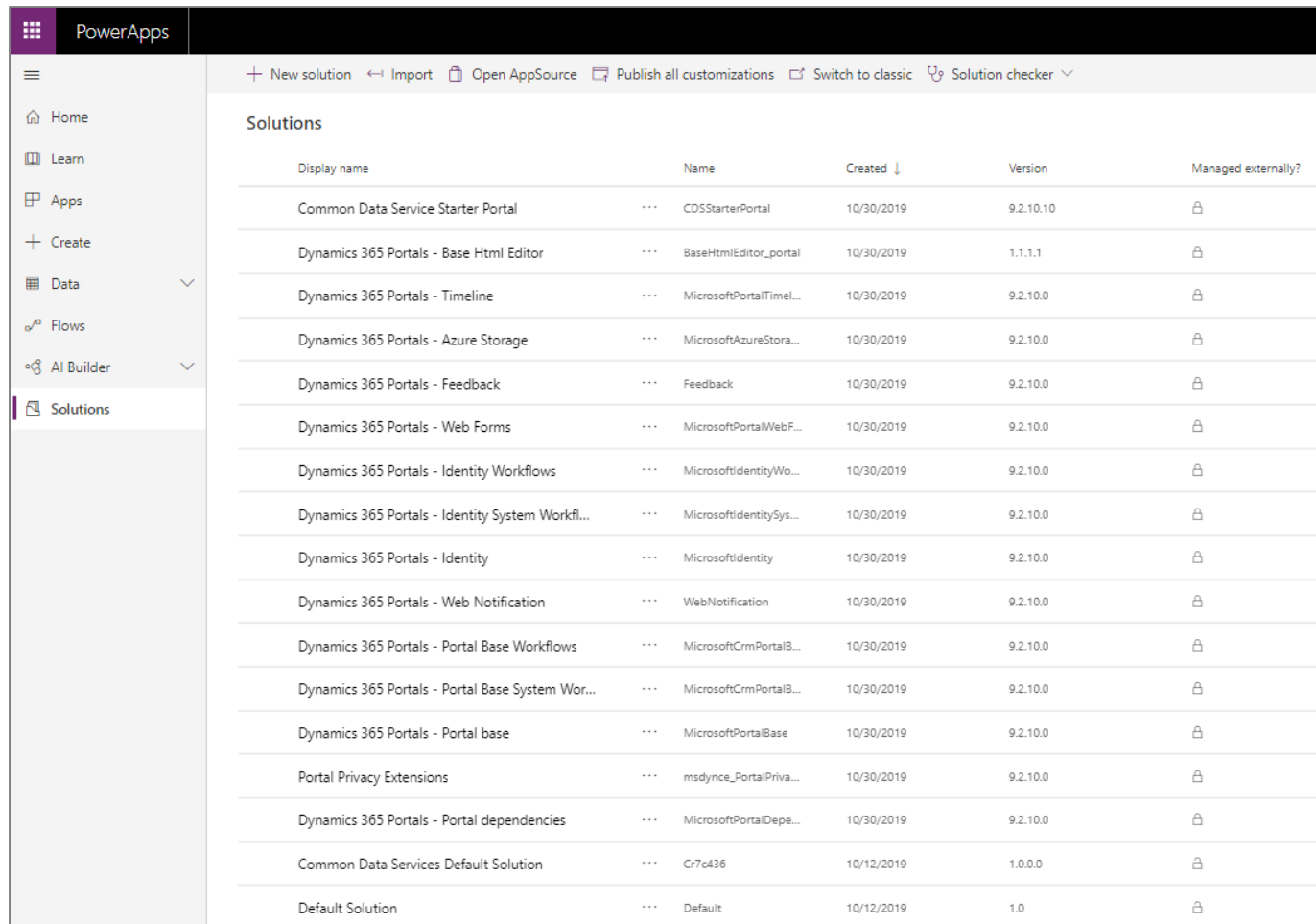
This is a dummy text. You can start editing directly

**Sample title**

This is a dummy text. You can start editing directly

# Solutions Installed to Support Portals

- Creation of portal triggers installation of ADX solutions



The screenshot displays the PowerApps interface with the 'Solutions' tab selected in the left-hand navigation pane. The main area shows a table of installed solutions. At the top of the table area, there are buttons for '+ New solution', 'Import', 'Open AppSource', 'Publish all customizations', 'Switch to classic', and 'Solution checker'. The table has columns for 'Display name', 'Name', 'Created', 'Version', and 'Managed externally?'. The solutions listed include various Dynamics 365 Portal components and extensions, all created on 10/30/2019, except for the 'Common Data Services Default Solution' and 'Default Solution' which were created on 10/12/2019.

| Display name                                     | Name                    | Created ↓  | Version   | Managed externally? |
|--|-------------------------|------------|-----------|---------------------|
| Common Data Service Starter Portal               | CD5StarterPortal        | 10/30/2019 | 9.2.10.10 | 🔒                   |
| Dynamics 365 Portals - Base Html Editor          | BaseHtmlEditor_portal   | 10/30/2019 | 1.1.1.1   | 🔒                   |
| Dynamics 365 Portals - Timeline                  | MicrosoftPortalTimel... | 10/30/2019 | 9.2.10.0  | 🔒                   |
| Dynamics 365 Portals - Azure Storage             | MicrosoftAzureStora...  | 10/30/2019 | 9.2.10.0  | 🔒                   |
| Dynamics 365 Portals - Feedback                  | Feedback                | 10/30/2019 | 9.2.10.0  | 🔒                   |
| Dynamics 365 Portals - Web Forms                 | MicrosoftPortalWebF...  | 10/30/2019 | 9.2.10.0  | 🔒                   |
| Dynamics 365 Portals - Identity Workflows        | MicrosoftIdentityWo...  | 10/30/2019 | 9.2.10.0  | 🔒                   |
| Dynamics 365 Portals - Identity System Workfl... | MicrosoftIdentitySys... | 10/30/2019 | 9.2.10.0  | 🔒                   |
| Dynamics 365 Portals - Identity                  | MicrosoftIdentity       | 10/30/2019 | 9.2.10.0  | 🔒                   |
| Dynamics 365 Portals - Web Notification          | WebNotification         | 10/30/2019 | 9.2.10.0  | 🔒                   |
| Dynamics 365 Portals - Portal Base Workflows     | MicrosoftCrmPortalB...  | 10/30/2019 | 9.2.10.0  | 🔒                   |
| Dynamics 365 Portals - Portal Base System Wor... | MicrosoftCrmPortalB...  | 10/30/2019 | 9.2.10.0  | 🔒                   |
| Dynamics 365 Portals - Portal base               | MicrosoftPortalBase     | 10/30/2019 | 9.2.10.0  | 🔒                   |
| Portal Privacy Extensions                        | msdynce_PortalPriva...  | 10/30/2019 | 9.2.10.0  | 🔒                   |
| Dynamics 365 Portals - Portal dependencies       | MicrosoftPortalDepe...  | 10/30/2019 | 9.2.10.0  | 🔒                   |
| Common Data Services Default Solution            | Cr7c436                 | 10/12/2019 | 1.0.0.0   | 🔒                   |
| Default Solution                                 | Default                 | 10/12/2019 | 1.0       | 🔒                   |



