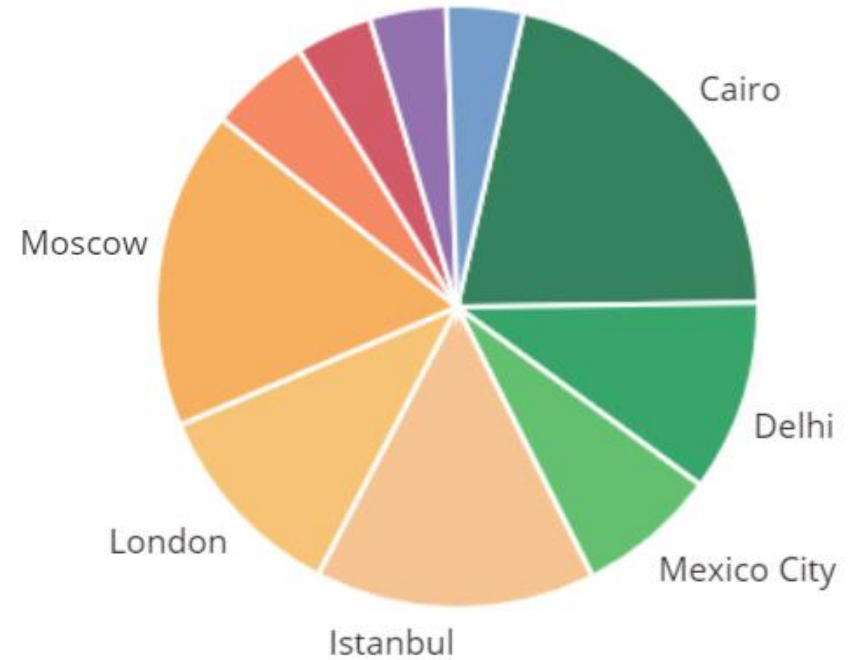# Power Apps Controls

Topics

- Text controls
- Input controls
- Media controls
- Form controls
- Data table controls
- Gallery controls
- Charts controls
- Using variables with controls

Text controls

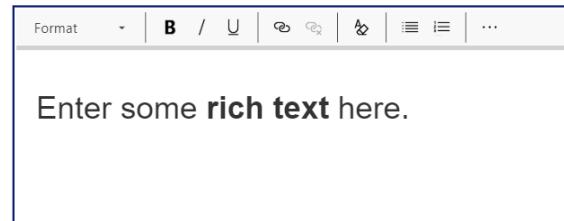## Display

- Label

  Bill Gates

- HTML text

  Technology Adviser **Bill Gates**.

Data Entry

- Text input

  | Bill Gates |

- Rich text editor

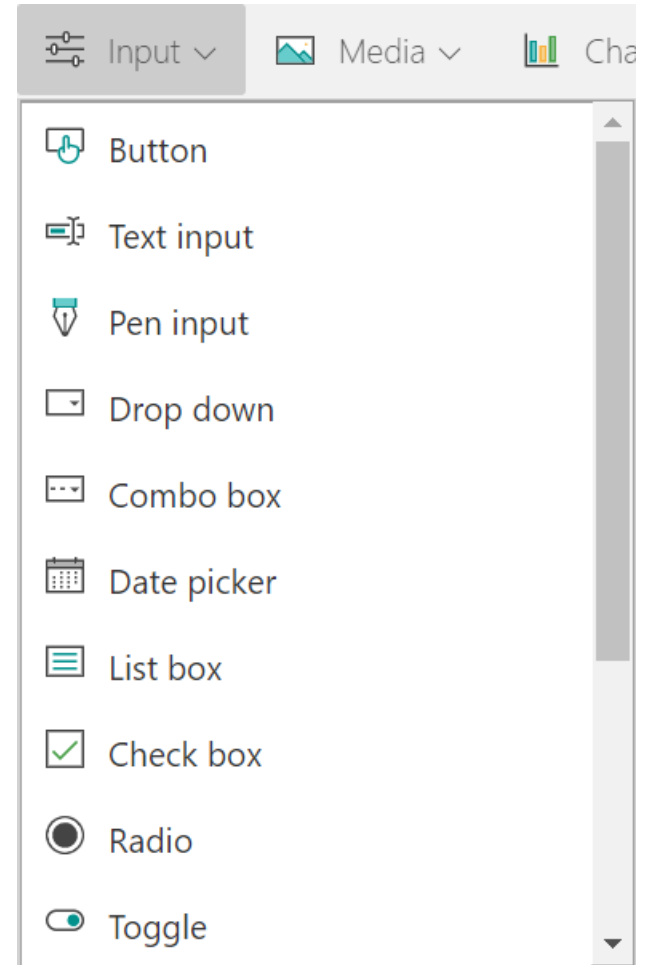 Enter some **rich text** here.

