

## Assignment UART: Jai SINGH ic22b037

### Getting Assignment Parameters

#### Question 1

Answer saved  
Marked out of 1.00

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Aufgabennummer 183726

Part ONE

Baudrate: 9600

q – on // w – off // e - toggle

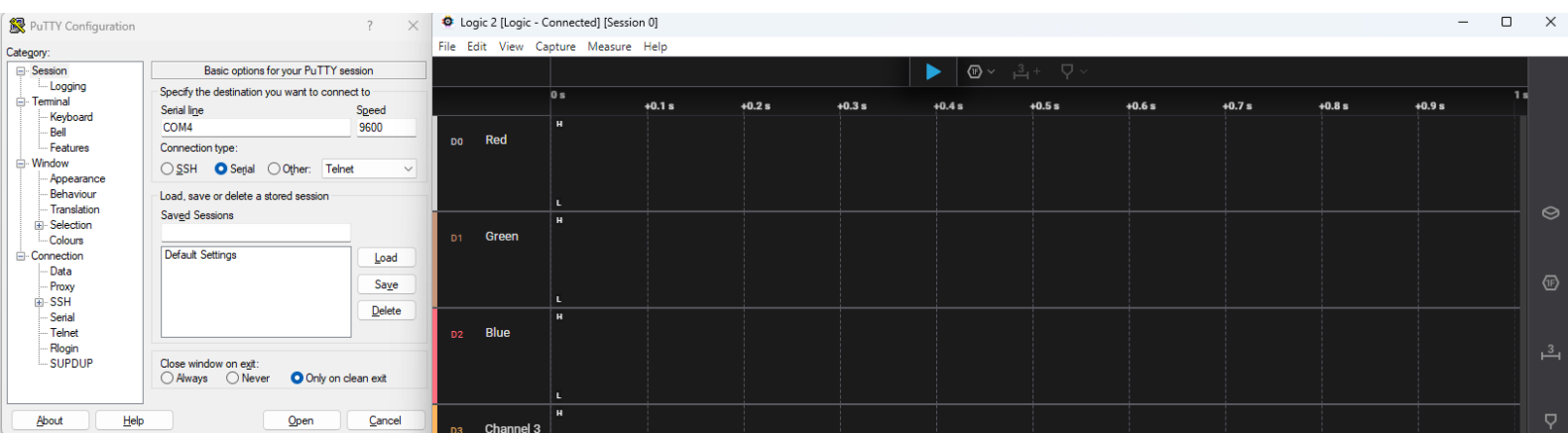
Part TWO

Periode: 400ms // On-time 100ms

- ☒ a. Ja  
☐ b. Nein

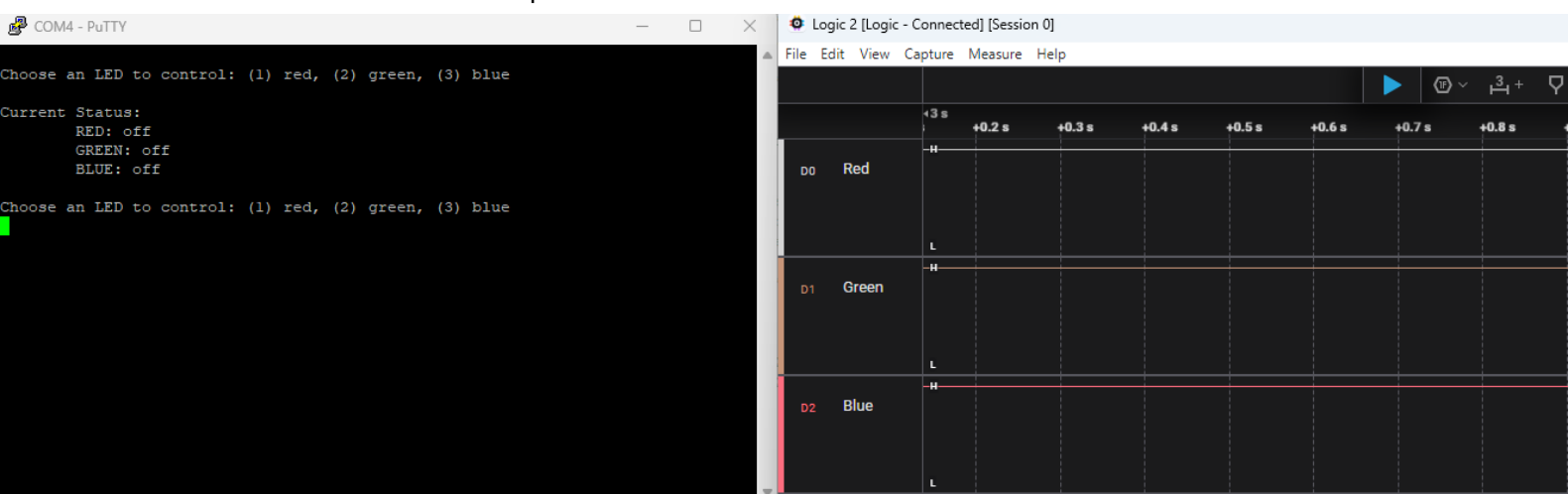
[Clear my choice](#)