# PowerApps Portal Entities

|                                     |                                      |
|-------------------------------------|--------------------------------------|
| Ad                                  | adx_ad                               |
| Ad Placement                        | adx_adplacement                      |
| Alert Subscription                  | adx_alertsubscription                |
| Change Password for Portals Contact | adx_bpf_c2857b638fa7473d             |
| Content Snippet                     | adx_contentsnippet                   |
| Entity Form                         | adx_entityform                       |
| Entity Form Metadata                | adx_entityformmetadata               |
| Entity List                         | adx_entitylist                       |
| Entity Permission                   | adx_entitypermission                 |
| External Identity                   | adx_externalidentity                 |
| Invitation                          | adx_invitation                       |
| Invite Redemtion<br>Page Alert      | adx_inviteredemtion<br>adx_pagealert |
| Page Notification                   | adx_pagenotification                 |
| Page Tag                            | adx_pagetag                          |
| Page Template                       | adx_pagetemplate                     |
| Poll                                | adx_poll                             |
| Poll Option                         | adx_polloption                       |
| Poll Placement                      | adx_pollplacement                    |
| Poll Submission                     | adx_pollsubmission                   |
| Portal Comment                      | adx_portalcomment                    |
| Portal Language                     | adx_portallanguage                   |
| Publishing State                    | adx_publishingstate                  |
| Publishing State Transition Rule    | adx_publishingstatetransitionrule    |
| Redirect                            | adx_redirect                         |
| Setting                             | adx_setting                          |
| Shortcut                            | adx_shortcut                         |

|                              |                              |
|------------------------------|------------------------------|
| Site Marker                  | adx_sitemarker               |
| Site Setting                 | adx_sitesetting              |
| Tag                          | adx_tag                      |
| URL History                  | adx_urlhistory               |
| Web File                     | adx_webfile                  |
| Web File Log                 | adx_webfilelog               |
| Web Form                     | adx_webform                  |
| Web Form Metadata            | adx_webformmetadata          |
| Web Form Session             | adx_webformsession           |
| Web Form Step                | adx_webformstep              |
| Web Link                     | adx_weblink                  |
| Web Link Set                 | adx_weblinkset               |
| Web Notification Entity      | adx_webnotificationentity    |
| Web Notification URL         | adx_webnotificationurl       |
| Web Page                     | adx_webpage                  |
| Web Page Access Control Rule | adx_webpageaccesscontrolrule |
| Web Page History             | adx_webpagehistory           |
| Web Page Log                 | adx_webpagelog               |
| Web Role                     | adx_webrole                  |
| Website                      | adx_website                  |
| Website Access               | adx_websiteaccess            |
| Website Binding              | adx_websitebinding           |
| Website Language             | adx_websitelanguage          |
| Web Template                 | adx_webtemplate              |



# Portal Templates

- **Customer self-service portal**
  - Provides customers with access info, support resources and order status
- **Partner portal**
  - Provides portal for with resellers, distributors, suppliers and/or partners
- **Employee self-service portal**
  - streamline common tasks and allows for sharing resource
- **Community portal**
  - Facilitates interactions between customers and experts
- **Portal from blank**
  - Minimum portal with a small set of sample pages



# Portal Template Features

| Feature                                | Customer self-service portal | Partner portal | Employee self-service portal | Community portal | Portal from blank |
|--|------------------------------|----------------|------------------------------|------------------|-------------------|
| World Ready                            | •                            | •              | •                            | •                | •                 |
| Multi-Language Support                 | •                            | •              | •                            | •                | •                 |
| Portal Administration                  | •                            | •              | •                            | •                | •                 |
| Customization and Extensibility        | •                            | •              | •                            | •                | •                 |
| Theming                                | •                            | •              | •                            | •                | •                 |
| Content Management                     | •                            |                | •                            | •                |                   |
| Knowledge Management                   | •                            | •              | •                            | •                |                   |
| Support/Case Management                | •                            |                | •                            | •                |                   |
| Forums                                 | •                            |                | •                            | •                |                   |
| Faceted Search                         | •                            |                | •                            |                  |                   |
| Profile Management                     | •                            |                | •                            |                  |                   |
| Subscribe to Forum Thread              | •                            |                | •                            |                  |                   |
| Comments                               | •                            |                | •                            | •                |                   |
| Azure AD Authentication                |                              |                | •                            |                  |                   |
| Ideas                                  |                              |                |                              | •                |                   |
| Blogs                                  |                              |                |                              | •                |                   |
| Project Service Automation Integration |                              | •              |                              |                  |                   |
| Field Service Integration              |                              | •              |                              |                  |                   |
| Partner Onboarding                     |                              | •              |                              |                  |                   |
| Portal Base                            | •                            | •              | •                            | •                | •                 |
| Portal Workflows                       | •                            | •              | •                            | •                | •                 |
| Web Notifications                      | •                            | •              | •                            | •                | •                 |
| Microsoft Identity                     | •                            | •              | •                            | •                | •                 |
| Identity Workflows                     | •                            | •              | •                            | •                | •                 |
| Web Forms                              | •                            | •              | •                            | •                | •                 |
| Feedback                               | •                            | •              | •                            | •                | •                 |





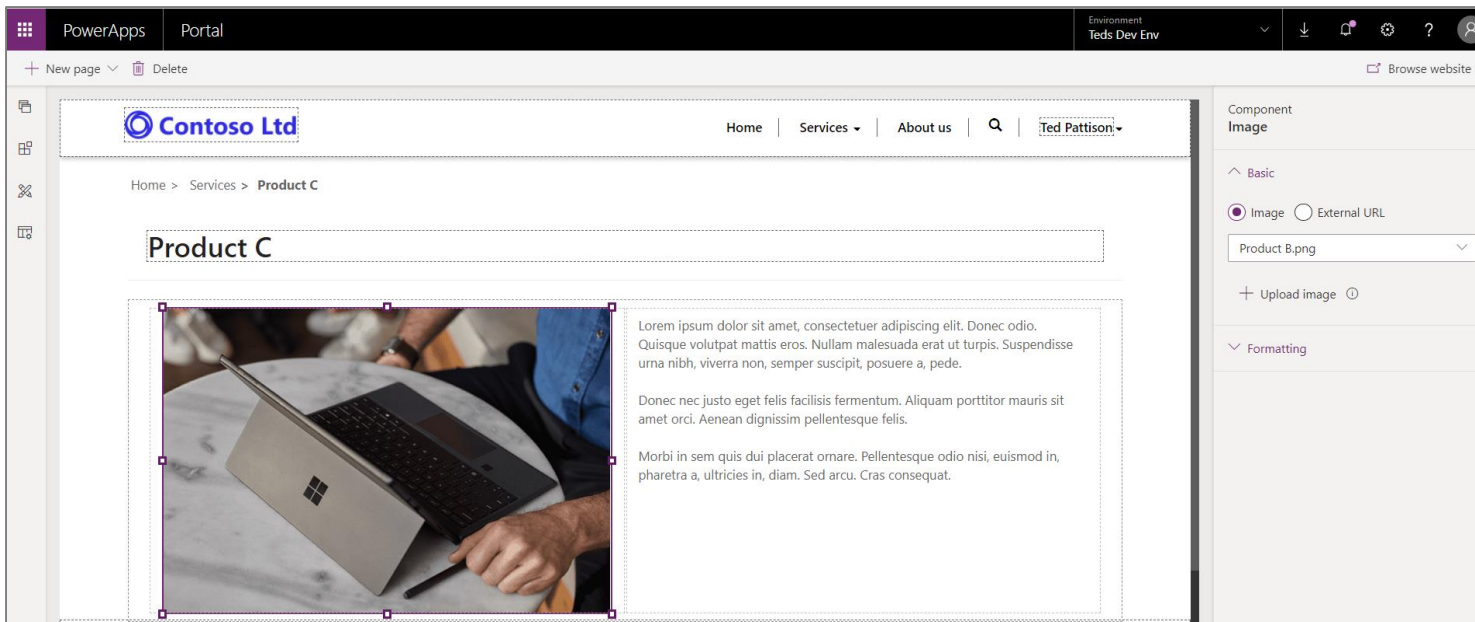
# Agenda

- ✓ PowerApps Portal Architecture
- Portal Editor
  - Portal Management App
  - Portal Configuration
  - Developing Web Templates



