**Code conversation level 1 - Slider Snake**

**Code link: https://tinyurl.com/cvcvzr7y**

**Describe what the whole program is doing in a couple of sentences:**

**Fill in the blanks**

|  |  |  |
| --- | --- | --- |
|  | ***Code*** | ***What is this line doing?*** |
| 1 | from microbit import |  |
| 2 | Import time |  |
| 3 | positions = [2, 2, 2, 2, 2] |  |
|  | This function will determine the progression of the snake animation on the micro:bit |  |
| 4 | def scroll\_up(): | defines a Python function called scroll\_up () |
| 5 | for y in range(4): |  |
| 6 | positions[y] = positions[y + 1] | Changes the value in index [0][1][2][3] to become the value in the position above them e.g. the value in position [0] is overwritten by the value in position [1] (the element in position 4 is unaltered by this process) |
|  |  |  |
| 7 | while True: |  |
| 8 | display.clear() | calls the micro:bit display.clear() function which sets the brightness of all of the LEDs to 0, i.e. off. It clears the LED display screen |
| 9 | scroll\_up() |  |
| 10 | positions[4] = int(pin2.read\_analog() / 240) | The function pin2.read\_analog gives a number between 0 and 1023 depending on the voltage at pin2, which depends on the position of the slider. This is then divided by 240 which once it has been cast as an integer gives a maximum reading of 4. So the element in index [4] in the positions list takes on this value. |
| 11 | for y2 in range(5): |  |
| 12 | display.set\_pixel(positions[y2], y2, 9)\* | ...call the inbuilt function display.set\_pixel() so that the LEDs are lit.  The x value here is taken by identifying the value in the index position determined by the y2 for loop.  The y value here is taken from the y2 for loop so it is iterating the value from 0 to 4. |
| 13 | time.sleep(0.1) |  |

\*display.set\_pixel(x,y,value) - this inbuilt function sets the brightness of the LED at row x and column y to value, which has to be an integer between 0 and 9. In this case the brightness is always set to the maximum 9.