Hello Friends, Welcome to the video tutorial on the Raspberry Pi.

In this tutorial we will learn about external interrupt on RPi using threading.

First What is interrupt? An Interrupt is a signal generated by external peripheral connected to CPU, which causes the CPU to stop what it is doing and go to separate piece of code

known as ISR(i.e. Interrupt service routine) for execution. When the execution of ISR completes it starts main program from where it left.

In this tutorial we use concept of threading.

Running several threads in similar to running many program concurrently.

But it has some advantages i.e. it access the same data space.

We have interfaced a switch to gpio pins of rpi. When we run the program Main program will remain in execution. Whenever switch is pressed, on python console “switch press” is displayed.

We will show this interrupt using thread. We will create two thread. In one thread main program will be called. Another thread will pool the status of switch. When switch is pressed second thread will print that switch has been pressed.

Experiment:

Switch Interrupt on RPi using threading.

Hardware required for the experiments are

1. Breadboard
2. Two leds
3. Two 330 ohm resistors and one switch

Switch is connected to pin 11 of rpi and ground.

First led is conneted to pin 12.

Second led is connected to pin 13.

Connections are as shown in fig.

Problem Statement:

Interfacing two leds with raspberry pi. One led will blink continuously. Another led will glow for 1 second when switch is pressed.