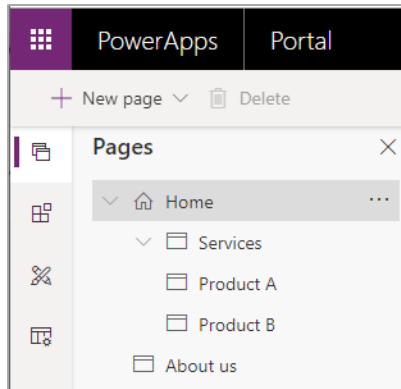
# Portal Editor

- Used to add pages and author page content
  - Designed for less-technical users
  - Editor not require web designer/developer skills



# Page Hierarchy

- Web Page can have one or more child pages
  - Provides foundation for building page hierarchy

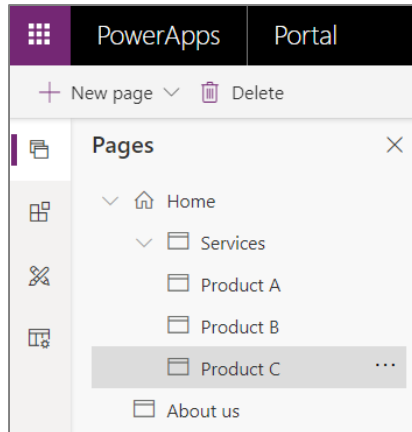


- Page hierarchy used to build navigation menu

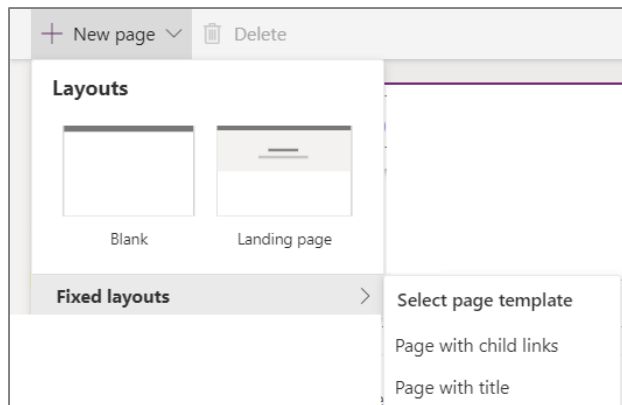


# Adding and Navigating Pages

- **Pages** tab provides navigation across pages

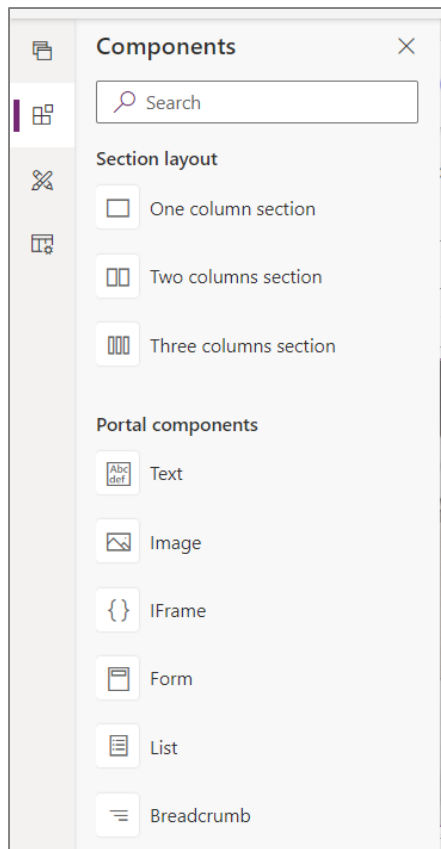


- Pages added using **New page** menu button



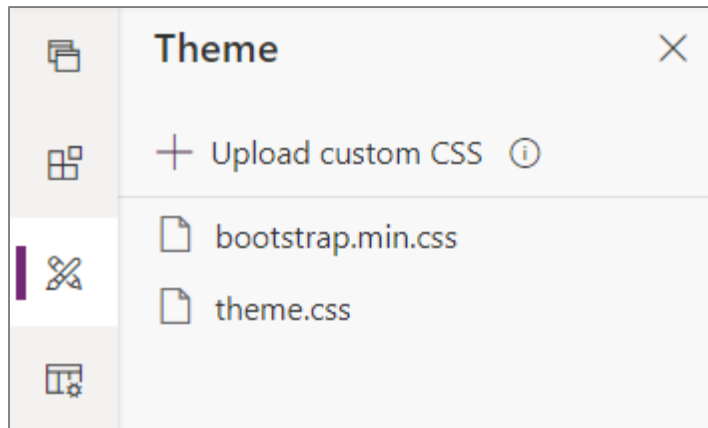
# Adding Page Content using Components

- Portal Editor provides Components for content authors
  - You drag components onto page design surface