### Setting up test environment:

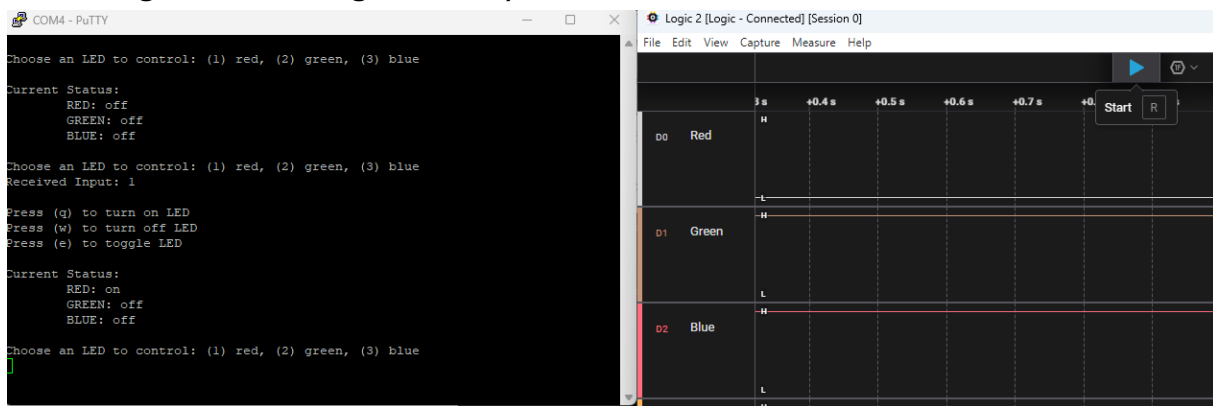


### TASK1:

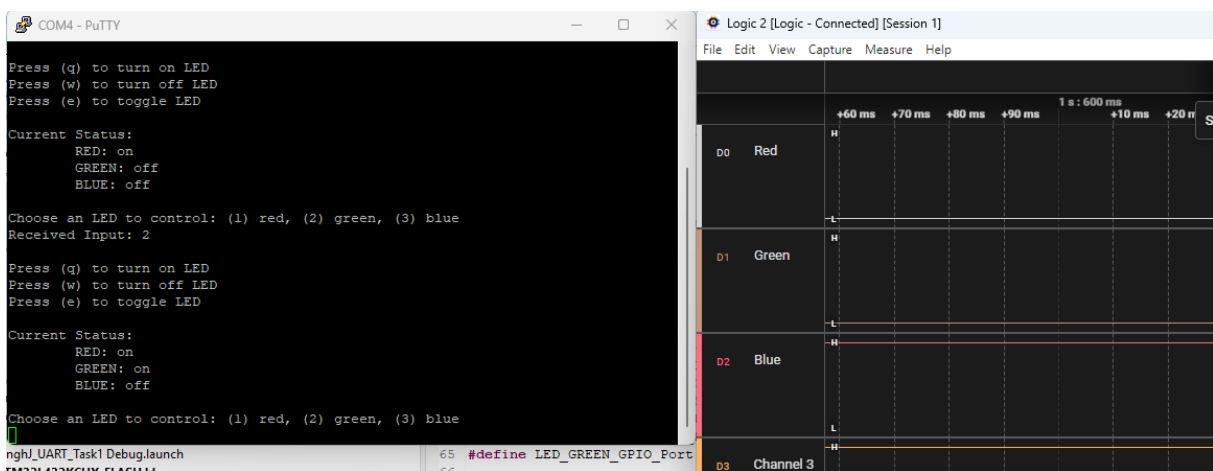
All LEDs turned off at startup:



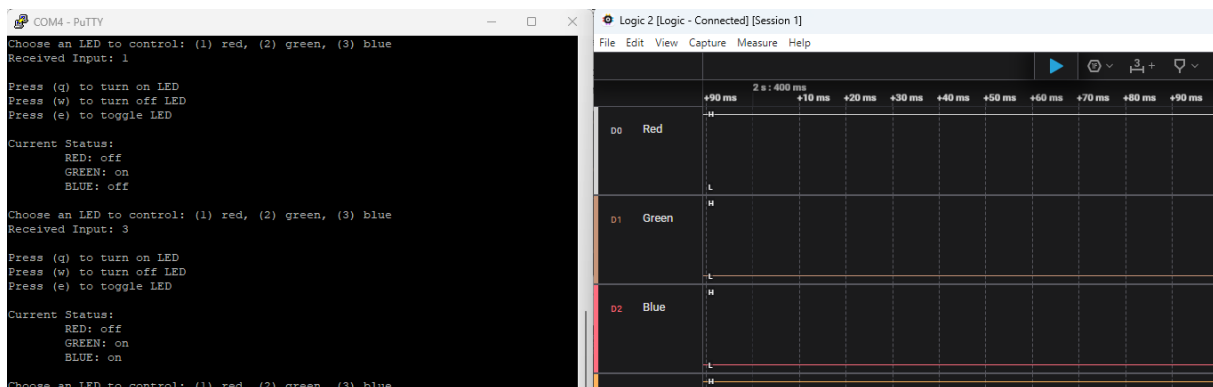
Red LED turned on (q) **(NOTE: Pins stay activated when choosing the next LED, until turned off via Program or resetting controller):**



Toggle (e) Green on as well (Yellow color now):



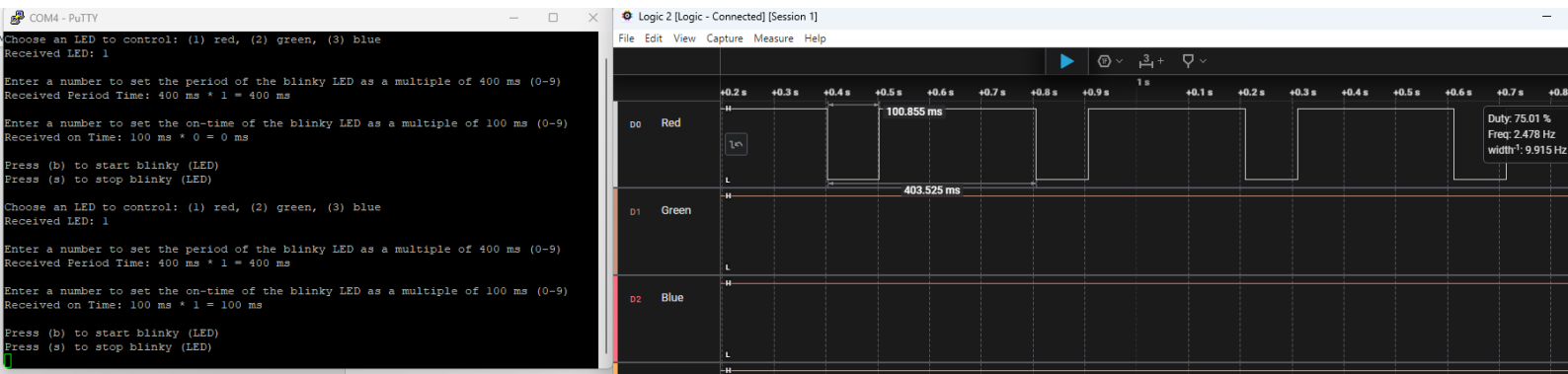
Turning off (w) Red and turning on (q) Blue:



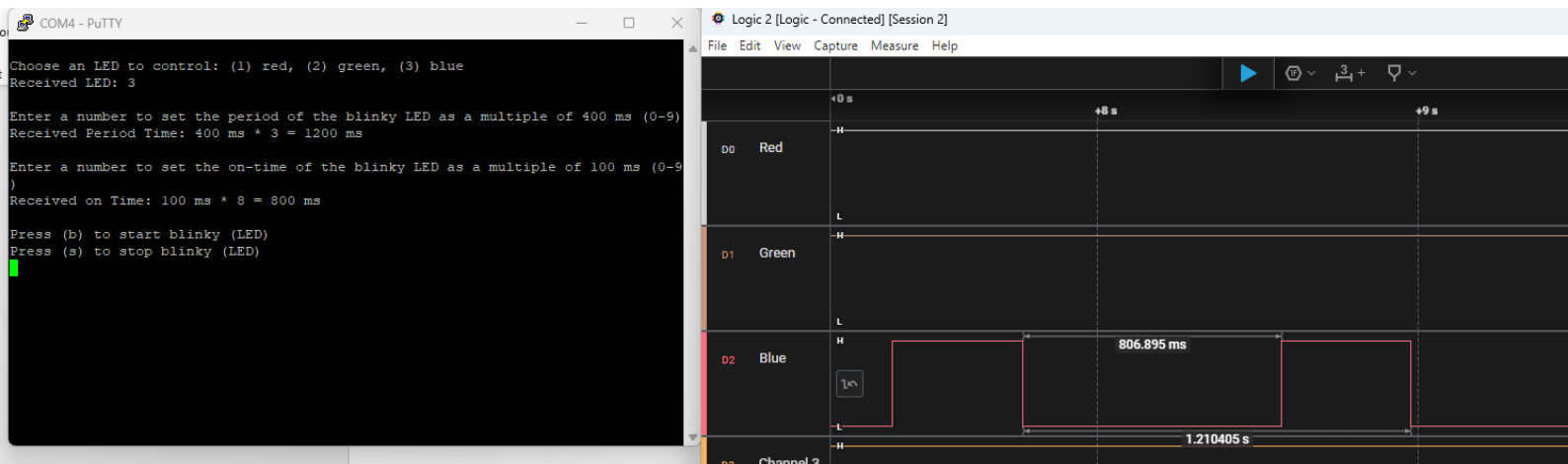
Task 2 on following pages

## Task 2

Setting Red LED to blink with period 400ms and 100ms on time (both 1). Starting by pressing (b):  
(NOTE: Stop blinky simply by pressing (s)):



Restarting controller (necessary to start whole process) and turning on blue blinky with 1200ms period and 800ms on time (3 and 8). Starting by pressing (b):



Error: catching period < ontime

```
Choose an LED to control: (1) red, (2) green, (3) blue
Received LED: 1

Enter a number to set the period of the blinky LED as a multiple of 400 ms (0-9)
Received Period Time: 400 ms * 1 = 400 ms

Enter a number to set the on-time of the blinky LED as a multiple of 100 ms (0-9)
Received on Time: 100 ms * 5 = 500 ms

ERROR! The on time is bigger then the whole period.
Please choose other values!
```

All letters of the alphabet and other characters are valued 0:

The image shows a PuTTY terminal window titled 'COM4 - PuTTY' and a Logic 2 logic analyzer window titled 'Logic 2 [Logic - Connected] [Session 2]'.

**PuTTY Terminal Output:**

```
Enter a number to set the period of the blinky LED as a multiple of 400 ms (0-9)
Received Period Time: 400 ms * 0 = 0 ms

Enter a number to set the on-time of the blinky LED as a multiple of 100 ms (0-9)
Received on Time: 100 ms * 0 = 0 ms

Press (b) to start blinky (LED)
Press (s) to stop blinky (LED)

Choose an LED to control: (1) red, (2) green, (3) blue
Received LED: 1

Enter a number to set the period of the blinky LED as a multiple of 400 ms (0-9)
Received Period Time: 400 ms * 0 = 0 ms

Enter a number to set the on-time of the blinky LED as a multiple of 100 ms (0-9)
Received on Time: 100 ms * 0 = 0 ms

Press (b) to start blinky (LED)
Press (s) to stop blinky (LED)
```

**Logic 2 Logic Analyzer:**

The logic analyzer shows three digital signals: D0 (Red), D1 (Green), and D2 (Blue). The D0 signal is shown with a high pulse of 160 ms and a low pulse of 7 ms. The D1 and D2 signals are shown as low pulses. A measurement of 25 μs is shown for the D0 signal.