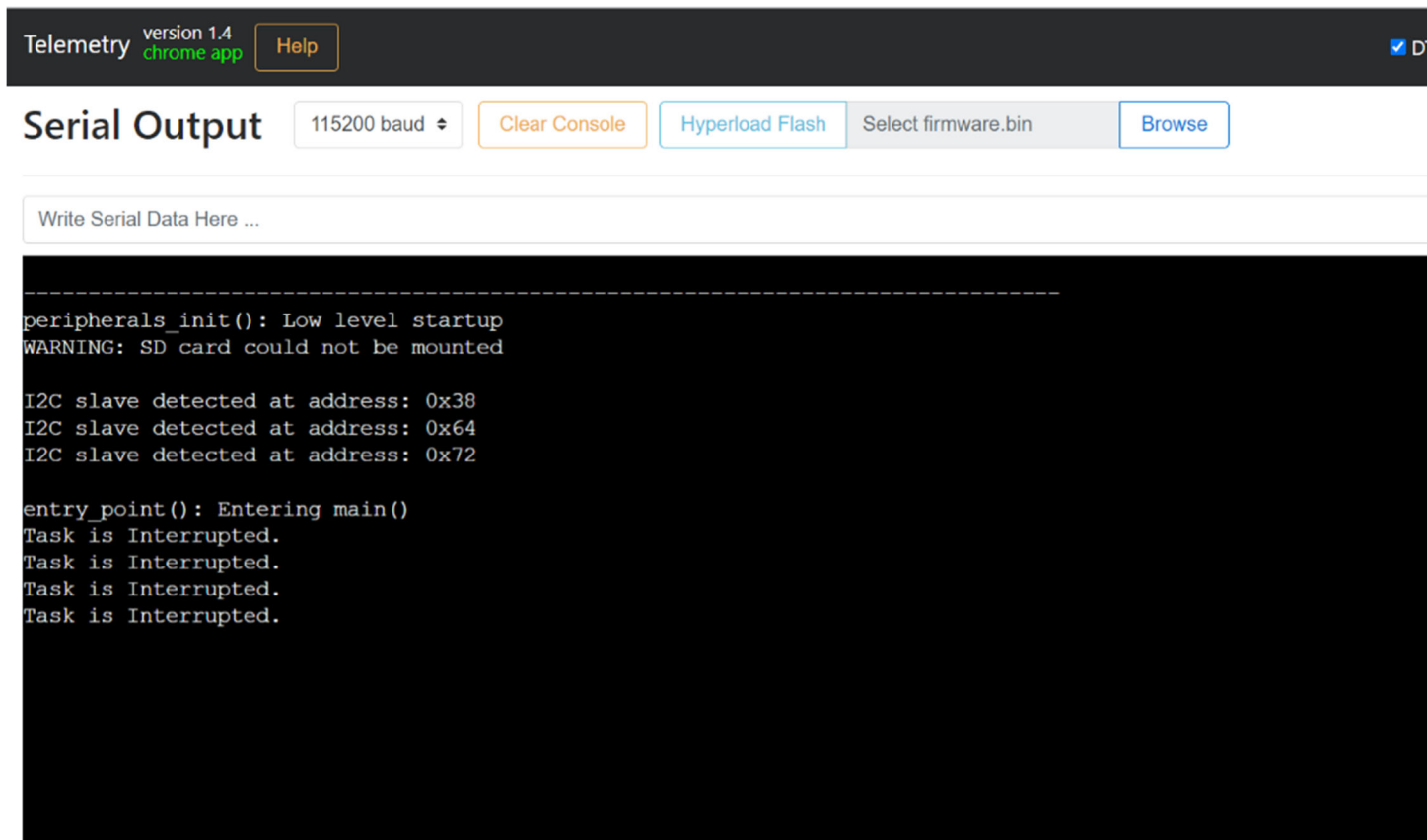


LAB 4: INTERRUPTS

Part 0:

Normal Operation the LED is blinking. When switch is pressed there is a print statement "Task is Interrupted".



