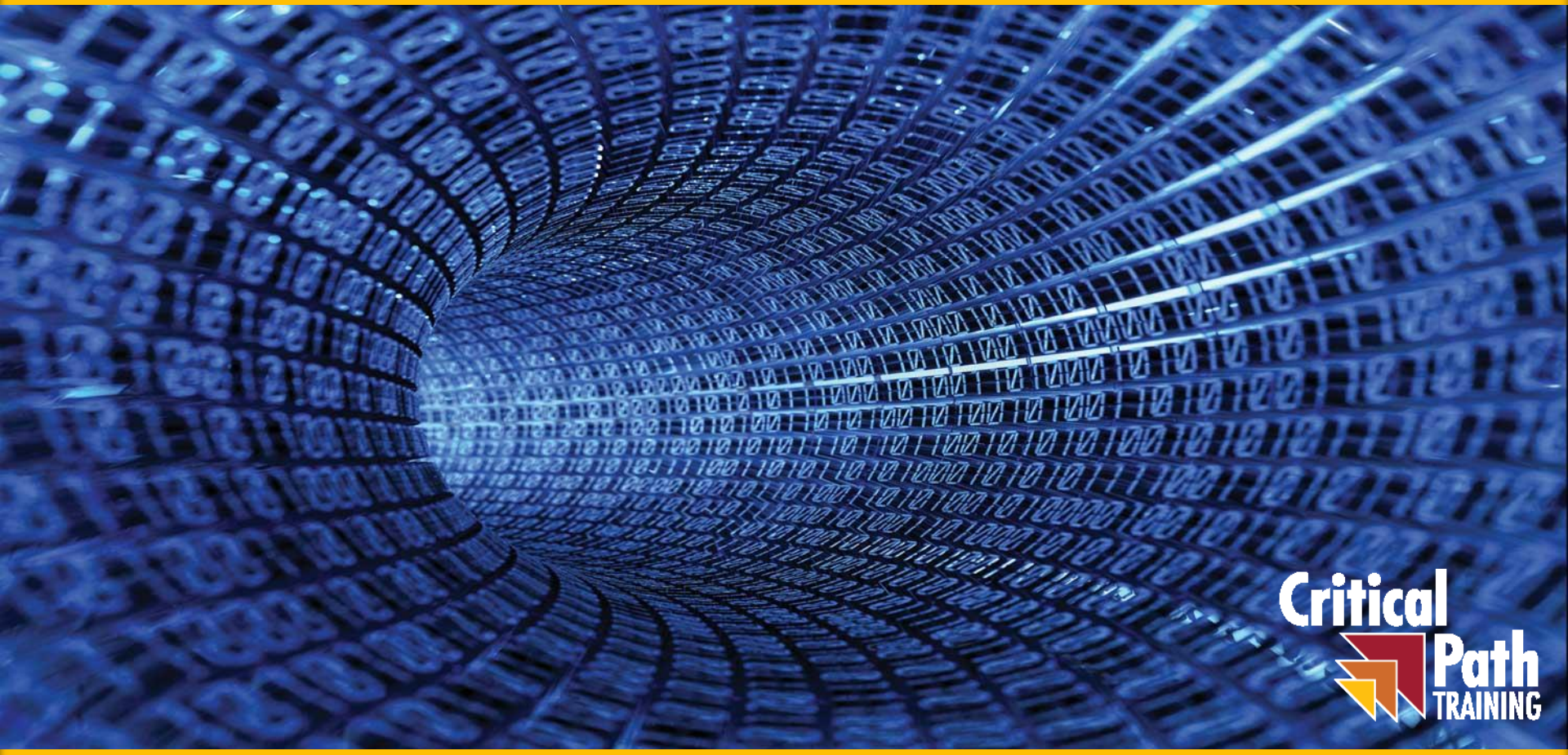
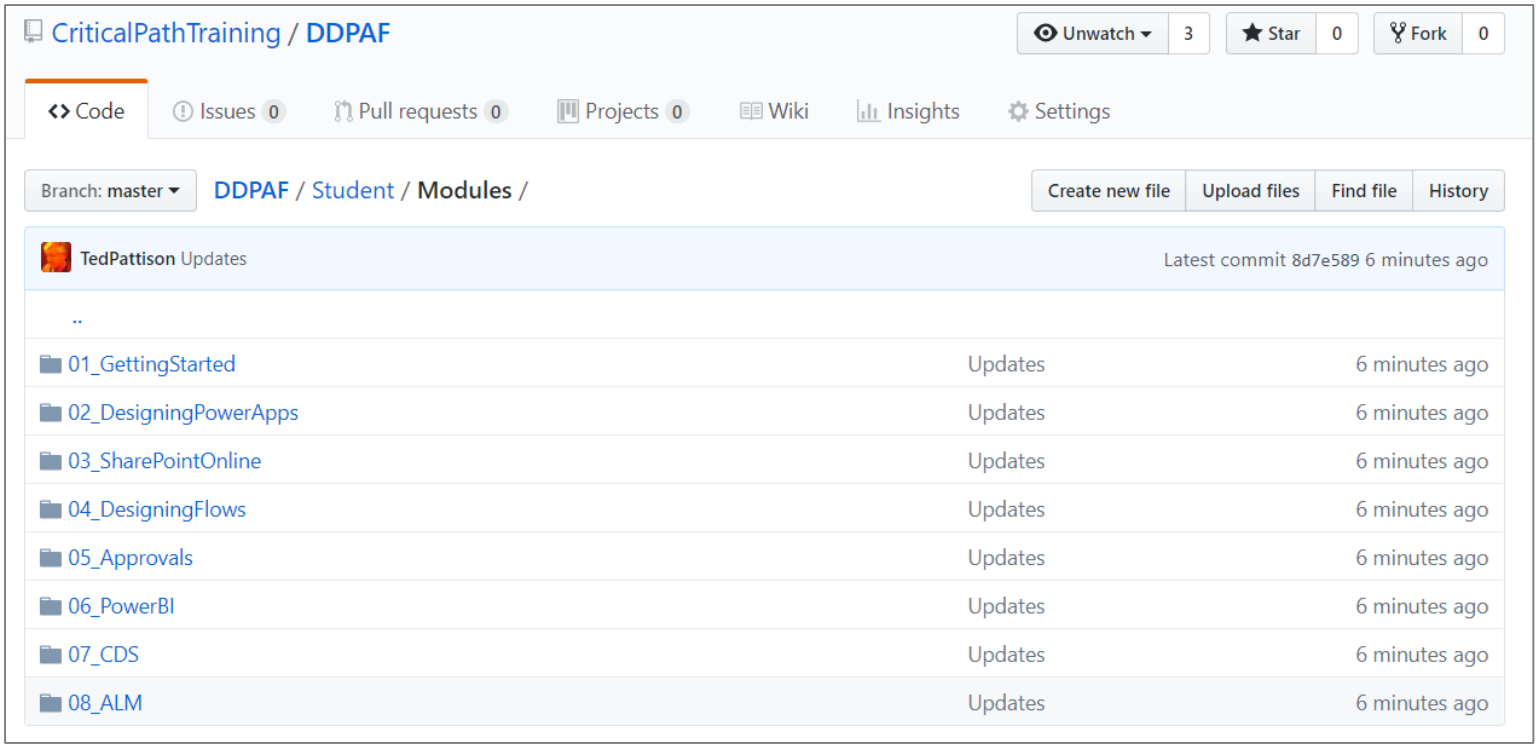
Getting Started with PowerApps Studio



Downloading Student Files

- Student files maintained in a GitHub repository
  - https://github.com/CriticalPathTraining/DDPAF



