Introduction to Python I (Exercises 03) Lists

1) Write a program that defines the following list:

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countries = ['Canada', 'Russia', 'Mexico', 'Poland']
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1.1 Print the list
1.2 Reverse the list and print it
1.3 Sort the list and print it
1.4 Copy the countries list to a new list countries_02
1.5 delete the last element from countries_02
1.6 Pop the first element from countries and save it into a variable called OneCountry, print OneCountry
1.7 Append the element ' Spain' to the countries list
1.8 Extend countries with countries_02, and print countries

1.9 Find out how many times 'Mexico' is found in the list, print the result.

2) Take a list, say for example this one:

a = [1, 1, 2, 3, 5, 8, 13, 21, 34, 55, 89]

Write a program that uses a 'for loop' and prints out all the elements of the list that are less than 5. Remember to use a 'for loop', because there are other ways of doing this, but for academic purposes you should use a 'for loop'.

3) Prompt the user for 10 integers (one at a time) and add them to a list (call it MyList). Then print the list.

4) Write a program that takes a list of numbers (for example, mylist = [5, 10, 15, 20, 25]) and makes a new list of with only the first and last elements of the given list. Print the new list.

5) Prompt the user for 10 integers (one at a time) and add them to a list (MyList). Check to see if the numbers '10' , '5' and '3' are in the list and print a suitable message to let us know of their existence in the list.

6) Prompt the user for 10 integers (one at a time) and add them to a list (MyList). Then go through each element of the list and select and print those numbers that are less than 10. Use for loops, for this exercise.

7) Prompt the user for 10 integers (one at a time) and add them to a list (MyList). Then create a new list (MySecondList) which includes all the element of the first list without duplicates (for the time being use for loops for this exercise, we will see a different way of doing this later on).

8) Write a program that prompts you to enter names and continues to prompt you until you type either a 'q' or a 'Q'.

   Add all the names to a list and then print the names sorted in reverse order.

9) Take two lists, say for example these two:

   list_a = [1, 1, 2, 3, 5, 8, 13, 21, 34, 55, 89]
   list_b = [1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13]

   Write a program that creates a list that contains only the elements that are common between the lists (without duplicates). Make sure your program works on two lists of different sizes.