Assignment -1

Python Programming

Assignment Date	19 September 2022
Student Name	SHRISHA CHANDRA A
Student Roll Number	211519104148
Maximum Marks	10 marks

Question-1:

1. Split this string

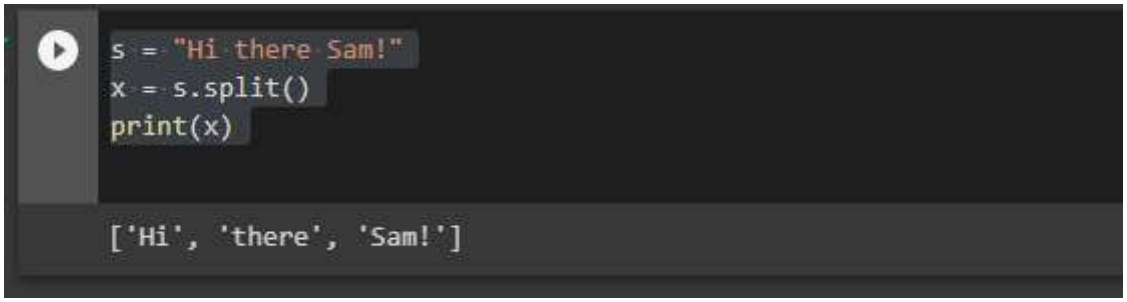
s = "Hi there Sam!"

Solution:

s = "Hi there Sam!"

x = s.split()

print(x)



Question-2:

2.Use .format() to print the following string. Output should be: The diameter of Earth is 12742 kilometers.

planet = "Earth" diameter = 12742

Solution:

planet = "Earth"

diameter = 12742

print('The diameter of {} is {}.'.format(planet , diameter))

```
planet = "Earth"
diameter = 12742
print('The diameter of {} is {}.'.format(planet , diameter))
```

```
The diameter of Earth is 12742.
```

Question-3:

3. In this nest dictionary grab the word "hello".

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

Solution:

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

print(d['k1'][3]["tricky"][3]['target'][3])

```
d = {'k1':[1,2,3,{'tricky':['oh','man','inception',{'target':[1,2,3,'hello']}]}]}
print(d['k1'][3]["tricky"][3]['target'][3])
```

```
hello
```

Question-4:

4.1 Create an array of 10 zeros?

Solution:

import numpy as np

array=np.zeros(10)

print("An array of 10 zeros:")

print(array

```
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.]
```

4.2 Create an array of 10 fives?

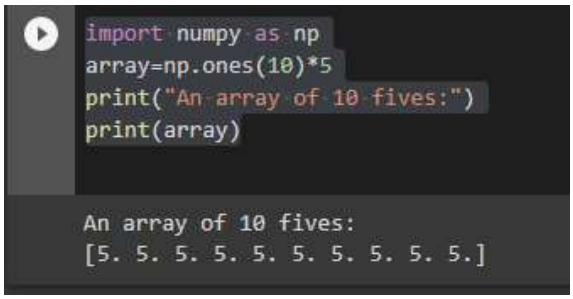
Solution:

import numpy as np

array=np.ones(10)*5

print("An array of 10 fives:")

print(array)



Question-5:

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

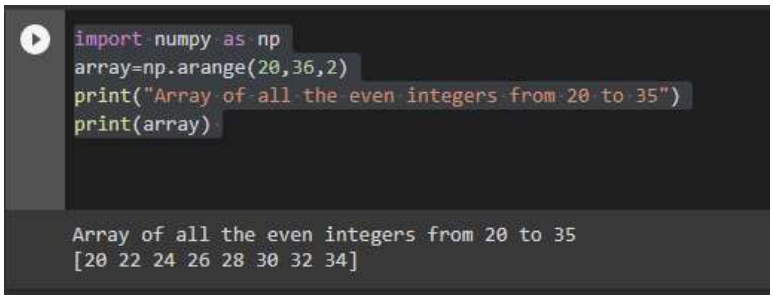
Solution:

import numpy as np

array=np.arange(20,36,2)

print("Array of all the even integers from 20 to 35")

print(array)



