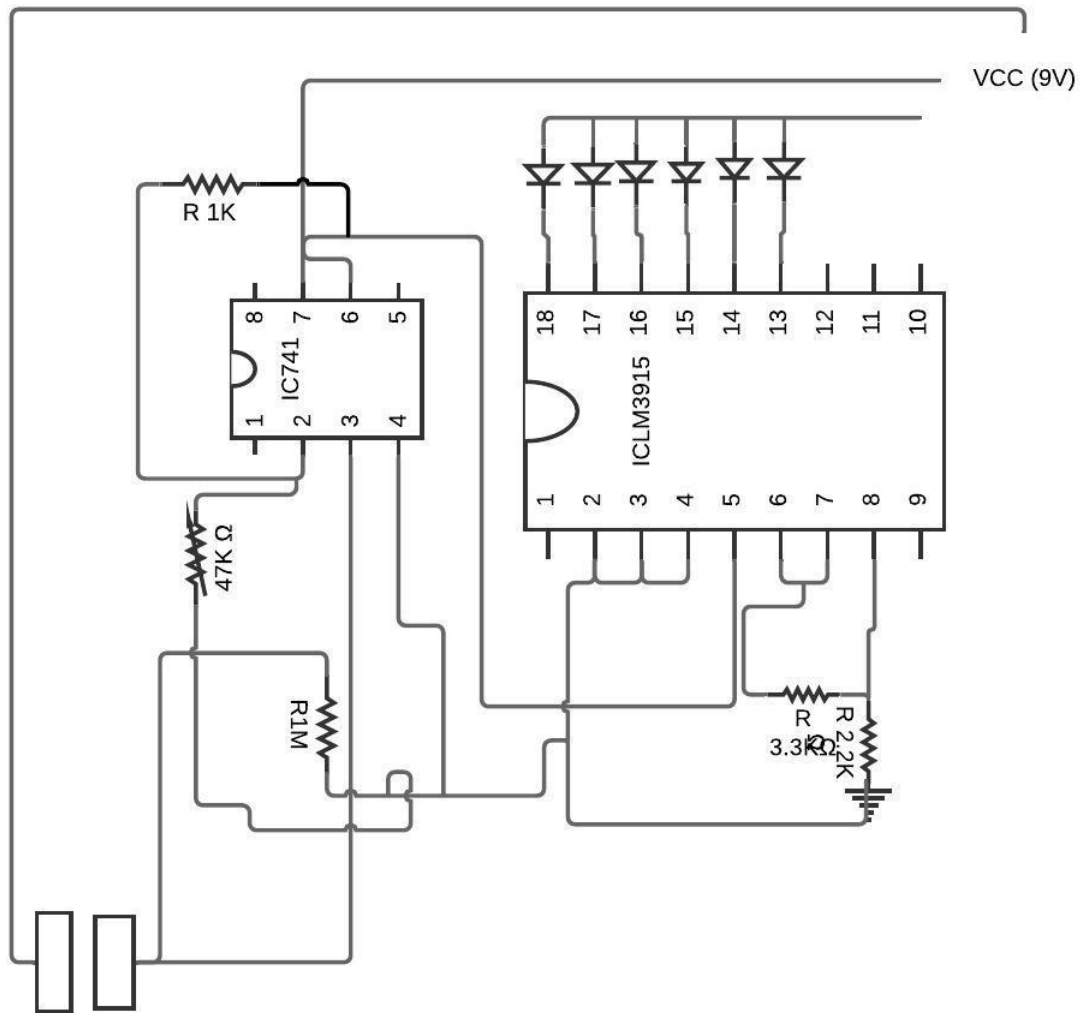


CIRCUIT EXPLANATION



The input to this device is the voltage variations that the touchpads sense. The touch pads are highly sensitive to voltage variation and detects even a minute voltage variation across the touch pads. The question now is how are these voltage variations related to the stress of an individual. If an individual is under high stress the resistance offered by the individual's body is less, thus less voltage drop is observed across the body which results in high voltage across the touch pads. The voltage variations from the touch pads are amplified by IC741 which is a non-inverting amplifier operated with the gain 2 which is achieved by maintaining the feedback resistance R_f and input resistance R_i equal. The sensitivity of the device is directly related to the gain of the amplifier. If the value of the feedback resistance is not appropriate the output

obtained is not accurate. The desired value of the feedback resistance is obtained by using a potentiometer (variable resistance). By tuning the potentiometer, the desired value of feedback resistance is set. The output of IC741 which is obtained at pin number 6 which is the amplified value of the voltage variation. This amplified signal is now fed to the input of the IC LM3915. The function of this IC is that it detects the amount of voltage entering the IC. The LED connected to pin 13 indicates high stress level and the LED connected to pin 18 indicates low stress. Discussing in terms of the current delivered to each LED; the amount of current required to drive the LED at pin 18 is 150mA and the current required to drive LED at pin 13 is 800mA.