

Mitchell Jonker

Hunter Frady

CSCE-313-002 Embedded Systems

03/03/2023

## Project 4

## 1.0 | Screenshots

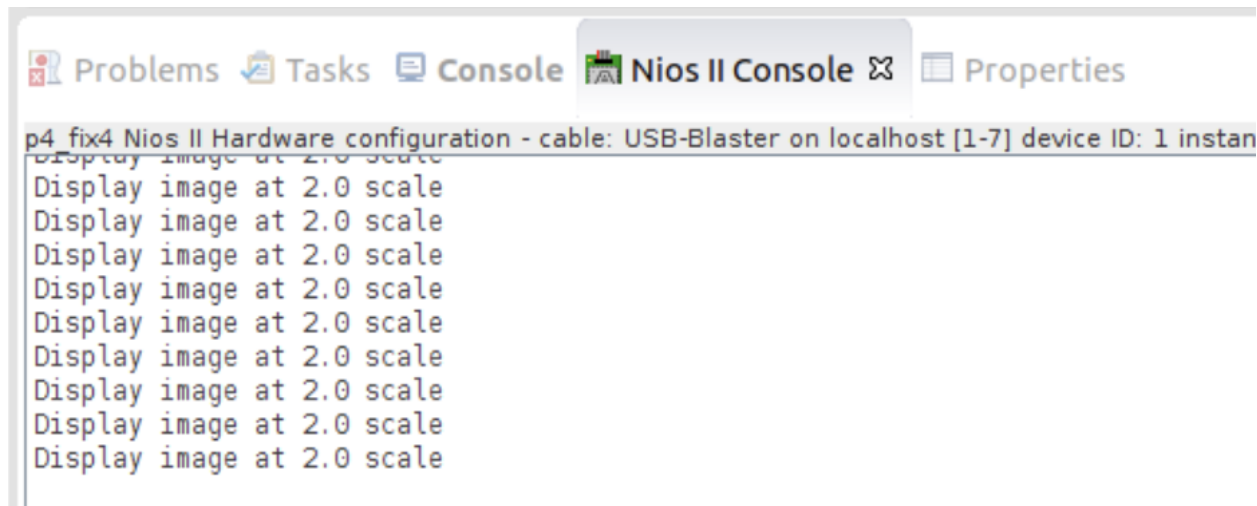
Display image output:

[illegible]

Resize image by 0.5 output:

[illegible]

Resize image by 2.0 output:



The screenshot shows the Nios II Console window with the following text:

```
p4_fix4 Nios II Hardware configuration - cable: USB-Blaster on localhost [1-7] device ID: 1 instan
Display image at 2.0 scale
Display image at 2.0 scale
Display image at 2.0 scale
Display image at 2.0 scale
Display image at 2.0 scale
Display image at 2.0 scale
Display image at 2.0 scale
Display image at 2.0 scale
Display image at 2.0 scale
Display image at 2.0 scale
```

## 2.0 | Questions

- a. Given the following frame:
  - i. Resolution: 640x480, totaling 307200 pixels.
  - ii. Red Pixel coordinates: (6,4)
- b. 24-Bit RGB into pixel memory with a base address of 0x08000000, coordinates: (4,1)
  - i. 0x080 00408 [Base + (00000001 000000100 0)2], 8 bits followed by 9 bits as demonstrated in lecture 6 page 29.
  - ii. Resolution: 640x480, so the frame size is 640x480x24bit, totaling 7372800.