Question-6:

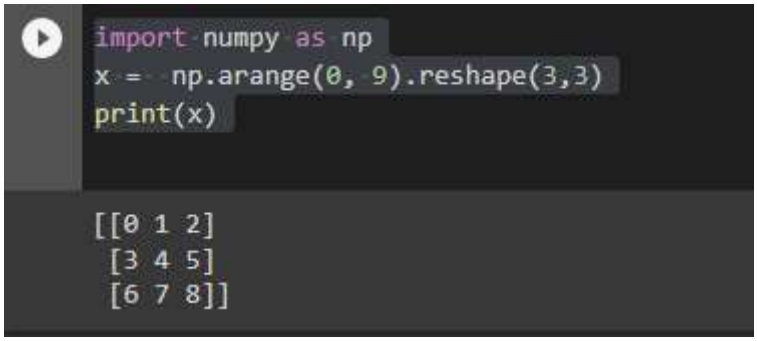
6. Create a 3x3 matrix with values ranging from 0 to 8.

Solution:

import numpy as np

x = np.arange(0, 9).reshape(3,3)

print(x)



Question-7:

7. Concatenate a and b

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

Solution:

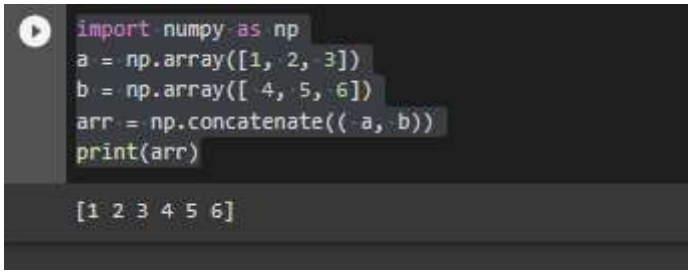
import numpy as np

a = np.array([1, 2, 3])

b = np.array([4, 5, 6])

arr = np.concatenate((a, b))

print(arr)



Question-8:

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

Solution:

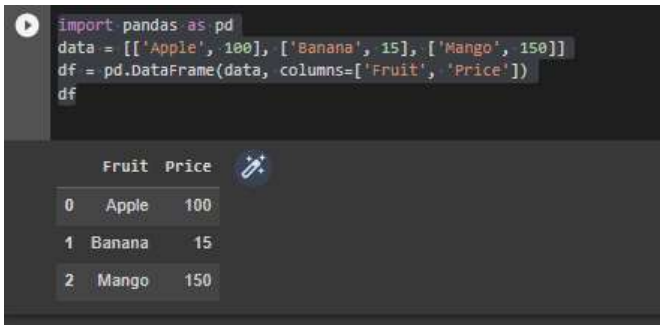
import pandas as pd

data = [['Apple', 100], ['Banana', 15], ['Mango', 150]]

df = pd.DataFrame(data, columns=['Fruit', 'Price'])

Df

	Fruit	Price
0	Apple	100
1	Banana	15
2	Mango	150



Question-9:

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

Solution:

```
import pandas as pd

pd.date_range(start='1/1/2023', end='10/2/2023')
```

```
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')
```

```
import pandas as pd
pd.date_range(start='1/1/2023', end='10/2/2023')
```

```
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')
```

Question-10:

Create 2D list to DataFrame

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

Solution:

import pandas as pd

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

df = pd.DataFrame(lists, columns=['S.no','Alphabet', 'Numerical'])

df

	S.no	Alphabet	Numerical
0	1	aaa	22
1	2	bbb	25
2	3	ccc	24

```
import pandas as pd
lists = [[1, 'aaa', 22], [2, 'bbb', 25], [3, 'ccc', 24]]
df = pd.DataFrame(lists, columns=['S.no','Alphabet', 'Numerical'])
df
```

	S.no	Alphabet	Numerical
0	1	aaa	22
1	2	bbb	25
2	3	ccc	24