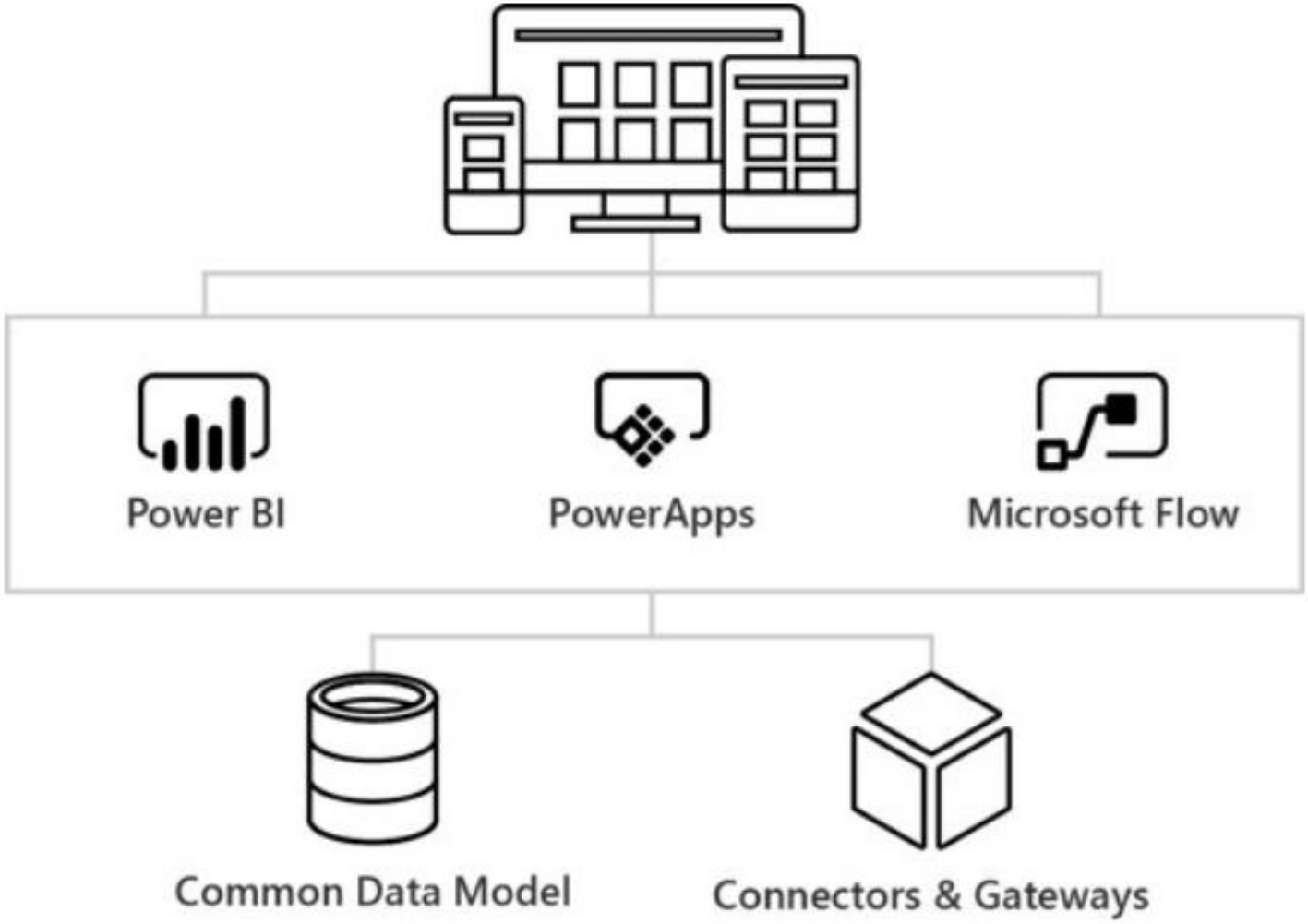
Student Background Questionnaire

- What is your name?
- What are you doing with PowerApps and Flow?
- Which products and services have you used?
  - PowerApps and Flow
  - Microsoft Excel
  - Office 365
  - SharePoint Online
  - Power BI
  - Dynamics 365
  - Others

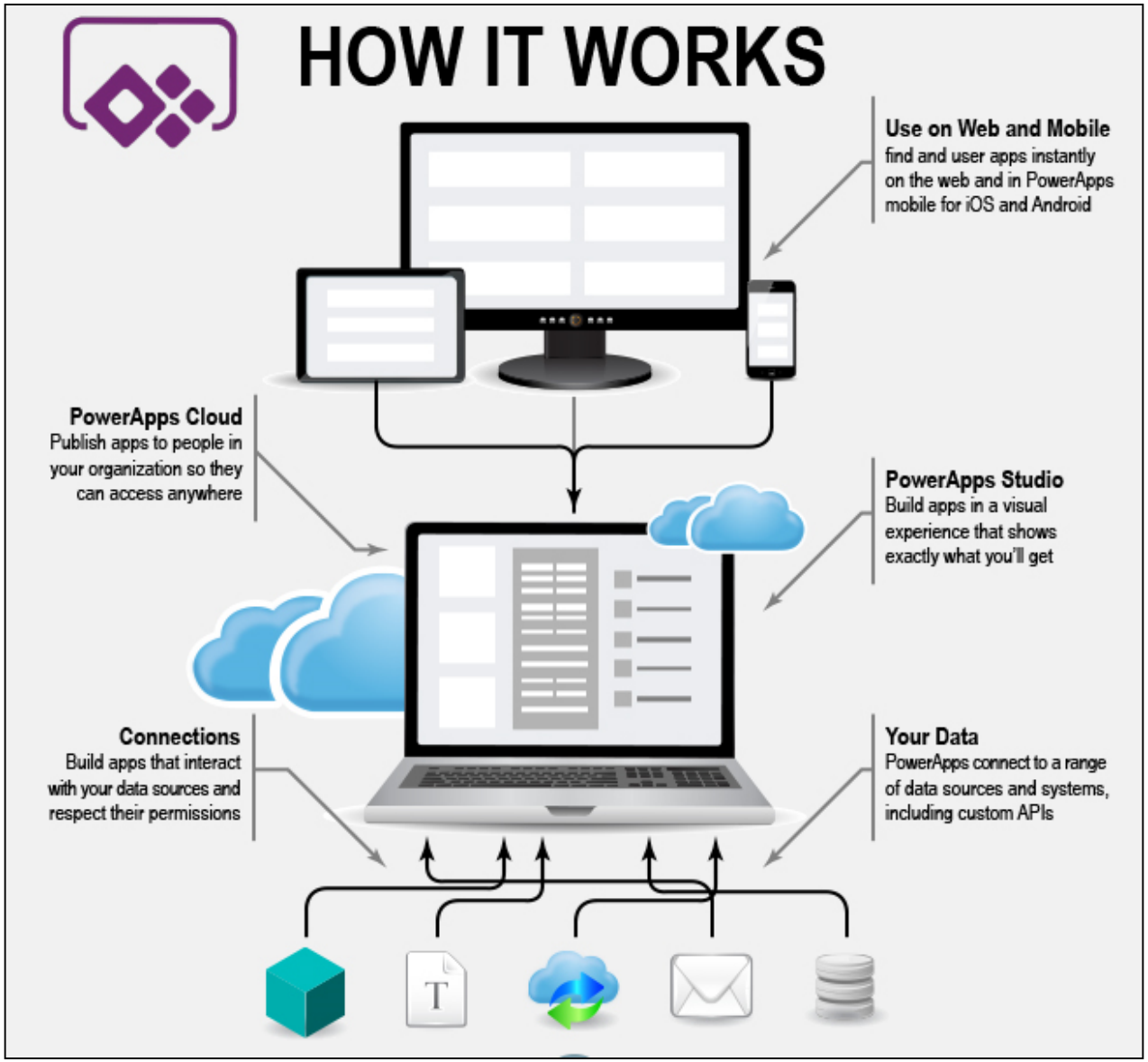
Agenda

- Getting Started with PowerApps
- Creating and Testing Apps with PowerApps Studio
- Working with Screens and Controls
- Understanding Connectors and Data Binding
- Customizing Forms and Data Cards

What is the Business Application Platform?

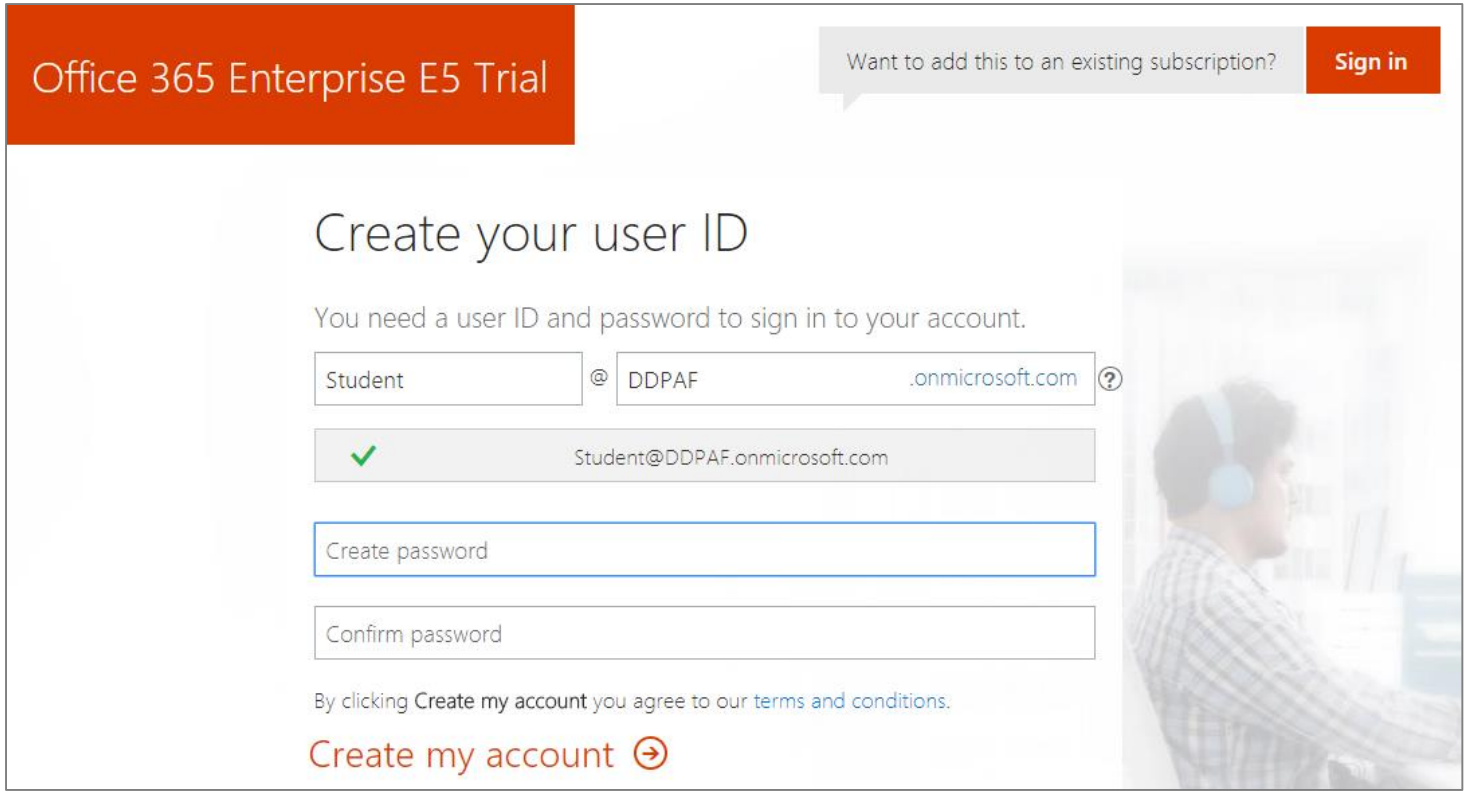


What is PowerApps?



