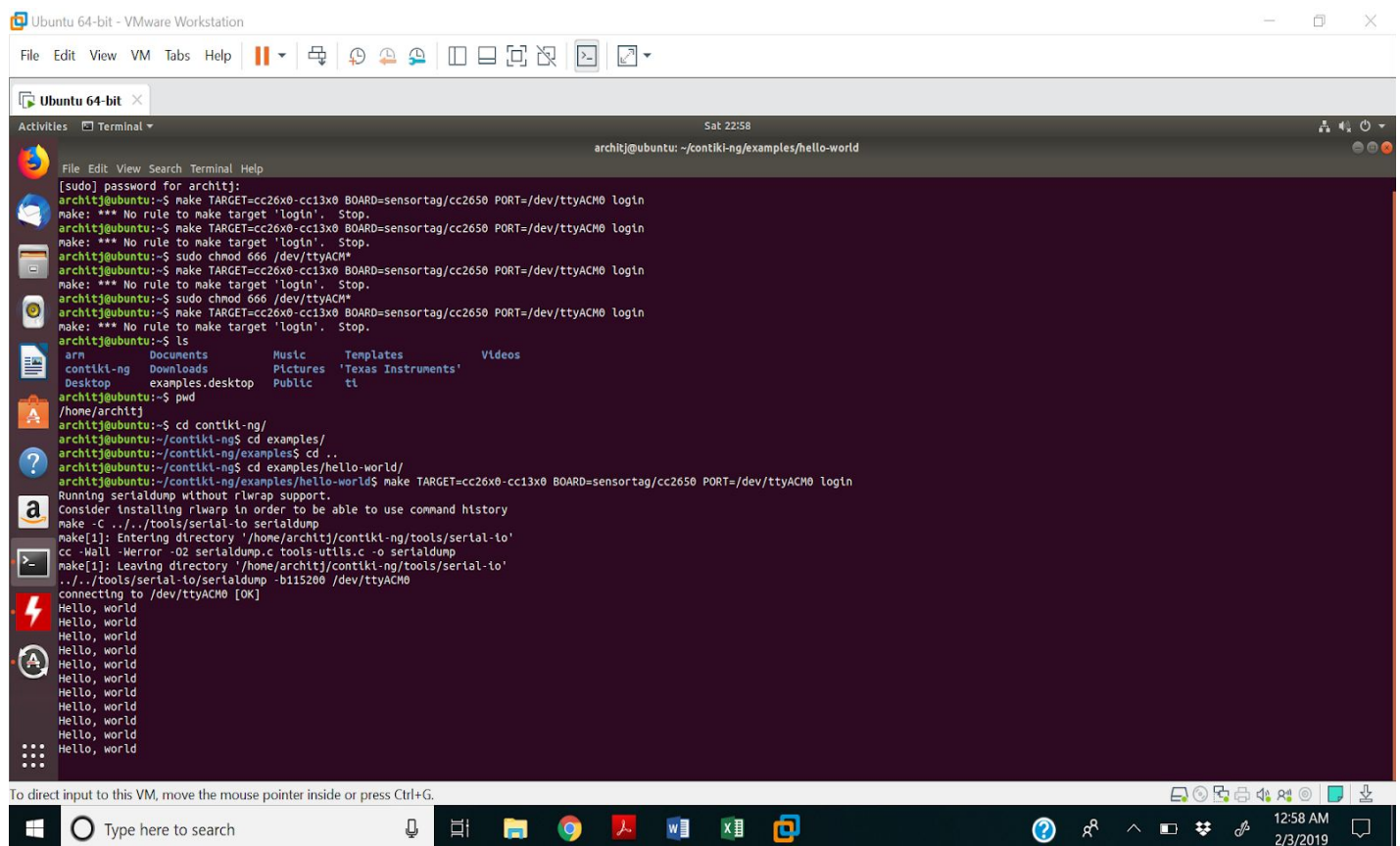


pvjain05@iastate.edu



# Mote Output view from Cooja simulation

Ubuntu 64-bit - VMware Workstation

File Edit View VM Tabs Help

Activities org-contikios-cooja-Cooja

Sat 23:33

My simulation - Cooja: The Contiki Network Simulator

File Simulation Notes Tools Settings Help

Network

View Zoom

Simulation control

Run Speed limit

Start Pause Step Reload

Time: 35:31.290

Speed: 3315.69%

Notes

Enter notes here

Mote output

Time	Mote	Message
28:53.164	ID-4	[INFO: App] Received response 'hello 1' from fd09::212:7401:1:101
28:53.355	ID-2	[INFO: App] Not reachable yet
29:52.535	ID-4	[INFO: App] Sending request 2 to fd09::212:7401:1:101
29:52.538	ID-1	[INFO: App] Received request 'hello 2' from fd09::212:7404:4:404
29:52.560	ID-1	[INFO: App] Sending response
29:52.609	ID-4	[INFO: App] Received response 'hello 2' from fd09::212:7401:1:101
29:53.030	ID-3	[INFO: App] Not reachable yet
29:53.581	ID-2	[INFO: App] Not reachable yet
30:52.050	ID-4	[INFO: App] Sending request 3 to fd09::212:7401:1:101
30:52.089	ID-1	[INFO: App] Received request 'hello 3' from fd09::212:7404:4:404
30:52.092	ID-1	[INFO: App] Sending response
30:52.124	ID-3	[INFO: App] Not reachable yet
30:52.156	ID-4	[INFO: App] Received response 'hello 3' from fd09::212:7401:1:101
30:52.675	ID-2	[INFO: App] Not reachable yet
31:52.034	ID-4	[INFO: App] Sending request 4 to fd09::212:7401:1:101
31:52.058	ID-1	[INFO: App] Received request 'hello 4' from fd09::212:7404:4:404
31:52.060	ID-1	[INFO: App] Sending response
31:52.094	ID-4	[INFO: App] Received response 'hello 4' from fd09::212:7401:1:101
31:52.757	ID-3	[INFO: App] Not reachable yet
