Introduction to FlowCode4

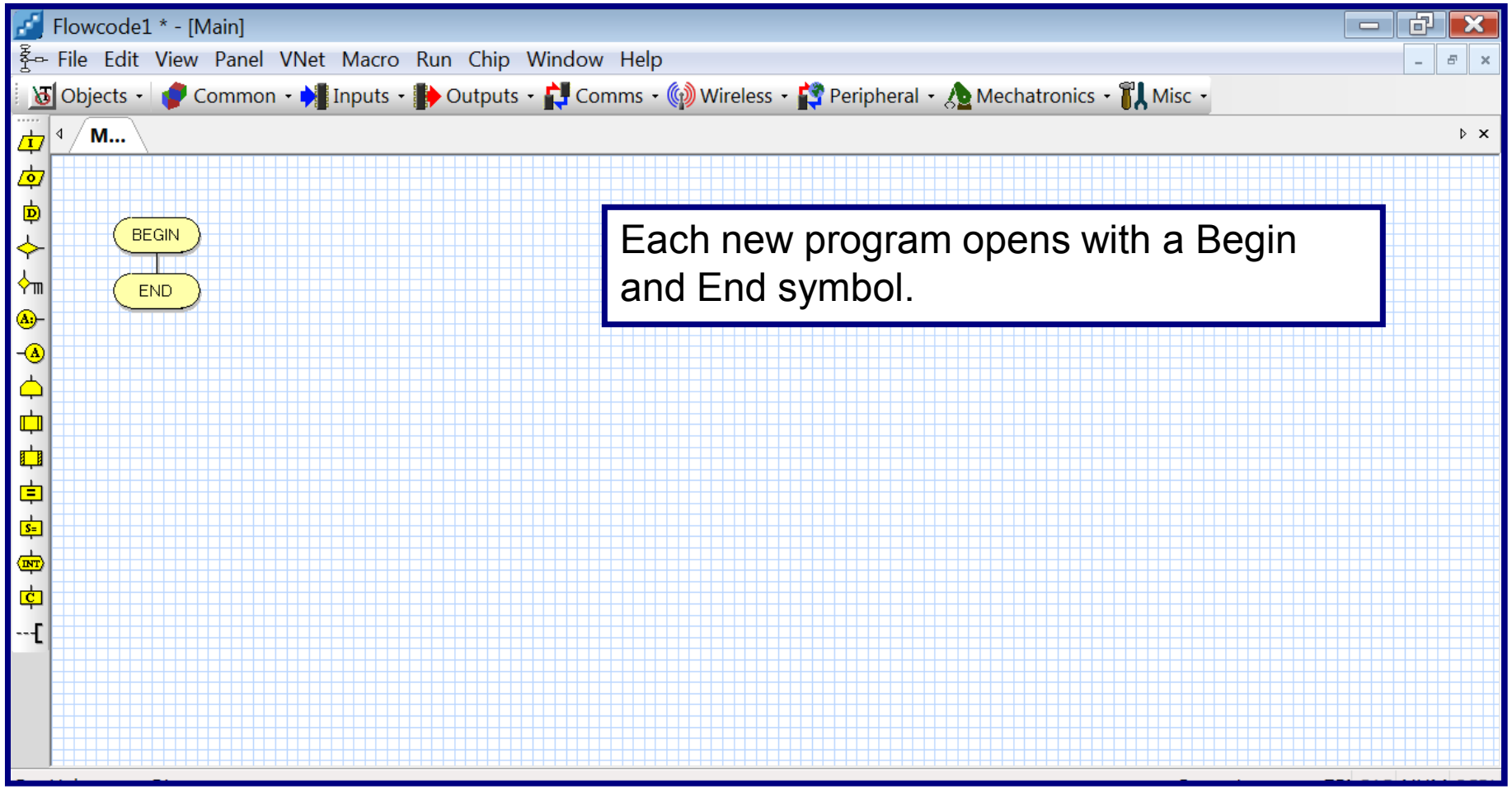
FlowCode4 is a flowchart driven program that allows the user to create a microcontroller program simply by creating a flowchart. Tools located in the program will compile the flowchart and download the hexadecimal program to the microcontroller chip.

Introduction to FlowCode4

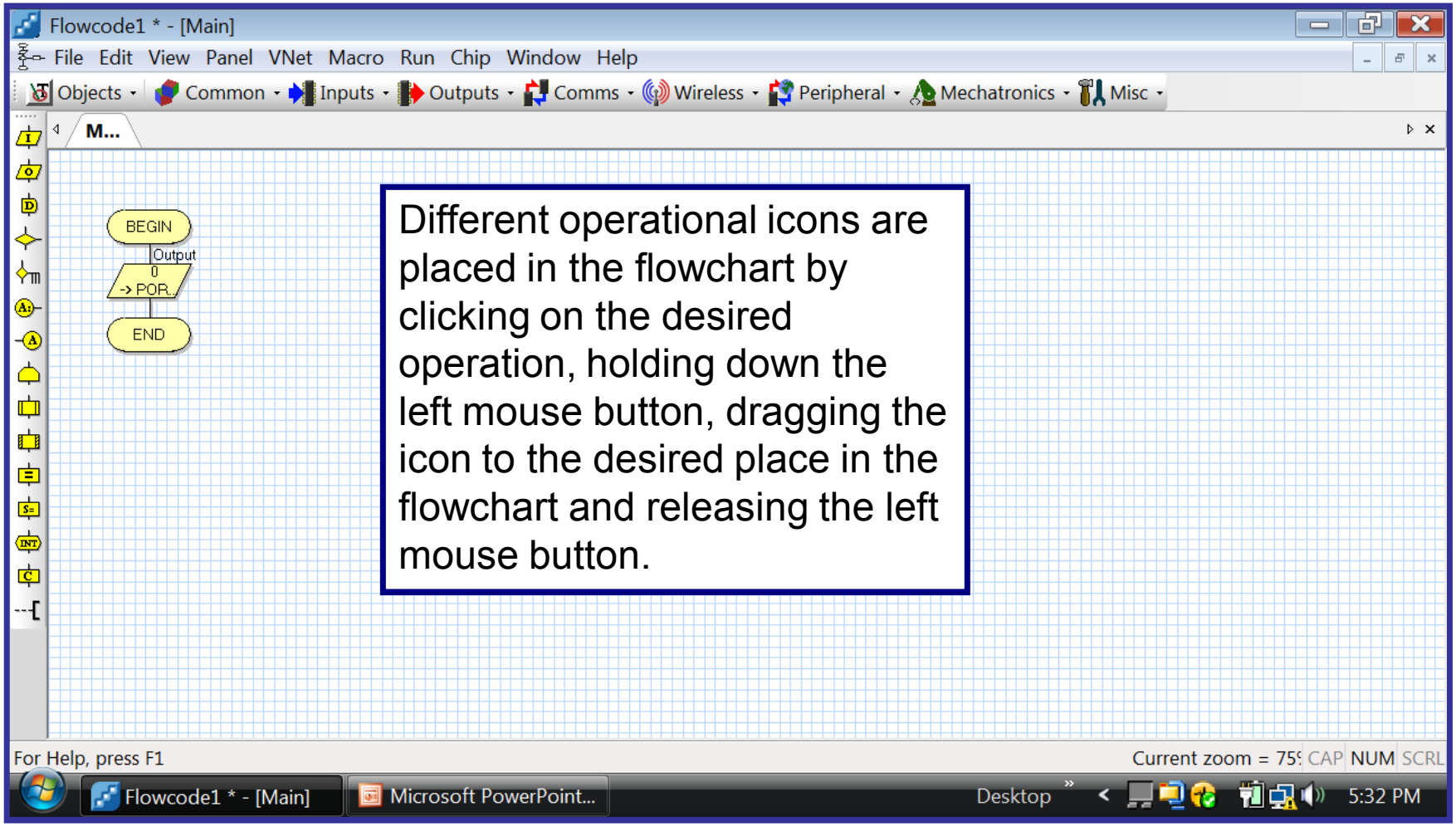
The first step in using FlowCode4 is to learn how the program works.

Once the software is loaded and the user opens the program, the following screen appears.

