ICT & Technology

Week 3 – Chapter 1

Evidence

Problem: Blink on board LED challenge  
A screenshot of a computer program

Description automatically generated

This is the example code with comments on what every line of code does.

Link to the video of the Arduino: <https://drive.google.com/file/d/16B4vFMrsAQO8flmDXjZRt4VRa7vwnU3F/view?usp=drive_link>

Problem: Blink external LED challenge

A screenshot of a computer program

Description automatically generated

Here I replaced the “LED\_BUILDIN” with 4 which is the port number of the red LED light which should now be blinking.

Link to the video of the Rich Shield:

<https://drive.google.com/file/d/1zz0DorAuVu3WHDX9wW5b3n3_D67yFAWS/view?usp=drive_link>

Problem: Fast Blink LED challenge - make the LED blink faster

A screenshot of a computer program

Description automatically generated

Here I decreased the delay (1000) to 200 so the red LED light blinks faster.

Link to the video of the Rich Shield:

<https://drive.google.com/file/d/1jcgw7SvGQnhndXDtQffk0Eg3IiZ_FWmS/view?usp=drive_link>

Problem: Serial.println() challenge - Use the Serial.println() function to print out “LED on” and “LED off”.

A screenshot of a computer program

Description automatically generated

Here I increased the delay from 200 to 500 and added Serial.println(“LED on”) and (“LED off”) so that it prints “LED on” when the light is on and “LED off” when the light is off.

I encountered a problem when doing this task – the output would not print. I used the internet and learned that I have to add Serial.begin(9600) in the setup(). It is essential for setting up the Arduino to communicate over the serial port. It allows to send and receive messages.

Link to the video of the Rich Shield and the Serial monitor:

<https://drive.google.com/file/d/1vSSU1evh53Tqn7myNQie1c3ktHmgyRPG/view?usp=drive_link>

Problem: Final LED blink challenge - Make the 4 LEDs on the rich Shield blink alternately.

A screen shot of a computer program

Description automatically generated

Here is the code. I used pinMode() to configure the specified pins to behave as an output. 4, 5, 6 and 7 are the numbers of the LEDs. In the loop I used digitalWrite to either turn on or off the light of the specified LED lights. LOW turns the light off and HIGH turns the light on. I used delay() to pause the program for the amount of time (in milliseconds) specified as parameter which I set to 200.

Link to the video of the Rich Shield:

<https://drive.google.com/file/d/1Mp_hBiYm6bPdfrD0_aVpIevdS34QbWcf/view?usp=drive_link>