Unit 1: Getting Started with TI-Innovator™ Hub **Application: Traffic Light**

Write a program that controls a traffic light.

Objectives:

- Control the COLOR LED to simulate a traffic light using a single bulb
- Create a sequence of statements with proper timing controls

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Your task is to write a program that controls a traffic light. The light will be simulated using the COLOR LED on the TI-Innovator Hub.

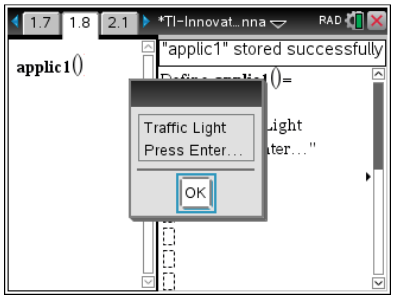
The COLOR LED should switch from green to yellow to red AND from red to yellow to green. Timing is up to you.

Your program will have a sequence of statements that simulate the change from RED to GREEN to YELLOW to RED. A sequence control structure in programming is a set of statements that are processed one after another, from top to bottom, without interruption.

Using *Text* as a pause

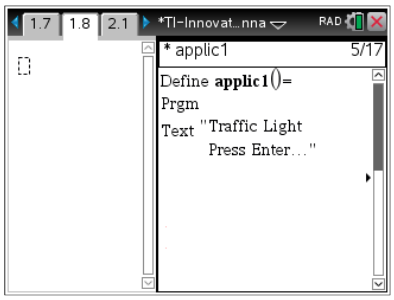
The **Disp** command displays a message on the HOME screen of the calculator. It can be used to display the value of a variable as in **Disp X,** or it can display a string. But it does not stop the program from continuing.

The **Text** statement on the **I/O** menu displays a dialog box and waits for the user to press enter or click the 'OK' button before processing the rest of the program.



Setting up the title screen

1. Begin a new program, and call it APPLIC1.
2. Get the **Text** keyword from the **I/O** menu.
3. In quotation marks, add the message "*Traffic Light* <enter> *Press enter…"* as shown.

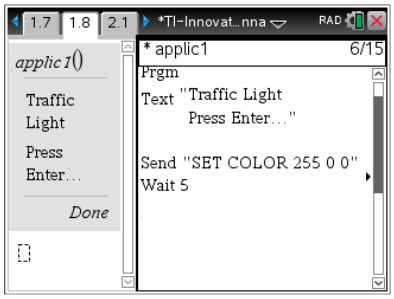


Set the Colors

First, we set the color to red by sending the RGB values of 255 0 0.

In the example on the right, we use a **Wait** statement to tell the calculator to wait 5 seconds before sending the next command to the TI-Innovator Hub. The red light will stay on during this time.

Your task is to add the statements to make the light green, then yellow, then red again.



Challenge: Add SOUNDs so that a blind person (pedestrian, not driver!) can tell which color the light is.