- Pen input

  Pen input can be stored locally using **SaveData** or stored in a data source such as SharePoint using **Patch** formulas

Input controls

- Button
- Drop down
- Combo box
- Date Picker
- List box

- Check box
- Radio
- Toggle
- Slider
- Rating

Other input controls

- Buttons
  - Make use of **OnSelect** for button actions

  Click here to view

- Drop down
  - Can be static or dynamically populated

  $fx \vee$ ["Mon","Tue","Wed","Thu","Fri"]

  - Can allow a selection of single/multiple items

Mon ⌄
Mon
Tue
Wed
Thu
Fri

  Mon Wed ⌄

- Combo box
  - Similar function to a drop down
  - Offers a search box
  - Great for big lists

Find items
Mon
Tue
Wed
Thu
Fri

Other input controls

- Date picker – Manual entry or calendar

04/08/2020	📅

- List box – Select an item from a list

  Monday
  Tuesday
  Wednesday
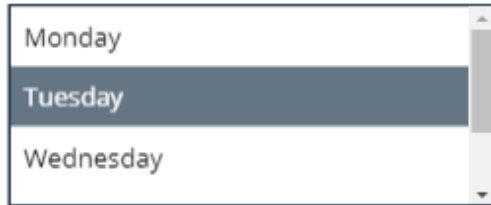
- Check box – Display one or more items

  ☑ Option
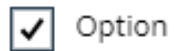
- Radio – Like a list, select from visible items

  ○ The good
  ● The bad
  ○ The ugly

- Toggle – On/off switch

  ⬤━ On

- Slider – set a numeric value by dragging left and right
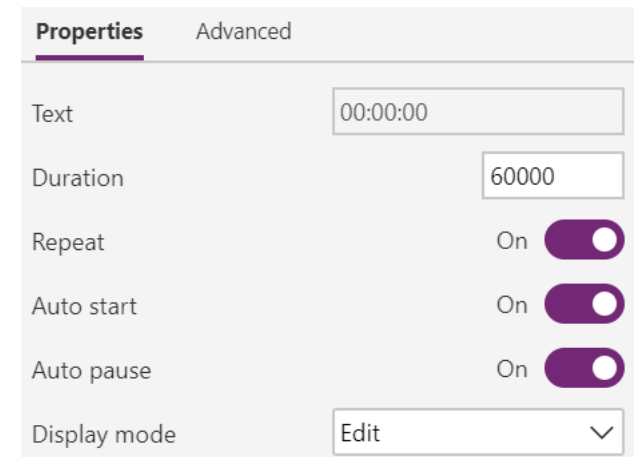
  ──────○──────

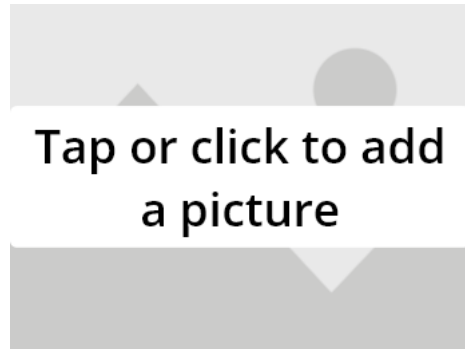- Rating – set a number value by clicking a star

  ★★★★☆

Other input controls

- Timer – can be used in a variety of ways for example
  - Animating objects like sliding a menu onto the screen
  - Timing how long messages appear for
  - Delaying the submission of information to a service
- Times are measured in milliseconds, 1000 = 1 second
- Timers have unique properties:
  - OnTimerStart
  - OnTimerEnd
- Timers can repeat, auto pause if you navigate to another screen and automatically start when you navigate to the page
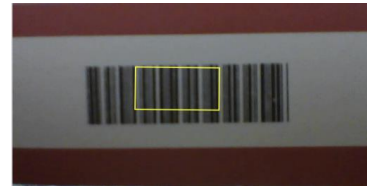
00:00:07

Properties	Advanced	
Text		00:00:00
Duration		60000
Repeat	On	
Auto start	On	
Auto pause	On	
Display mode		Edit

Media controls

- Add Picture – add from device

- Camera – take a photo

- Microphone – records audio
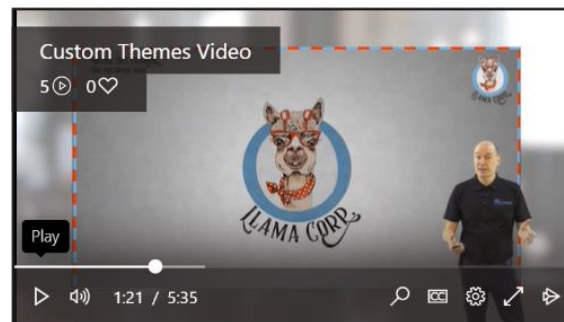


- Barcode – scan barcodes with a camera

- Microsoft Stream – ensure users have access to the video

Media controls often use hardware on your device like a microphone, GPS or camera. The app will ask you if you are happy for it to use the hardware on your device. If you approve the app opens. If rejected the app simply closes.