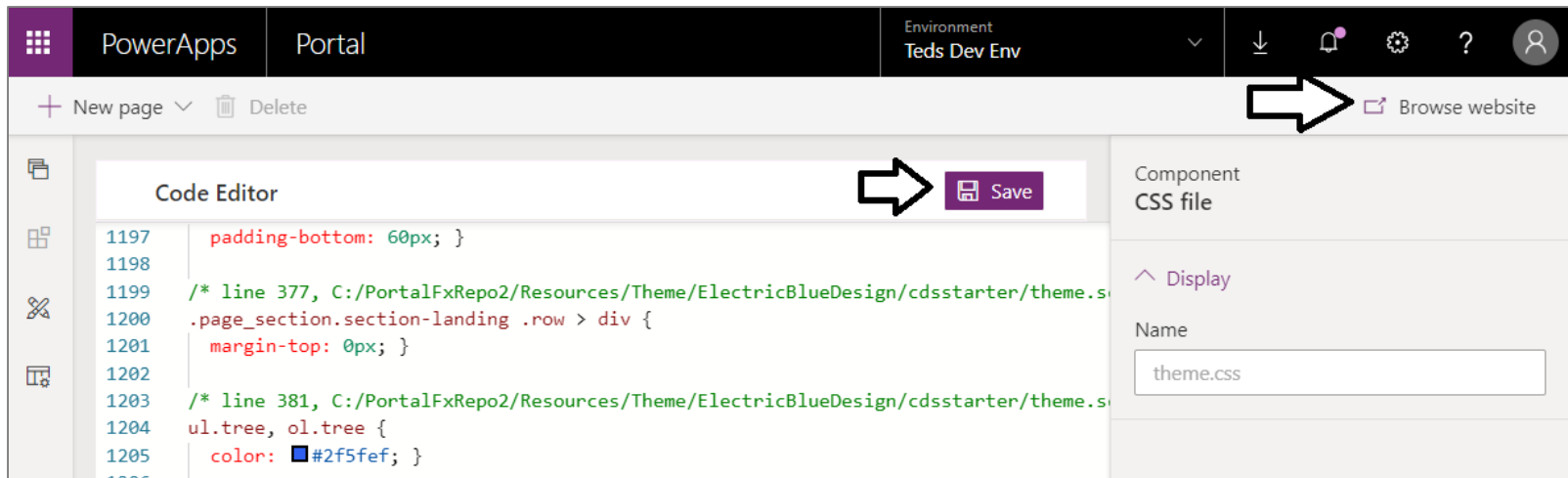
# Themes

- PowerApps portals styled using Bootstrap 3
  - Not practical to use a more recent version of bootstrap (e.g. v4)
  - theme.css file is provided for your custom styles



# Seeing Your Changes in the Portal

- Portal Editor provides **Browse website** button
  - Used to test how the portal will appear to others
  - Browse website clears cache to enabled development



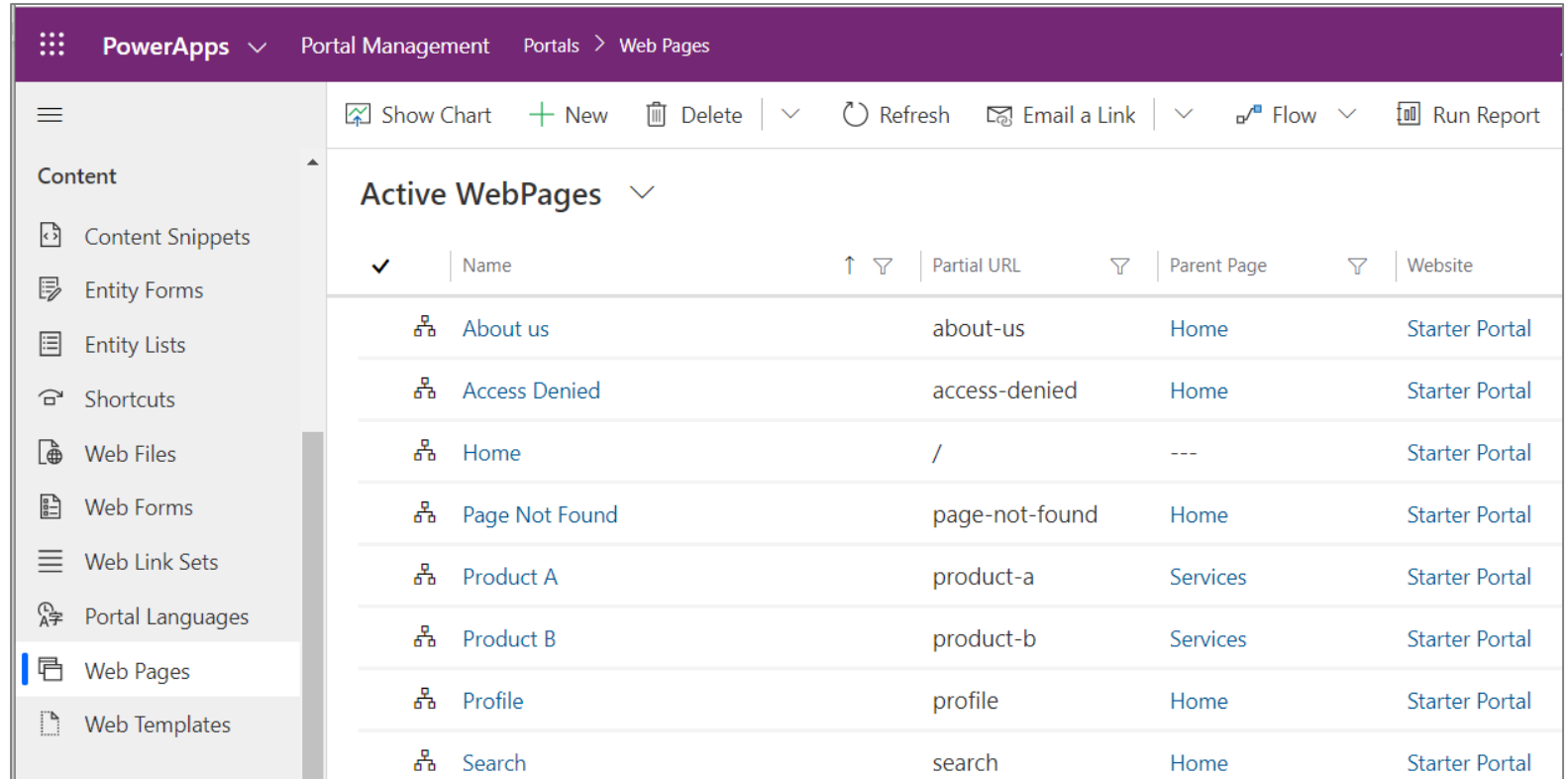
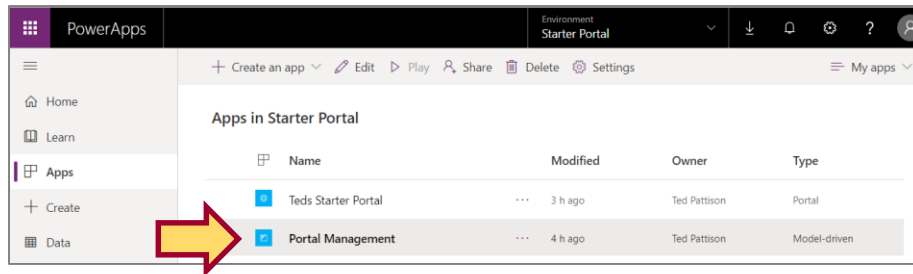


# Agenda

- ✓ PowerApps Portal Architecture
- ✓ Portal Editor
- Portal Management App
  - Portal Configuration
  - Developing Web Templates

