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 values stored in the following addresses, including IR. **[5 points]**

Note: IR shows the last executed code. For example, it shows 2201 for the code in line 3.

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

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

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

FF	
IR	
FD	

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 <u>halt</u> 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 table with five columns. Ensure your code is correctly structured with proper HTML tags and formatting. **[7 points]**

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


</head>
<body                              >
```

Book List

Title	*Author*	*Year*	*Genre*	*Pages*
1984	George Orwell	1949	Dystopian	328
War and Peace	Leo Tolstoy	1869	Historical	1225

```
</body>
</html>
```

➢ Page title is "Best Books".

➢ Page background is covered with an image. This image's name is "backB.png".

➢ Use "h2" for the heading. Also, it is aligned to "right".

➢ Table border size is "5". Also, it is aligned to "center".

➢ First row items in the table are **bold** and *italic*.

➢ Pages items in the table are **bold**.

➢ Image is placed after the table, its name is "mveB.png", width is "307", height is "450".

➢ There is an empty space between table and image.

B