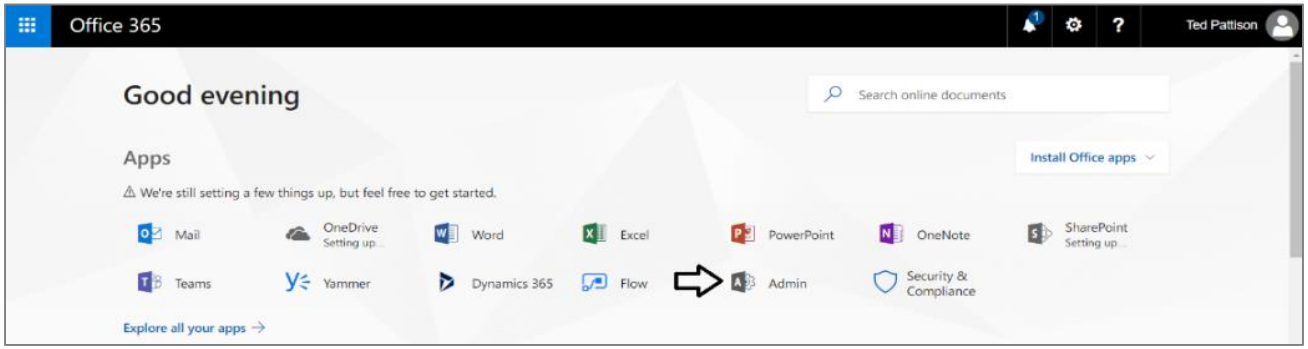
Creating an Office 365 E5 Trial Tenant

- All students will create an Office 365 trial tenant
  - Provides an isolated development environment for lab exercises
  - Trial accounts will last for 30 days

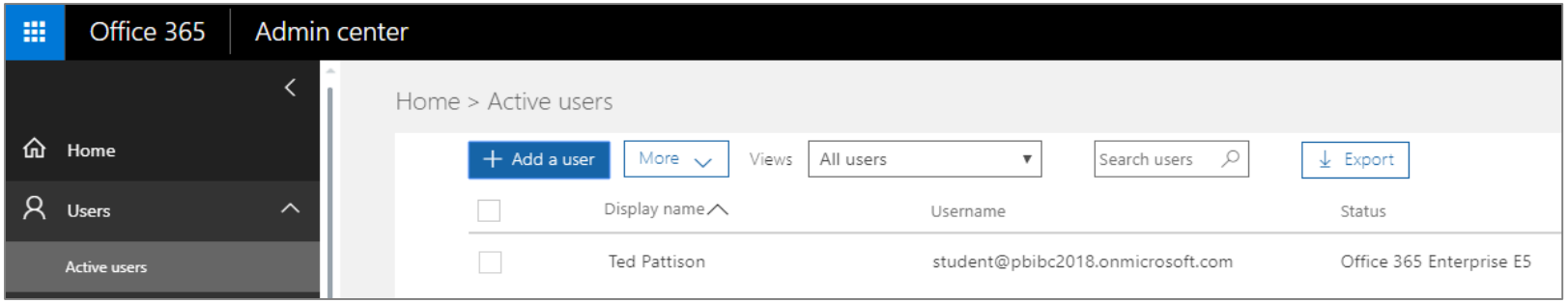


Office 365 Admin Center

- Navigate to the Office 365 Admin center

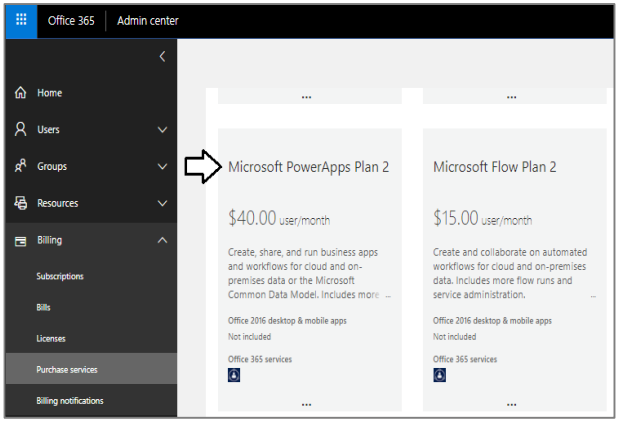


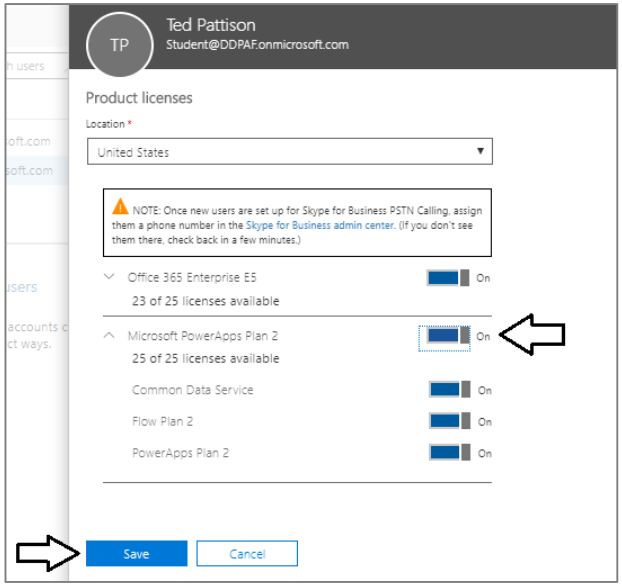
- Allows for management of users accounts and licensing



Configuring a PowerApps Plan 2 License

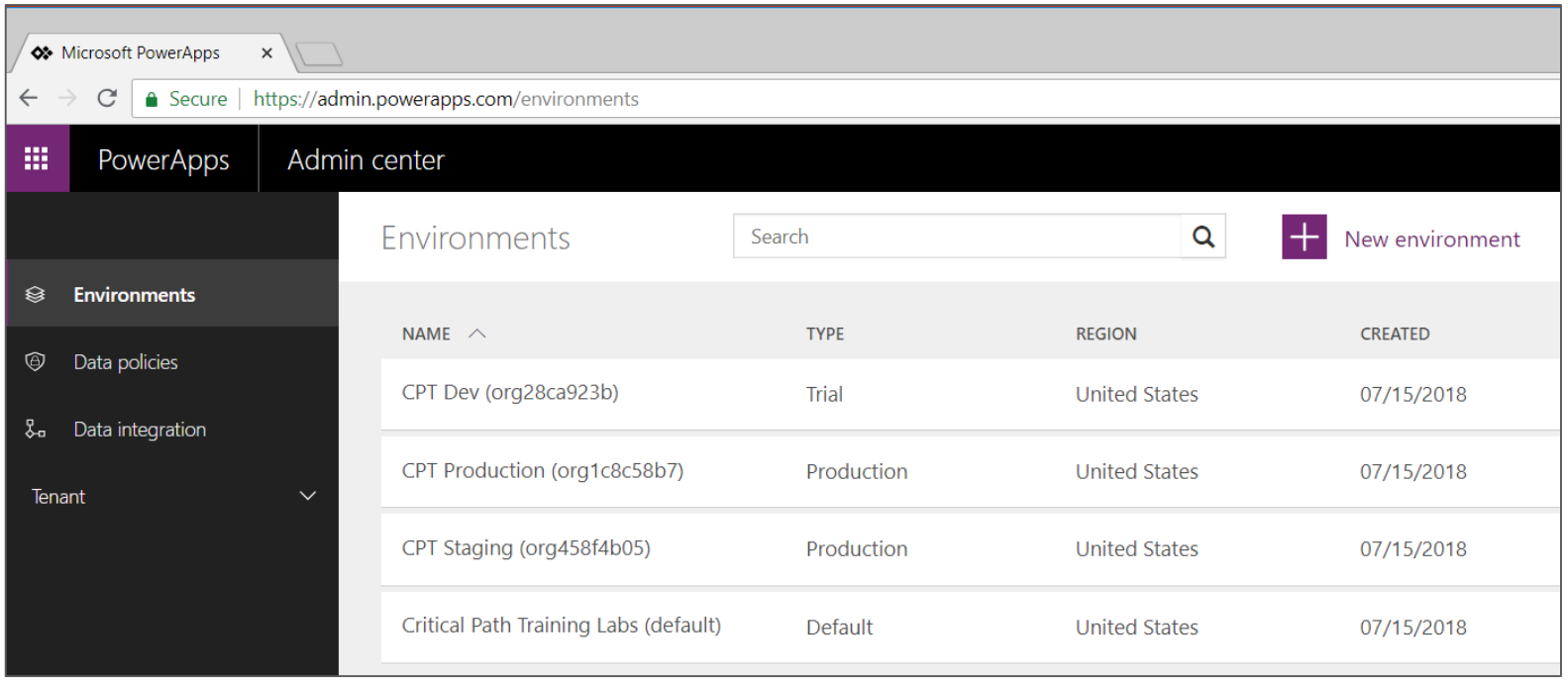
- Certain design tasks require PowerApps Plan 2
  - You can start a 30-day trial for PowerApps Plan 2
  - License must be assigned to individual user accounts





PowerApps Admin Center & Environments

- PowerApps architecture based on environments
  - Environment provides context for creating apps and flows
  - Every tenant is automatically created with default environment
  - Organization can create multiple environments for dev & staging
  - PowerApps Plan 2 license required to manage environments




DEMO
Configuring PowerApps Plan 2 Licenses

Agenda

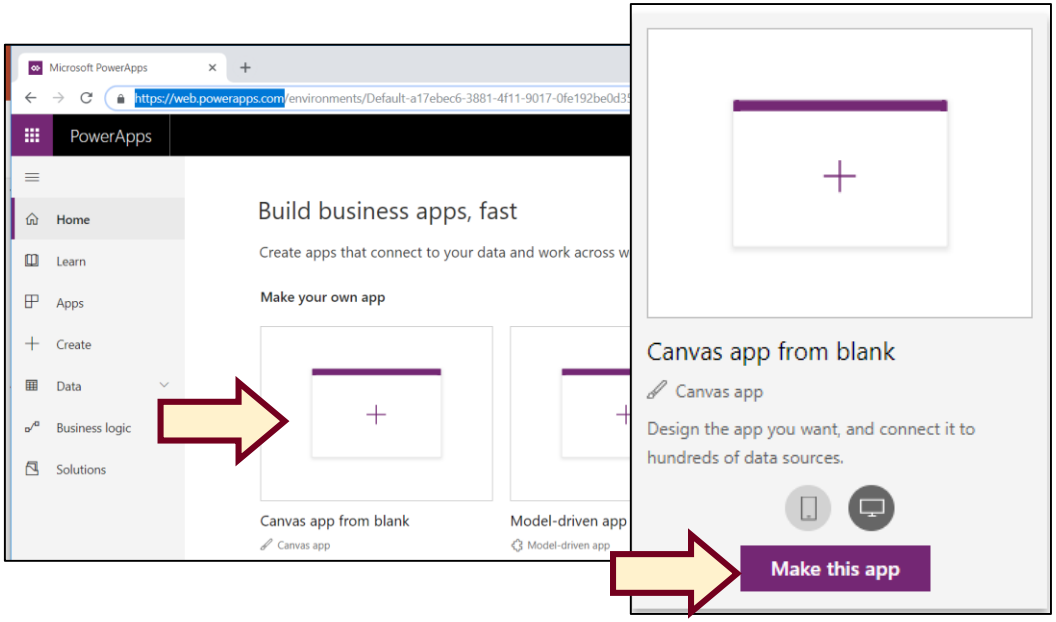
- ✓ Getting Started with PowerApps
- ➢ Creating and Testing Apps with PowerApps Studio
- Working with Screens and Controls
- Understanding Connectors and Data Binding
- Customizing Forms and Data Cards

What Can You Build with PowerApps?

