

HW 9

ENED 1090: MODELS I Week 9 Homework

ENED 1090 Fa2018 @ CQU

Submit Week 10 during Lab

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INSTRUCTIONS

Complete each question below by typing your answer or copying from the output in MATLAB or Excel.

This assignment is to be completed outside of class. You will submit a digital copy to your TA during the lab session next week.

!!! To receive points for this assignment, add your name to the filename. For example, if my name is Lin Yali, I will change the filename to

Wk09_ened1090_homework_LinYali.doc

OBJECTIVES

For this assignment, students will demonstrate

- Row Iterations
- While Loops
- For Loops

Each problem can be completed without using MATLAB or Octave. Attempt each one and check the result in the programming software.

PROBLEM 1

What do these MATLAB keywords do?

return

Stop program early.

error('message')

Does the same thing as fprintf + return, and the output text is red.

continue

Stop in the middle of the process and go back to the start of the repeating block.

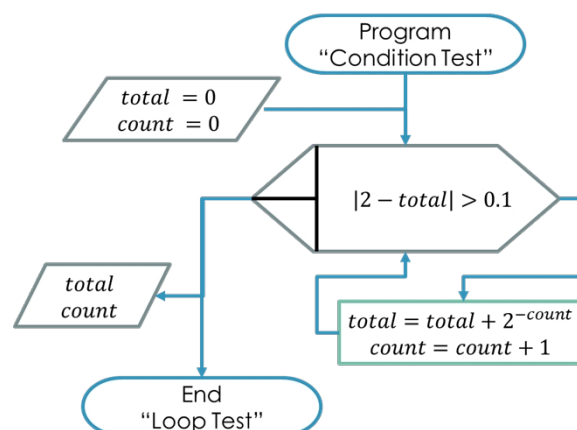
break

Stop in the middle of the process and go to the next block.

PROBLEM 2

Complete this problem without a computer program

Consider the flow chart of a condition based loop and complete the table of values for each variable.

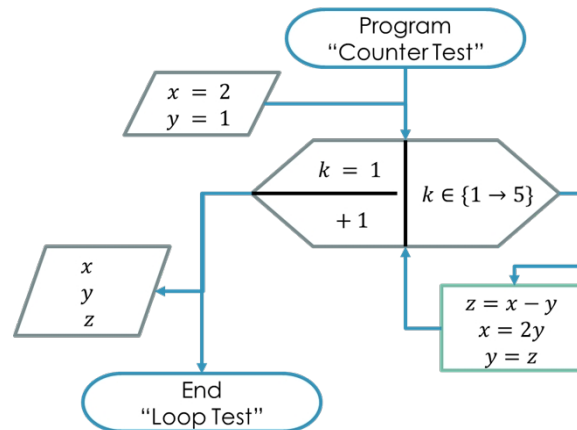


While Loop Condition (T F)	total	count
Before the loop	0	0
T	1	1
T	1.5	2
T	1.75	3
T	1.875	4
T	1.9375	5
F	***	***

PROBLEM 3

Complete this problem without a computer program

Consider the flow chart for a counter-based loop and complete the table of values for each variable.



k	x	y	z
Before the loop	2	1	not defined
1	3	1	1
2	3	2	2
3	6	1	1
4	3	5	5
5	15	-2	-2

PROBLEM 4

Write about an application for which a **while** loop would be useful.

You use a while loop when the endpoint is specified.

For example:

When you want to create a game to ask the player for different values in different round, you need to make the program run again, so you can set a while loop:

At the beginning of the program, you write “while yes == 1”;

At the end of the program, you write “yes = menu('Do you want to try new values?', 'Yes', 'No')”;

end.

PROBLEM 5

Write about an application for which a **for** loop would be useful.

You use a for loop when the endpoint is undetermined.

For example:

When you want to calculate a sequence of addition of increasing variables, you need to make a loop to increase the number, so you can set a for loop:

At the beginning of the program, you write “for x = xmin:xinc:xmax”;

At the end of the program, you write “end”.