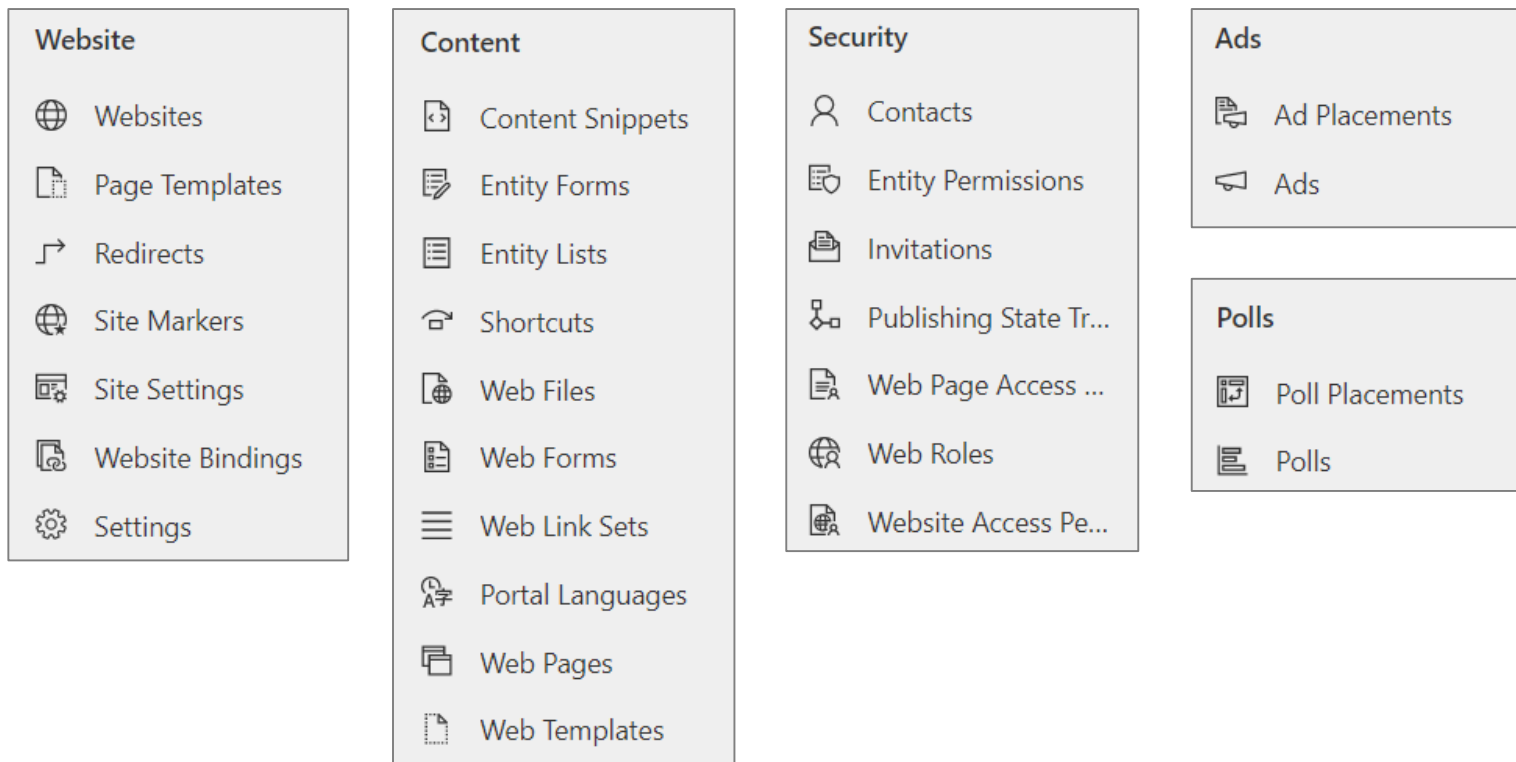


# Portal Management App



# Portal Management App Entities

- Portal Management app provides access to portal entities
  - Website entities
  - Content entities
  - Security entities
  - Ad and Poll entities

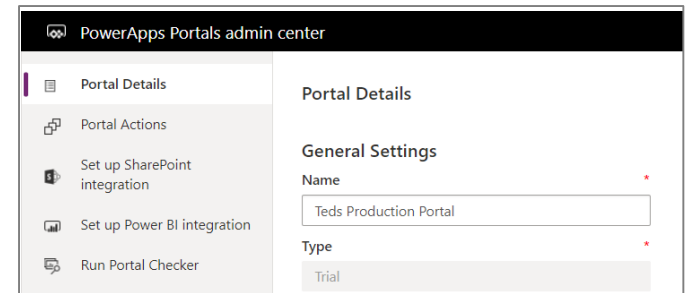
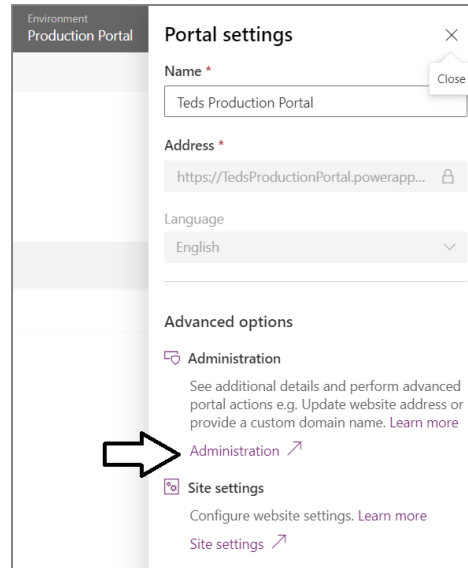
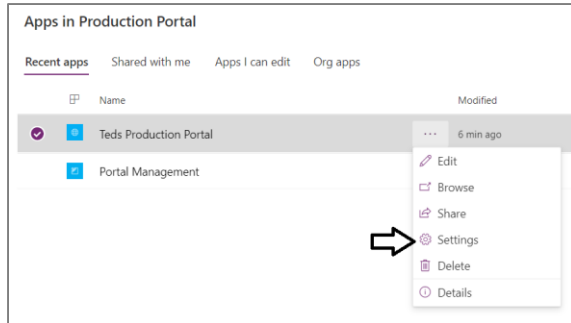


# Agenda

- ✓ PowerApps Portal Architecture
- ✓ Portal Editor
- ✓ Portal Management App
- Portal Configuration
- Developing Web Templates



# Navigating to the Portal admin center



# Converting from Trial to Production

- Portal is created in trial mode
  - Portal must be converted to production mode within 30 days
  - Host environment must be in production mode to convert portal
  - Important configuration options not available in trial portal

The screenshot displays the 'PowerApps Portals admin center' interface. On the left, a sidebar lists various actions, with 'Convert' highlighted by a white arrow. The main panel shows 'Portal Details' for a portal named 'Teds Production Portal'. The 'Type' is currently 'Trial', and a yellow warning banner indicates that the trial portal will expire in 30 days. Below the details, the 'Application ID' and 'Owner' (Ted Pattison) are listed. The 'Portal URL' is also shown. A confirmation dialog box is open in the foreground, titled 'Convert trial to production', asking for confirmation to convert the trial portal to production. The dialog includes 'Confirm' and 'Cancel' buttons.

PowerApps Portals admin center

Portal Details

General Settings

Name  
Teds Production Portal

Type  
Trial

ⓘ Your trial portal will expire in 30 day(s). Convert your portal to production to avoid its suspension. [Learn more](#)

Convert

Application ID  
a278550c-49c6-4035-b8da-e4304bc91c37

Owner  
Ted Pattison

Portal URL  
Base Portal URL  
<https://TedsProductionPortal.powerappsportals.com>

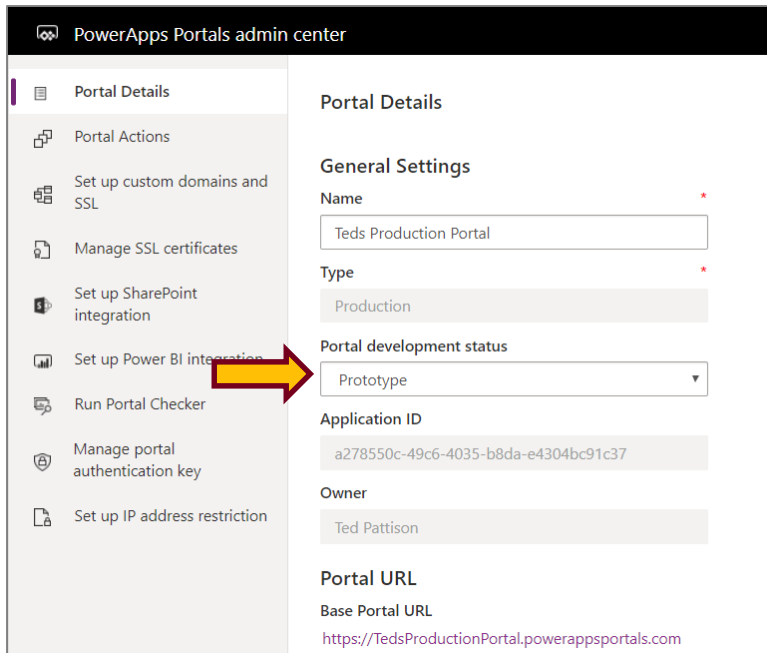
Convert trial to production

This action will convert your trial portal to production. Are you sure you want to continue?