- Canvas Apps
  - Built using PowerApps Studio
- Connections
  - Used to connect Canvas apps to external data
- Flows
  - Used to process data and run workflows
- Common Data Service for Apps (CDS for Apps)
  - Used to create business-centric data solutions
- Model-driven Apps
  - Application platform built on top of CDS for Apps

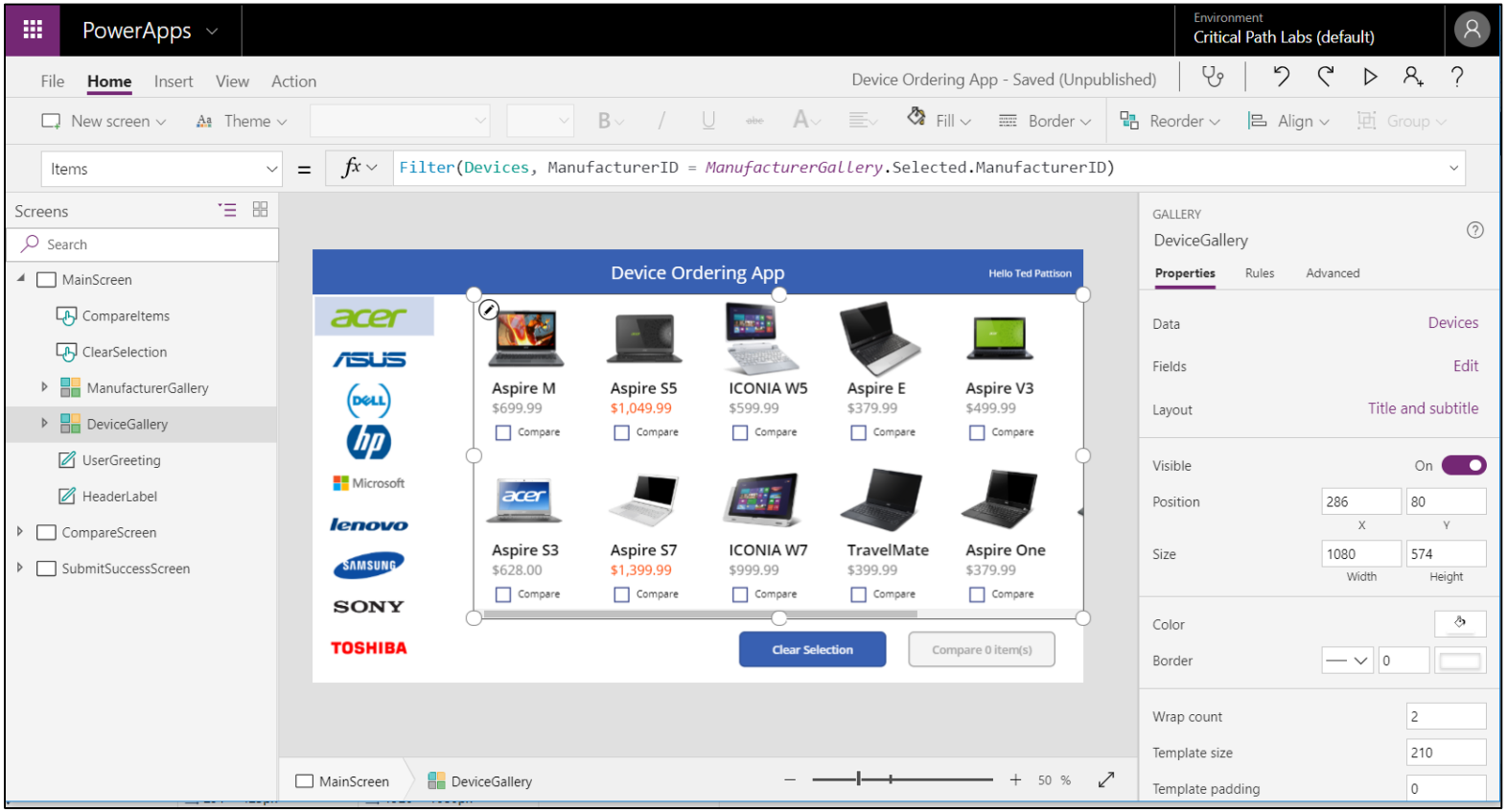
Creating a New Canvas App

- Create Canvas apps from the PowerApps Home page
  - Navigate to https://web.powerapps.com
  - Chose **Canvas app from blank** or **Start from data**
  - Choose between **Phone** form factor and **Desktop/Tablet** form factor
  - Clicking **Make this app** redirects browser to **https://create.powerapps.com**



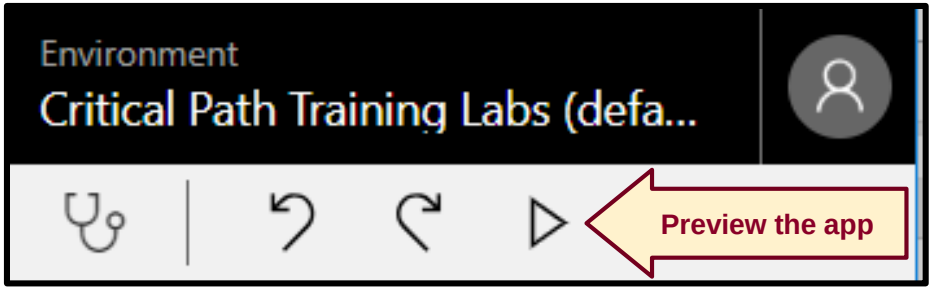
Getting Started with PowerApps Studio

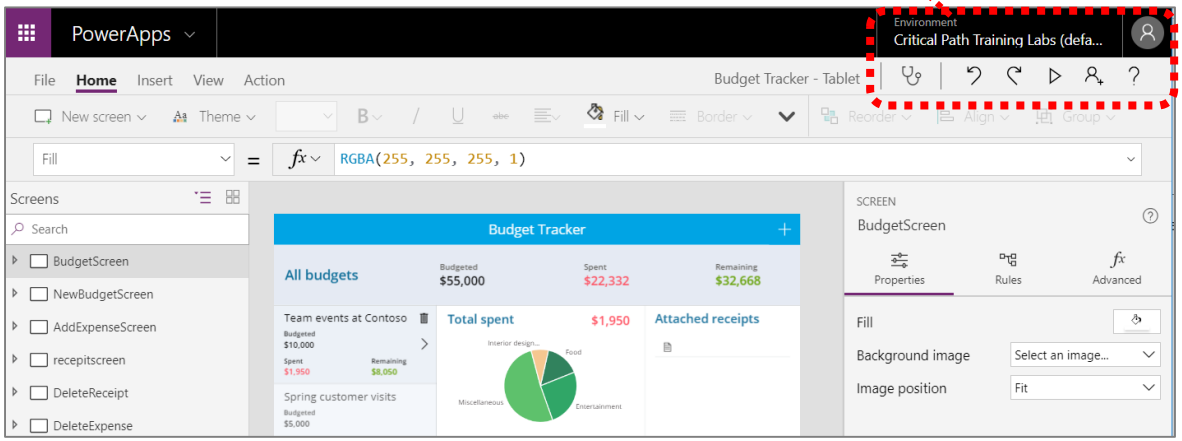
- PowerApps Studio for the Web is used to build apps
  - Environment supported across platforms (Windows & Mac)
  - Supports all popular, modern browsers



Running an App from PowerApps Studio

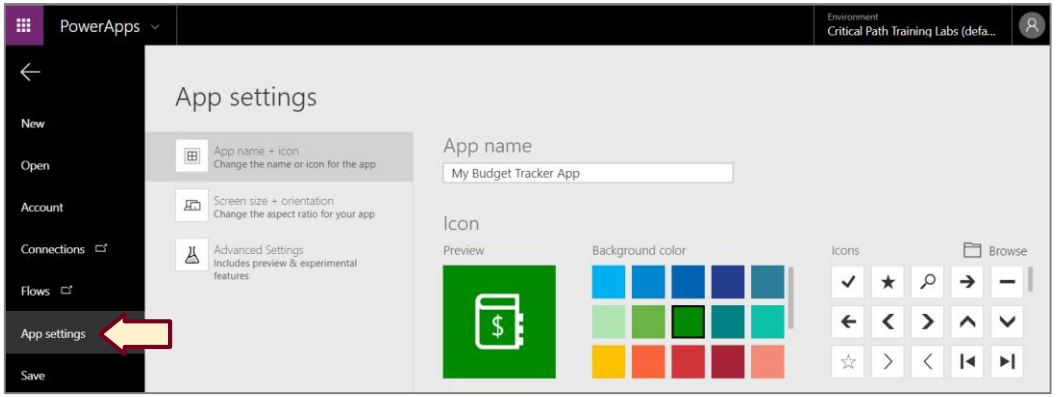
- You can run the app using the PowerApps Studio toolbar
  - Run the app by clicking the **Preview the App** button
  - Stop a running app to return to design mode



