Assignment -1

Python Programming

Assignment Date	12 november 2022
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Student Roll Number	211419106174
Maximum Marks	2 Marks

Question-1:

Split this string

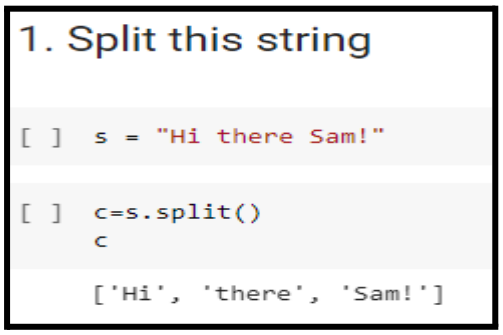
Solution:

```
s = "Hi there Sam!
c=s.split()
C
```

Output:

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

Screenshot:



Question-2:

Use.format() to print the following string.

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

Solution:

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

Output:

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

Screenshot:

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))

     The diameter of Earth is 12742 kilometers.
```

Question-3:

In this nest dictionary grab the world “hello”

Solution:

```
d={'k1':[1,2,3,{'tricky':['oh','man','inception',{'target':[1,2,3,'hell
o']}]}]}
D['k1'][3]['tricky'][3]['target'][3]
```

Output:

‘hello’

Screenshot:

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'][3]['tricky'][3]['target'][3]

     'hello'
```

Question-4:

Numpy

4.1:Create an array of 10 zeros

Solution:

```
array=np.zeros(10)
print(array)
```

Output:

```
[0. 0. 0. 0. 0. 0. 0. 0. 0. 0.]
```

4.2:Create an array of 10 fives

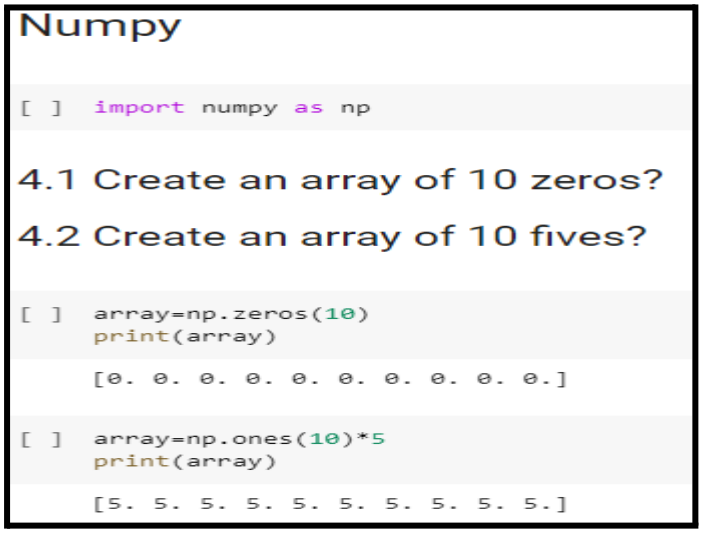
Solution:

```
array=np.ones(10)*5
print(array)
```

Output:

```
[5. 5. 5. 5. 5. 5. 5. 5. 5. 5.]
```

Screenshot:



Question-5:

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

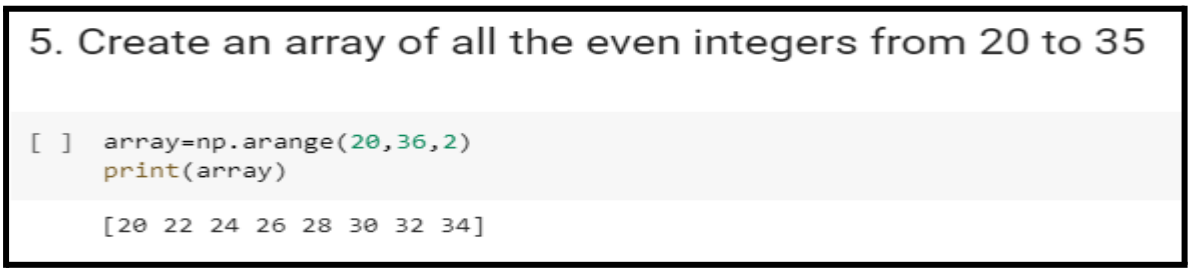
Solution:

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

Output:

```
[20 22 24 26 28 30 32 34]
```

Screenshot:



Question-6:

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

Solution:

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

Output:

```
[[0 1 2]
 [3 4 5]
 [6 7 8]]
```

Screenshot:

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

```
[ ]  x =  np.arange(0, 9).reshape(3,3)
     print(x)

     [[0 1 2]
      [3 4 5]
      [6 7 8]]
```

Question-7:

Concatenate a and b

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

Solution:

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

Output:

```
[1 2 3 4 5 6]
```

Screenshot:

7. Concatenate a and b

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

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

     [1 2 3 4 5 6]
```

PANDAS

Question-8:

Create a dataframe with 3 rows and 2 columns

Solution:

```
import pandas as pd
data = [['raj', 10], ['suresh', 15], ['juli', 14]]
d= pd.DataFrame(data, columns=['Name', 'Age'])
print(d)
```

Output:

```
Name  Age
0      raj   10
1   suresh   15
2     juli   14
```

Screenshot:

8. Create a dataframe with 3 rows and 2 columns

```
[ ]  import pandas as pd
```

```
[ ]  data = [['raj', 10], ['suresh', 15], ['juli', 14]]
     d= pd.DataFrame(data, columns=['Name', 'Age'])
     print(d)
```

```
     Name  Age
0     raj   10
1  suresh   15
2    juli   14
```

Question-9:

Generate the series of datas from jan,2023 to feb,2023

Solution:

```
pd.date_range(start='1/1/2023', periods=41)
```

Output:

```
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', '2023-01-11', '2023-01-12',
               '2023-01-13', '2023-01-14', '2023-01-15', '2023-01-16',
               '2023-01-17', '2023-01-18', '2023-01-19', '2023-01-20',
               '2023-01-21', '2023-01-22', '2023-01-23', '2023-01-24',
               '2023-01-25', '2023-01-26', '2023-01-27', '2023-01-28',
               '2023-01-29', '2023-01-30', '2023-01-31', '2023-02-01',
               '2023-02-02', '2023-02-03', '2023-02-04', '2023-02-05',
               '2023-02-06', '2023-02-07', '2023-02-08', '2023-02-09',
               '2023-02-10'],
              dtype='datetime64[ns]', freq='D')
```

Code

Text

Screenshot:

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

```
[ ]  pd.date_range(start='1/1/2023', periods=41)
```

```
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', '2023-01-11', '2023-01-12',
               '2023-01-13', '2023-01-14', '2023-01-15', '2023-01-16',
               '2023-01-17', '2023-01-18', '2023-01-19', '2023-01-20',
               '2023-01-21', '2023-01-22', '2023-01-23', '2023-01-24',
               '2023-01-25', '2023-01-26', '2023-01-27', '2023-01-28',
               '2023-01-29', '2023-01-30', '2023-01-31', '2023-02-01',
               '2023-02-02', '2023-02-03', '2023-02-04', '2023-02-05',
               '2023-02-06', '2023-02-07', '2023-02-08', '2023-02-09',
               '2023-02-10'],
              dtype='datetime64[ns]', freq='D')
```

Question-10:

Create 2D list to Dataframe

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

Solution:

```
lists = [[1, 'aaa', 22], [2, 'bbb', 25], [3, 'ccc', 24]]
s = pd.DataFrame(lists)
s
```

Output:

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

Screenshot: