In Class Quiz 1: Submit via Canvas

- Subtract 8 from 9 in 2's complement negation method (without doing subtraction)
- Assume we have 8-bit digits (not 32 bits), ignore carry beyond 8 bits

- 9 in binary: 0000_1001
- 8 in binary: 0000_1000
- Step 1: -8 in binary: ?
- Step 2: 9+(-8) in binary:?

1 0.5 / 0.5 points

Show the correct work to subtract 8 from 9 in 2's complement negation method (without doing subtraction) Assume we have 8-bit digits (not 32 bits), ignore carry beyond 8 bits.

- Step1: -8 in binary: 1111_0111
  Step2: 9+(-8) in binary: 0000_1001+1111_0111
- ✓ Step1: -8 in binary: 1111_0111+1= 1111_1000
  Step2: 9+(-8) in binary: 0000_1001+1111_1000
- Step1: -8 in binary: 0000_1000+1= 0000_1001
  Step2: 9+(-8) in binary: 0000_1001+0000_1001
- Step1: -8 in binary: 0111_0111+1= 0111_1000
  Step2: 9+(-8) in binary: 0000_1001+0111_1000

Quiz 2:

- Assume reg t1, t2 contains decimal 4 and 1000 respectively. Reg $zero contains 0.
- All numbers in decimal. **Submit via Canvas**
- **Question 1: How many times the instruction "add t2, t2, t1" will execute?**
- **Question 2: To which memory address content of $t2 is stored?**

```
loop:  add $t2, $t2, $t1
       addi $t1, $t1, -1
       bne $t1, $zero loop
      sw $t2, 104($t1)
```


1 0.25 / 0.25 points

How many times the instruction "add t2, t2, t1" will execute?

- ○ 0
- ✓ ● 4
- ○ 2
- ○ 3

2 0.25 / 0.25 points

To which memory address content of $t2 is stored?

- ○ 4
- ○ 0
- ✓ ● 104
- ○ 108

THIS IS QUIZ 3

1 0.25 / 0.25 points

Which features of NAND flash makes it less attractive technology (compared to NOR flash) for storing program's binary on an embedded platform?

- [ ] Read granularity of 1 byte
- [ ] Higher density (storage capacity per area)
- [x] Read granularity of 1 page (e,g, 512 Byte)
- [x] Slow random reads

2 0.25 / 0.25 points

Which of the following memory technologies are non-volatile?

- [ ] SRAM
- [x] EEPROM
- [ ] Register
- [x] Solid state drive
- [ ] DRAM