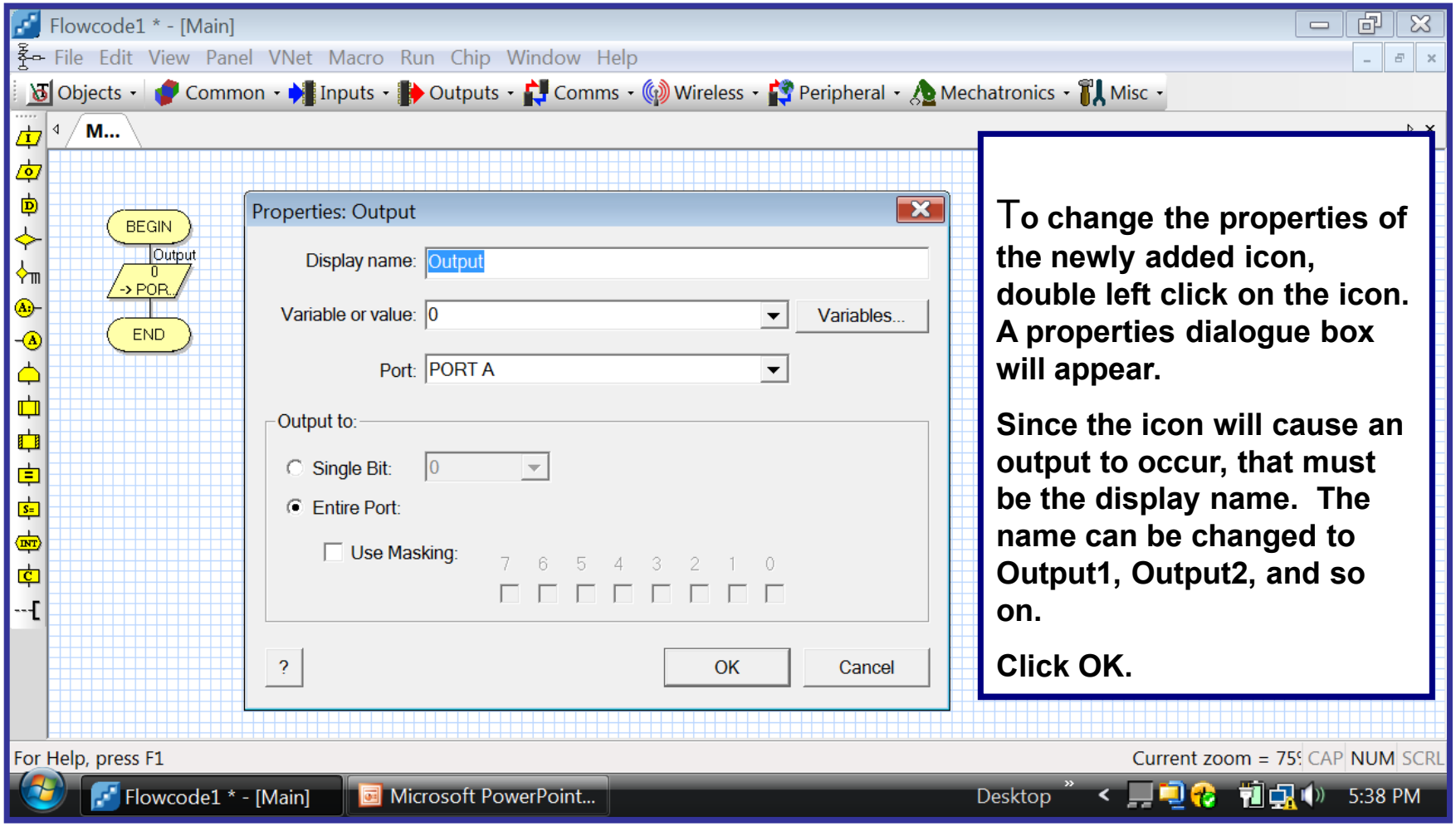
Opening FlowCode4



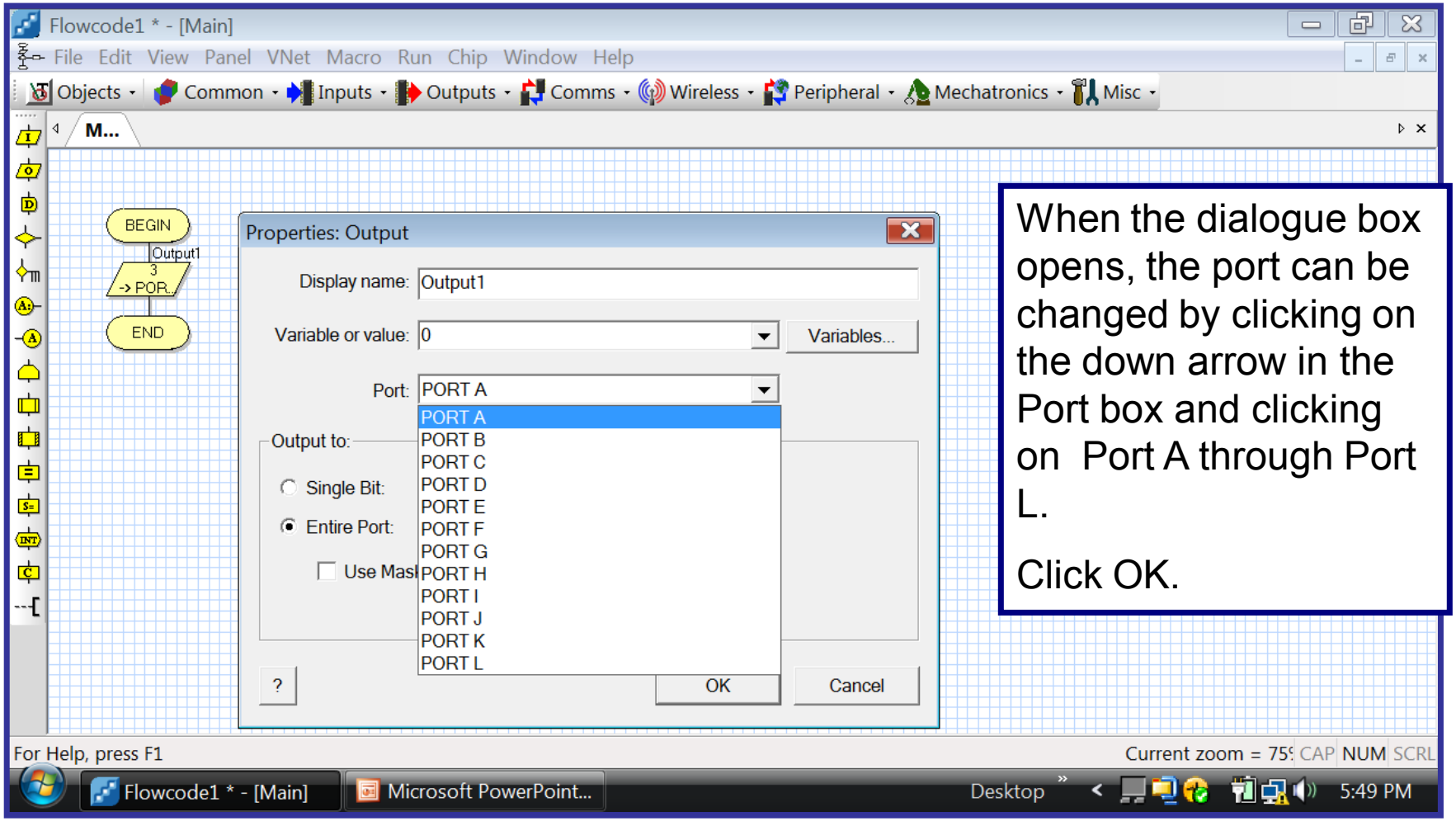
Adding Operational Icons



Changing Properties



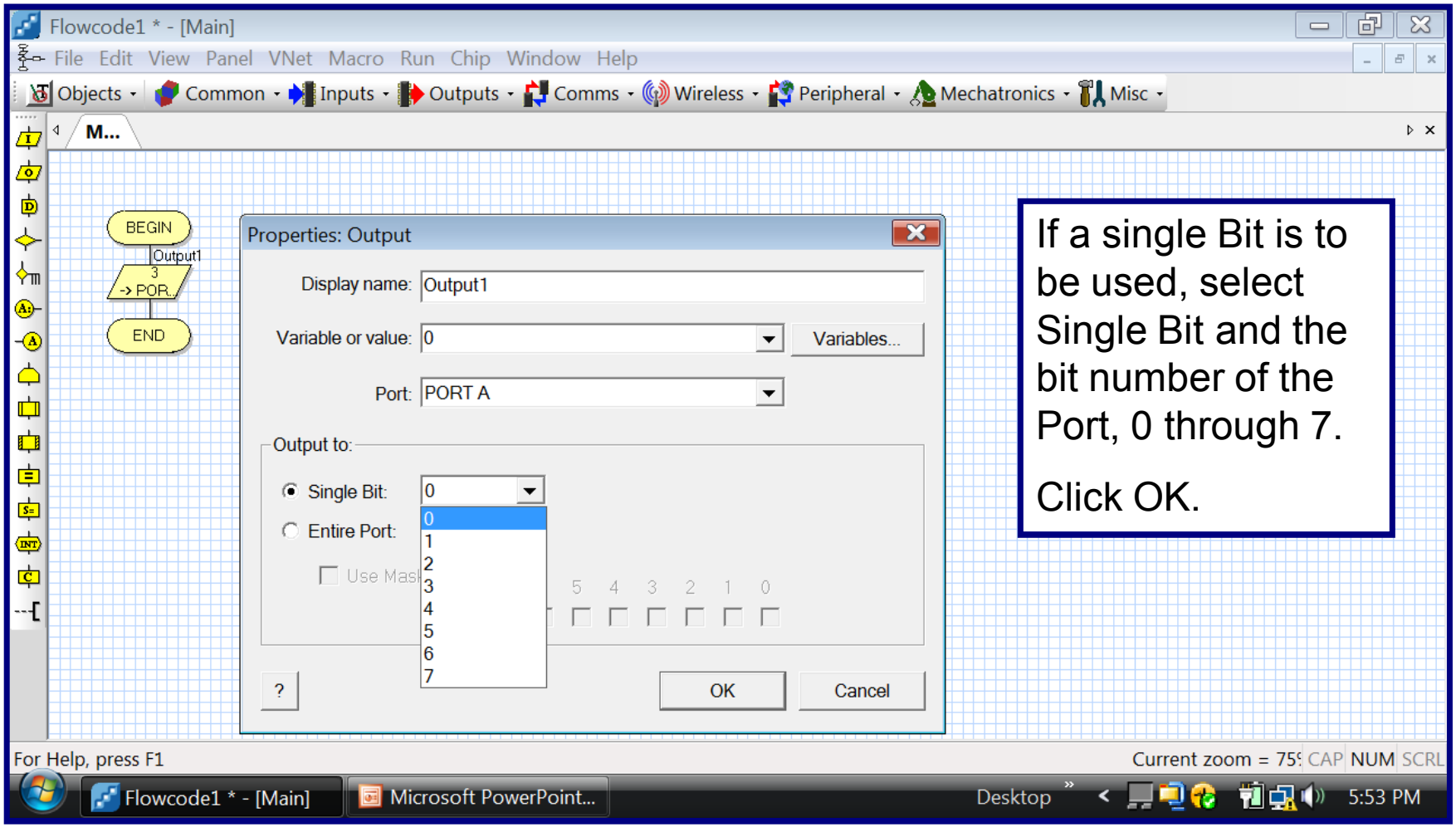
Changing the Port



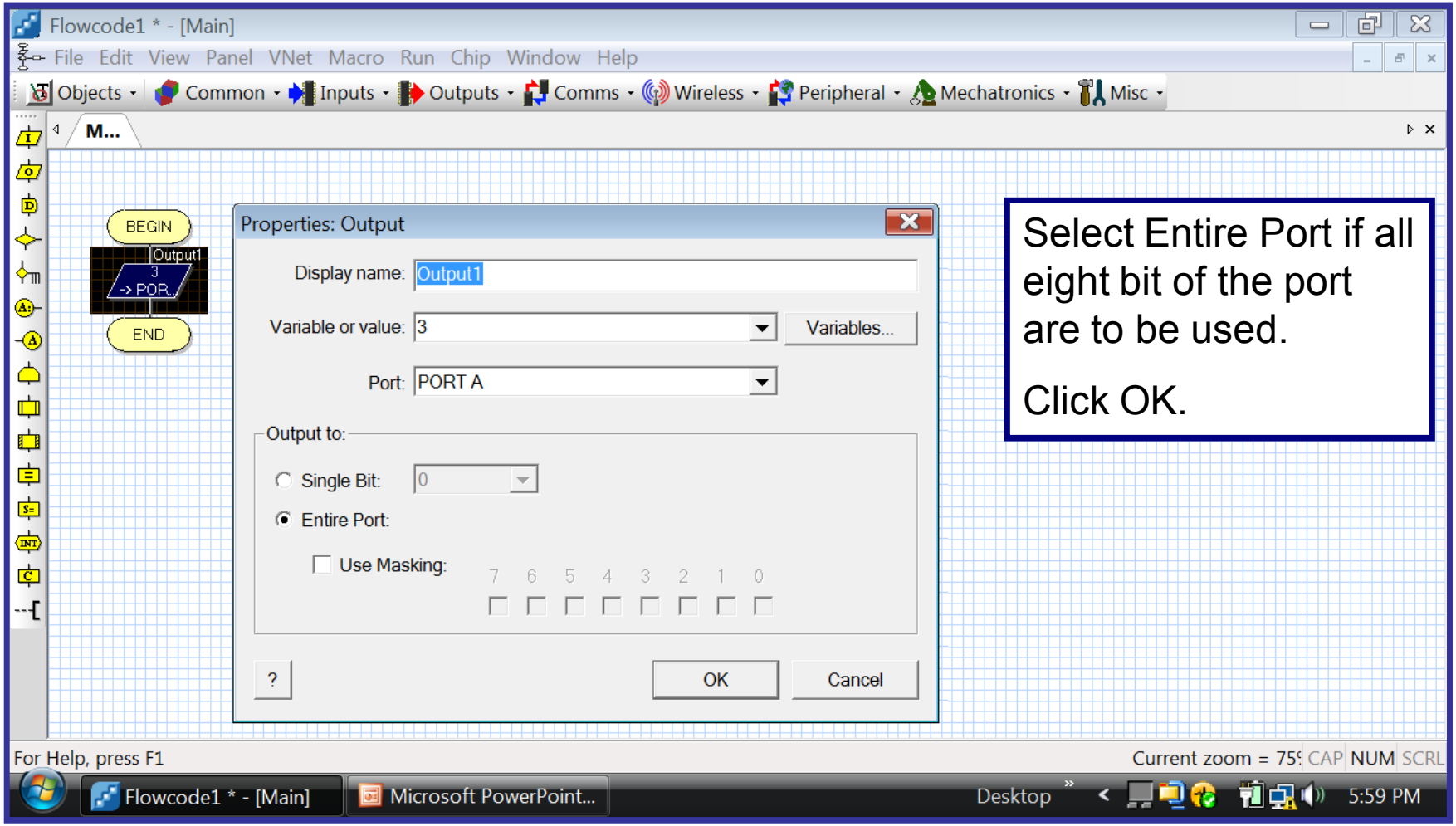
When the dialogue box opens, the port can be changed by clicking on the down arrow in the Port box and clicking on Port A through Port L.

Click OK.

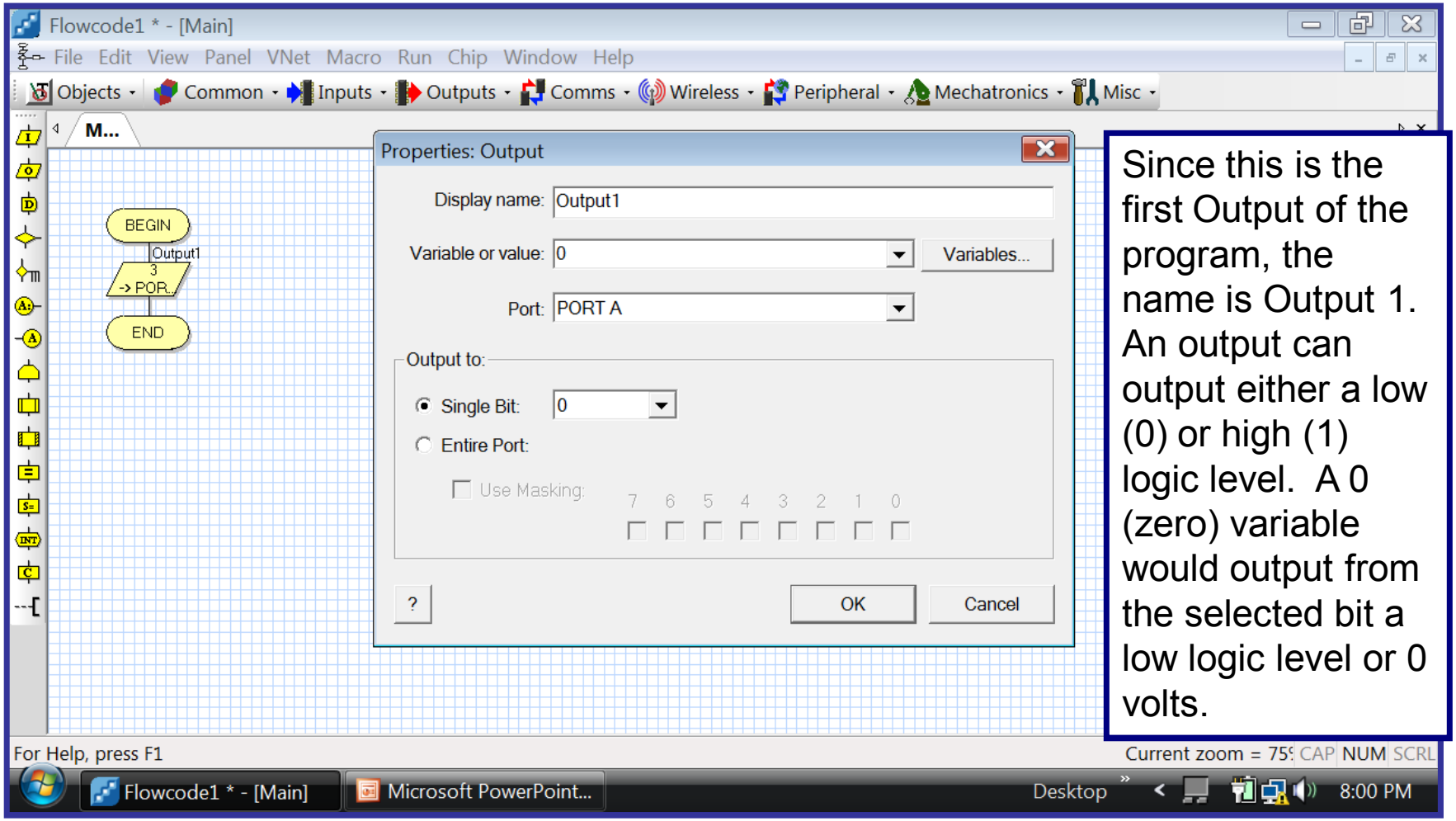
Selecting Output to Single Bit



Selecting Entire Port

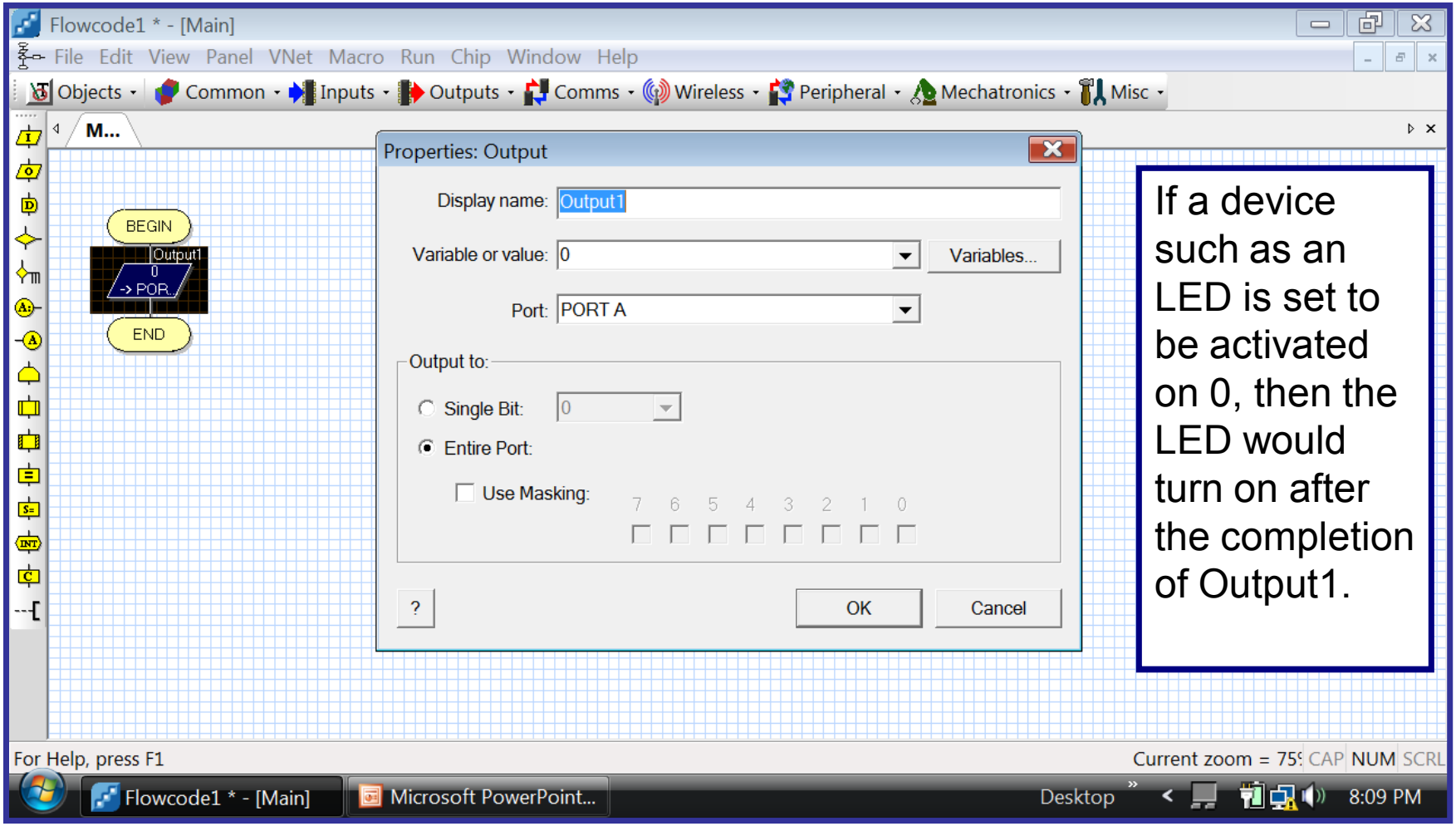


Setting Properties for Output Icon

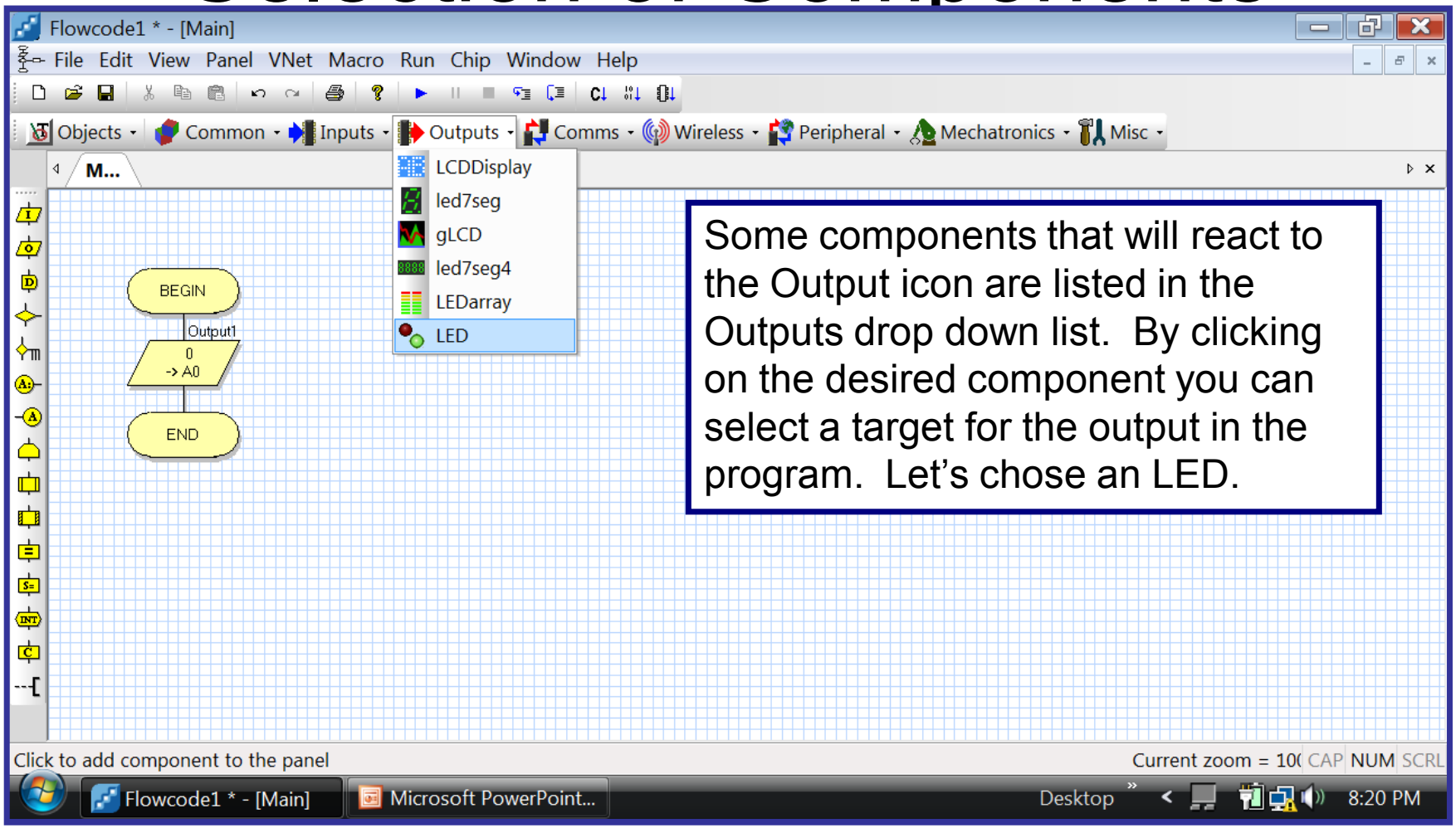


Since this is the first Output of the program, the name is Output 1. An output can output either a low (0) or high (1) logic level. A 0 (zero) variable would output from the selected bit a low logic level or 0 volts.

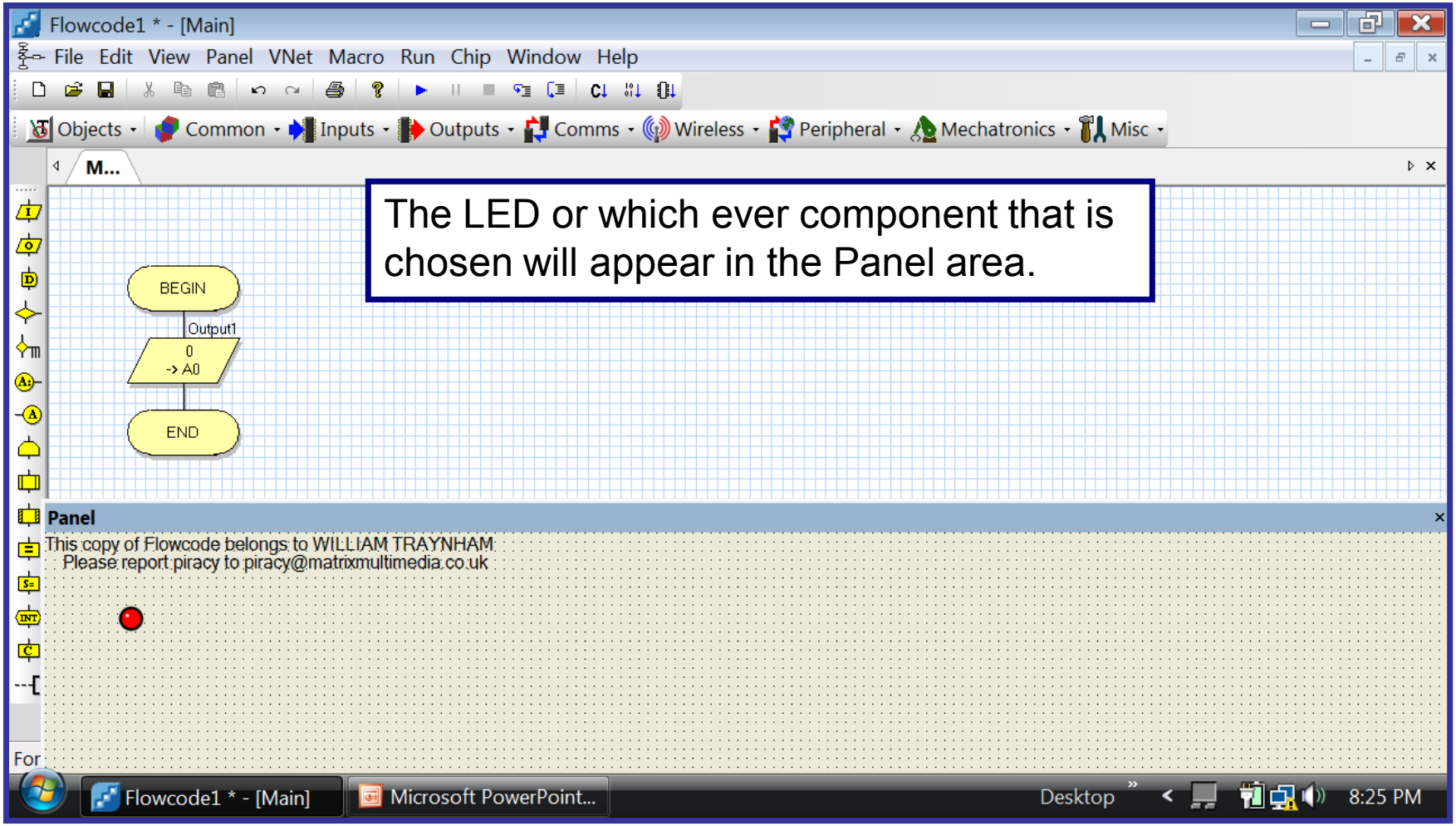
Setting Properties for Output Icon



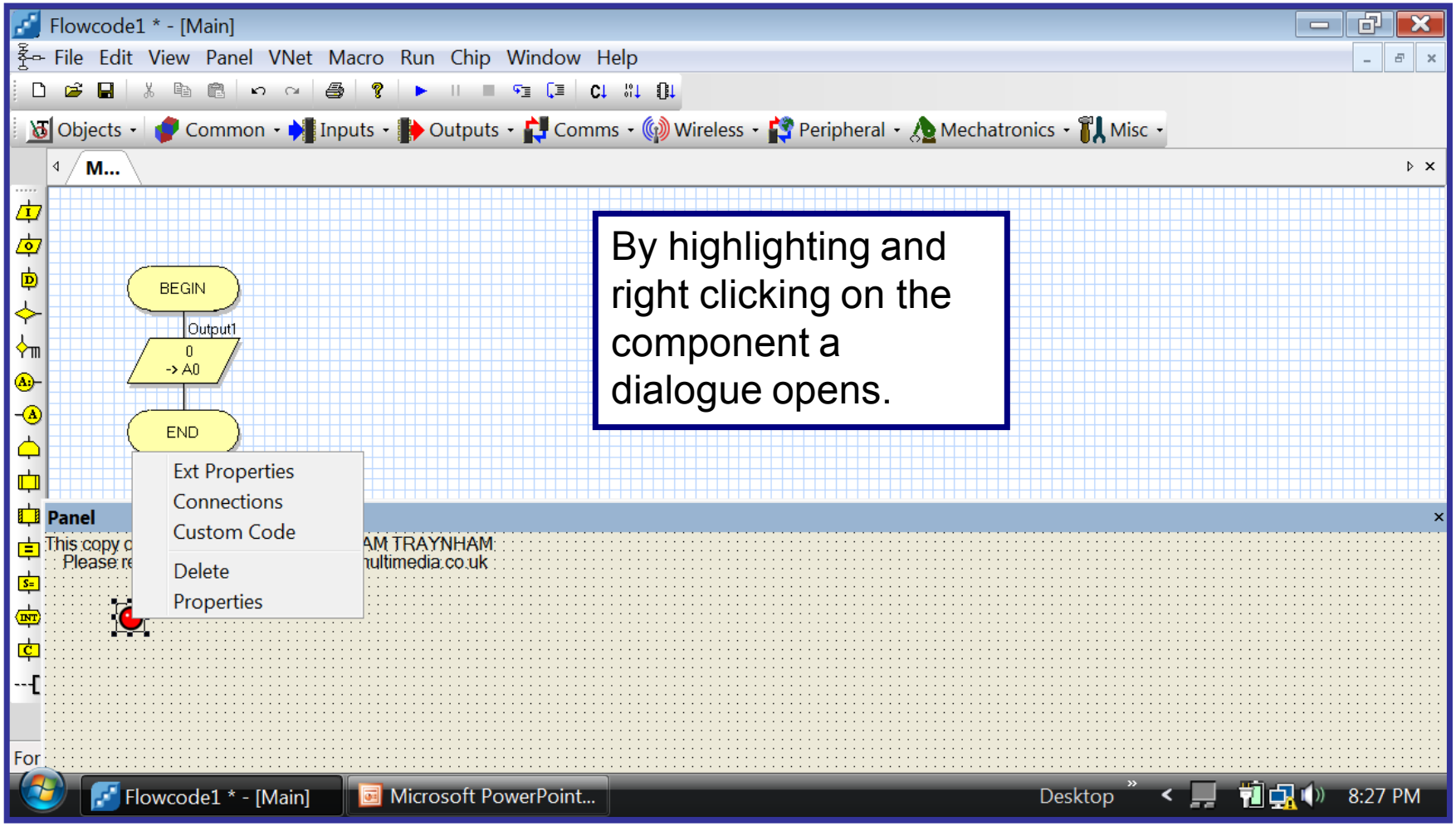
Selection of Components



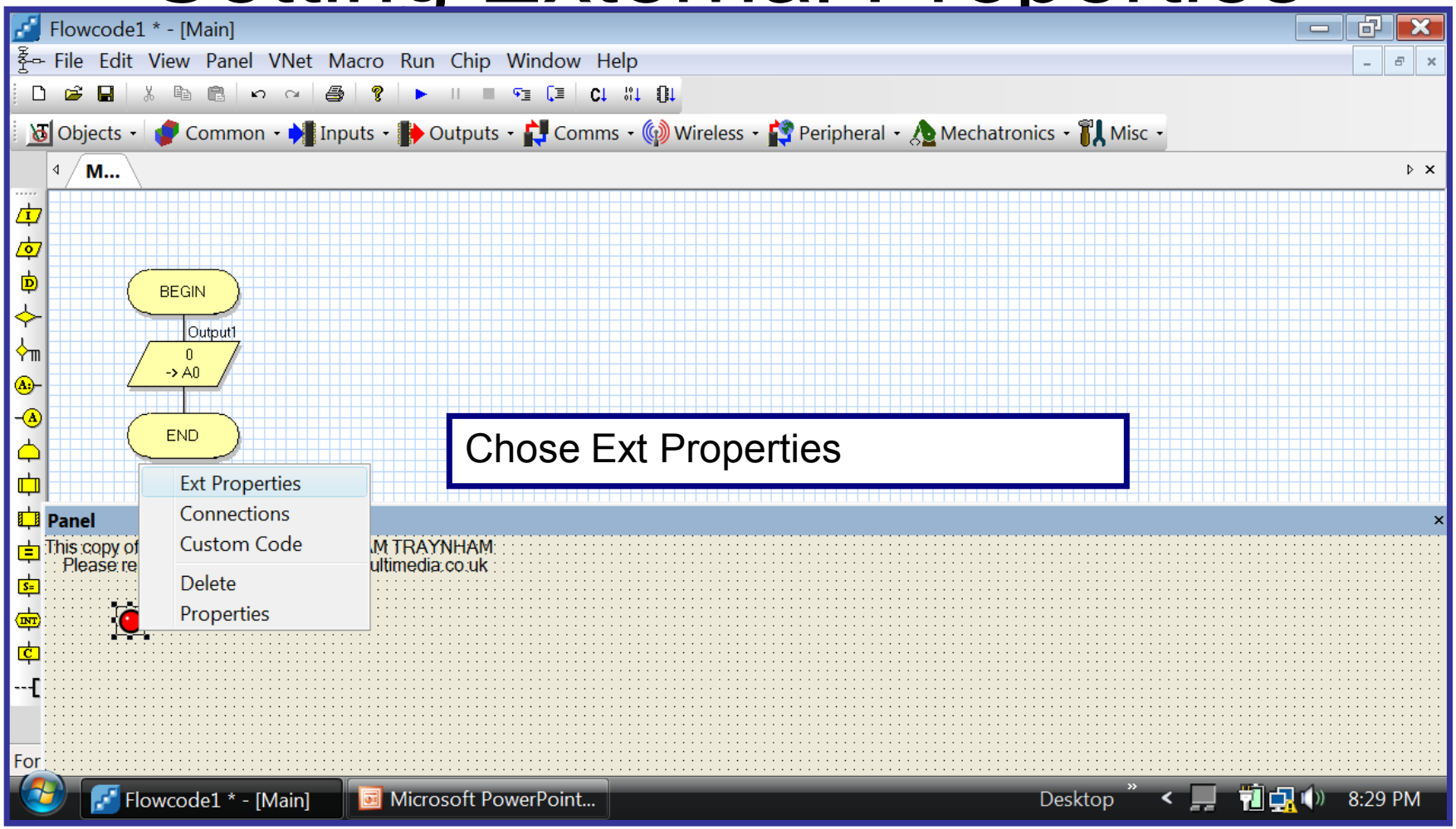
Selection of Components



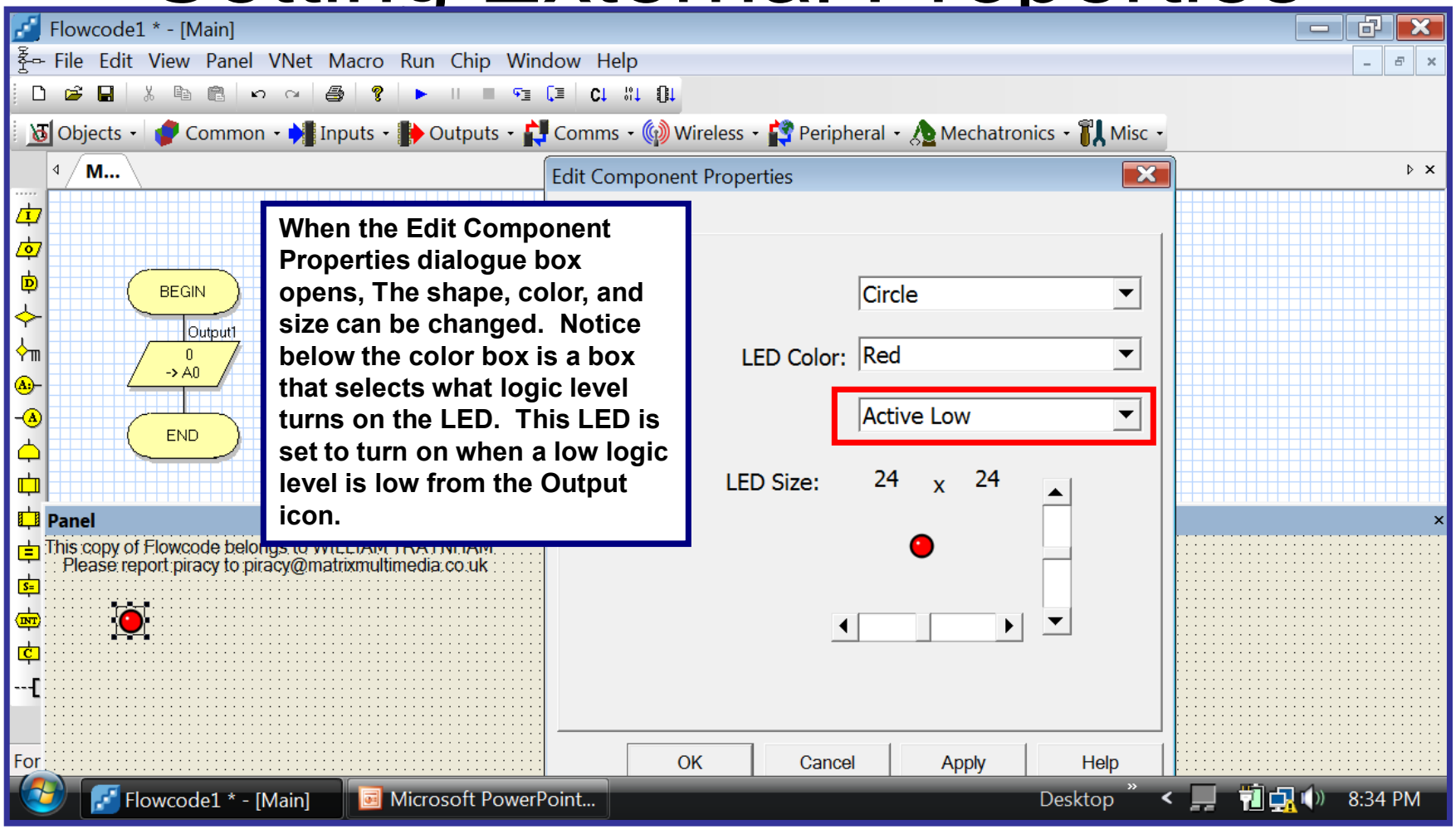
Setting Component Properties



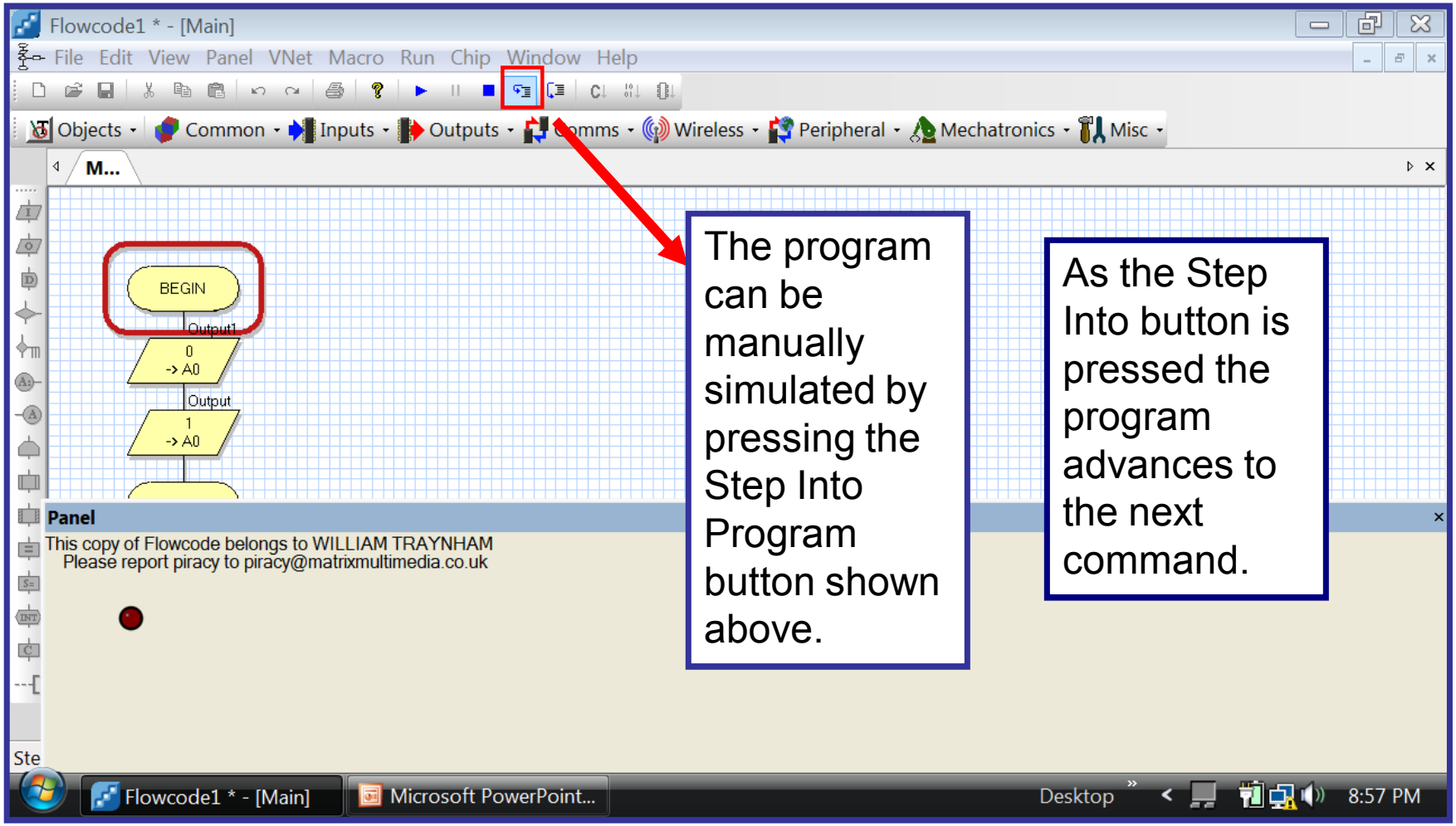
Setting External Properties



Setting External Properties



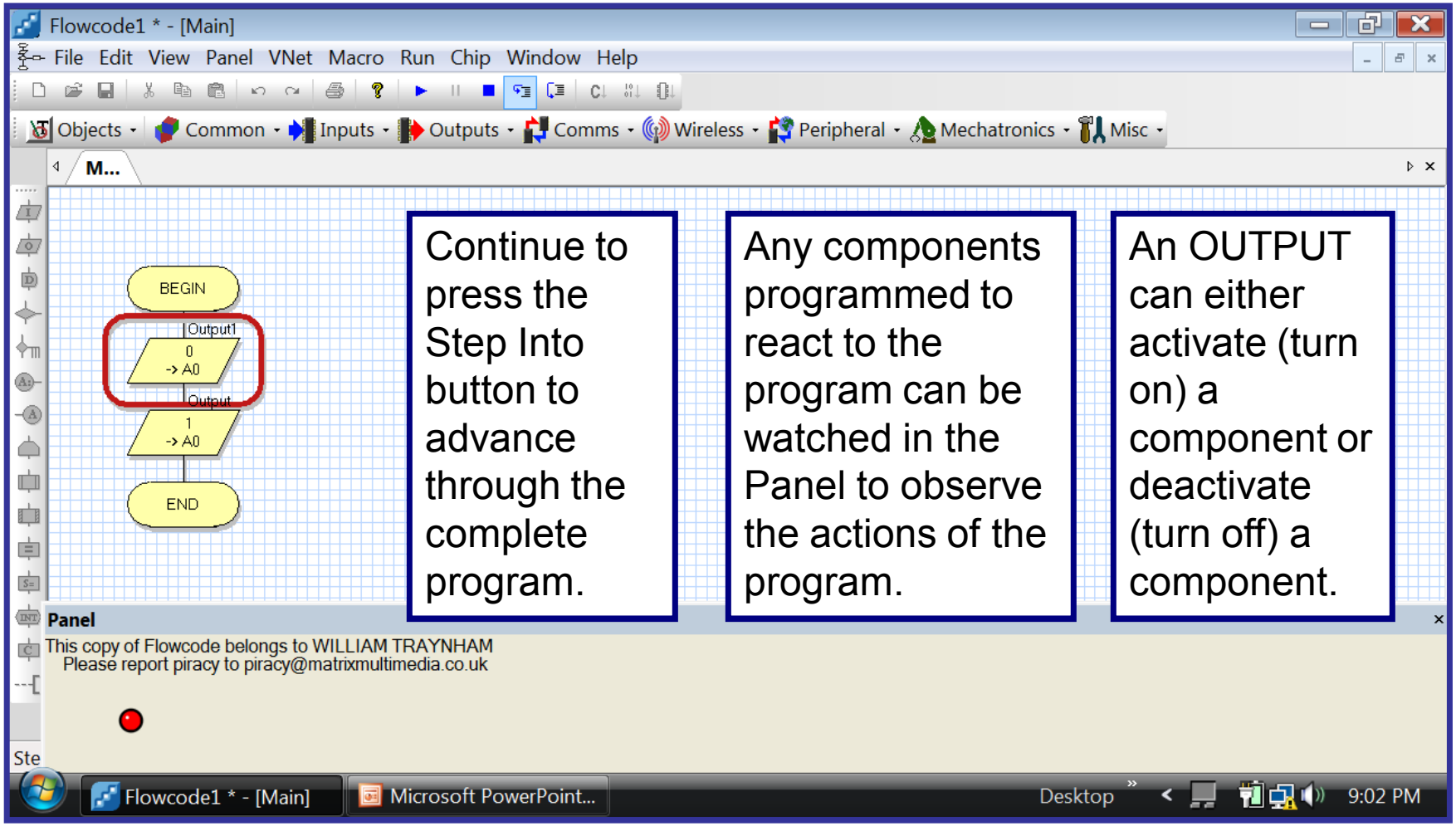
Stepping Through the Program Manually



The program can be manually simulated by pressing the Step Into Program button shown above.

As the Step Into button is pressed the program advances to the next command.

Stepping Through the Program

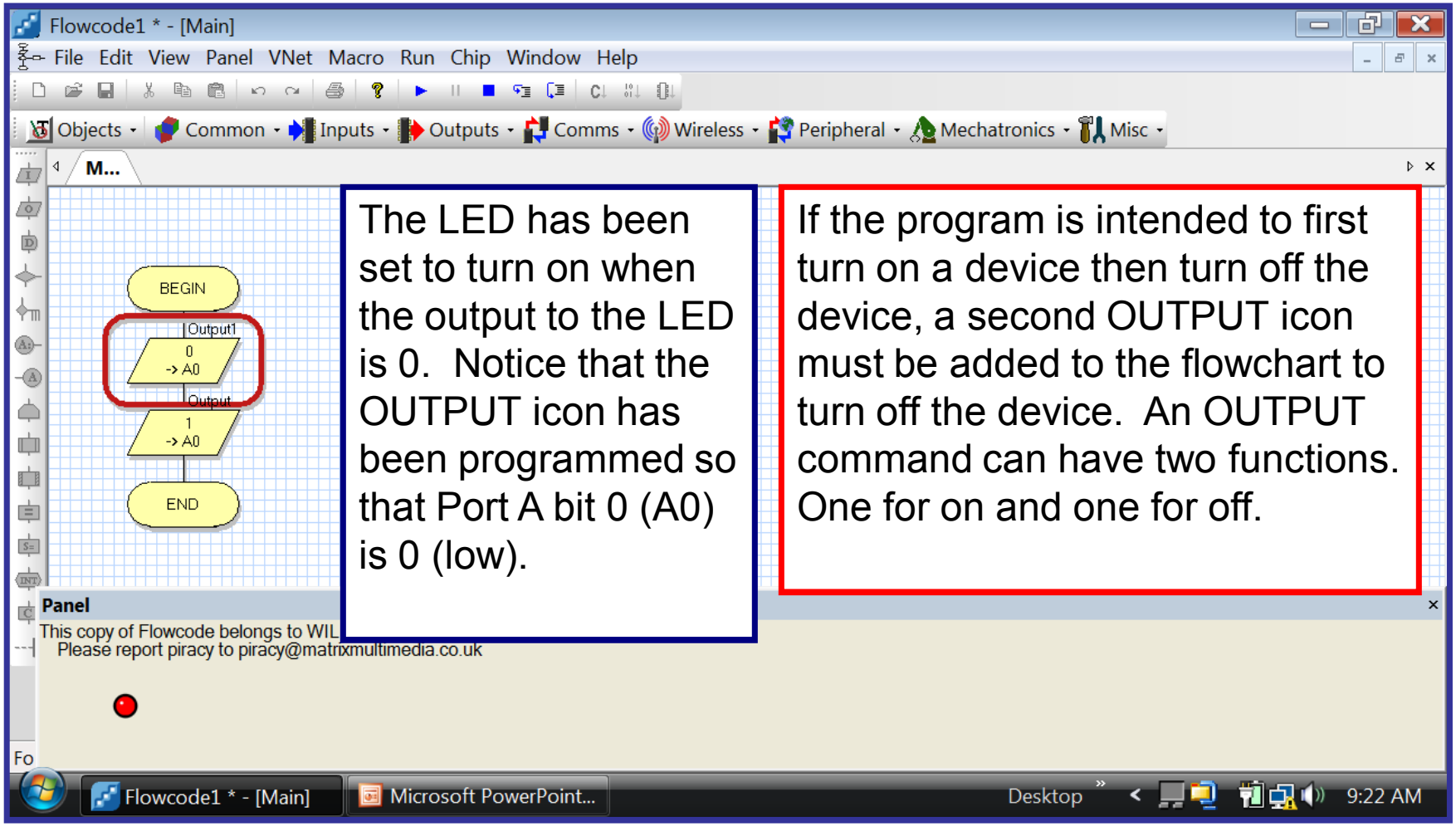


Continue to press the Step Into button to advance through the complete program.

Any components programmed to react to the program can be watched in the Panel to observe the actions of the program.

An OUTPUT can either activate (turn on) a component or deactivate (turn off) a component.

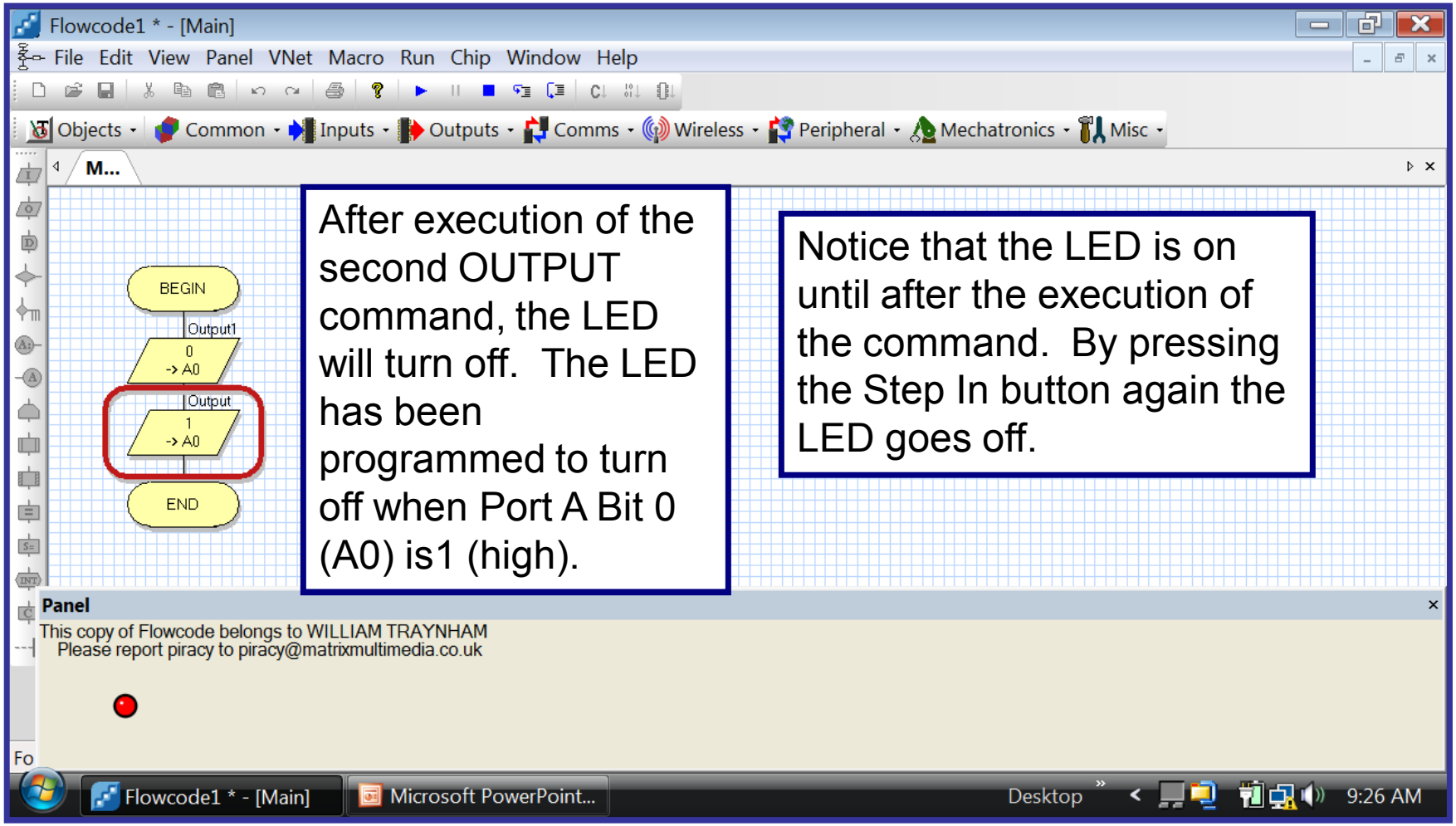
Stepping Through the Program



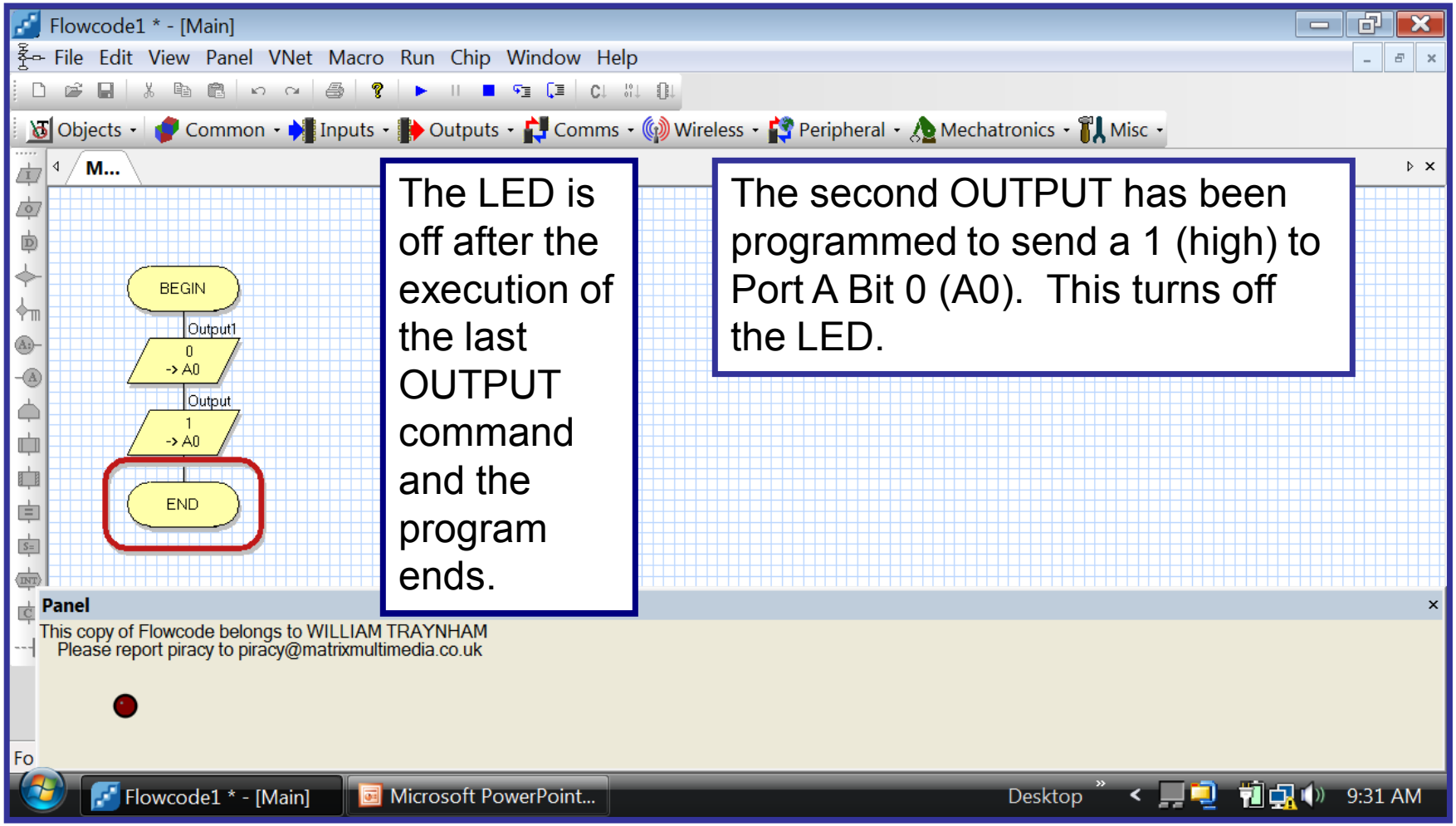
The LED has been set to turn on when the output to the LED is 0. Notice that the OUTPUT icon has been programmed so that Port A bit 0 (A0) is 0 (low).

If the program is intended to first turn on a device then turn off the device, a second OUTPUT icon must be added to the flowchart to turn off the device. An OUTPUT command can have two functions. One for on and one for off.

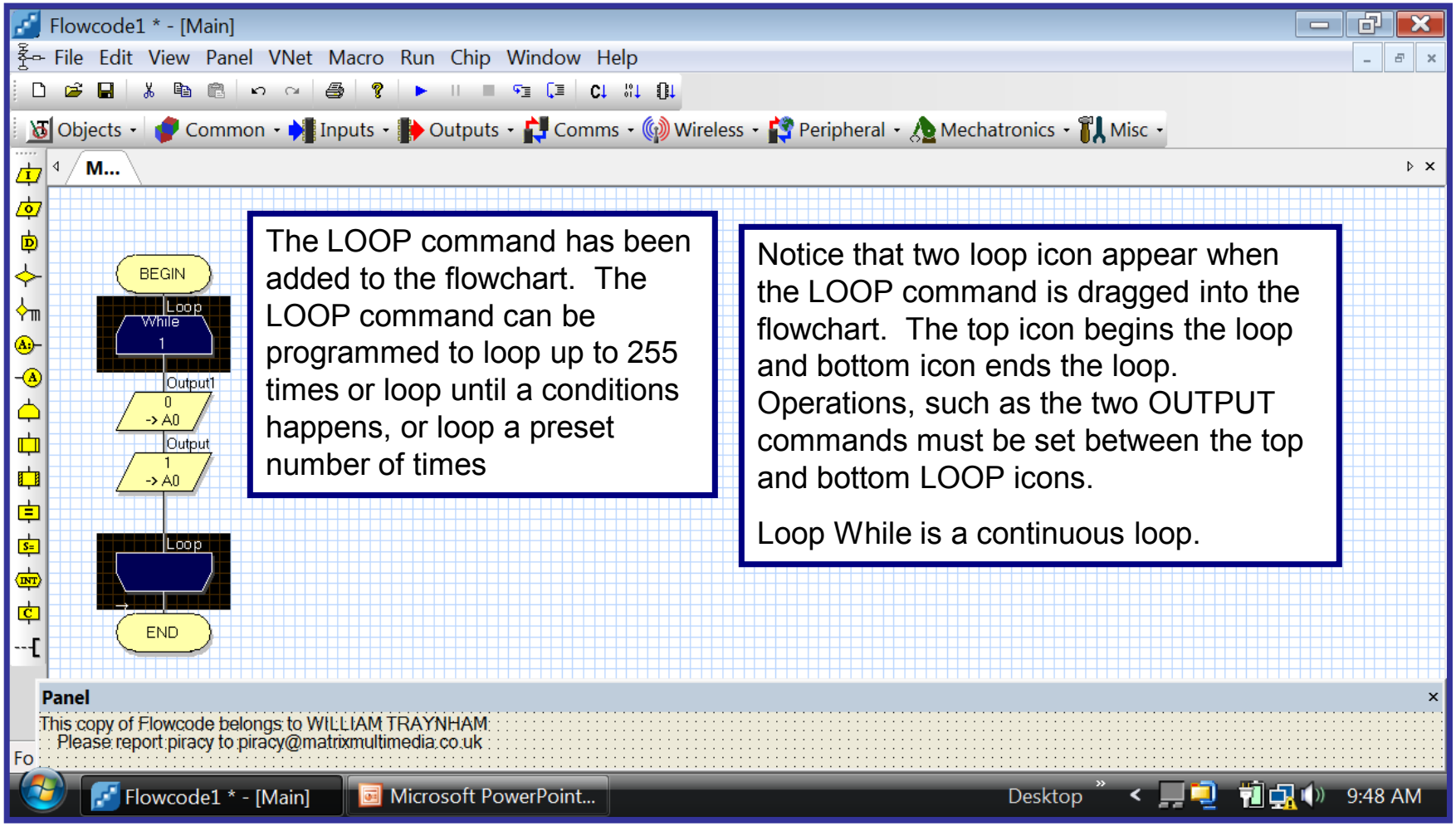
Stepping Through the Program



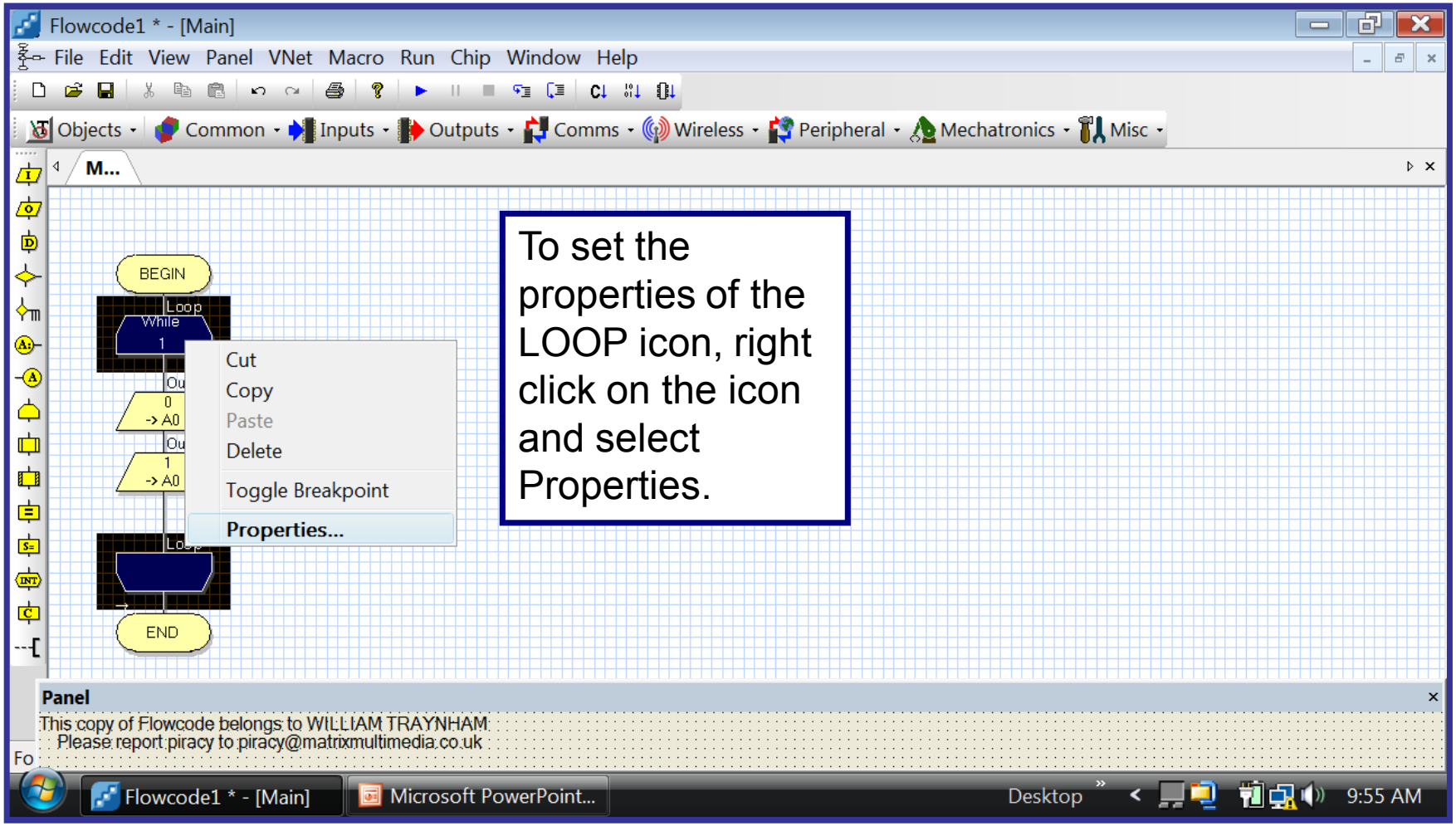
Stepping Through the Program



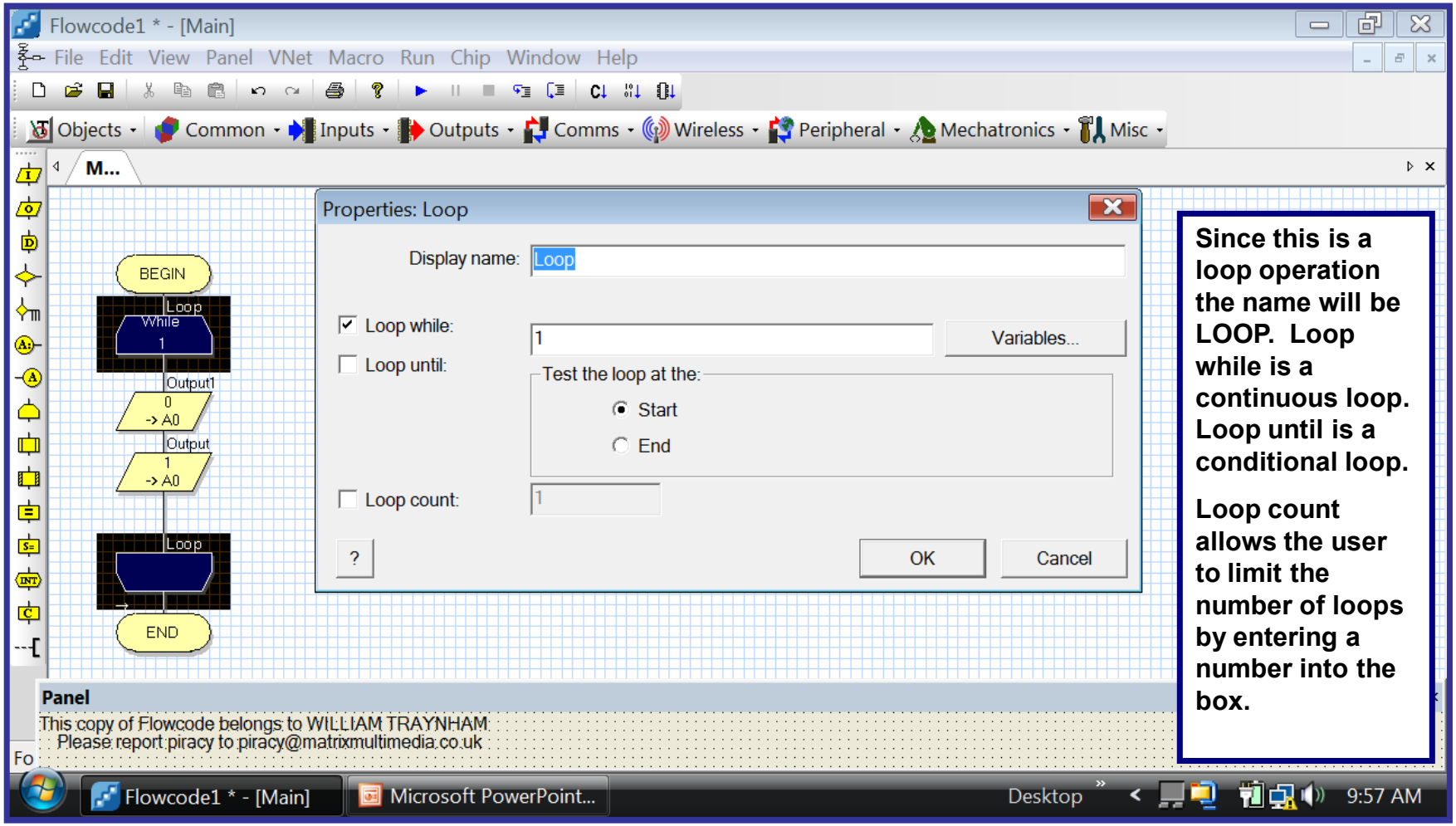
Add Looping to the Program



Add Looping to the Program



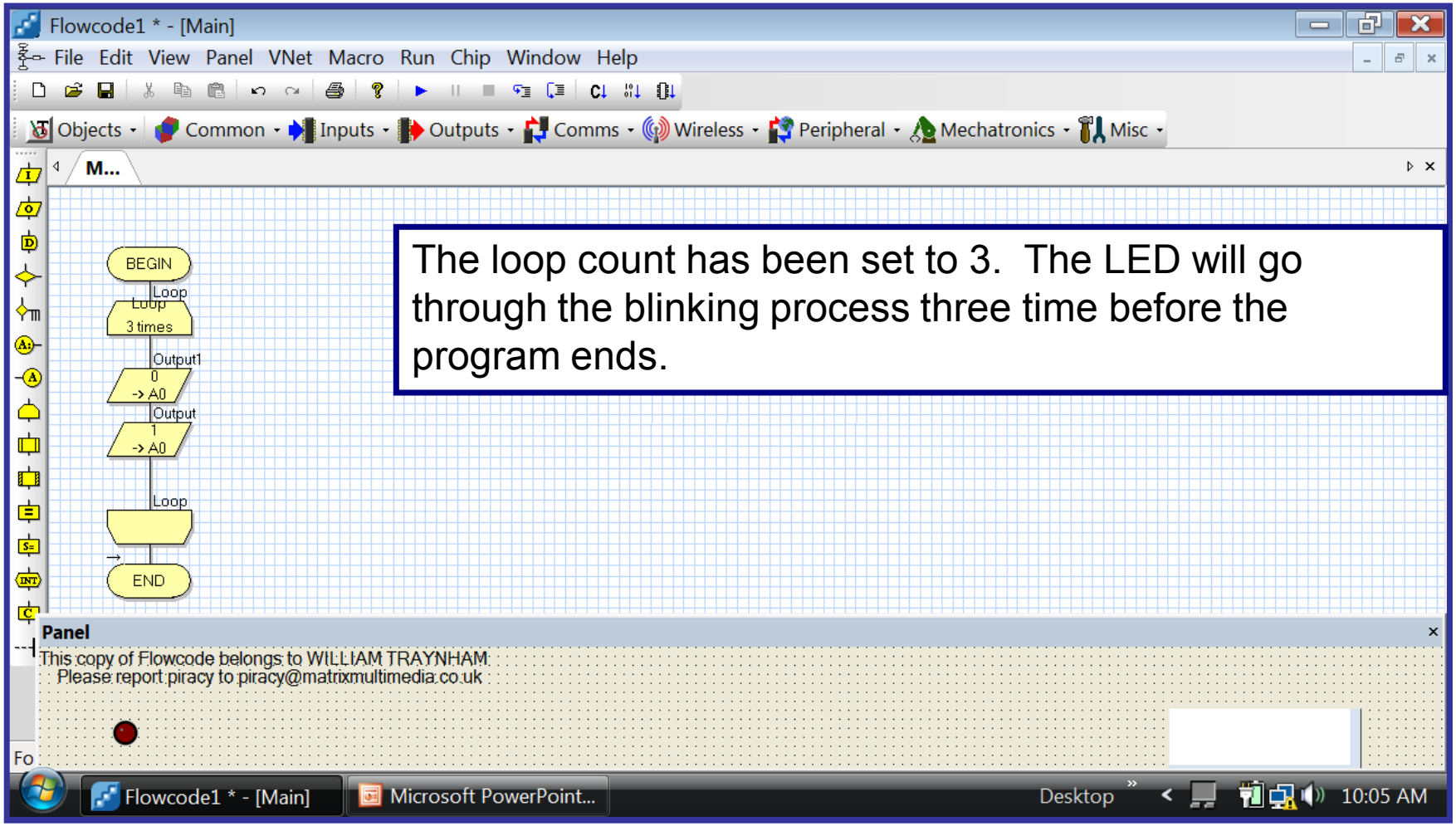
Setting Properties for Looping



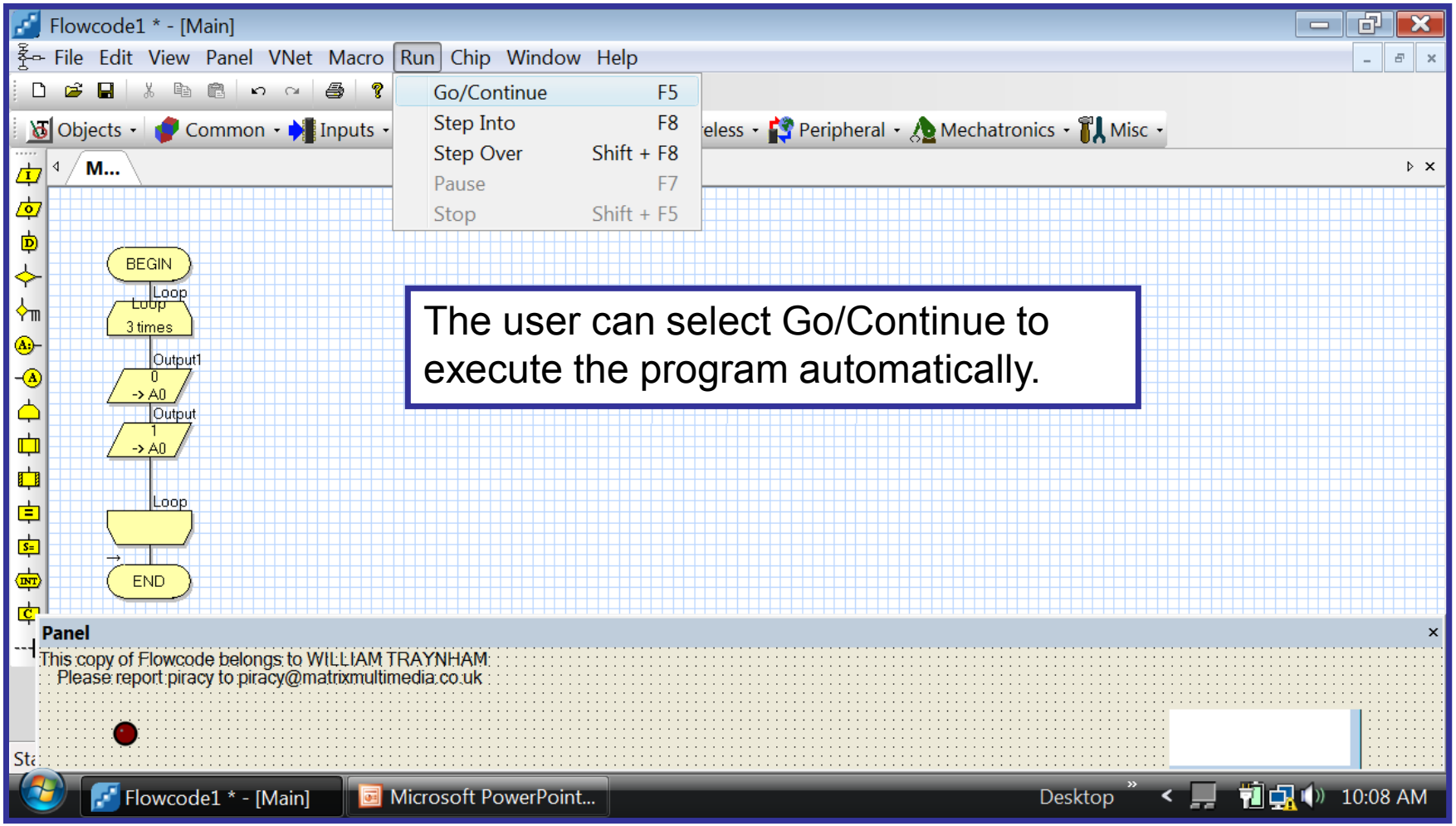
Since this is a loop operation the name will be LOOP. Loop while is a continuous loop. Loop until is a conditional loop.

Loop count allows the user to limit the number of loops by entering a number into the box.

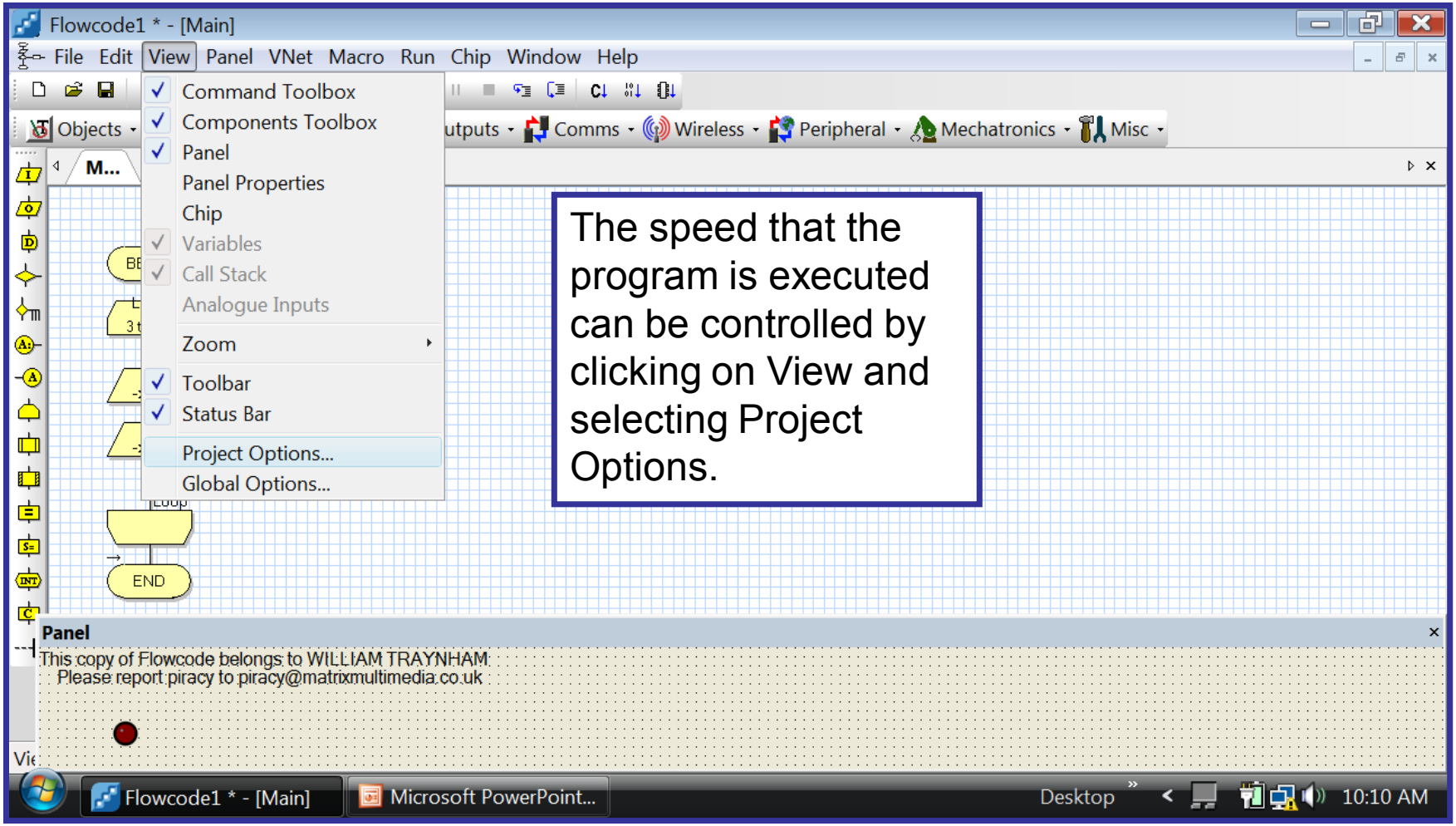
Setting Properties for Looping



Using Go/Continue to Execute the Program

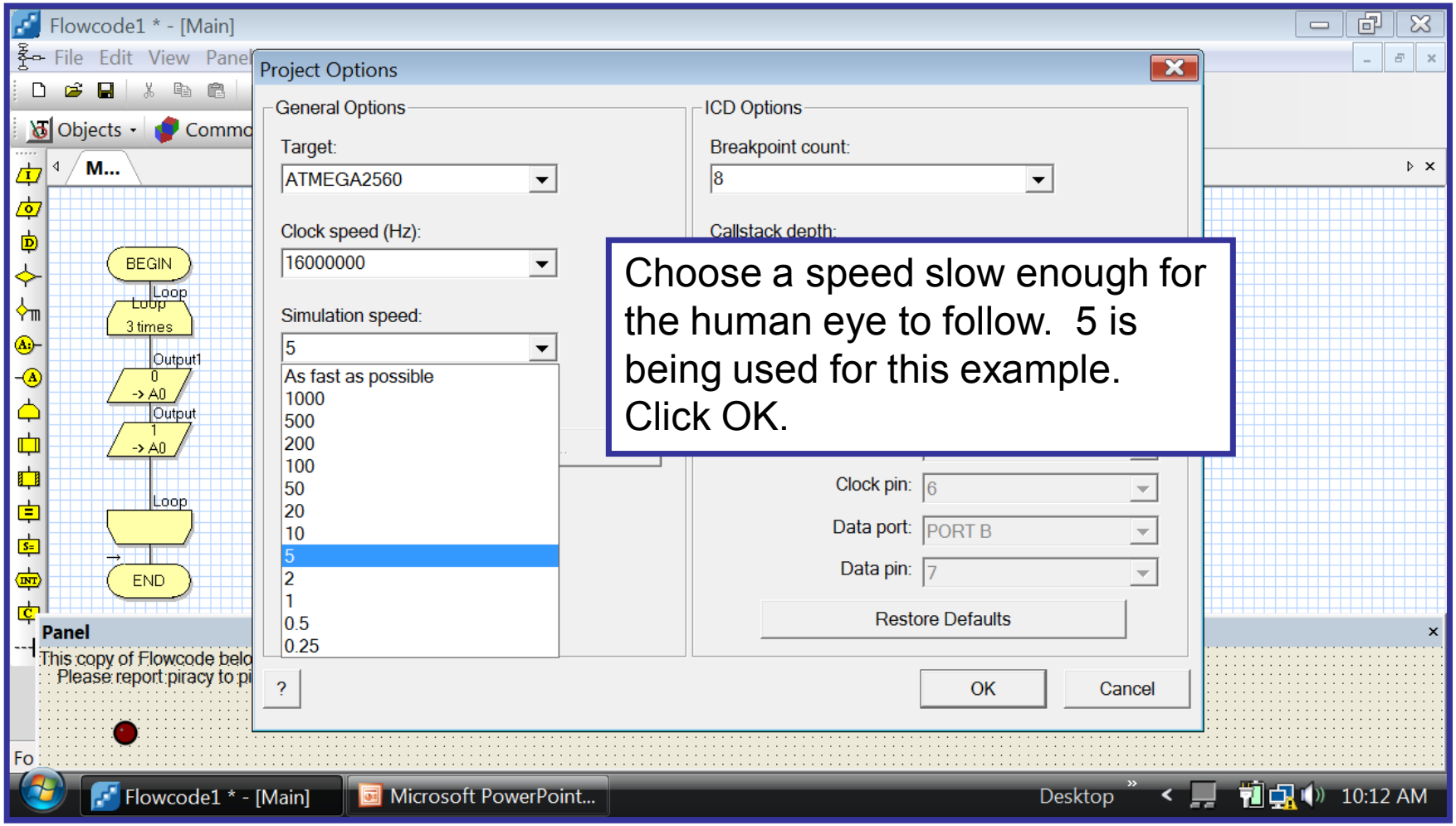


Using Go/Continue to Execute the Program

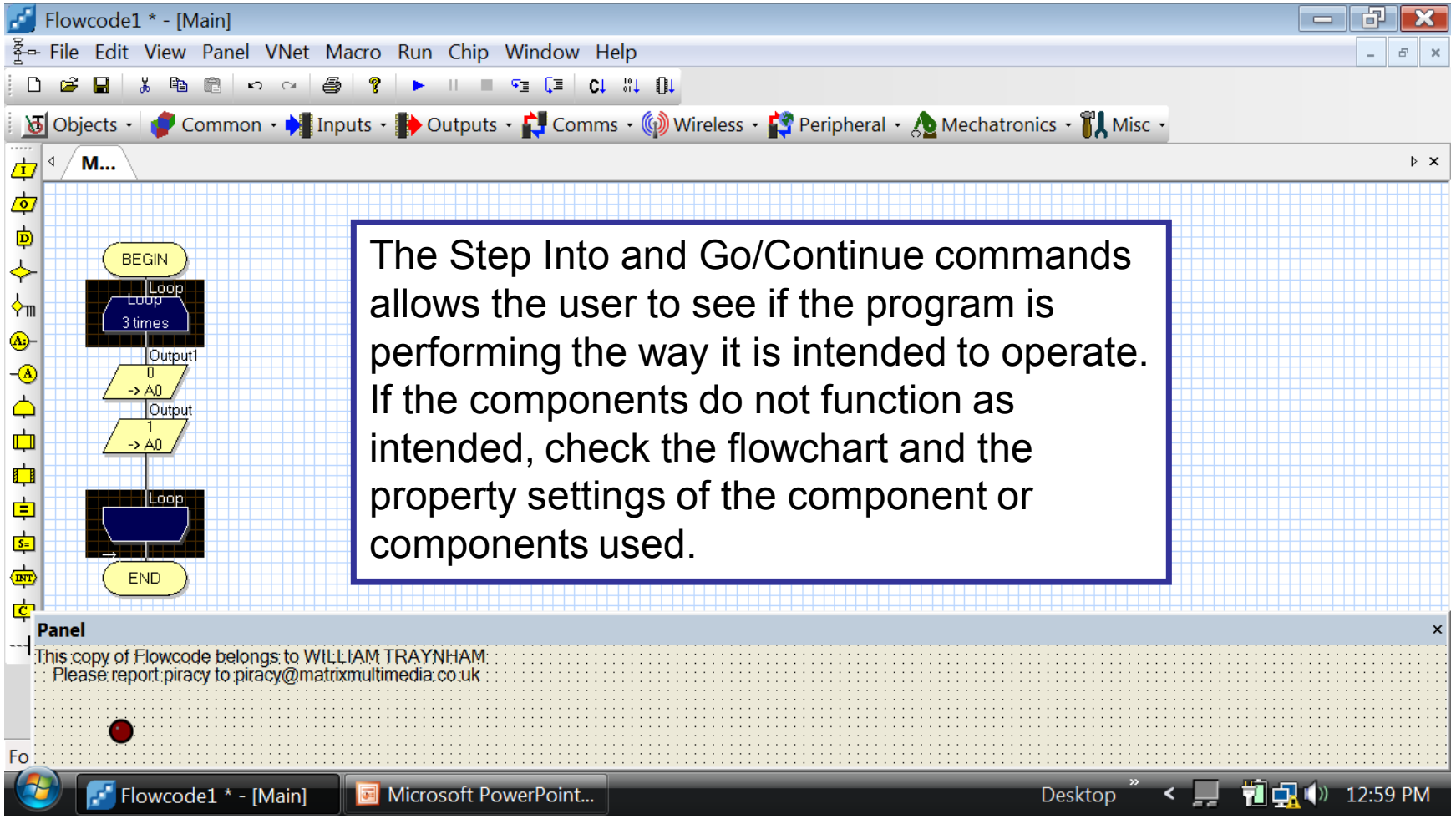


The speed that the program is executed can be controlled by clicking on View and selecting Project Options.

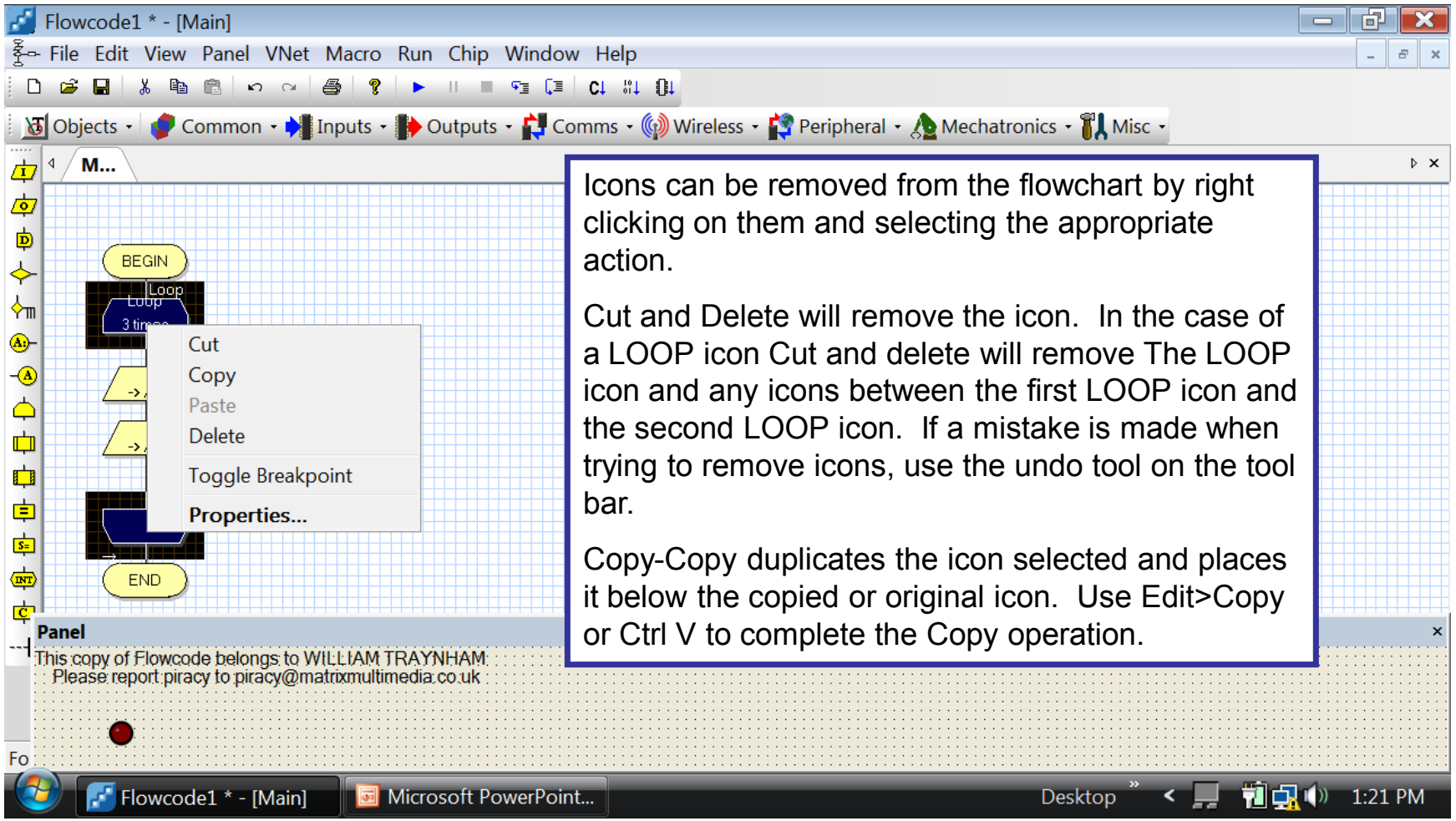
Using Go/Continue to Execute the Program



Executing the Program



Editing the Program

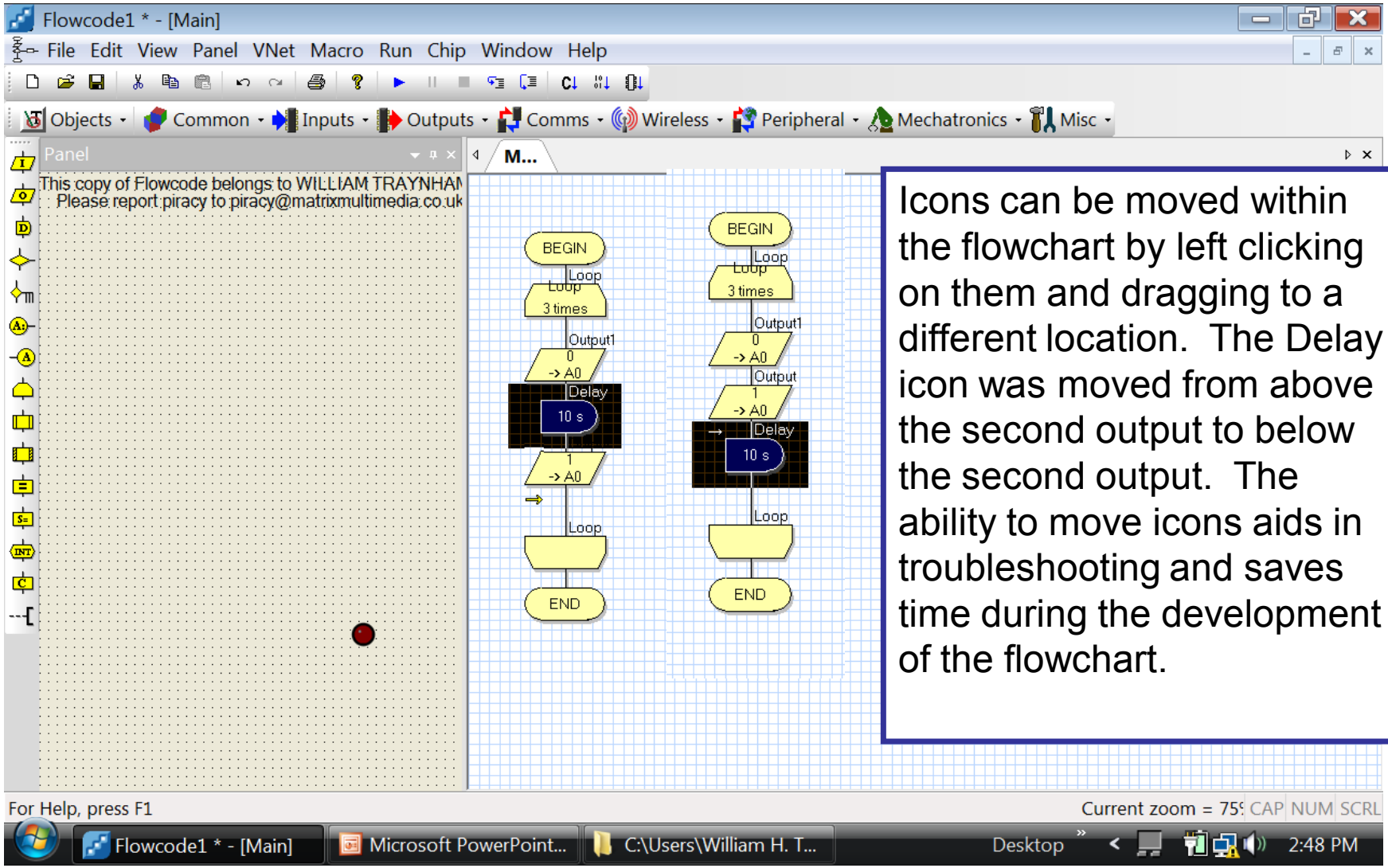


Icons can be removed from the flowchart by right clicking on them and selecting the appropriate action.

Cut and Delete will remove the icon. In the case of a LOOP icon Cut and delete will remove The LOOP icon and any icons between the first LOOP icon and the second LOOP icon. If a mistake is made when trying to remove icons, use the undo tool on the tool bar.

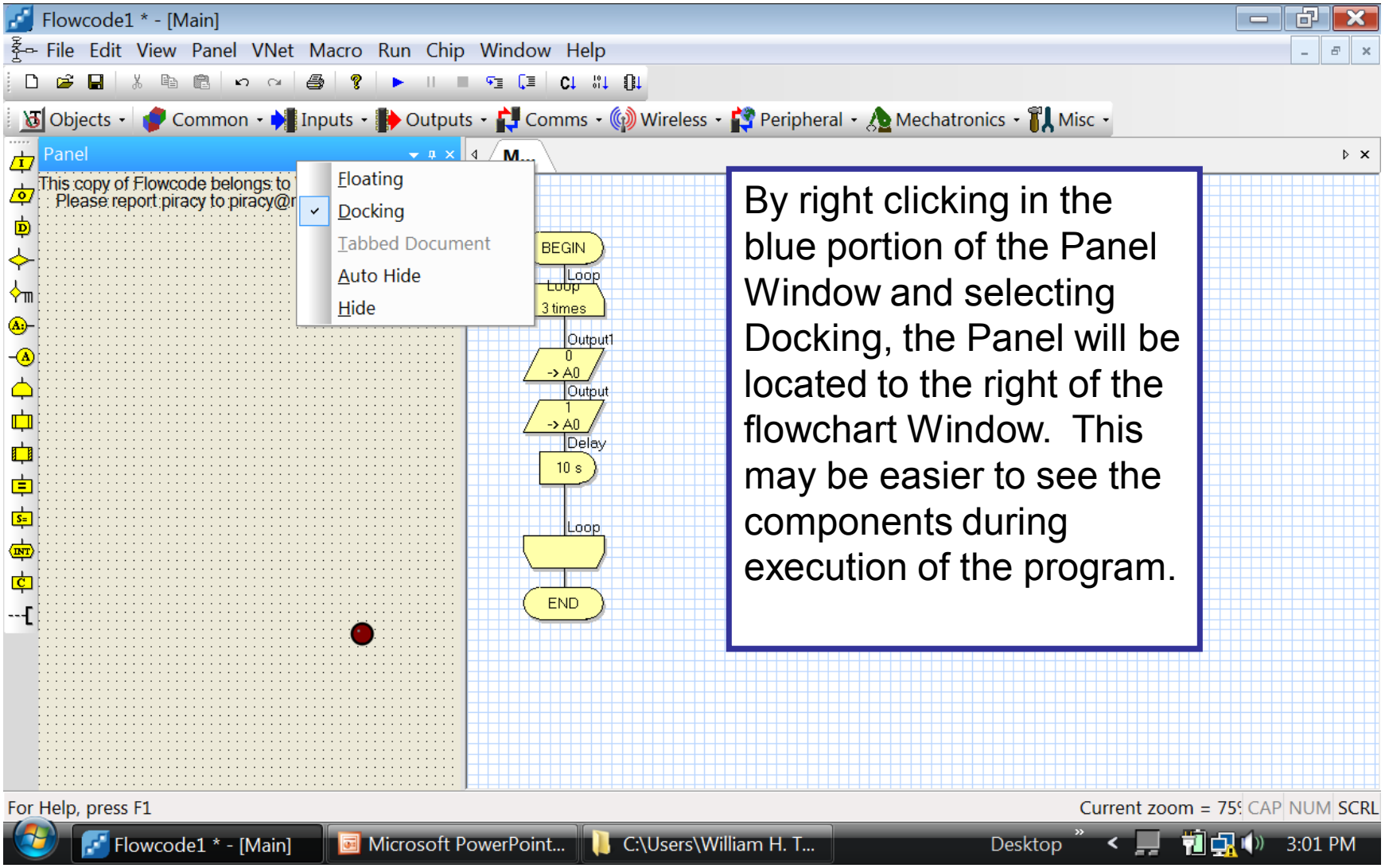
Copy-Copy duplicates the icon selected and places it below the copied or original icon. Use Edit>Copy or Ctrl V to complete the Copy operation.

Moving Within the Program



Icons can be moved within the flowchart by left clicking on them and dragging to a different location. The Delay icon was moved from above the second output to below the second output. The ability to move icons aids in troubleshooting and saves time during the development of the flowchart.

Repositioning the Panel Window



Positioning the Variable and Call Stack Windows