Assignment_1

November 17, 2022

1 Basic Python

Assignment Date	10 September 2022
Student Name	Shwetha L S
Student Roll Number	2019504586
Maximum Marks	2 Marks

1.1 1. Split this string

[2]:
```
s = "Hi there Sam!"
```

[3]:
```
s.split()
```

[3]:
```
['Hi', 'there', 'Sam!']
```

1.2 2. Use .format() to print the following string.

1.2.1 Output should be: The diameter of Earth is 12742 kilometers.

[4]:
```
planet = "Earth"
diameter = 12742
```

[5]:
```
"The diameter of {} is {} kilometers.".format(planet, diameter)
```

[5]:
```
'The diameter of Earth is 12742 kilometers.'
```

1.3 3. In this nest dictionary grab the word “hello”

[6]:
```
d = {'k1':[1,2,3,{'tricky':['oh','man','inception',{'target':
 ↪[1,2,3,'hello']}]}]}
```

[8]:
```
d['k1'][-1]['tricky'][-1]['target'][-1]
```

[8]:
```
'hello'
```

2 Numpy

[9]:
```
import numpy as np
```

2.1 4.1 Create an array of 10 zeros?

2.2 4.2 Create an array of 10 fives?

[11]:
```
np.zeros(10)
```

[11]:
```
array([0., 0., 0., 0., 0., 0., 0., 0., 0., 0.])
```

[12]:
```
5*np.ones(10)
```

[12]:
```
array([5., 5., 5., 5., 5., 5., 5., 5., 5., 5.])
```

2.3 5. Create an array of all the even integers from 20 to 35

[13]:
```
np.arange(20, 35, 2)
```

[13]:
```
array([20, 22, 24, 26, 28, 30, 32, 34])
```

2.4 6. Create a 3x3 matrix with values ranging from 0 to 8

[15]:
```
np.arange(0, 9).reshape((3,3))
```

[15]:
```
array([[0, 1, 2],
       [3, 4, 5],
       [6, 7, 8]])
```

2.5 7. Concatinate a and b

2.6 a = np.array([1, 2, 3]), b = np.array([4, 5, 6])

[19]:
```
a = np.array([1, 2, 3])
b = np.array([4, 5, 6])
np.concatenate([a, b])
```

[19]:
```
array([1, 2, 3, 4, 5, 6])
```

3 Pandas

3.1 8. Create a dataframe with 3 rows and 2 columns

[20]:
```
import pandas as pd
```

[22]:
```
pd.DataFrame(np.zeros((3,2)))
```

[22]:

	0	1
0	0.0	0.0
1	0.0	0.0
2	0.0	0.0

3.2 9. Generate the series of dates from 1st Jan, 2023 to 10th Feb, 2023

[23]:
```
pd.date_range('1/1/23', '10/2/23')
```

[23]:
```
DatetimeIndex(['2023-01-01', '2023-01-02', '2023-01-03', '2023-01-04',
               '2023-01-05', '2023-01-06', '2023-01-07', '2023-01-08',
               '2023-01-09', '2023-01-10',
               …
               '2023-09-23', '2023-09-24', '2023-09-25', '2023-09-26',
               '2023-09-27', '2023-09-28', '2023-09-29', '2023-09-30',
               '2023-10-01', '2023-10-02'],
              dtype='datetime64[ns]', length=275, freq='D')
```

3.3 10. Create 2D list to DataFrame

lists = [[1, ‘aaa’, 22], [2, ‘bbb’, 25], [3, ‘ccc’, 24]]

[24]:
```
lists = [[1, 'aaa', 22], [2, 'bbb', 25], [3, 'ccc', 24]]
```

[27]:
```
pd.DataFrame(lists)
```

[27]:

	0	1	2
0	1	aaa	22
1	2	bbb	25
2	3	ccc	24