Confirm Cancel

# Portal Development Status

- Production portal has develop status property



PowerApps Portals admin center

**Portal Details**

**General Settings**

Name  
Teds Production Portal

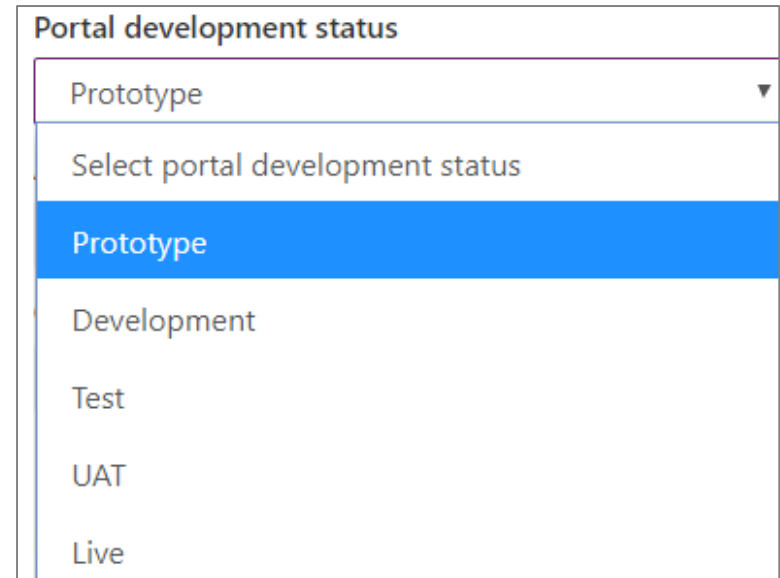
Type  
Production

**Portal development status**  
Prototype

Application ID  
a278550c-49c6-4035-b8da-e4304bc91c37

Owner  
Ted Pattison

**Portal URL**  
Base Portal URL  
<https://TedsProductionPortal.powerappsportals.com>



**Portal development status**

Prototype

Select portal development status

Prototype

Development

Test

UAT

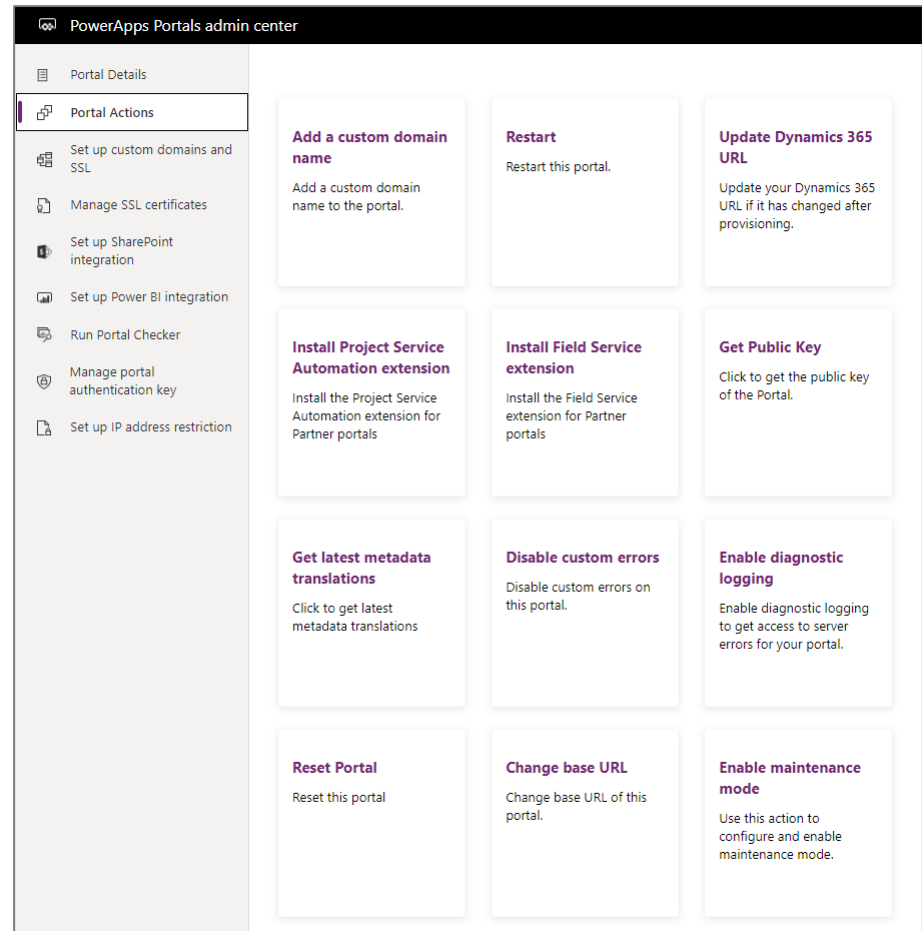
Live





# Portal Actions

- Import portal actions
  - Add custom domain
  - Configure SSL
  - Enable SharePoint Integration
  - Enabled Power BI Integration
  - Restart Portal
  - Reset Portal



# Integrating External Authentication Providers

- PowerApps portals allows for external authentication providers
  - Users can authenticate using LinkedIn, Facebook and Twitter
- Brian Knight (MVP) has some very useful videos
  - PowerApps Portals External Authentication with LinkedIn  
<https://www.youtube.com/watch?v=8Zx2RBhwV4I>
  - PowerApps Portals External Authentication with Facebook  
<https://www.youtube.com/watch?v=egfnaXIqpwU>




# Demo Portal at [www.TedPattison.net](http://www.TedPattison.net)

Public Class Schedule · CPT Portal

tedpattison.net/schedule/

AppsM365 AdminPower BIPowerAppsa Azure PortalTutorial 1CS in Power BIPortal DevSPODig web interface