31:53.308	ID-2	[INFO: App] Not reachable yet
32:51.988	ID-4	[INFO: App] Sending request 5 to fd09::212:7401:1:101
32:52.087	ID-1	[INFO: App] Received request 'hello 5' from fd09::212:7404:4:404
32:52.009	ID-1	[INFO: App] Sending response
32:52.031	ID-4	[INFO: App] Received response 'hello 5' from fd09::212:7401:1:101
32:53.273	ID-3	[INFO: App] Not reachable yet
32:53.824	ID-2	[INFO: App] Not reachable yet
33:51.409	ID-4	[INFO: App] Sending request 6 to fd09::212:7401:1:101
33:51.464	ID-1	[INFO: App] Received request 'hello 6' from fd09::212:7404:4:404
33:51.467	ID-1	[INFO: App] Sending response
33:51.531	ID-4	[INFO: App] Received response 'hello 6' from fd09::212:7401:1:101
33:53.812	ID-3	[INFO: App] Not reachable yet
33:54.363	ID-2	[INFO: App] Not reachable yet
34:51.105	ID-4	[INFO: App] Sending request 7 to fd09::212:7401:1:101
34:51.136	ID-1	[INFO: App] Received request 'hello 7' from fd09::212:7404:4:404
34:51.138	ID-1	[INFO: App] Sending response
34:51.203	ID-4	[INFO: App] Received response 'hello 7' from fd09::212:7401:1:101
34:54.468	ID-3	[INFO: App] Not reachable yet
34:55.019	ID-2	[INFO: App] Not reachable yet

Control Panel

The control panel controls the simulation.

Start starts the simulation.

Pause stops the simulation.

The keyboard shortcut for starting and pausing the simulation is Ctrl+S.

Step runs the simulation for one millisecond.

Reload reloads and restarts the simulation.

Simulation speed is controlled via the Speed limit menu.

Timeline showing 4 notes

File Edit View Zoom Events Notes

1 2 3 4

To direct input to this VM, move the mouse pointer inside or press Ctrl+G.