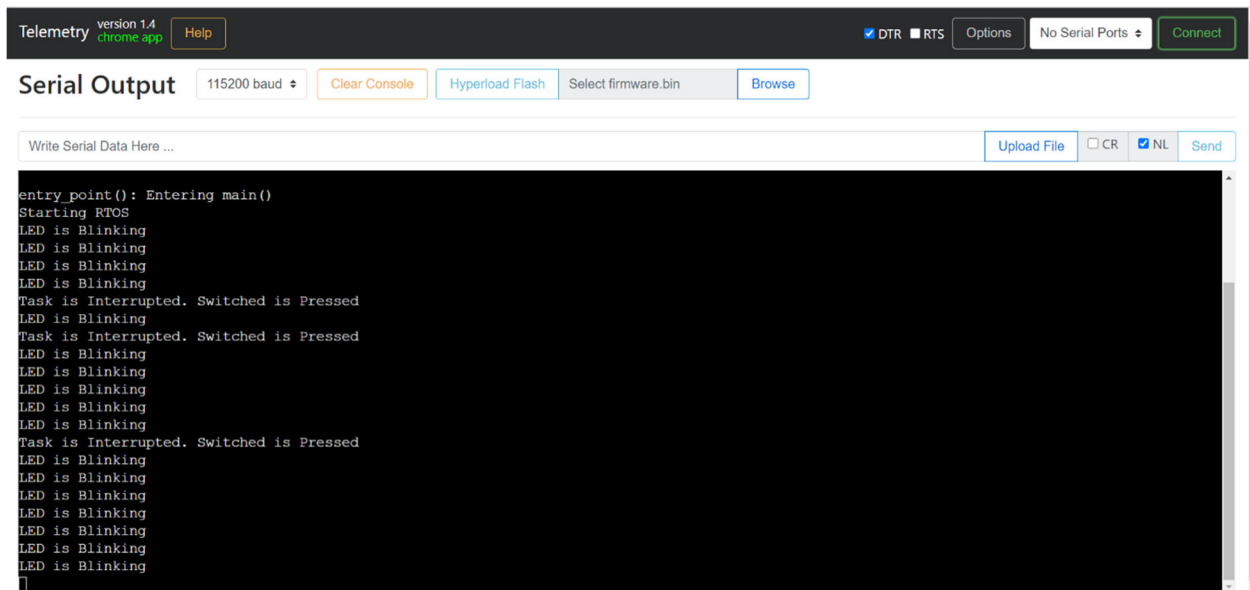
The screenshot shows the Telemetry Chrome App interface. At the top, there is a dark header bar with the text "Telemetry version 1.4 chrome app" and a "Help" button. Below the header, the "Serial Output" section is visible, featuring a baud rate dropdown set to "115200 baud", a "Clear Console" button, a "Hyperload Flash" button, a "Select firmware.bin" button, and a "Browse" button. The main area of the app is a black console window with white text. The text in the console is as follows:

```
-----  
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()  
Task is Interrupted.  
Task is Interrupted.  
Task is Interrupted.  
Task is Interrupted.
```

Part 1:

During a normal operation the LED is blinking with a delay 100ms. Here semaphore is used along with interrupts. When switch is pressed an interrupt is generated and prints the following:

```
Task is Interrupted. Switched is Pressed
```