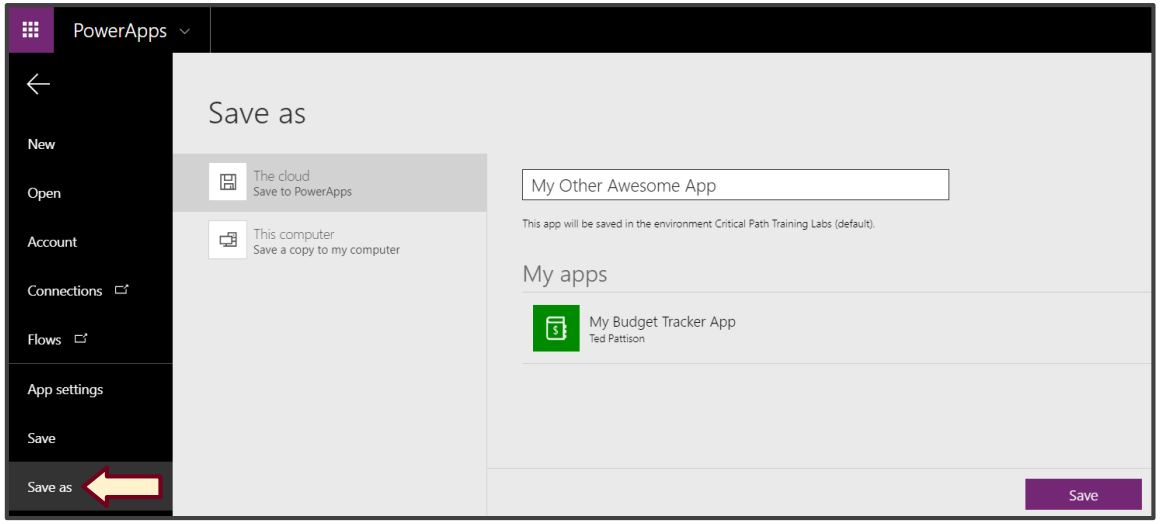


Saving an App to the Cloud

- Before saving, first you should configure App settings



- Save app to cloud using Save or Save As command



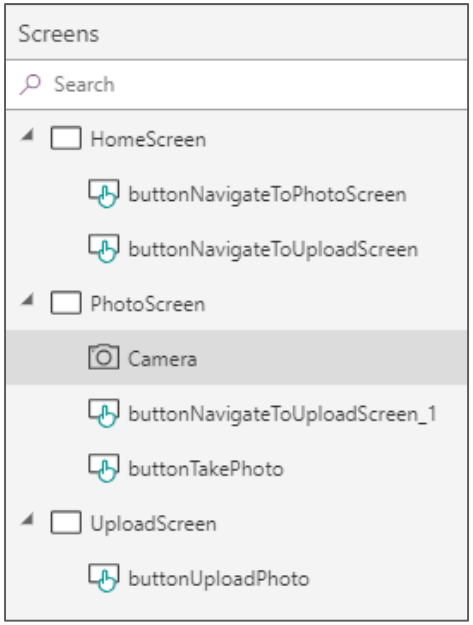

DEMO
Creating an App with the Budget Tracker App Template

Agenda

- ✓ Getting Started with PowerApps
- ✓ Creating and Testing Apps with PowerApps Studio
- ➢ Working with Screens and Controls
- • Understanding Connectors and Data Binding
- • Customizing Forms and Data Cards

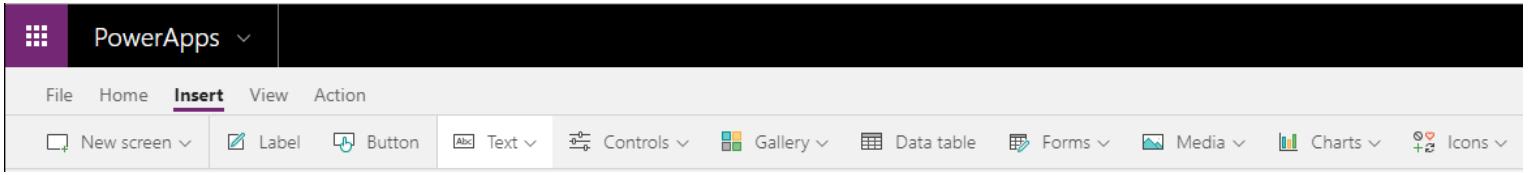
Building Apps using Screens and Controls

- Screens provide the top-level objects in PowerApps UI
  - Your app must have one screen but can have multiple screens
  - You design screens by adding and configuring controls
  - Left navigation shows hierarchical view of screens and controls
  - You can rename screens and controls using left navigation menu

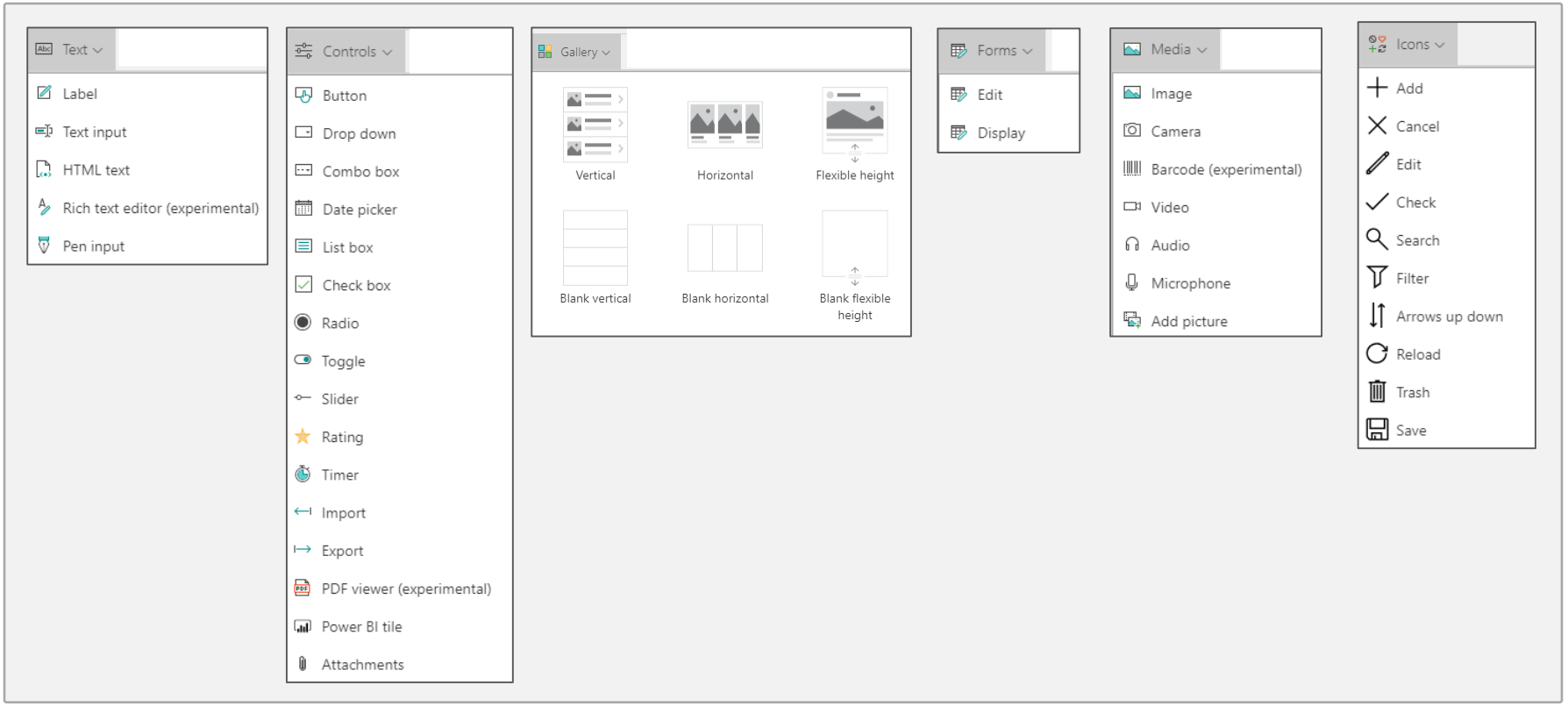


Adding Controls to a Screen

- You add controls to a screen using the **Insert** ribbon tab

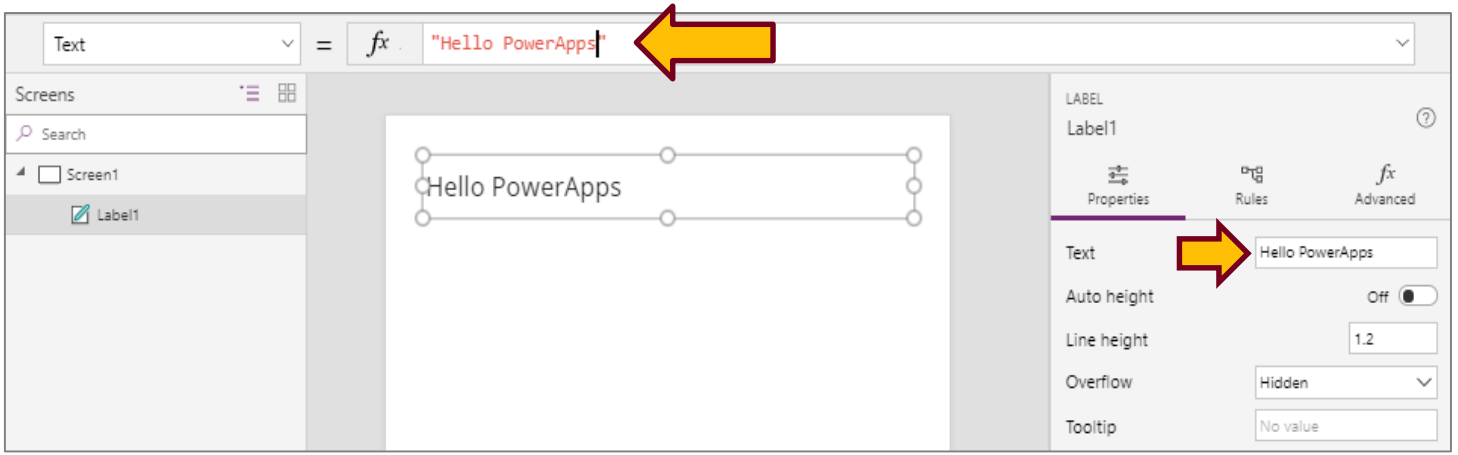


- PowerApps provides extensive set of controls for web and mobile apps



Configuring Control Properties

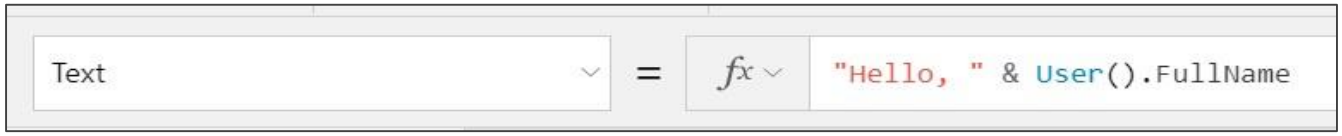
- Control properties can be set two different ways
  - Property values can be set using Properties pane
  - Property values can be set using Formula bar