PowerApps Portals ▾Training Courses ▾ScheduleAboutSearchSign in

Home > Public Class Schedule

## Public Class Schedule

| Start  | Class  | Audience                | Instructor        | Location  | Length | Online | Action                   |
|--------|--|-------------------------|-------------------|-----------|--------|--------|--------------------------|
| Nov 25 | <a href="#">Day of Building Business Solutions with PowerApps (DOPAP)</a>      | Citizen developers      | Christina Wheeler | Online    | 1 Day  | Yes    | <a href="#">Register</a> |
| Nov 26 | <a href="#">Day of Building Business Solutions with Microsoft Flow (DOFLO)</a> | Citizen developers      | Christina Wheeler | Online    | 1 Day  | Yes    | <a href="#">Register</a> |
| Dec 3  | <a href="#">Building Business Solutions with PowerApps and Flow (BBSPA)</a>    | Citizen developers      | Ted Pattison      | Tampa, FL | 3 Days | No     | <a href="#">Register</a> |
| Dec 9  | <a href="#">Modern SharePoint and Office 365 Development (MSD365)</a>          | Professional developers | Ted Pattison      | Tampa, FL | 4 Days | Yes    | <a href="#">Register</a> |
| Dec 16 | <a href="#">Power BI Certification Bootcamp (PBI365)</a>                       | Citizen developers      | Ted Pattison      | Tampa, FL | 3 Days | Yes    | <a href="#">Register</a> |
| Jan 13 | <a href="#">Power BI Developer Bootcamp (PBD365)</a>                           | Professional developers | Ted Pattison      | Tampa, FL | 4 Days | Yes    | <a href="#">Register</a> |
| Jan 20 | <a href="#">Building Business Solutions with PowerApps and Flow (BBSPA)</a>    | Citizen developers      | Ted Pattison      | Tampa, FL | 3 Days | Yes    | <a href="#">Register</a> |
| Feb 3  | <a href="#">Modern SharePoint and Office 365 Development (MSD365)</a>          | Professional developers | Ted Pattison      | Tampa, FL | 4 Days | Yes    | <a href="#">Register</a> |



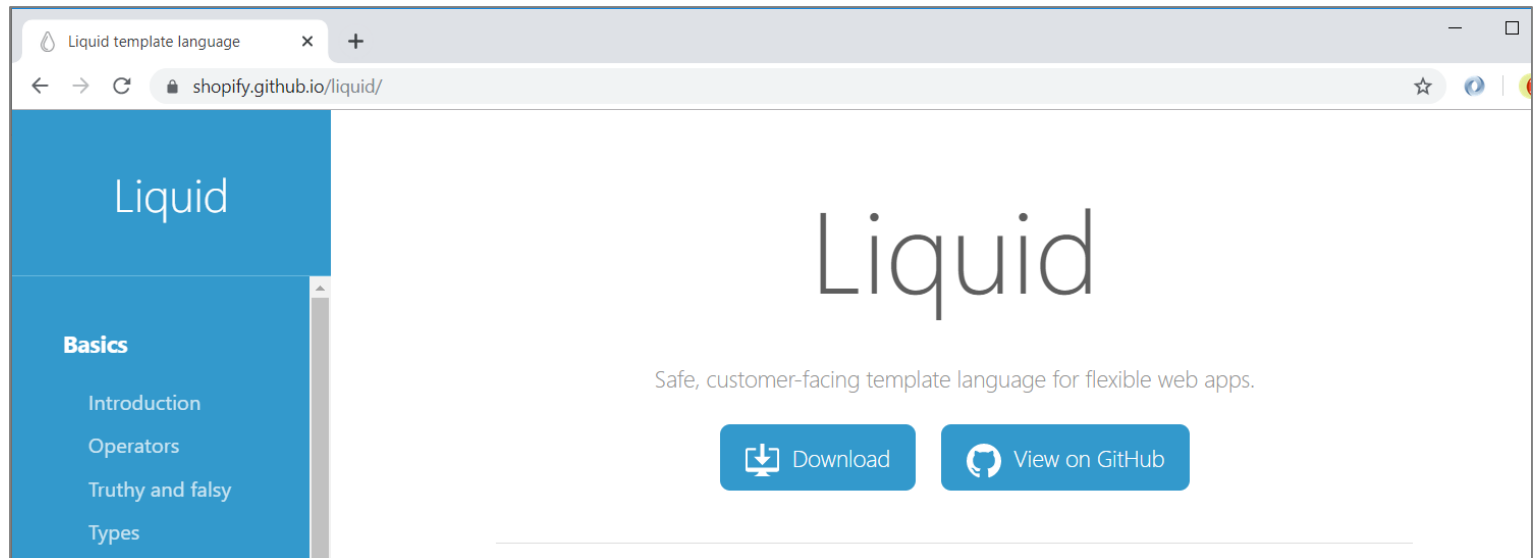
# Agenda

- ✓ PowerApps Portal Architecture
- ✓ Portal Editor
- ✓ Portal Management App
- ✓ Portal Configuration
- Developing Web Templates



# Liquid Template Language

- Liquid is open-source template language
  - Created by Shopify in 2006
  - Currently used by 100s of websites and ISVs
  - Designed to surface data from databases into web pages
  - Liquid template code runs in the cloud in secure manner
  - Docs and tutorial available at <https://shopify.github.io/liquid/>



# Liquid 101 – Objects and Tags

- **Objects** and variables denoted by double curly braces: `{{` and `}}`

Input

```
{{ page.title }}
```

Output

Introduction

- **Tags** with logic use curly braces and percent signs: `{%` and `%}`.

Input

```
{% if user %}  
  Hello {{ user.name }}!  
{% endif %}
```

Output

Hello Adam!



# Liquid Objects

- The follow Liquid objects are available in PowerApps portals

|                    |  |
|--------------------|--|
| <b>now</b>         | A date/time object that refers to the current UTC time at the time the template is rendered. |
| <b>page</b>        | current portal request page with title and URL   |
| <b>params</b>      | request.params   |
| <b>request</b>     | Contains information about the current HTTP request. More information: request               |
| <b>settings</b>    | Allows you to load any Site Setting by name. More information: settings                      |
| <b>sitemap</b>     | Allows access to the portal site map. More information: sitemap                              |
| <b>sitemarkers</b> | Allows you to load any Site Markers by name. More information: sitemarkers                   |
| <b>snippets</b>    | Allows you to load any Content Snippet by name. More information: snippets                   |
| <b>user</b>        | Refers to the current portal user. If no user is signed in, this variable will be null.      |
| <b>weblinks</b>    | Allows you to load any Web Link Set by name or ID. More information: weblinks                |
| <b>website</b>     | current portal Website record with website properties  |

- PowerApps-specific reference for Liquid template language
  - <https://docs.microsoft.com/en-us/powerapps/maker/portals/liquid/liquid-overview>





# Liquid 101 - Filters

- Filters transform objects and are separated by a |

Input

```
{{ "/my/fancy/url" | append: ".html" }}
```

Output

```
/my/fancy/url.html
```

Input

```
{{ "adam!" | capitalize | prepend: "Hello " }}
```

Output

```
Hello Adam!
```



# Liquid 101 – where filter

- where can be used to filter records

## Input

```
All products:
{% for product in products %}
- {{ product.title }}
{% endfor %}

{% assign kitchen_products = products | where: "type", "kitchen" %}

Kitchen products:
{% for product in kitchen_products %}
- {{ product.title }}
{% endfor %}
```

## Output

```
All products:
- Vacuum
- Spatula
- Television
- Garlic press

Kitchen products:
- Spatula
- Garlic press
```



# Creating a Solution with Custom Entities

| Solutions > Critical Path Training Solution           |   |                                     |                  |
|---|---|-------------------------------------|------------------|
| Display name ▾  |   | Name                                | Type ▾           |
| Audience  | ⋮ | cpt_audience                        | Option Set       |
| Class   | ⋮ | cpt_class                           | Entity           |
| Class Location  | ⋮ | cpt_classlocation                   | Entity           |
| Course  | ⋮ | cpt_course                          | Entity           |
| Course Length   | ⋮ | cpt_length                          | Option Set       |
| Training Class Management <a href="#">🔗</a>           | ⋮ | cpt_TrainingClassManagement         | Client Extension |
| Training Class Management <a href="#">🔗</a>           | ⋮ | cpt_TrainingClassManagement         | Model-driven App |
| Import class events from Eventbrite <a href="#">🔗</a> | ⋮ | Import class events from Eventbrite | Flow             |



# The Course Entity

Solutions > Critical Path Training Solution > **Course**

Fields

Relationships

Business rules

Views

Forms

Dashboards

Charts

Keys

Data

Display name ↑ ∨

Name ∨

Data type ∨

Audience

...

cpt\_audience

☰ Option ...

