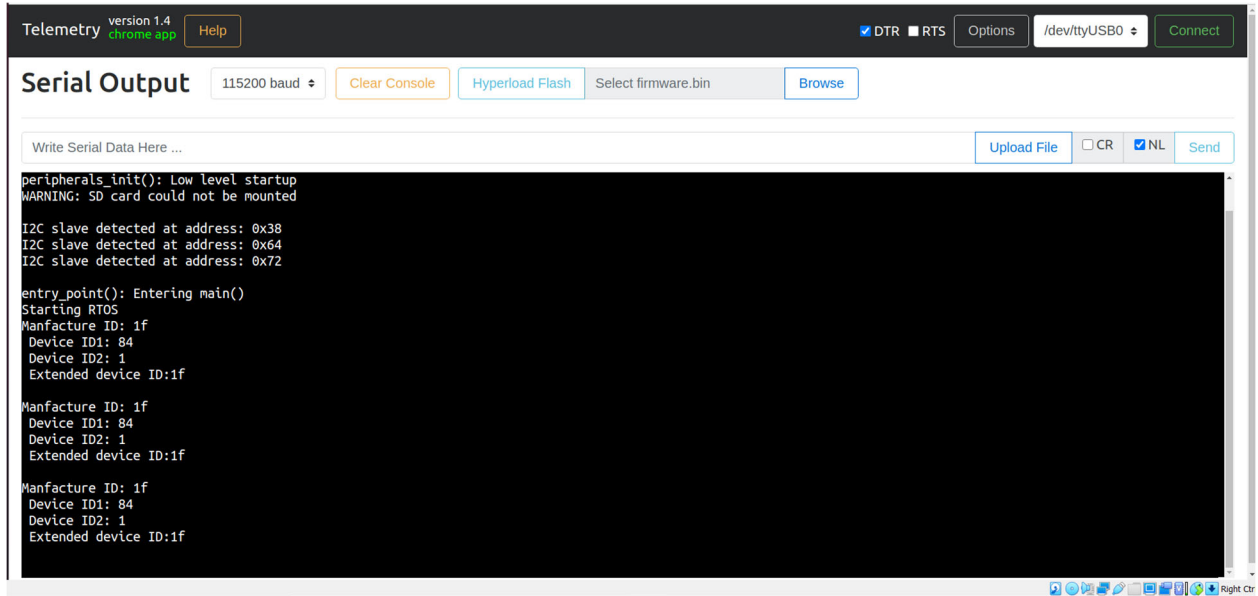
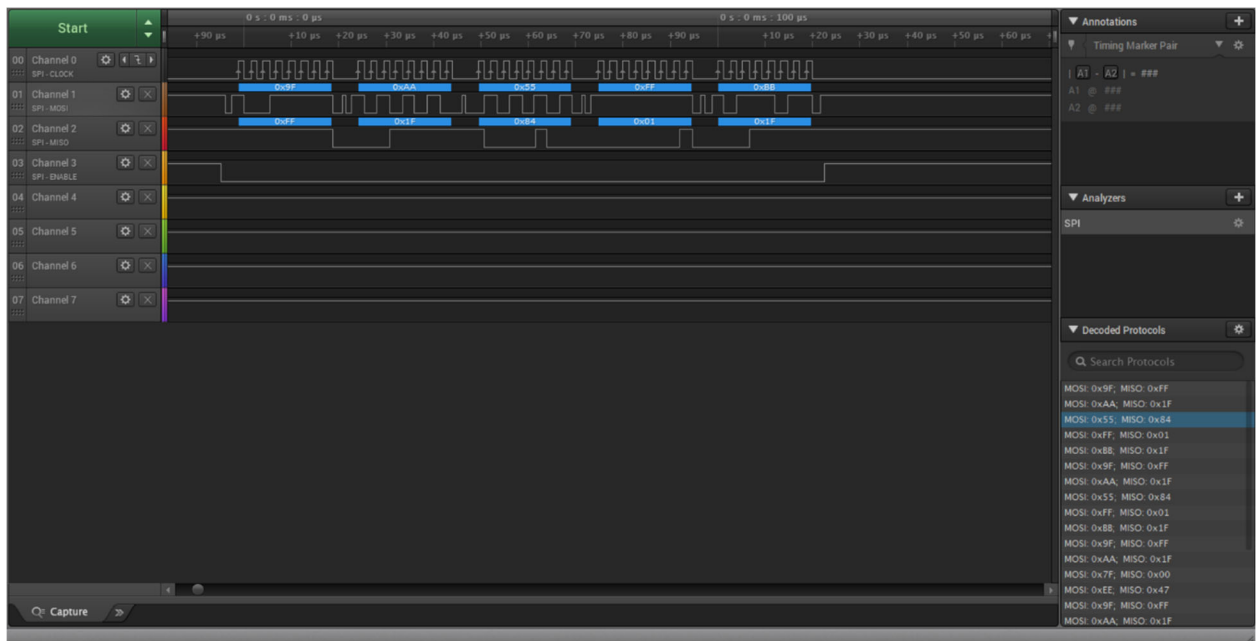


