

PSEUDOCODE - Implement this pseudocode in CircuitPython. Where relevant, use the functions for reading sensor values and controlling DCs from previous exercises

Start the program

Set up joystick X axis, Y axis and button input

Set up two DC motors

Set minimum and maximum threshold values

Repeat forever

 Read X axis value

 Read Y axis value

 Read joystick button value

 If Y value is less than minimum threshold

 Move the rover forward

 Else if Y value is greater than maximum threshold

 Move the rover backward

 Else if X value is less than minimum threshold

 Turn the rover right

 Else if X value is greater than maximum threshold

 Turn the rover left

 Else if joystick button is pressed

 Stop the rover

 End if

 Wait for a short time

Repeat

INSTRUCTIONS FOR THE EXERCISE

- Connect the joystick to the Crickit board using the X axis, Y axis, button, power and ground pins.
- Connect both DC motors to the Crickit motor ports.
- Upload the CircuitPython code to the CPX
- Move the joystick up to make the rover move forward.
- Move the joystick down to make the rover move backward.
- Move the joystick left or right to turn the rover.
- Press the joystick button to stop the rover.
- Observe how different joystick movements control the rover's direction and motion.