Media controls

- Import and Export – Used to move data between apps
- PDF Viewer – Display a PDF file in an app that you can scroll through
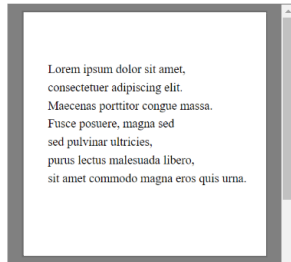
- Power BI tile – Show and navigate you to a Power BI dashboard tile
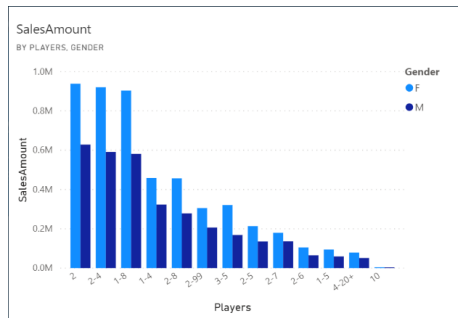
- Attachments – Normally associated with SharePoint lists, attaches files to an item
- Forms Pro survey (premium) – Connect to Forms Pro (not standard MS Forms)

Form controls

- Forms make it easy to:
  - Create new items in a data source
  - Edit existing items in a data source
- Forms are automatically generated by Power Apps based on a table e.g. SharePoint list or an Excel workbook
- You can modify forms including:
  - Hiding columns you don't want users to see
  - Changing the layout of the form
  - Customising fields
- If your data source updates for example, you add a new column it, is easy to update your form

Creating a form

- If you create a new app based on a data source, the wizard will generate forms to add new items and edit existing items

- You can also create a new form by navigating to a screen in your app and then clicking **Insert** > **Forms**, then click either **Edit** or **Display**
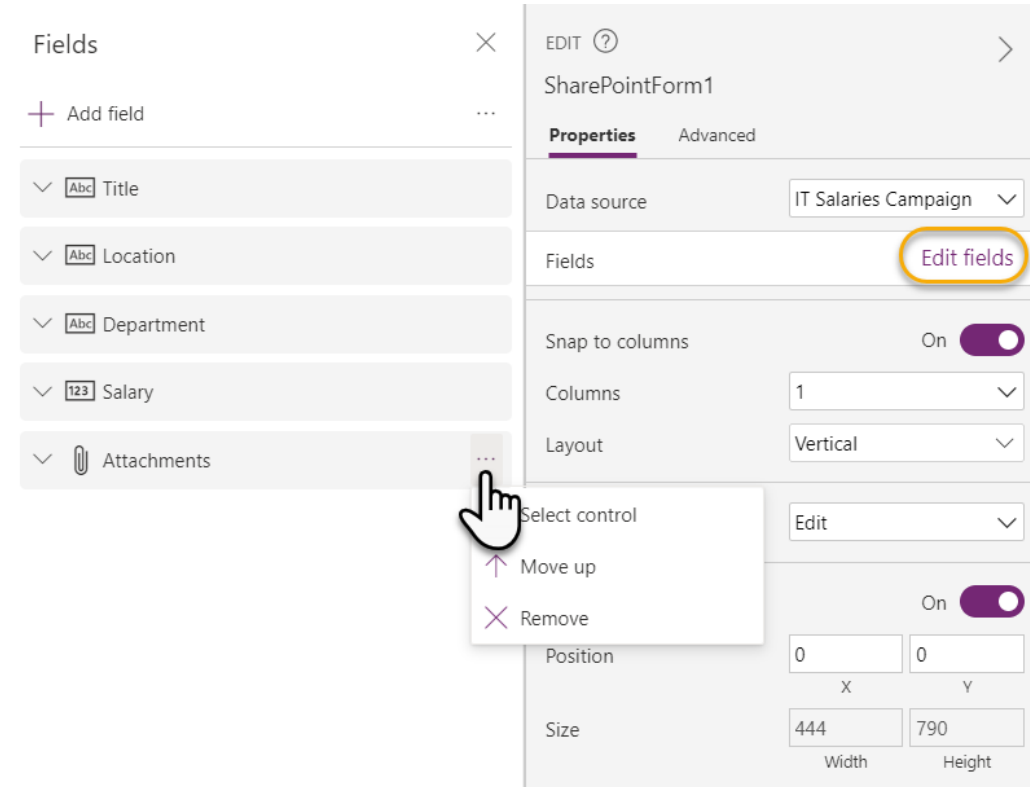
  📝 Edit

  📄 Display

- When a user has entered data in to a form they will need a way to send the information in the form back to the data source

- The formula to do this can be added to a button or other control 💾

- The formula is **SubmitForm** and in brackets the name of the form:

  - SubmitForm(NewCustomer)

Create new or edit existing records

- You can prime your form to either edit an existing record or create a new one
- This is done based on the way you set up the form before navigating to it
- Here are the examples of priming a form:

