

ALGORITHM-EXAM-05 200 minutes

Question - 1

All numbers are greater (or equal) than 10 and smaller (or equal) than 20 print "WIN"

WHAT YOUR PROGRAM SHALL DO

- Enter 5 numbers
- If all numbers are greater (or equal) than 10 and smaller (or equal) than 20 print "WIN"
- Otherwise print "LOST"

INPUT	OUTPUT	EXPLANATION
19	LOST	21 is greater than 20.
11		
17		
13		
21		
19	WIN	All numbers are in the range [10, 20]
11		
17		
13		
15		

Question - 2

Enter numbers again and again until the total sum of numbers is greater or equal to 20.

WHAT YOUR PROGRAM SHALL DO

Enter numbers again and again until the total sum of numbers is greater or equal to 20.

Important: not all the number counts for the sum:

• If the number is equal to 10 or 12, we don't count this number in the sum

At the end:

- If the final sum is:
 - Equal to 20, print WIN
 - Greater than 20, print LOST

INPUT	OUTPUT	EXPLANATION	
9	WIN	The final sum (9+9+2) is equal to 20	
9			
2			
9	WIN	The final sum (9 +9+2) is equal to 20 (10 and 12 do not count!)	
10			
12			
9			
2			
2	LOST	The final sum (2 +11+9) is greater than 20	
10			
11			

9		
12	WIN	The final sum (9 +3+8) is equal to 20 (12 does not count!)
9		
3		
8		

Question - 3

Enter numbers again and again until it's the number 72

WHAT YOUR PROGRAM SHALL DO

Enter numbers again and again until it's the number 72

- While the number entered is not 72, we print "AGAIN" on the console
- The user can only try 3 times to guess the number

At the end:

- If the number is not found after 3 tries, we print LOST
- · Otherwise we print WIN

Input	Output
7	again
24	again
72	win
72	win
1	again
1	again
1	lost
	explanation: only 3 tries are allowed to find the number 72

Question - 4

print the points related to the word

WHAT YOUR PROGRAM SHALL DO

- Enter a word in console
- According to the rules, print the points related to the word
 - Note: You cannot cumulate the rules (the first rule that matches is applied)

RULES:

Only one "A" in the word
 Two "\$" in the word
 Only one "\$" in the word but no "A"
 (20 points)
 (10 points)

• Otherwise : 0 points

INPUT	OUTPUT	EXPLANATION
AXXXXXBVV	30	one "A",
		RULE 1 => 30 points
\$XXXFFSS\$	20	two "\$"
		RULE 2 => 20 points

\$XXEE	10	one "\$" and no "A" RULE 3 => 10 points
\$XXEEAAA	0	one "\$" but we have A => 0 points
AAXX\$\$	20	two "\$" RULE 2 => 20 points Note: the RULE 1 cannot apply, because we have 2 "A"