LAB 6: SPI

PART 1:

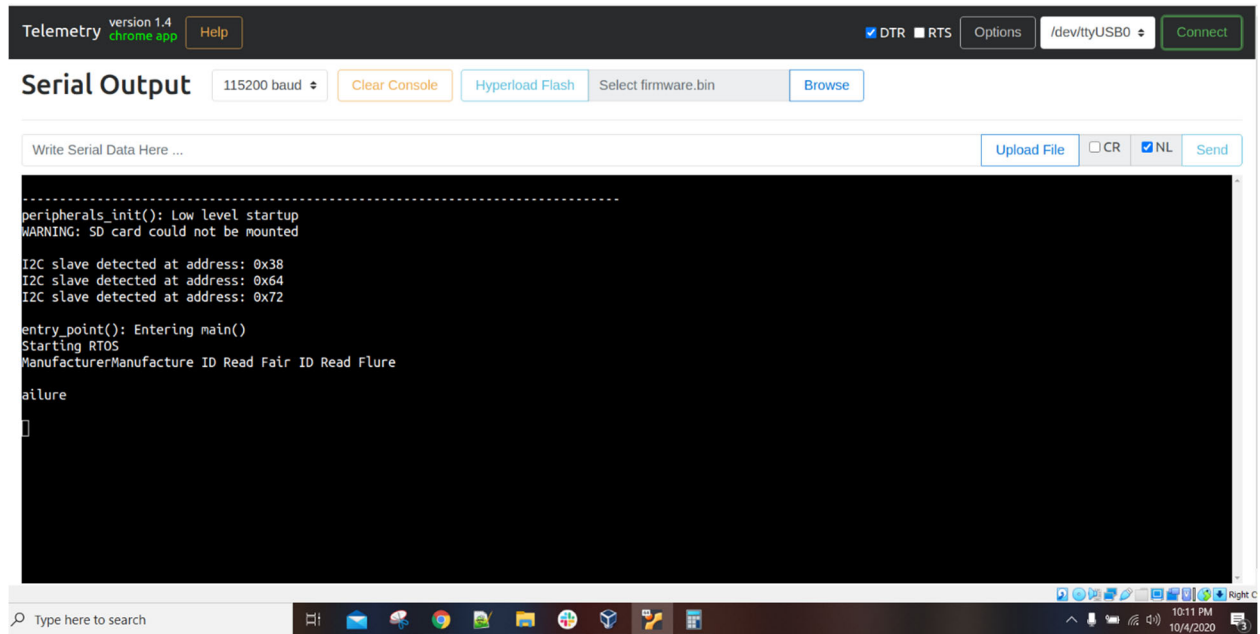


Output from Logic Analyzer:



PART2:

Without Mutex



The screenshot shows the Telemetry application interface. The top bar includes the version (1.4), a 'chrome app' label, a 'Help' button, and checkboxes for 'DTR' and 'RTS'. The 'Options' dropdown is set to '/dev/ttyUSB0', and a 'Connect' button is present. Below the top bar, the 'Serial Output' section has a baud rate of '115200', a 'Clear Console' button, a 'Hyperload Flash' button, a 'Select firmware.bin' dropdown, and a 'Browse' button. The main serial output area displays the following text:

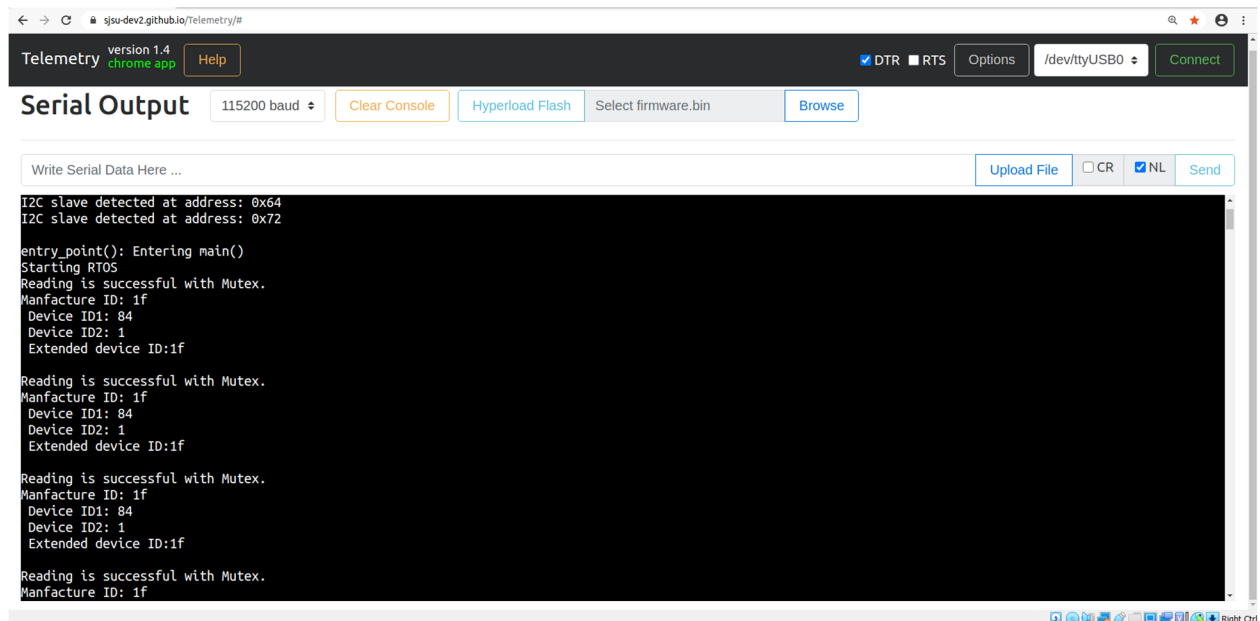
```
-----
peripherals_init(): Low level startup
WARNING: SD card could not be mounted

I2C slave detected at address: 0x38
I2C slave detected at address: 0x64
I2C slave detected at address: 0x72

entry_point(): Entering main()
Starting RTOS
ManufacturerManufacture ID Read Fair ID Read Flure
ailure
[]
```

The bottom of the image shows a Windows taskbar with various icons and a system clock indicating 10:11 PM on 10/4/2020.

With Mutex:



The screenshot shows the Telemetry application interface, similar to the previous one, but with different serial output. The top bar and 'Serial Output' controls are identical. The main serial output area displays the following text:

```
I2C slave detected at address: 0x64
I2C slave detected at address: 0x72

entry_point(): Entering main()
Starting RTOS
Reading is successful with Mutex.
Manufacture ID: 1f
Device ID1: 84
Device ID2: 1
Extended device ID:1f

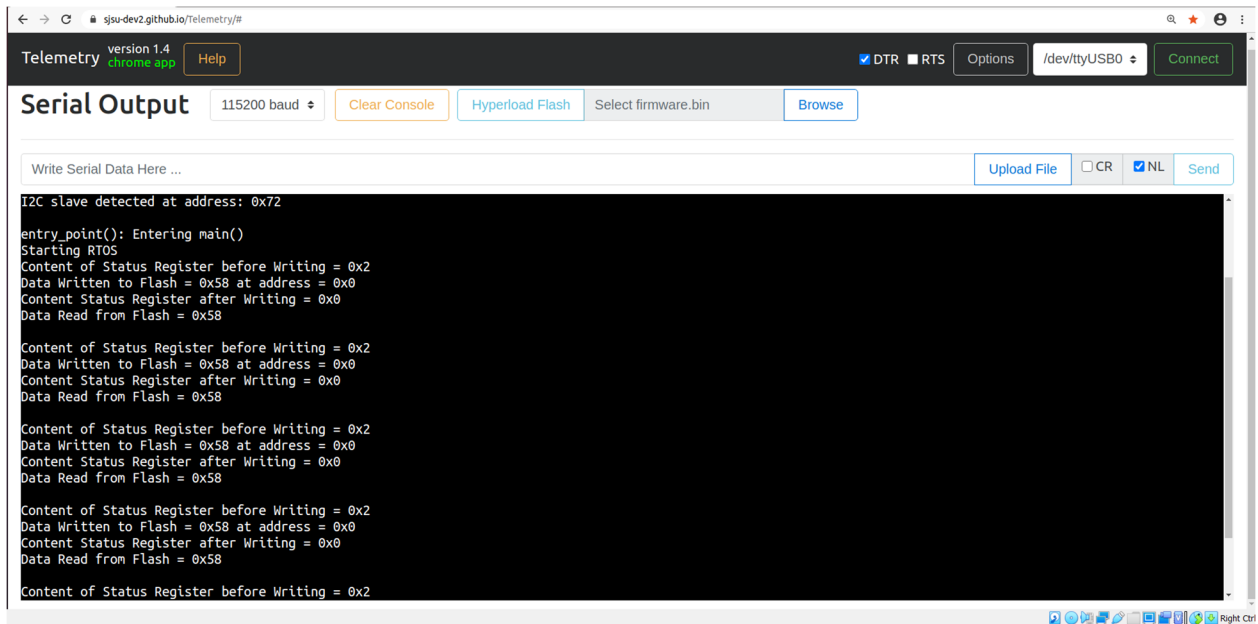
Reading is successful with Mutex.
Manufacture ID: 1f
Device ID1: 84
Device ID2: 1
Extended device ID:1f

Reading is successful with Mutex.
Manufacture ID: 1f
Device ID1: 84
Device ID2: 1
Extended device ID:1f

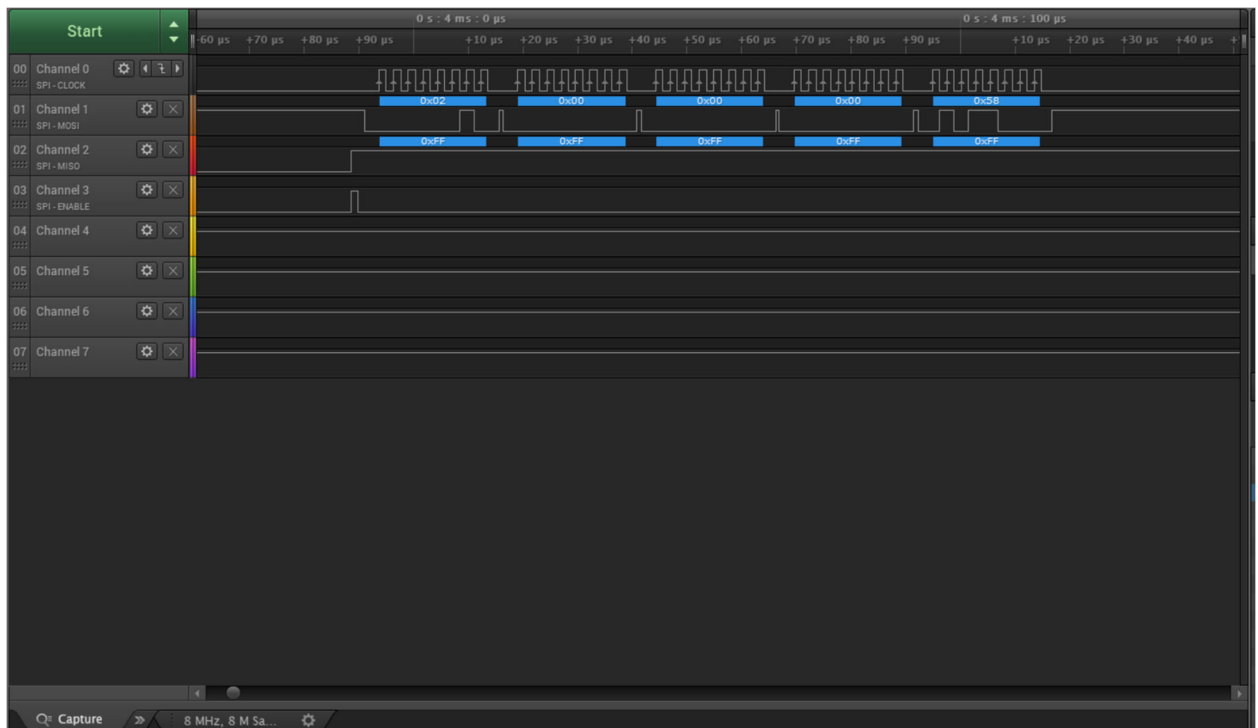
Reading is successful with Mutex.
Manufacture ID: 1f
```

The bottom of the image shows a Windows taskbar with various icons and a system clock indicating 10:11 PM on 10/4/2020.

EXTRA CREDIT:



WRITING DATA:



READING DATA:

Right hand side of the screenshot below shows the sequence of bytes sent and received by SPI while reading and writing data. The waveform in screenshot displays only the bytes read from SPI.