Type here to search

1:33 AM 2/3/2019

Ubuntu 64-bit - VMware Workstation

File Edit View VM Tabs Help

Activities org-contikios-cooja-Cooja

Sat 23:42

My simulation - Cooja: The Contiki Network Simulator

File Simulation Notes Tools Settings Help

Network

View Zoom

Simulation control

Run Speed limit

Start Pause Step Reload

Time: 10:12.258

Speed: 2556.90%

Notes

Enter notes here

Mote output

Time	Mote	Message
07:58.370	ID-3	[INFO: App] Sending request 7 to fd09::212:7401:1:101
07:58.438	ID-1	[INFO: App] Received request 'hello 7' from fd09::212:7403:3:303
07:58.440	ID-1	[INFO: App] Sending response
07:58.466	ID-3	[INFO: App] Received response 'hello 7' from fd09::212:7401:1:101
07:59.363	ID-4	[INFO: App] Sending request 7 to fd09::212:7401:1:101
07:59.410	ID-1	[INFO: App] Received request 'hello 7' from fd09::212:7404:4:404
07:59.412	ID-1	[INFO: App] Sending response
07:59.435	ID-4	[INFO: App] Received response 'hello 7' from fd09::212:7401:1:101
08:57.442	ID-2	[INFO: App] Not reachable yet
08:58.797	ID-3	[INFO: App] Sending request 8 to fd09::212:7401:1:101
08:58.828	ID-1	[INFO: App] Received request 'hello 8' from fd09::212:7403:3:303
08:58.831	ID-1	[INFO: App] Sending response
08:58.880	ID-3	[INFO: App] Received response 'hello 8' from fd09::212:7401:1:101
08:59.871	ID-4	[INFO: App] Sending request 8 to fd09::212:7401:1:101
08:59.916	ID-1	[INFO: App] Received request 'hello 8' from fd09::212:7404:4:404
08:59.920	ID-1	[INFO: App] Sending response
08:59.966	ID-4	[INFO: App] Received response 'hello 8' from fd09::212:7401:1:101
09:56.901	ID-2	[INFO: App] Not reachable yet
09:58.187	ID-3	[INFO: App] Sending request 9 to fd09::212:7401:1:101
09:58.234	ID-1	[INFO: App] Received request 'hello 9' from fd09::212:7403:3:303
09:58.237	ID-1	[INFO: App] Sending response
09:58.286	ID-3	[INFO: App] Received response 'hello 9' from fd09::212:7401:1:101
09:59.457	ID-4	[INFO: App] Sending request 9 to fd09::212:7401:1:101
09:59.519	ID-1	[INFO: App] Received request 'hello 9' from fd09::212:7404:4:404
09:59.522	ID-1	[INFO: App] Sending response
09:59.560	ID-4	[INFO: App] Received response 'hello 9' from fd09::212:7401:1:101

Control Panel

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Timeline showing 4 notes

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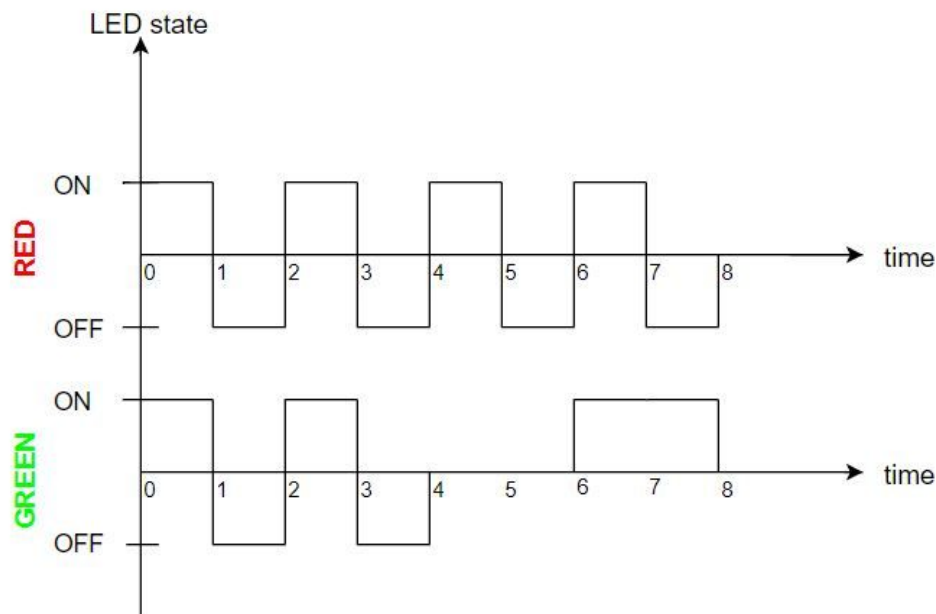
Type here to search

1:42 AM 2/3/2019

## Exercise 2

Write a description of the control flow of the leds-example.c application. You may draw a figure if helpful. Your description should answer the the following questions:

Periodic behavior of LEDs with the period of 8 sec:



1) Which code in leds-example.c executes first?

The line **static struct etimer et;** in leds-example.c will execute first.

2) When is leds\_set() first called?

led\_set() is first called during the following line when the while(1) loop is entered for the first time,

```
if((counter & 7) == 0) {  
    leds_set(LED_ALL);  
}
```

3) When is leds\_set() called for the second time?

In the second iteration of while(1) loop, leds\_set() called for the second time.

4) What is the purpose of the `PROCESS_YIELD()` statement?

The `PROCESS_YIELD()` allows other processes to execute till an event addressed to current process appears. `PROCESS_YIELD` pauses the current process and gives way to those who are waiting in the queue.

5) What event causes control to return to the process after `PROCESS_YIELD()` has been called?

The timer event (`PROCESS_EVENT_TIMER`) counts the time specified in the argument, which is `CLOCK_SECOND` i.e. 1 sec here. `PROCESS_EVENT_TIMER` causes control to return to the process as its job of counting the time has been completed.