Assignment -1

Assignment Date	19 September 2022
Student Name	Hariharan K
Student Roll Number	621319106306
Maximum Marks	2 Marks

Question: 1

1. Split this string

```python
s = "Hi there Sam!"
```

Solution:

```python
s = "Hi there Sam!"
a=s.split()
a
```

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

Question: 2

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

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

```python
planet = "Earth"
diameter = 12742
```

Solution:

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

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

Question: 3

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

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

Solution:

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

```
hello
```

Question: 4.1

4.1 Create an array of 10 zeros?

Solution:

```python
import numpy as np
x1=np.ones(10)*5
print(x1)
```

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

Question: 4.2

4.2 Create an array of 10 fives?

Solution:

```python
import numpy as np
np.zeros(10)
```

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

Question: 5

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

Solution:

```python
import numpy as np
a=np.arange(20,35)
b=(a%2==0)
z=a[b]
print(z)
```

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

Question: 6

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

Solution:

```
import numpy as np
x = np.array([1, 2, 3])
y = np.array([4, 5, 6])
arr=np.concatenate((a,b))
print(arr)
```

Python

```
[20 21 22 23 24 25 26 27 28 29 30 31 32 33 34  1  0  1  0  1  0  1  0  1
  0  1  0  1  0  1]
```

Question: 7

7. Concatinate a and b

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

Solution:

```
import numpy as np
a=np.arange(0,9).reshape(3,3)
print(a)
```

Python

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

Question: 8

Pandas

8. Create a dataframe with 3 rows and 2 columns

```
import pandas as pd
```

Python

Solution:

```
import pandas as pd
lists = [[1, 'aaa', 22], [2, 'bbb', 25], [3, 'ccc', 24]]
df=pd.DataFrame(lists,columns=['sno','name','value'],dtype=int)
df
```

Python

```
/usr/local/lib/python3.7/dist-packages/IPython/core/interactiveshell.py:3326: FutureWarning: Could not cast to int64, falling back to object. This behavior is deprecated. In a future version, when a dtype is passed to 'DataFrame', either all columns will be cast to that dtype, or a TypeError will be raised
  exec(code_obj, self.user_global_ns, self.user_ns)
```

	sno	name	value
0	1	aaa	22
1	2	bbb	25
2	3	ccc	24

Question: 9

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

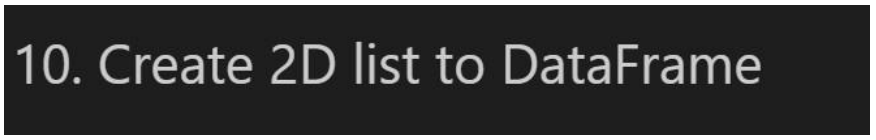
Solution:

```python
from datetime import date,timedelta
sdate=date(2023,1,1)
edate=date(2023,2,10)
delta=edate-sdate
for i in range(delta.days+1):
 day=sdate+timedelta(days=i)
 print(day)
```

Python

```
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
...
2023-02-07
2023-02-08
2023-02-09
2023-02-10
```

Question: 10



Solution:

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

```
import pandas as pd
lists = [[1, 'aaa', 22], [2, 'bbb', 25], [3, 'ccc', 24]]
df=pd.DataFrame(lists,columns=['sno','name','value'],dtype=int)
print(df)
```