# \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* Algorithms \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

‘’’

An **algorithm** is :

A series of steps required to accomplish a task

A recipe is an example of an algorithm.

Algorithms typically contain the following elements:

1. Conditional (IF) statements

“*When* the water boils, turn down the heat”

“*If* you like spicy foods, add jalapeno peppers”

1. Iterative (FOR, WHILE) statements

“*Repeat* steps 3 to 7 five times”

“*Repeat* steps 3 to 5 while the dough is still soft”

For each example below, write the algorithm and then the code.

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# \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

#1

# print three blank lines, then "goodbye".

'''

Algorithm:

1. Print blank line
2. Repeat step 1 two more times
3. Print “goodbye”

'''

''' Program '''

# \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

#2

# hello hello hello

# goodbye

'''

Algorithm:

'''

''' Program '''

# \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

#3

# Monday Monday Monday

# Monday Monday Monday

'''

Algorithm:

'''

''' Program '''

#\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

#4

# Search Algorithm

# Declaring if a person is or is not in a room.

'''

Algorithm:

'''

# \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

#5

# Max/Min Algorithm

# Finding the smallest number in a list

'''

Algorithm:

'''

''' Program '''

# start with this list:

number = [ 3, 2, 5, 6, 2, 5, -7, 9, 1, 8]