|  |  |  |
| --- | --- | --- |
| PYTHON BASIC |  |  |
|  |  |  |
|  |  |  |
|  |  | Merge this listring |
|  |  | s =( "Hi there Sam!") |
|  |  | print(s.merge()) |
|  |  | (OU) |
|  |  | [“Hitheresam”] |
|  |  | italicized text## 2. Use .format() to print the following string. |
|  |  |  |
|  |  | Output should be: The diameter of Earth is 12742 kilometers. |
|  |  | planet = "Earth" |
|  |  | diameter = 12742 |
|  |  | print( 'The diameter of {} is {} kilometers.' .format( planet ,diameter)); |
|  |  | (ou) |
|  |  | The diameter of Earth is 12742 kilometers. |
|  |  |  |
|  |  | 3. In this nest dictionary grab the word "hello" |
|  |  | d = {'k1':[1,2,3,{'tricky':['oh','man','inception',{'target':[1,2,3,'hello']}]}]} |
|  |  | d = {'k1':[1,2,3,{'tricky':['oh','man','inception',{'target':[1,2,3,'hello']}]}]} |
|  |  | print(d['k1'][3]["tricky"][3]['target'][3]) |
|  |  | hello |
|  |  | Numpy |
|  |  | import numpy as np |
|  |  | 4.1 Create an array of 10 zeros? |
|  |  | 4.2 Create an array of 10 fives? |
|  |  | import numpy as np |
|  |  | array=np.zeros(10) |
|  |  | print("An array of 10 zeros:") |
|  |  | print(array) |
|  |  | An array of 10 zeros: |
|  |  | [0. 0. 0. 0. 0. 0. 0. 0. 0. 0.] |
|  |  | import numpy as np |
|  |  | array=np.ones(10)\*5 |
|  |  | print("An array of 10 fives:") |
|  |  | print(array) |
|  |  | 5. Create an array of all the even integers from 20 to 35 |
|  |  | import numpy as np |
|  |  | array=np.arange(20,36,2) |
|  |  | print("An array of 10 fives:") |
|  |  | print(array) |
|  |  | An array of 10 fives: |
|  |  | [20 22 24 26 28 30 32 34] |
|  |  | 6. Create a 3x3 matrix with values ranging from 0 to 8 |
|  |  | import numpy as np |
|  |  | array=np.arange(0,9).reshape((3,3)) |
|  |  | print(array) |
|  |  | [[0 1 2] |
|  |  | [3 4 5] |
|  |  | [6 7 8]] |
|  |  | 7. Concatinate a and b |
|  |  | a = np.array([1, 2, 3]), b = np.array([4, 5, 6]) |
|  |  | import numpy as np |
|  |  | a = np.array([1, 2, 3]) |
|  |  | b = np.array([4, 5, 6]) |
|  |  | np.concatenate((a, b), axis=0) |
|  |  | array([1, 2, 3, 4, 5, 6]) |
|  |  | Pandas |
|  |  | 8. Create a dataframe with 3 rows and 2 columns |
|  |  | import pandas as pd |
|  |  | import pandas as pd |
|  |  | import numpy as np |
|  |  | array1=['s','y'] |
|  |  | array2=['a','u'] |
|  |  | array3=['m','k'] |
|  |  | pd.DataFrame(np.array([array1 ,array2,array3])) |
|  |  | (ou) |
|  |  | 0 1 |
|  |  | 0 s y |
|  |  | 1 a u |
|  |  | 2 m k |
|  |  | 9. Generate the series of dates from 1st Jan, 2023 to 10th Feb, 2023 |
|  |  | import pandas as pd |
|  |  |  |
|  |  | calendar = pd.date\_range(start ='1-1-2023', |
|  |  | end ='2-10-2023') |
|  |  |  |
|  |  | for val in calendar: |
|  |  | print(val) |
|  |  | (ou) |
|  |  | 2023-01-01 00:00:00 |
|  |  | 2023-01-02 00:00:00 |
|  |  | 2023-01-03 00:00:00 |
|  |  | 2023-01-04 00:00:00 |
|  |  | 2023-01-05 00:00:00 |
|  |  | 2023-01-06 00:00:00 |
|  |  | 2023-01-07 00:00:00 |
|  |  | 2023-01-08 00:00:00 |
|  |  | 2023-01-09 00:00:00 |
|  |  | 2023-01-10 00:00:00 |
|  |  | 2023-01-11 00:00:00 |
|  |  | 2023-01-12 00:00:00 |
|  |  | 2023-01-13 00:00:00 |
|  |  | 2023-01-14 00:00:00 |
|  |  | 2023-01-15 00:00:00 |
|  |  | 2023-01-16 00:00:00 |
|  |  | 2023-01-17 00:00:00 |
|  |  | 2023-01-18 00:00:00 |
|  |  | 2023-01-19 00:00:00 |
|  |  | 2023-01-20 00:00:00 |
|  |  | 2023-01-21 00:00:00 |
|  |  | 2023-01-22 00:00:00 |
|  |  | 2023-01-23 00:00:00 |
|  |  | 2023-01-24 00:00:00 |
|  |  | 2023-01-25 00:00:00 |
|  |  | 2023-01-26 00:00:00 |
|  |  | 2023-01-27 00:00:00 |
|  |  | 2023-01-28 00:00:00 |
|  |  | 2023-01-29 00:00:00 |
|  |  | 2023-01-30 00:00:00 |
|  |  | 2023-01-31 00:00:00 |
|  |  | 2023-02-01 00:00:00 |
|  |  | 2023-02-02 00:00:00 |
|  |  | 2023-02-03 00:00:00 |
|  |  | 2023-02-04 00:00:00 |
|  |  | 2023-02-05 00:00:00 |
|  |  | 2023-02-06 00:00:00 |
|  |  | 2023-02-07 00:00:00 |
|  |  | 2023-02-08 00:00:00 |
|  |  | 2023-02-09 00:00:00 |
|  |  | 2023-02-10 00:00:00 |
|  |  | 10. Create 2D list to DataFrame |
|  |  | lists = [[1, 'aaa', 22], [2, 'bbb', 25], [3, 'ccc', 24]] |
|  |  |  |
|  |  | lists = [[1, 'aaa', 22], [2, 'bbb', 25], [3, 'ccc', 24]] |
|  |  | import pandas as pd |
|  |  | import numpy as np |
|  |  | lists = [[1, 'aaa', 22], [2, 'bbb', 25], [3, 'ccc', 24]] |
|  |  | arr= np.array( lists) |
|  |  | df=pd.DataFrame(arr) |
|  |  | print(df) |
|  |  | (ou) 0 1 2 |
|  |  | 0 1 aaa 22 |
|  |  | 1 2 bbb 25 |
|  |  | 2 3 ccc 24 |

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