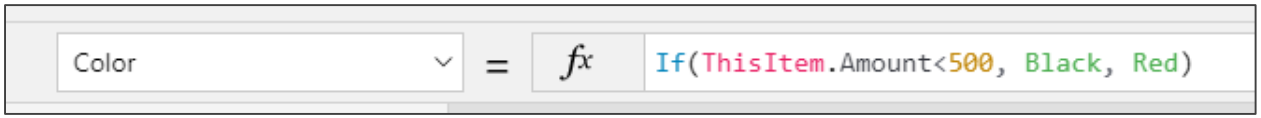
- Building apps with PowerApps requires shift in thinking
  - You don’t write code to set property values like in VBA
  - Control properties configured using formulas
  - You develop using **declarative style** instead of **procedural style**

PowerApps Formula Language

- PowerApps provides its own Formula Language
  - Designed to be as similar as possible to Excel Formula language
  - PowerApps Formula Language includes built-in set of functions
- You write formulas for specific properties
  - Set the Text property for a label



  - Set the Color property of the label text

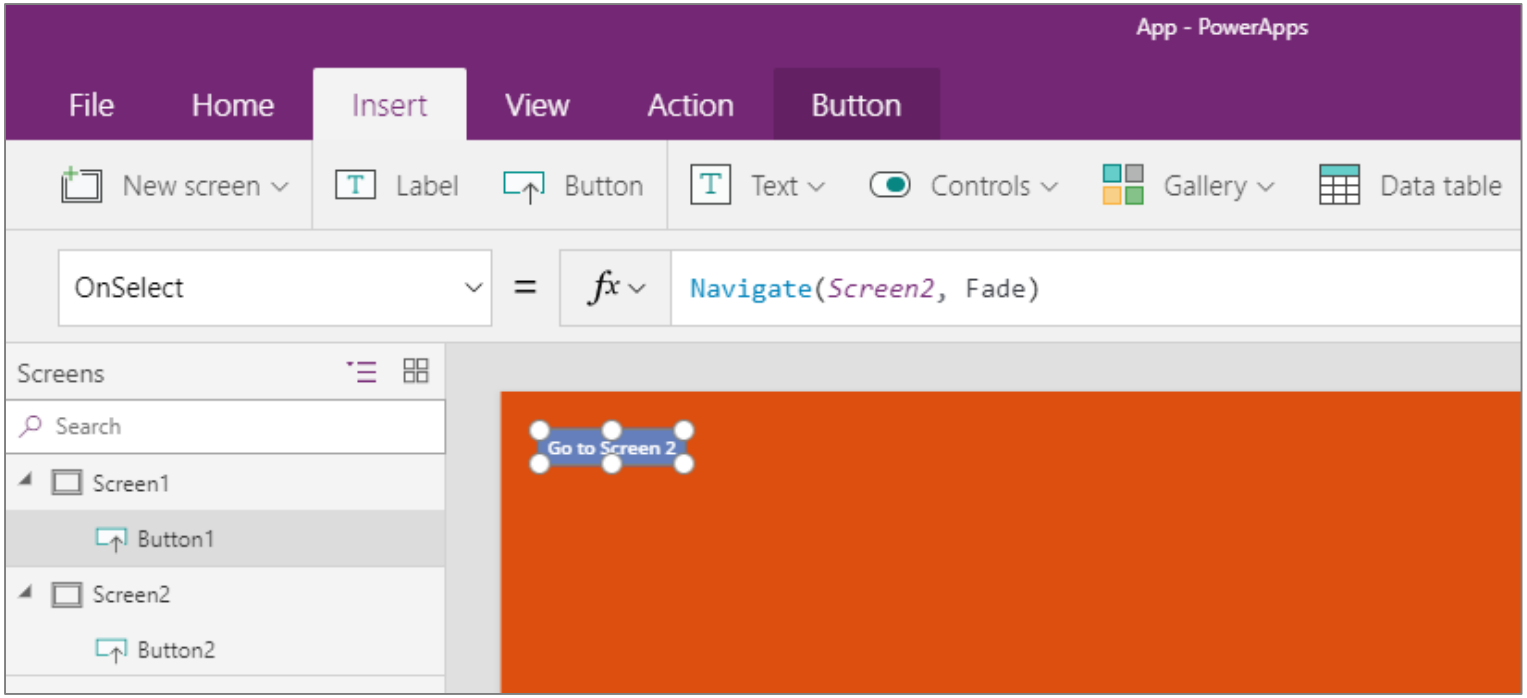


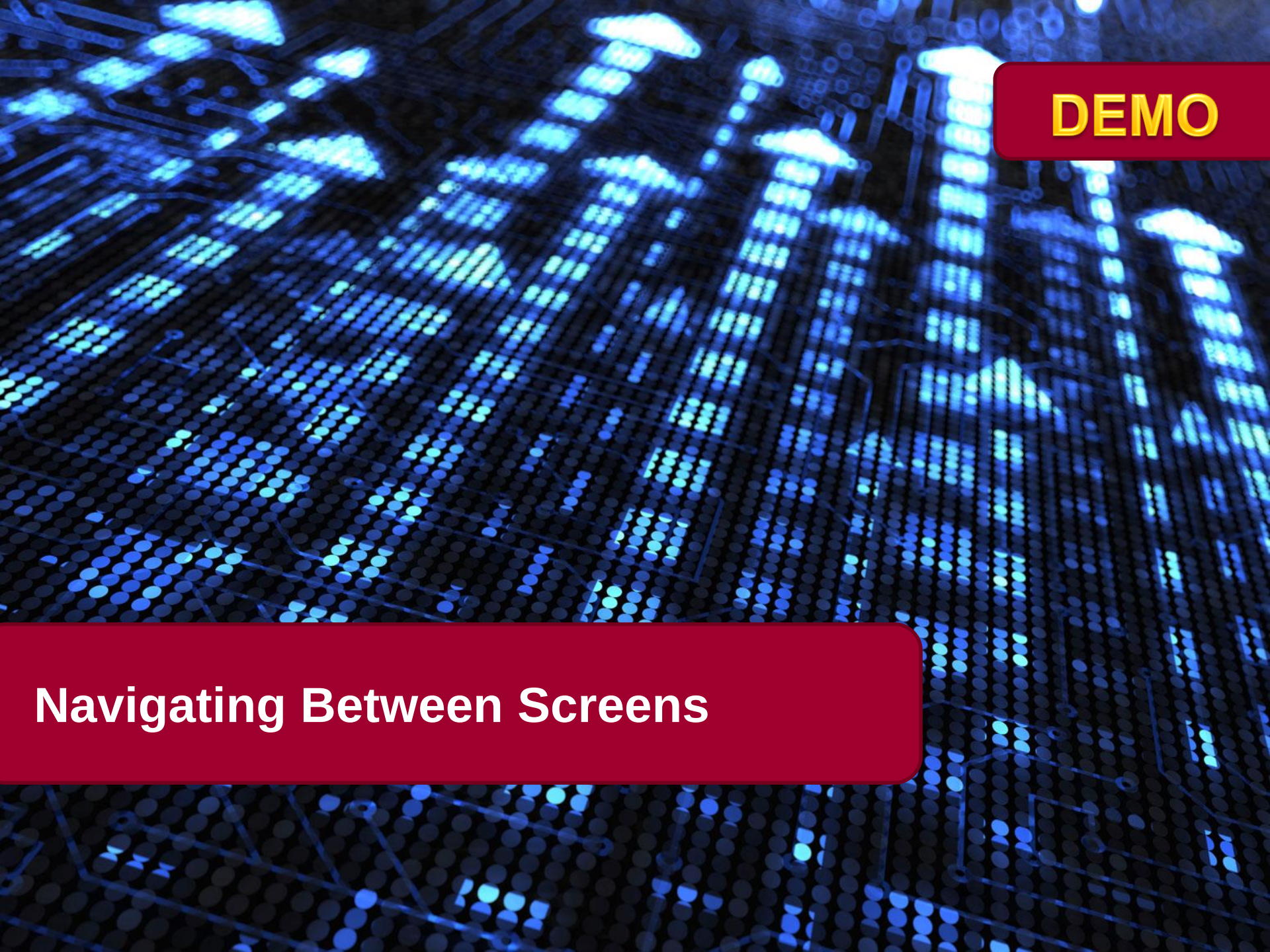
  - Write an formula to filter the items shown in a gallery


DEMO
Creating an App using the Start from Blank Template

Navigating Between Screens

- Navigate to a screen using Navigate function
  - Call **Navigate** function from **OnSelect** property of **Button** control
  - **Navigate** function performs action instead of returning a value



