numpyLab

February 9, 2018

1 Numpy Lab

1. Create a numpy array of 3 integers (5, 6, 8) and save it in an object called a.
2. Update the the array in 1 to be of type fload.
3. Create a 3x4 array of zeros.
4. Create an array of numbers from 10 to 20 with increments of 2.
5. Create an array of numbers from 0 to 2 with 9 numbers equally spread.
6. Create a 4x3 array of integers from 0 to 11.
7. Create two 2x2 arrays A and B. Peform the following operations: A-B, A^2, AxB, A.B
8. Cteate a 4x3 array of random numbers between 1 and 100. Find the min, max, sum of all elements, sum of each row, sum of each col.
9. Create an array of 10 squares (save it in a) starting from 1, i.e. 1, 4, 9, 16, ...
10. Select elements at index 4 and 5 in a.
11. Select every other element in a.
12. Reverse a.
13. Use a for loop to print the square root of all elements in a.
14. Create a 4x5 matrix for the sequene from 30 to 49. Save it in b.
15. Use for loop to print all elements of b, each on a seperate line.
16. Create a 5x4 array for element 0,5,10, 15, ..., 95. save it in b.
17. Print all elements in b that are divisible by 5, and not by 10.
18. Create 2 lists num_list = [1, 2, 3] and alpha_list = ['a', 'b', 'c']. Print each element in num_list followed by all elements in alpha list, i.e. 1, a, b, c, 2, a, b, c, ...
19. Create the following list: list_of_lists = [['apple', 'orange', 'grape'],[0, 1, 2],[9.9, 8.8, 7.7]]. Print all elements in the lists_of_lists, i.e. apple, orange, grape, 0, 1, 2, ...
20. Create two 2x2 arrays. Stack them vertically and horizontally.