

1.

Make an LED blink at 5 Hz frequency. (Remember a current limiting resistor!) (1p)

2.

Make an LED which changes it's state when a button is pressed. (Use the Arduino's internal pullup resistor for the button. Debounce the button if necessary.) (1.5p)

3.

Made an LED change its brightness in response to the ambient light. (1p)

4.

Read the position of a potentiometer and display it on your computer. (Use the Arduino IDE's built-in serial monitor.) (1p)

5.

Make a 4-bit binary counter whose frequency is adjusted by a potentiometer and which can be reset to zero with a button. (Have four leds light up in sequence 0000, 0001, 0010, 0011, etc.) (1.5p)