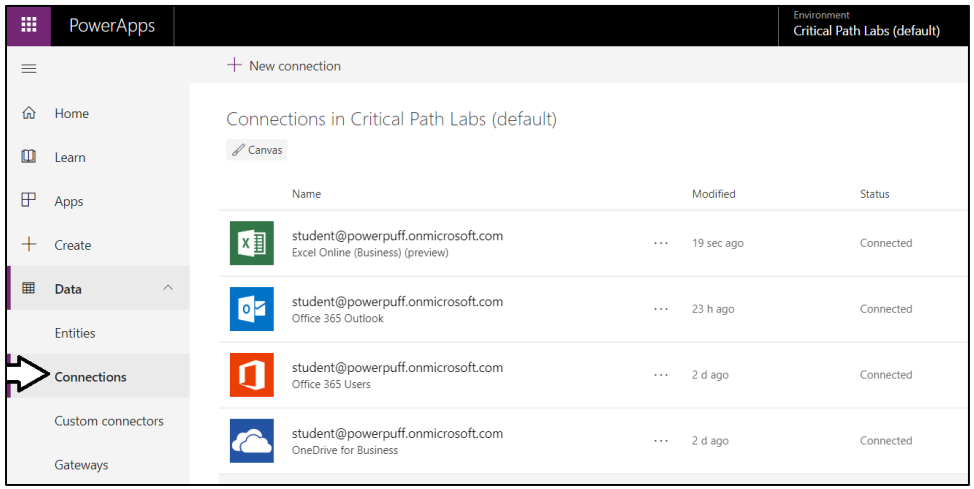

DEMO
Navigating Between Screens

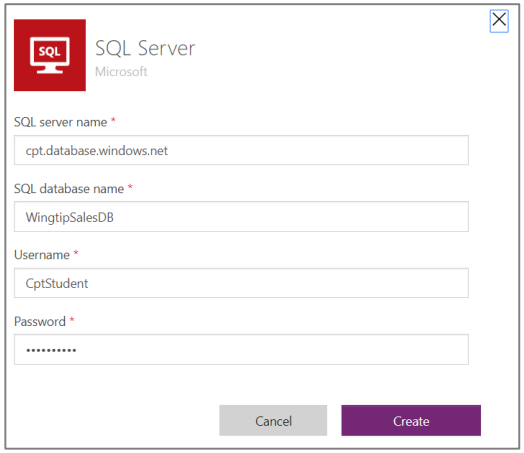
Agenda

- ✓ Getting Started with PowerApps
- ✓ Creating and Testing Apps with PowerApps Studio
- ✓ Working with Screens and Controls
- ➢ Understanding Connectors and Data Binding
- • Customizing Forms and Data Cards

Understanding Connectors & Connections

- What is a Connector?
  - API wrapper that PowerApps uses to interact with datasource
- What is a Connection?
  - Configuration created to connect to a specific datasource
  - Each connection is created using a specific connector
  - Connection also caches login credentials and granted permissions
  - Connections can be shared across users



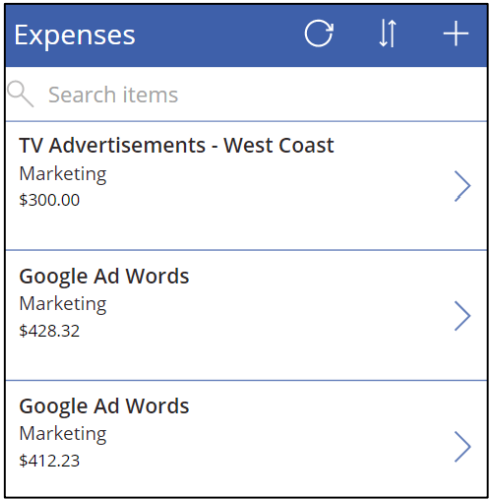


Standard Connectors vs Custom Connectors

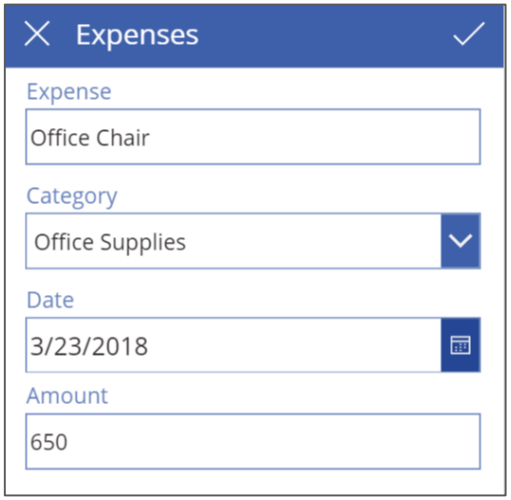
- PowerApps Supports two types of connectors
  - Standard connectors supplied out-of-box and vetted by Microsoft
  - Custom connectors created by organizations for their own use
- Many connectors are designed for tabular datasources
  - Underlying data is modeled as tables with rows and columns
  - Tabular data makes it very easy to use data binding
  - PowerApps provides tabular-based functions (e.g. Patch)
- Other connectors are function-based
  - Used when underlying datasource cannot be accessed as table
  - Connector executes calls against the external SaaS service
  - Data binding is possible but requires more effort

Data Binding with Galleries and Forms

- Table binding
  - Gallery control
  - DataTable control

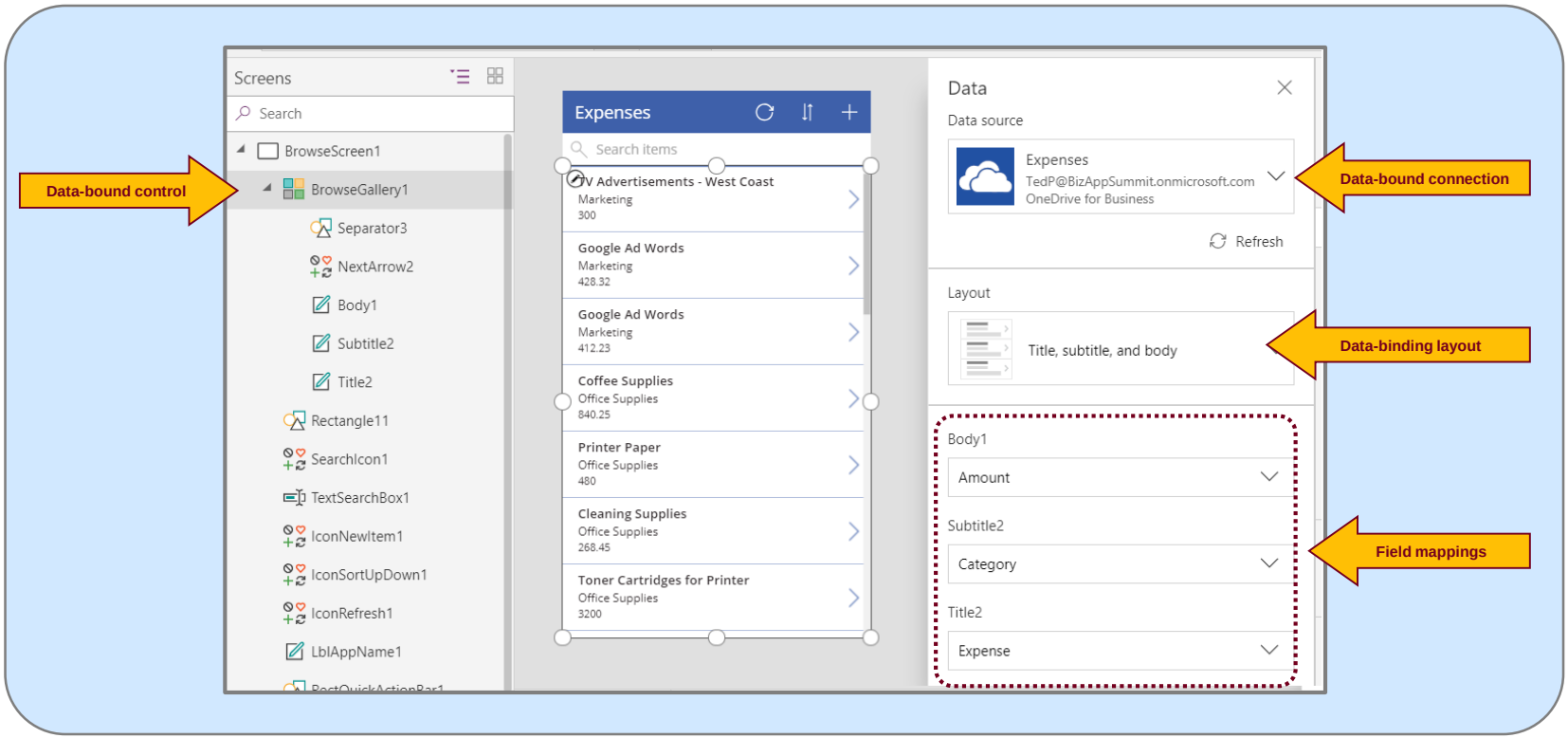


- Single-record binding
  - Display form control
  - Edit form control



Working with the Data Pane

- You use the Data pane to configure data binding
  - Select a data-bound control and then display Data pane
  - Data pane allows you to change layout for data binding
  - Once you select layout, you can then map fields below




