NYU Tandon School of Engineering

Fall 2023, ECE 6913

Homework Assignment 7

Instructor: Azeez Bhavnagarwala, email: ajb20@nyu.edu

Course Assistant Office Hour Schedule

On Zoom: 9:30AM – 11AM Monday, Tuesday, Wednesday & Thursday(Focus on Project A)

1. Arushi Arora, aa10350@nyu.edu

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Homework Assignment 7 [released Thursday November 9th 2022] [due Wednesday December 6th by 11:59PM]

You *are allowed* to discuss HW assignments with anyone. You are *not allowed* to share your solutions with other colleagues in the class. Please feel free to reach out to the Course Assistants or the Instructor during office hours or by appointment if you need any help with the HW.
Please enter your responses in this Word document after you download it from NYU Classes. *Please use the Brightspace portal to upload your completed HW.*

- Please use the online 32-bit RISC V simulator:

https://www.kvakil.me/venus/
or
https://www.cs.cornell.edu/courses/cs3410/2019sp/riscv/interpreter/

- Please write the RISC V code, run it online to test/debug, demonstrate it works, include your code in the PDF you upload – as text not as an image

- Your code is graded for (1) validity (it works) (2) size (fewer lines, higher grades) (3) discussion explaining choices you made and why

- You cannot use/copy parts of or all of anyone else's code

1. Write a RISC V program using instructions in the RISC V ISA to calculate the sum of the squares of all odd numbers between 0 and +N where N is an integer < 100

2. Write a RISC V program using instructions in the RISC V ISA to calculate the factorial of any positive integer N < 10

3. Write a RISC V program using instructions in the RISC V ISA to calculate the sum of all prime numbers less than a given integer N where N < 100

4. Write a RISC V program that calculates the sum of N terms in a geometric series where a = 1 and r = -3

5. Write a RISC V program that calculates the sum of N terms in a arithmetic series where a0 = 1 and d = 3