CMPE109 FUNDAMENTALS OF COMPUTING
2024-2025 FALL
LAB ASSIGNMENT 3
SECTION 2
B

B

Full Name:

Student ID:

Signature:

Q1) Trace the following assembly code. After we run the code, whether it halts or gives an error (doesn't matter), what will be the hexadecimal values stored in the following addresses, including IR. **[5 points]**

Note: Every hexadecimal value you write must be 2 characters. For example, write 0B for decimal 11.

```
1          LOAD R0, 10
2          LOAD R1, 0
3          LOAD R2, 2
4          LOAD R3, LIST
5
6   BACK:  LOAD R4, [R3]
7          JMPEQ R4=R0, END
8          ADDI R1, R1, R4
9          ADDI R3, R3, R2
10         STORE R4, [$FE]
11         JMP BACK
12
13  END:   ROR R1, 2
14         STORE R1, [$FF]
15         ROR R4, 1
16         HALT
17
18  LIST:  DB 2,8,5,10,9,9,10,4,-1
```

Machine Instruction		Assembly Instruction	Operation
Op-code	Operand		
1	RXY	load R, [XY]	Load R with the content from the memory cell at address XY
2	RXY	load R, XY	Load R with the bit pattern XY
3	RXY	store R, [XY]	Store the content of R into the memory cell at address XY
4	0RS	move S, R	Move content of R into S
5	RST	addi R, S, T	Add S and T and put the result in R (R, S, and T are in two's complement integer notation)
6	RST	addf R, S, T	Add S and T and put the result in R (R, S, and T are in floating-point notation)
7	RST	or R, S, T	OR the bit patterns in S and T and put the result in R
8	RST	and R, S, T	AND the bit patterns in S and T and put the result in R
9	RST	xor R, S, T	XOR the bit patterns in S and T and put the result in R
A	R0X	ror R, X	Circularly rotate the bit pattern in R one bit to the right X times
B	RXY	jmpEQ R=R0, XY	Start decoding the instruction located at address XY if the bit pattern in R is equal to the bit pattern in register 0
C	000	halt	Halt execution
D	0RS	load R, [S]	Load R with the content from the memory cell whose address is in S
E	0RS	store R, [S]	Store the content of R into the memory cell whose address is in S
F	RXY	jmpLE R<=R0, XY	Start decoding the instruction located at address XY if the bit pattern in R is less than or equal to the bit pattern in register 0

FE	
00	
FF	

Q2) Above assembly code can run without giving and error, or maybe it is wrong and can give an error at some point, you must understand that. Do you think this assembly code will run and halt without an error (write yes or no)? If you said no, why (write just 1 sentence)? **[2 points]**

Q3) Recreate the given webpage visually using HTML. Your code should include a nested list about hamburger ingredients. Ensure your code is correctly structured with proper HTML tags and formatting. **[7 points]**

```
<!DOCTYPE html>
<html>
<head>


</head>
<body                          >









</body>
</html>
```

Cool Hamburger Ingredients

1. **Bun**
   - Flour
   - Water
   - Sugar
   - Salt
   - Yeast mixture
2. **Patty**
   - Ground meat
   - Onion
   - Salt
   - Black pepper
   - Spices
3. **General Ingredients**
   - Lettuce
   - Tomato
   - Cheese
   - Ketchup
   - Mayonnaise
   - Pickles

- Page title is “Cool Recipes”.
- Page background is colored with “#FFBBBB” color.
- Use “h2” for the heading. Also, heading is *italic*.
- Image name is “brgB.png”, width is “300”, height is “367”.
- Outer list items are **bold**.
- There is an empty space between each outer list item.

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