  - Add new item   **NewForm(EditForm1)**;Navigate(EditScreen1) ⊕

  - Edit item   **EditForm(EditForm1)**;Navigate(EditScreen1) ✎

Edit a form

- When you have selected a form control you can:
  - Choose a layout
  - Set a number of columns
  - Edit fields
- Within the edit fields menu, you can:
  - Hide columns
  - Add columns (if removed or your data source has new columns)
  - Move columns up and down
  - Change the input (number fields can be set to use slider or rating controls)

Advanced Form Editing

- It is possible to change fields further by working with cards
- Cards are the property field and its label
- To edit, click on card, then click on **Advanced** and **Unlock to change properties**
- You can now edit the properties of that control
- Use the forms **Edit fields** option to remove custom cards and **Add field** to add the original card to the form

The data table control

- Displays data in a table format
- This is ok for tablet apps but can be tricky to view on mobile phones in a portrait layout
- Typically used to display data where as forms are used to edit records
- For a better mobile experience consider galleries
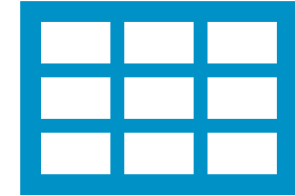
Product_Description	Product_Title	Product_image
The first full laptop has arrived in the Surf...	Powerful laptop	https://az787822.vo.msecnd.net/sampleapps/produc...
The 13.5" PixelSense™ display detaches e...	Portable clipboard	https://az787822.vo.msecnd.net/sampleapps/produc...
Turn the screen around and reattach it to ...	Creative canvas	https://az787822.vo.msecnd.net/sampleapps/produc...
Surface Book is built to be a creative work...	Ultimate performance	https://az787822.vo.msecnd.net/sampleapps/produc...
Use the multi-touch PixelSense™ screen a...	Serious creativity	https://az787822.vo.msecnd.net/sampleapps/produc...
Write directly on webpages with Surface P...	Markup webpages	https://az787822.vo.msecnd.net/sampleapps/produc...