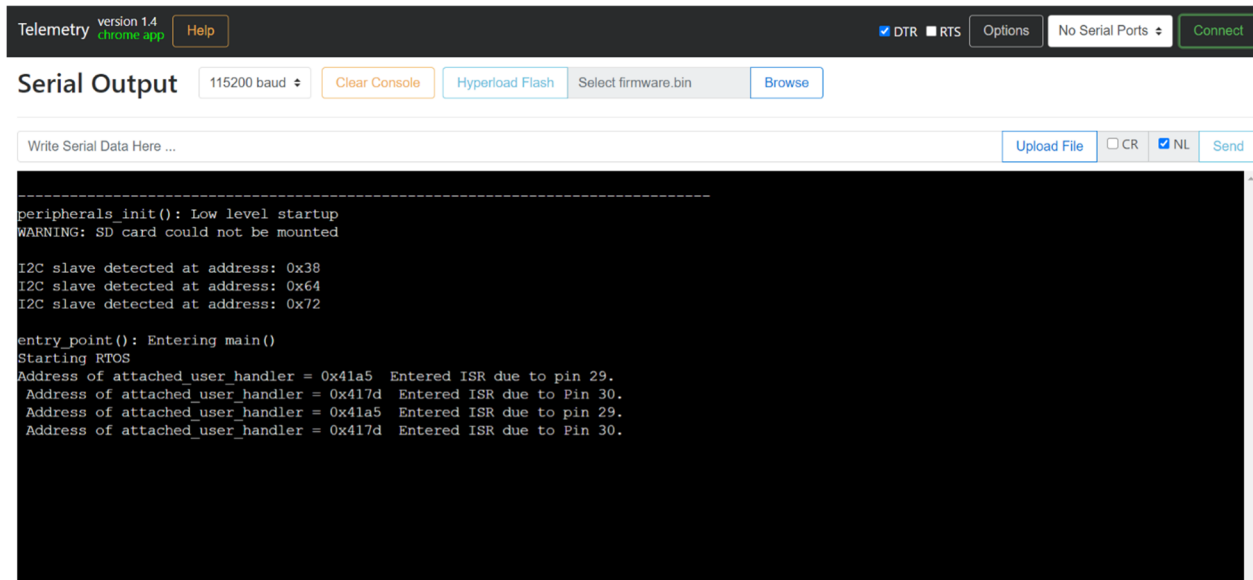


The screenshot shows the Telemetry version 1.4 Chrome App interface. At the top, there's a header bar with 'Telemetry version 1.4 chrome app', a 'Help' button, and status indicators for 'DTR' (checked), 'RTS' (unchecked), 'Options', 'No Serial Ports', and a 'Connect' button. Below the header, there's a 'Serial Output' section with a baud rate dropdown set to '115200 baud', a 'Clear Console' button, a 'Hyperload Flash' button, a 'Select firmware.bin' dropdown, and a 'Browse' button. A text input field 'Write Serial Data Here ...' is on the left, and 'Upload File', 'CR', 'NL' (checked), and 'Send' buttons are on the right. The main area is a black terminal window displaying the following text:

```
entry_point(): Entering main()
Starting RTOS
LED is Blinking
LED is Blinking
LED is Blinking
LED is Blinking
LED is Blinking
Task is Interrupted. Switched is Pressed
LED is Blinking
Task is Interrupted. Switched is Pressed
LED is Blinking
LED is Blinking
LED is Blinking
LED is Blinking
LED is Blinking
LED is Blinking
Task is Interrupted. Switched is Pressed
LED is Blinking
LED is Blinking
LED is Blinking
LED is Blinking
LED is Blinking
LED is Blinking
LED is Blinking
```

Part 2:

During a normal operation the LED is on. When switch is pressed an interrupt is generated and prints the details of the switch pressed and the interrupt handler address. For instance if switch 29 is pressed then it prints the address and informs that switch 29 is pressed.



The screenshot shows the Telemetry version 1.4 chrome app interface. At the top, there's a dark header bar with 'Telemetry version 1.4 chrome app' on the left, a 'Help' button, and on the right, checkboxes for 'DTR' and 'RTS', an 'Options' button, a 'No Serial Ports' dropdown, and a 'Connect' button. Below the header, the 'Serial Output' section is active, showing a baud rate of '115200 baud', a 'Clear Console' button, a 'Hyperload Flash' button, a 'Select firmware.bin' dropdown, and a 'Browse' button. The main area is a black terminal window with white text showing the following output:

```
-----
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
Address of attached_user_handler = 0x41a5 Entered ISR due to pin 29.
Address of attached_user_handler = 0x417d Entered ISR due to Pin 30.
Address of attached_user_handler = 0x41a5 Entered ISR due to pin 29.
Address of attached_user_handler = 0x417d Entered ISR due to Pin 30.
```

At the top of the terminal window, there's a text input field 'Write Serial Data Here ...' with an 'Upload File' button, checkboxes for 'CR' and 'NL' (the 'NL' checkbox is checked), and a 'Send' button.