DEMO
Creating an App using the
Start from Data Template

Agenda

- ✓ Getting Started with PowerApps
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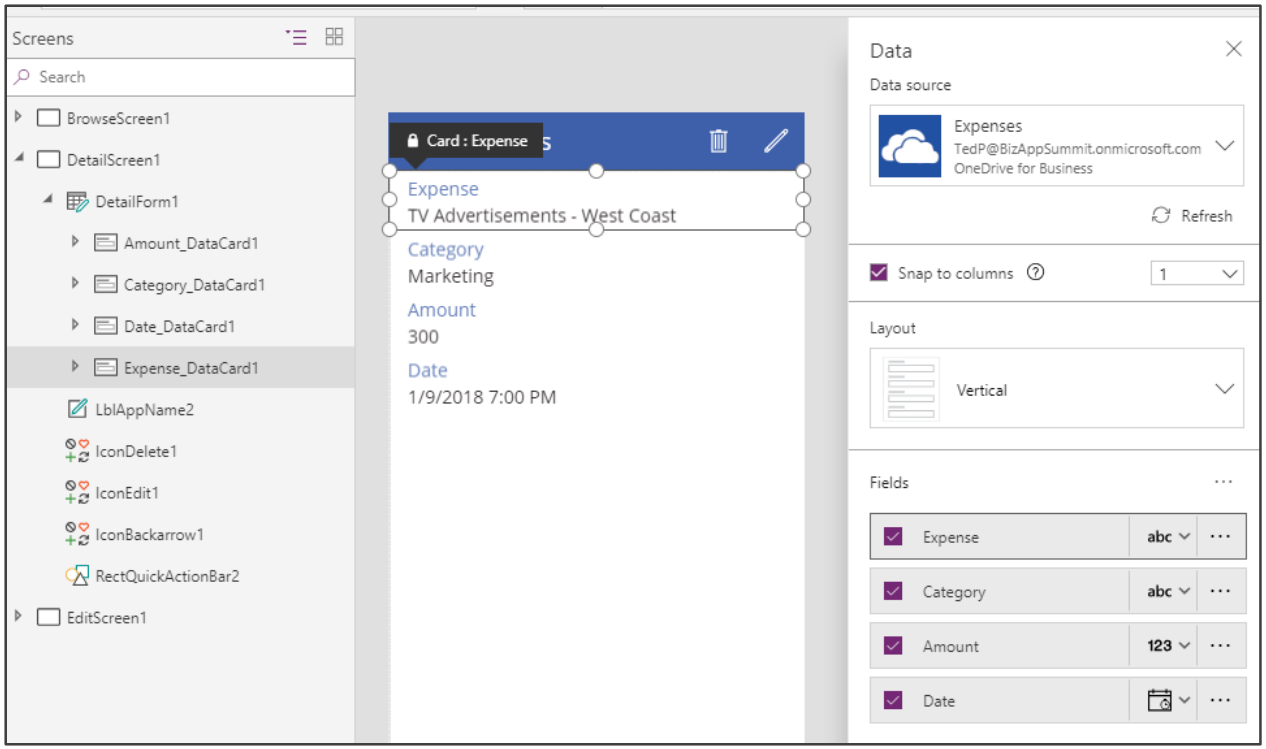
- ✓ Working with Screens and Controls
- ✓ Understanding Connectors and Data Binding
- ➢ Customizing Forms and Data Cards

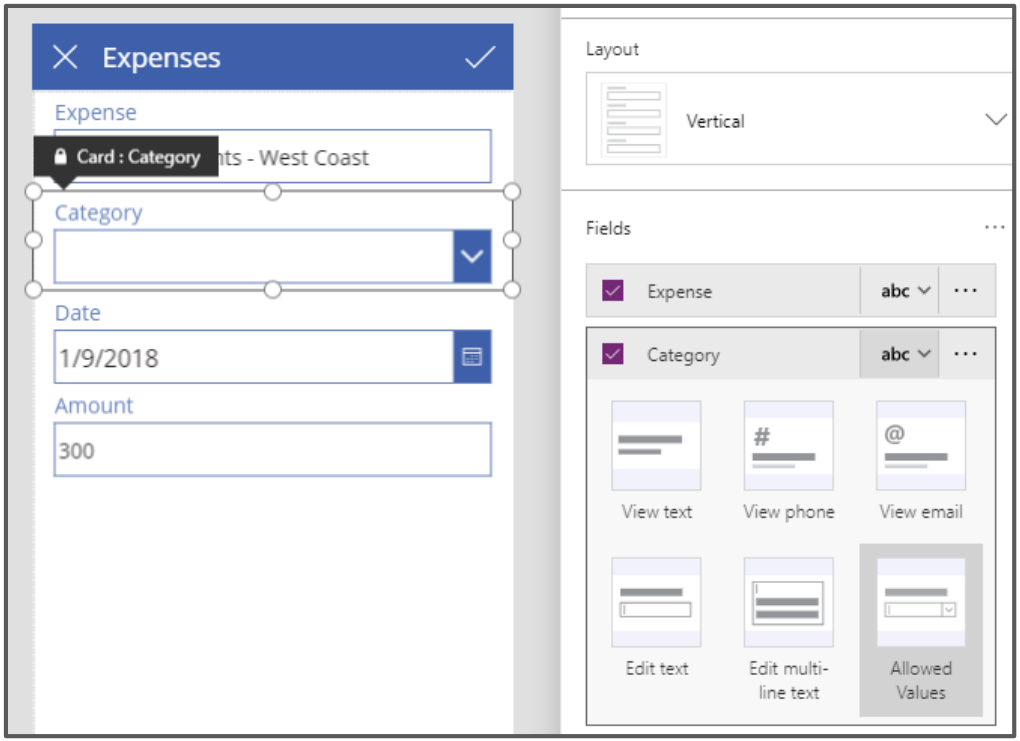
Understanding Forms and Data Cards

- Form acts as a container for data cards
  - Each form binds to a single record
  - Within a form, each data card binds to an underlying field
  - Each data card contains an encapsulated set of child controls



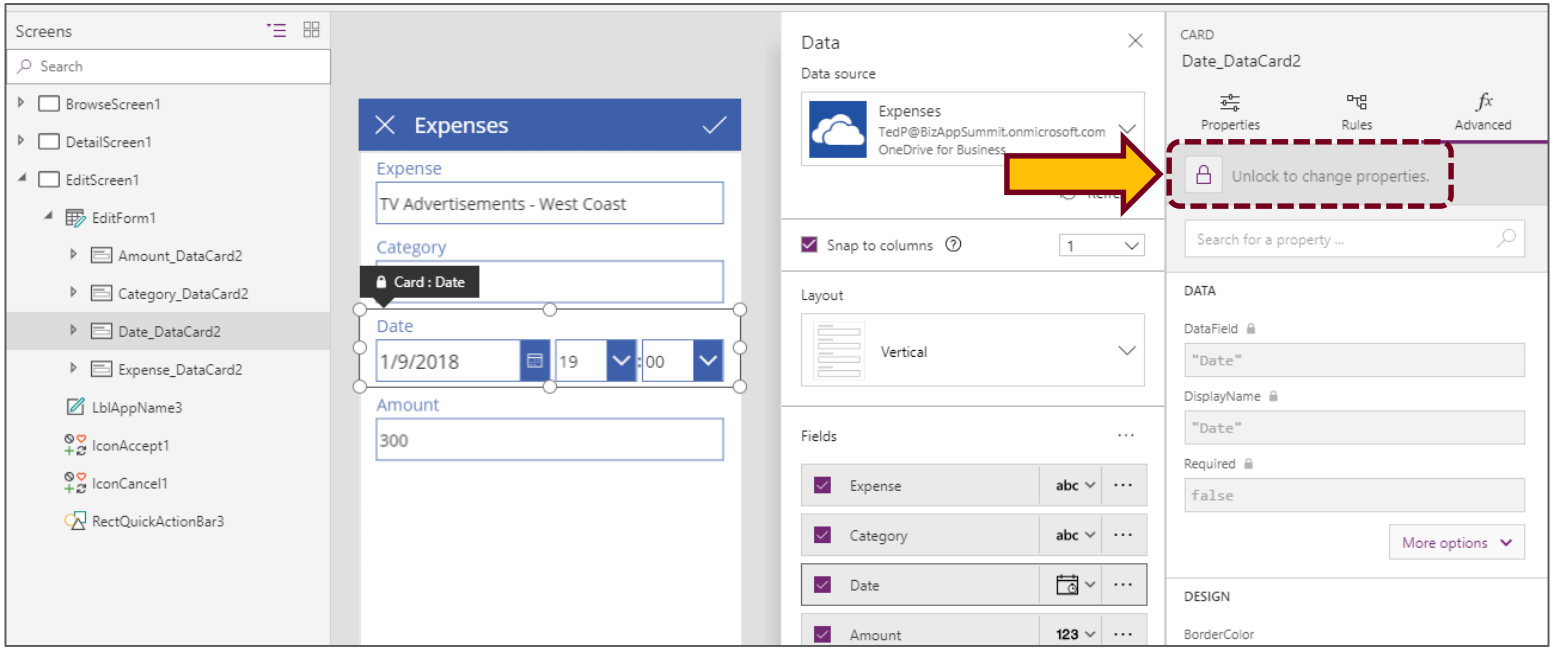
Changing a Field's Data Card Type

- Fields in Form control get default data card
  - Use Data pane to change data card used by any field
  - Different data cards offer different editing experiences



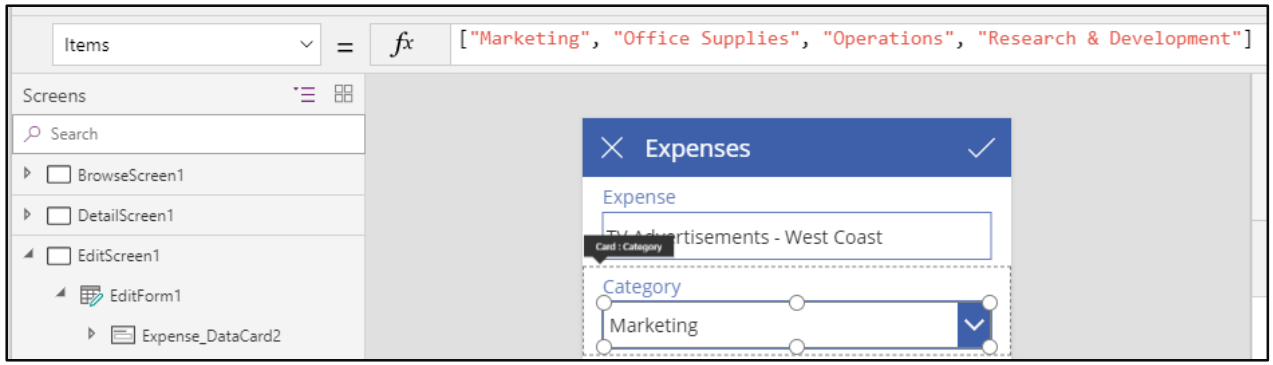
Customizing a Data Card

- By default, data cards are locked and cannot be edited
  - In many scenarios, you should leave data cards locked
  - Some scenarios call for unlocking data cards to customize them



Populating a Dropdown Combobox

- Once a data card is unlocked you can customize it
  - Add formula for **Items** property to populate combo box



  - Dropdown list provides better user experience than textbox


DEMO
Customizing Forms and Data Cards

Summary

- ✓ Getting Started with PowerApps
- ✓ Creating and Testing Apps with PowerApps Studio
- ✓ Working with Screens and Controls
- ✓ Understanding Connectors and Data Binding
- ✓ Customizing Forms and Data Cards