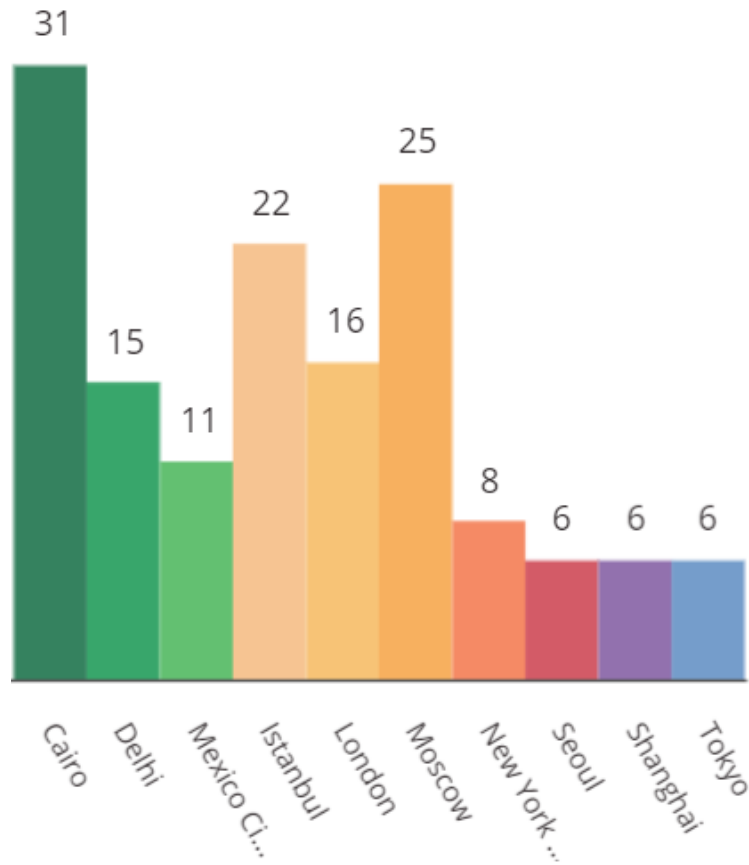# The gallery control

- Galleries arrange items in an engaging, friendly way
- They have a range of layouts including horizontal and vertical
- Image URLs can be rendered as images
- You can pick how many properties to display
- You can choose which field displays which property
- You can edit the size and layout of an item by editing the **first entry**
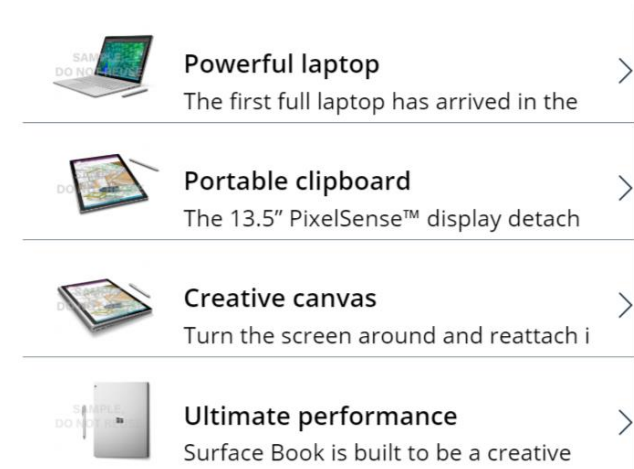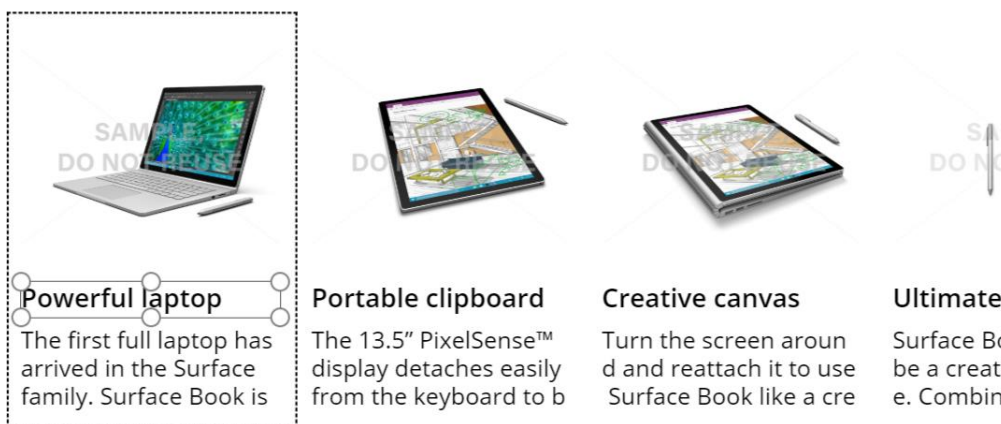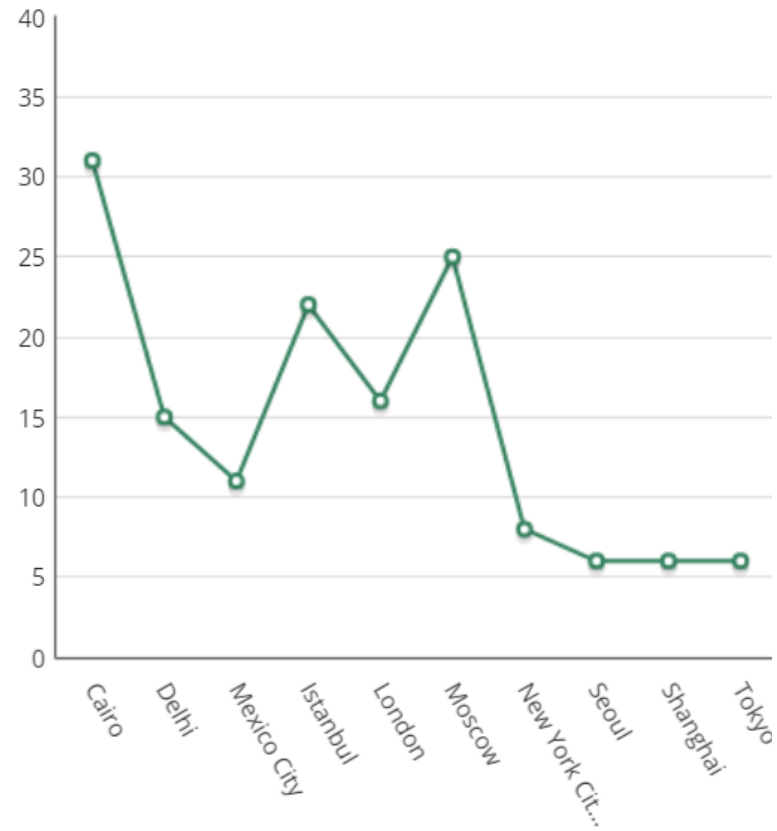
The chart control