Course Code

...

cpt\_coursecode

Abc Text

Currency

...

transactioncurrencyid

🔍 Lookup

Description

...

cpt\_description

Abc Text Area

Description URL

...

cpt\_descriptionurl

Abc URL

Exchange Rate

...

exchangerate

×<sub>2</sub> Decimal...

Length

...

cpt\_length

☰ Option ...

List Price

...

cpt\_listprice

💰 Currency

List Price (Base)

...

cpt\_listprice\_base

💰 Currency

Name

Primary Field

...

cpt\_name

Abc Text



# The Class Entity

Solutions > Critical Path Training Solution > **Class**

Fields

Relationships

Business rules

Views

Forms

Dashboards

Charts

Keys

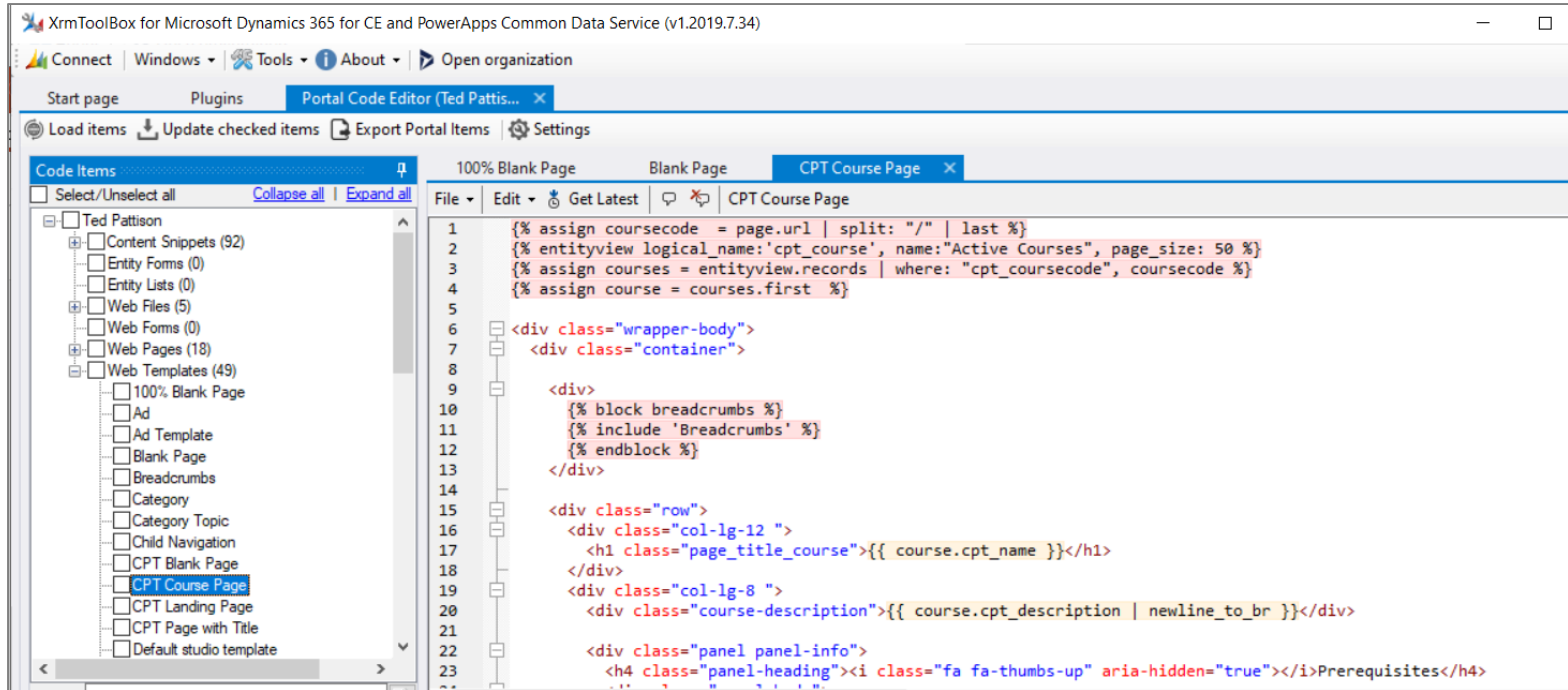
Data

| Display name ↑ ∨                |     | Name ∨              | Data type ∨   |
|---------------------------------|-----|---------------------|---------------|
| Attend Online                   | ... | cpt_attendonline    | Two Options   |
| Course                          | ... | cpt_course          | Lookup        |
| Description                     | ... | cpt_description     | Text Area     |
| End                             | ... | cpt_end             | Date and Time |
| EventbriteID                    | ... | cpt_eventbriteid    | Text          |
| Instructor                      | ... | cpt_instructor      | Lookup        |
| Location                        | ... | cpt_location        | Lookup        |
| Name <span>Primary Field</span> | ... | cpt_name            | Text          |
| Registration Url                | ... | cpt_registrationurl | URL           |
| Start                           | ... | cpt_start           | Date and Time |



# XrmToolbox

- Authoring Tool for PowerApps Portals
  - Provides plug-ins for authoring and managing portals



# Using Liquid to Access Entity Data

- Web Template created using Liquid scripting language
  - Can be used to access CDS data

```
<table class="table-schedule table table-bordered table-striped">
  <thead class="thead-dark">
    <tr>
      <th>Start</th>
      <th>Instructor</th>
      <th>Location</th>
      <th>Action</th>
    </tr>
  </thead>
  {% entityview logical_name:'cpt_class', name:"Active Classes", page_size: 50 %}
  {% assign classes = entityview.records | where: "cpt_Class_Course_cpt_Course.cpt_coursecode", course.cpt_coursecode |
    order_by: "cpt_start" %}
  {% for item in classes %}
    <tr>
      <td>{{item.cpt_start | date: "MMM d"}}</td>
      <td>{{item.cpt_instructor.name}}</td>
      <td>{{item.cpt_location.name}}</td>
      <td><a href="{{item.cpt_registrationurl}}" target="_blank">Register</td>
    </tr>
  {% endfor %}
{% endentityview %}
</table>
```



# Summary

- ✓ PowerApps Portal Architecture
- ✓ Portal Editor
- ✓ Portal Management App
- ✓ Portal Configuration
- ✓ Developing Web Templates

