Programming Logic - Beginning

152-101

Using Visio 2013
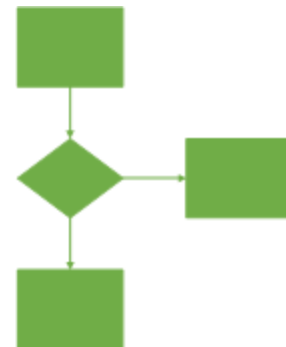
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Starting Visio

- Click the Start Button, choose (All) Programs, click on Microsoft Visio (may be in the Office folder)
- If necessary, select the File tab and choose New in the left column of items.
- Choose (double-click) the Basic Flowchart template
- The Basic Flowchart template will appear on the left side of the screen, providing access to all your favorite flowchart symbols.
- A new document appears on the right. You may want to change the zoom (View tab) to 100% to get a better view.
  - ➢ You can also change the zoom level by holding the Ctrl key down while moving the scroll wheel on the mouse.

Notes	Activity

General Drawing Creation Procedures

1. Set the diagram theme
2. Set diagram orientation
3. Add shapes to diagram
4. Label Shapes
5. Connect shapes
6. Add remaining labels and symbols
7. Save diagram

General Guidelines

- Don't forget the undo button. Visio has multiple levels of undo.
- To select multiple objects:
  - Drag a box around the objects (you must completely surround the objects—objects that are merely touched are not selected).
  - Shift-click an object to add it or remove it from the list

Setting Diagram Theme

- Visio starts out creating boxes with a blue background
- If you wish, you can change the color scheme Visio uses for this diagram.
- Click the Design tab and choose a theme from the Themes group
- Tip: place a couple of objects on the form so you can see the effects of changing to a theme.
- The *Simple* theme results in a plain, black-and-white flowchart

Setting Diagram Orientation

- Select Design tab, Page Setup group
- Use the Orientation button to designate Portrait or Landscape orientation
- Usually use portrait for flowcharts, but not always

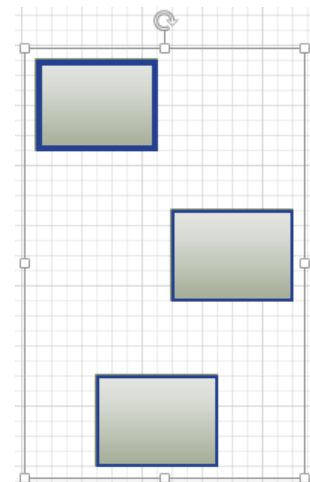| Notes	Activity

Adding Shapes to Diagram

- Drag shapes from template to diagram
- Use handles to resize shapes
- To quickly copy custom sized shapes:
    - ➢ Select shape to copy (click it)
    - ➢ Ctrl-drag shape to new location
    - ➢ Repeat as many times as desired

Aligning Shapes

- Visio displays alignment *guides* to help you align shapes both vertically and horizontally when you drag a shape
- The lines through the center of the shapes help you align shapes.
- The double-headed arrows designate the shapes are spaced evenly.
- Note if the background grid doesn't appear and you'd like it to, choose the View tab, Show group, Grid option
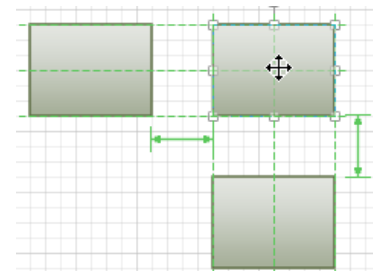
Option 2

- You can also realign shapes after they're already on the form.
- Select shapes to align
    - ➢ First select the master shape—the one the others should align to.
        - – The first shape you select with have a dark border designating it as the master shape; the others will have lighter borders.
    - ➢ Drag box around shapes or
    - ➢ Shift-click shapes to add/remove from list
- Select the Home tab, Arrange group, Align button
- Select alignment type

For shortcut to add new shapes, see Connecting Shapes below

Notes	Activity

Adjust Shape Spacing

- You can adjust the space between shapes
- Select shapes to space
  - ➢ Drag box around shapes or
  - ➢ Shift-click shapes to add/remove from list
- Select the Home tab, Arrange group, Position button
- Select distribution type
  - ➢ Shapes will evenly distribute between left-most and right-most shapes or top-most and bottom-most shapes)

Adding Text to Shapes

- Click the shape to label
  - ➢ Type text for shape
  - ➢ Visio will automatically zoom in on the shape to make entering text easier
  - ➢ Visio will automatically wrap text that does not fit in the current shape
  - ➢ Press Enter to move to the next line of the label before word wrap does
- Adjust font and size for text
  - ➢ Drop down list of fonts (Home tab, Font group) to change character appearance
  - ➢ Drop down size list to change size of characters
  - ➢ Drop down the color list to change the text color
  - ➢ To change the appearance of only a part of the label, select the desired text, then change its appearance.
- Click outside of shape to lock in text
  (Visio will automatically zoom back out if it zoomed in)
  (Caution: if you click on another shape before allowing Visio to zoom out, Visio will forget to zoom back out)
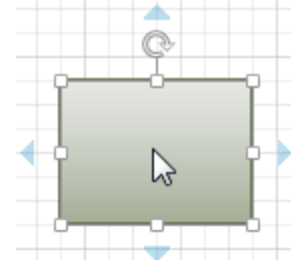
Notes	Activity

Connecting Shapes

Option 1

- The quickest way to connect shapes is to use the connection arrows.
- These arrows appear around a shape when the shape is selected **and** the mouse pointer is resting inside the shape.
- Point to (but don't click) a connection arrow to preview how the connection will appear.
- Click to make the connection

Tip: You can also use the connection arrows to **add shapes** to a diagram.

- Point to (but don't click) a connection arrow, then select the new shape you want from the list that appears.
- If you wait a second a preview of the shape will appear.

Option 2

- If you need greater control of the connection, use the ⬚ Connector tool in the Home tab, Tools group.
- Touch the middle of a shape. Its borders will change color. Drag to the shape you want to connect to. A dotted line will appear previewing the connection.
- Turn off the Connector Tool by selecting the ⬚ Pointer Tool in the Home tab, Tools group.

Option 3

- The connector tool (see Option 2) provides even greater control of connections.
- Place your mouse over any one of the small black dots that appear on the side of the shapes (usually located on the *middle* sizing arrows). A small box should appear.
- Drag to the connector dot on the second shape till a green box appears, then release the mouse button. Visio will automatically connect the shapes in an appropriate manner.
- Turn off the Connector Tool by selecting the ⬚ Pointer Tool in the Home tab, Tools group.
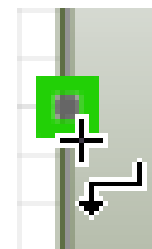
Notes	Activity

Adjusting Connectors

- Easier if you use the Pointer Tool Pointer Tool
- Moving end points
  - ➢ Select the connector (click it)
  - ➢ Point to an endpoint. End points appear as green boxes at each end of the connector.
  - ➢ Drag the endpoint to a different connection point (dot) on this shape or a different shape.
- Deleting a connector
  - ➢ Select the connector (click it)
  - ➢ Press the delete key on the keyboard.
- Changing connector appearance
  - ➢ Select the connector (click it)
  - ➢ Select the Line ▾ button in the Home tab, Shape Styles group.
  - ➢ Change the line weight, line color, line pattern, and/or arrows as necessary using the items that appear.

Tip: Choose Line Options... to display a dialog box that allows you to change many connector features in a window pane that appears on the right side of the window.

Tip: You can also right-click a connection and format with the options on the popup menu.
  - ➢ This is probably the easiest way to convert a line that appears with right angles to a straight line

Notes	Activity

Adding Line Labels

- At this point, it often helps to zoom in to (at least) 100%
- The easiest way to add text to a connector is to select the connector and type.
  - ➢ If you want to add *floating text* (not necessarily on a connector) see below.
- Select the connector (click it)
- Begin typing the text you want to appear on the connector. Press Enter if you want multiple line labels.
- Use the Home tab, Font group to change the size, color, font of the label (make sure the connector is still selected)
- To move the text, point to the yellow square in the text and drag it to a new location.
  NOTE: you can even drag the text off the line.
  This label will always be connected to the line. If you move the connector or its endpoints, the text will stay *near* the connector.

Adding Floating Text

- Just like in Microsoft Word, you use text boxes to add floating text to a Visio diagram.
- Click the Text Box button in the Insert tab, Text group.
- Drag a box on the screen that is the approximate size of the text box you want.
  - ➢ You can resize the text box later if you need to.
- Type the text you want to appear.
- With the text box selected, use the Home tab to change the appearance of the text or the text box itself (fill, line color, shadow, etc.)
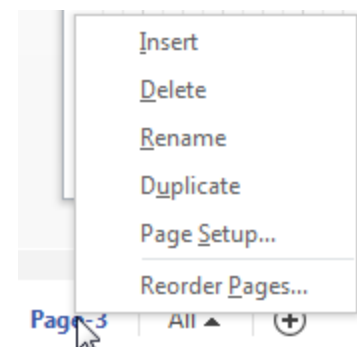
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Multiple Page Flowcharts

- Some flowcharts get quite large. Visio 2013 allows you to automatically make a diagram page bigger if you need more space vertically or horizontally.
  - ➤ Ensure the Auto Size button is selected in the Design tab (it usually is)
  - ➤ Drag a shape (or shapes) to any edge of the current drawing.
    - – Visio will show a new page that you can drop your shapes on.
    - – Page breaks appear to show how the diagram would print

- Most of your flowcharts (after the first few) will include more than one event flowchart. Some, you'll be able to combine onto one page. As they get larger, you can put each event flowchart into a separate tab to make them easy to locate.
  - ➤ Visio treats pages like Excel treats workbooks. Visio files can contain more the one page.
  - ➤ Each page is represented by a tab at the bottom of the window.

- To insert a new page in a file:

  - ➤ Click the New Page button ⊕ to the right of the last tab

            or

  Right-click any tab and choose Insert

            or

   Select the Insert tab, Blank Page button

- To make your pages easier to manage, you'll need to rename the tab. To rename a tab:
  - ➤ Double-click the tab and type in the new name

            or

  - ➤ Right-click the tab, choose Rename and type in the new name.

Notes	Activity

Sprucing Up Your Drawing

Like all Microsoft Office products, Visio comes with design templates that allow you to quickly add a little flair to your diagrams.

- Select the Design tab.
- Touch (but don't click) any of the buttons in the Themes group to see the effect on your diagram.
- Click the Theme to implement it.

- Visio also includes *Borders and Titles*. Use this feature to add your name and any other information in a stylish way.

  Borders &

  ➢ Select the   Titles ▾   button in the Design tab, Backgrounds group.
  ➢ Select the style of border you'd like. There isn't a *live preview* feature for this, so you'll have to click the border style to see it.
    Tip: **Right-click** the border to designate whether it should be used for the current page or all pages.
  ➢ It's not real obvious, but to change the word *Title*, double-click it and simply start typing

Saving a Visio Drawing

I suggest you save often. If you don't want to redo it, save it.

- Click the Save button 🖫 on the Quick Access toolbar or choose the File tab and choose Save or press Ctrl-S
- Specify the location and name for your diagram.
- Click the Save button

Notes	Activity

Printing a Visio Drawing

- Ask yourself—*do I really need to print this?* If you're not sure (or the answer is *no*) skip the rest of this.
- Save the drawing first (see above)
- Select the File tab
- Select Print
  - ➢ The Print window includes a preview of the document
- If the preview looks OK, click the Print button in the Print Preview tab, Print group.

Print

- Click the Back button to return to Visio