- Column
- Line
- Pie

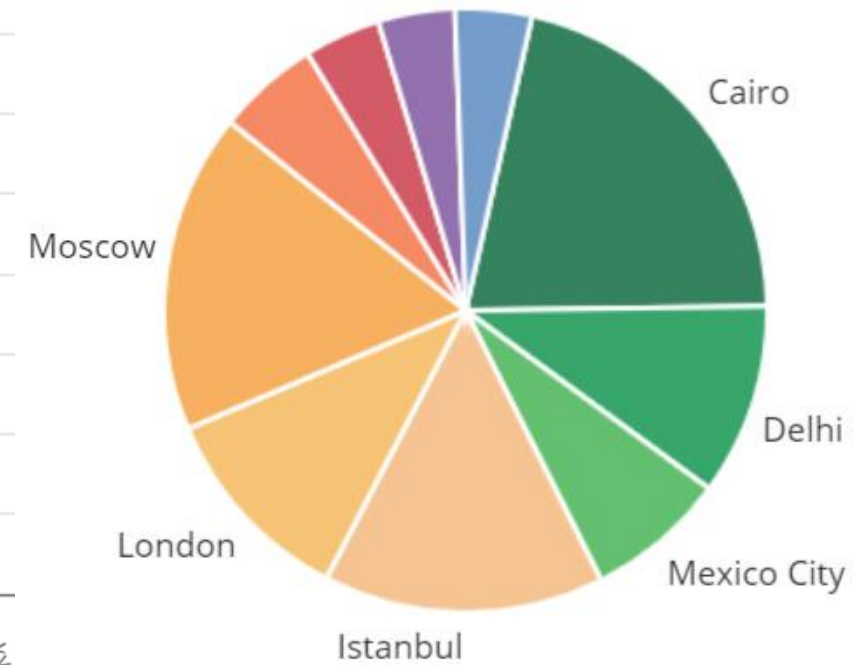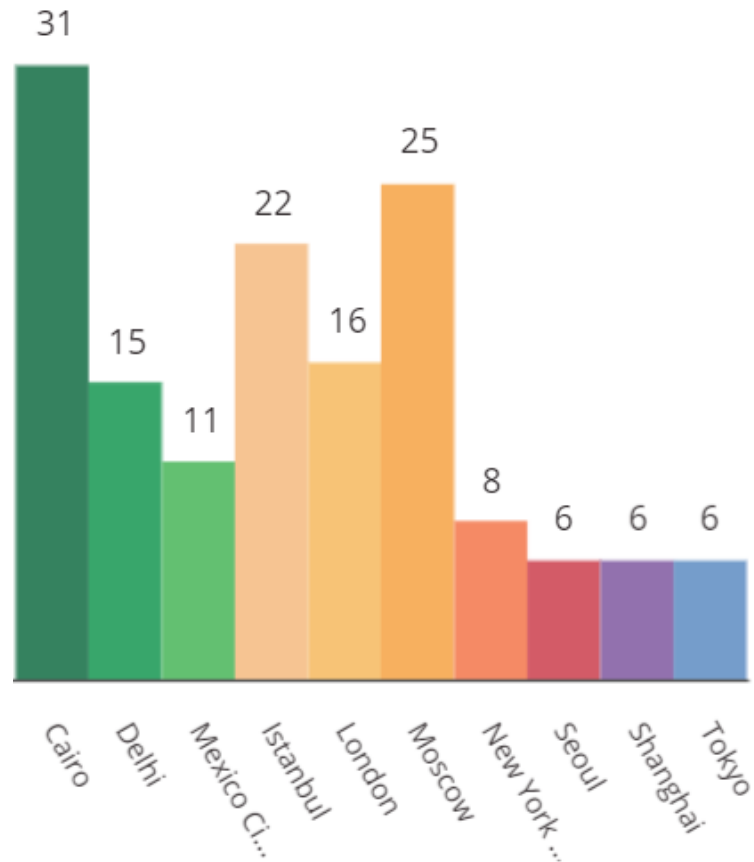# Chart Colours

- ItemColorSet

Each RGBA value is a colour in the series:

[RGBA(49, 130, 93, 1),RGBA(48,166,103, 1), RGBA(94,193,108,1), RGBA(246,199,144,1), RGBA(247,199,114,1), RGBA(247,180,91,1), RGBA(246,143,100,1), RGBA(212,96,104,1), RGBA(148, 110, 176, 1), RGBA(118, 154, 204, 1), RGBA(96, 197, 234, 1)]

Other Chart Settings
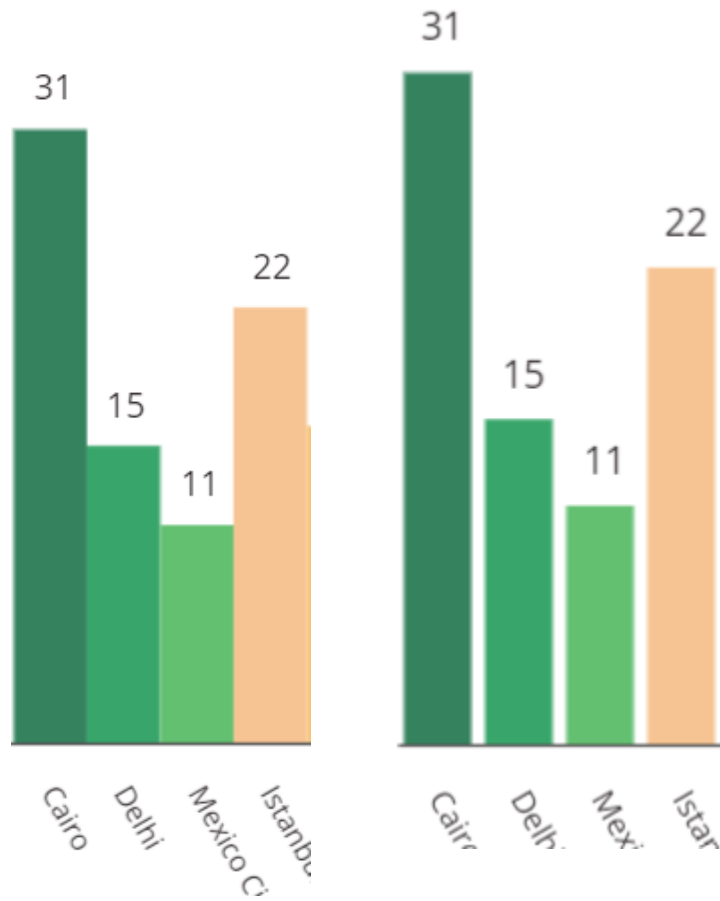
- **Items gap** 0 and 20
- **Number of Series** 1 and 3

Chart Data

- Set using the **Items** property

- Defaults to *ColumnChartSample*

- You can pass data from a collection

  ClearCollect(Sales,

  {Name:"Georgia",Sales:2000},
  {Name:"Matt",Sales:10500},
  {Name:"Steve",Sales:25300}
)

Using variables with controls

- Variables are useful when designing solutions as they can store information
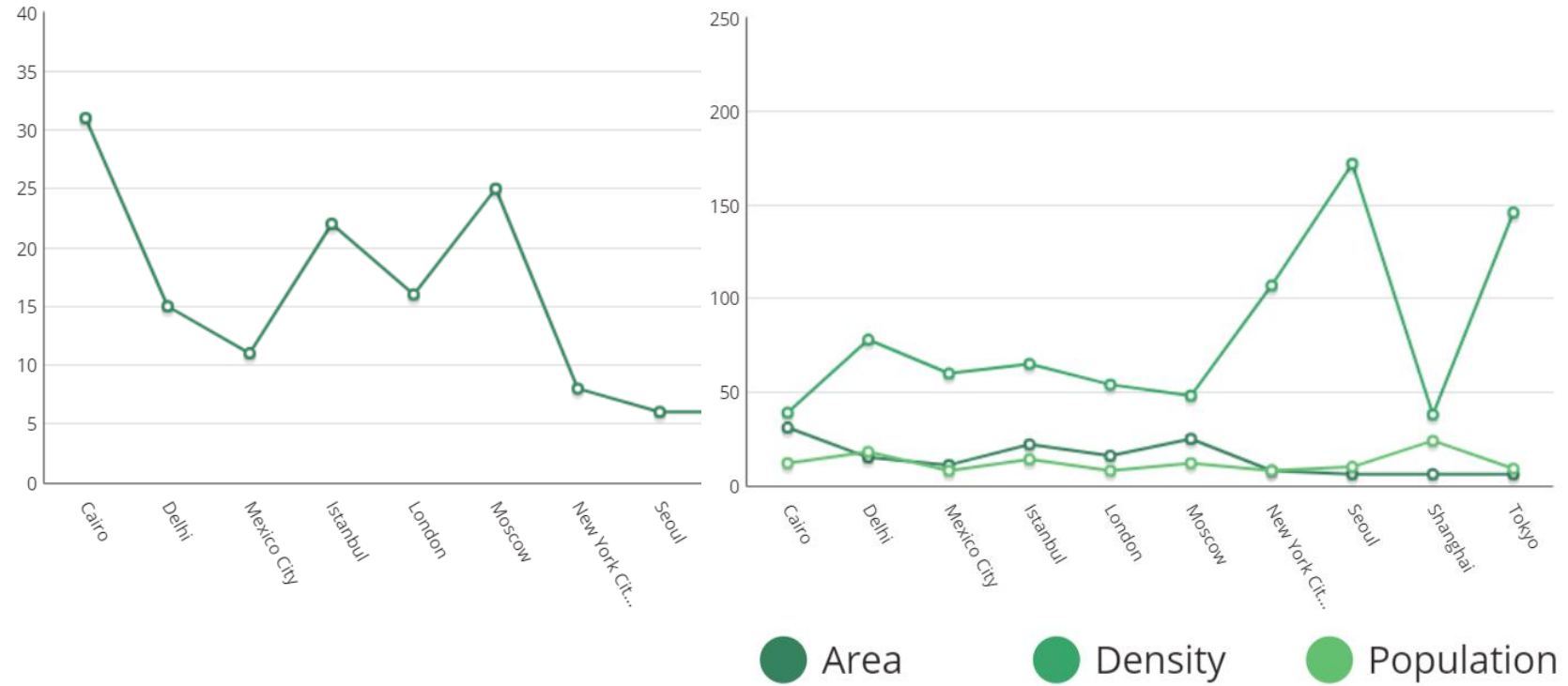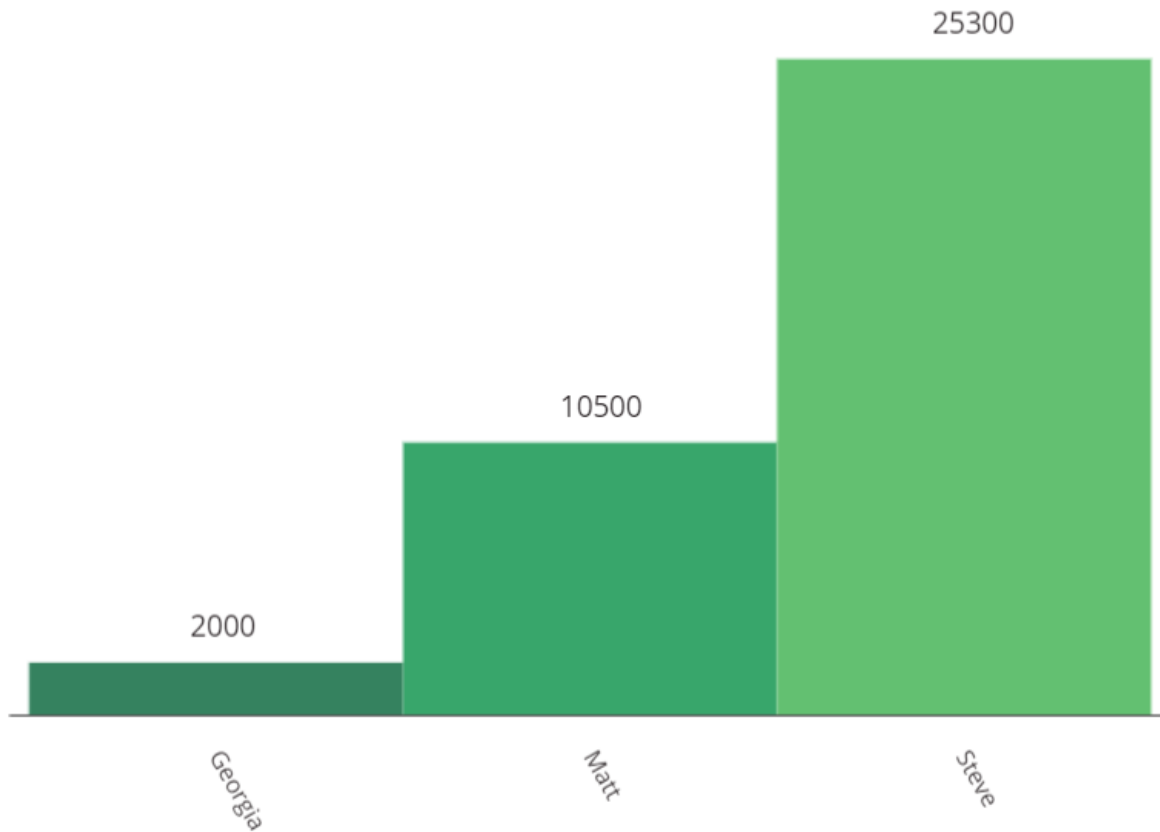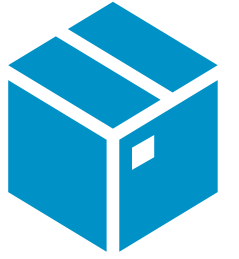- This information can then be picked up by another control, for example:
  - A variable can contain a calculation that yields an order total, which can be displayed in a text field across several screens
  - A variable could request information from another data source and store the answer, which could be used to hide unnecessary controls e.g. is the current user a line manager
- There are three types of variables in Power Apps:
  - Set
  - UpdateContext
  - Collect

Variables will temporarily store your data while the app is running, to store a value you must use SaveData or commit it to a data source

Using variables with controls - Global

- Formula: Set
  - Stores a single value, which could be text, a number, a date etc
  - Set is define in the following way:
    - Set(VariableName,VariableValue)
    - Set(exchangeRate,1.3)
  - In a label you could now type the formula:
    - 100 * exchangeRate
  - Set creates a global variable, which means it could be referenced on every screen in your app

Using variables with controls - Local

- Formula: UpdateContext
  - UpdateContext variables are only available in a single screen
  - This is known as a local variable
  - The syntax is different to Set, notice the use of curly brackets
    - UpdateContext({Counter:1})
  - UpdateContext is often used dialogue boxes that only feature on the current screen for example, a confirmation box for deleting an item
    - UpdateContext({ShowDeleteConfirmation:true})

Using variables with controls - Collection

- Formula: Collect
  - Collect is used to store multiple values
  - Collect(varName,"Value")

- We can use this to capture more than one reference e.g. use a collection to save photos captured using the camera control or drawings from pen input

- Collections can be displayed in an app using Table or Gallery controls

- You can use formulas like **Clear** which can remove all values in a collection

Some app designers prefix the name of a variable with Collection, Local or Global based on the type of variable

Lab 4 – Retail barcode scanner

- Module 9: Page 41 to 50   [30 Mins]
- Exercise 1 – Set up a product list to reference with your app
- Exercise 2 – Design an interface for scanning and viewing products
- Exercise 3 – Optionally test this app on your phone

Key Points

- All of the controls are useful in the right situation
- Every control includes many different property settings to make them more versatile
- Some controls are premium so using them in an app would require additional licensing
- Some controls may connect to services that may require additional licensing like Power BI
- Keep an eye out for new controls and improvements to existing controls