Assignment -1
BASIC PYTHON

Assignment Date	18 September 2022
Student Name	Mr.K.Francis Huban
Student Roll Number	913319104018
Maximum Marks	2 Marks

Question-1:

Split the given string s="Hi there Sam!"

Solution:
s="Hi there Sam!"
print(s.split())

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

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

Question-2:

```
Use .format() to print the string
planet="earth"
diameter=12742
Output should be: The diameter of the earth is 12742 kilometers.
```
Solution:
st= "The diameter of {planet} is {diameter} kilometres.".format(planet = "Earth", diameter = 12742)
print(st)

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

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

     The diameter of Earth is 12742 kilometres.
```

Question-3:

In this nest dictionary grab the word "hello"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']}]}]}

n=d['k1'][3]['tricky'][3]['target'][3]

print (n)

```
[ ] 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']}]}]}
    n=d['k1'][3]['tricky'][3]['target'][3]
    print (n)

    hello
```

Question-4:

4.1 Create an array of 10 zeros?

Solution:

import numpy as np

array=np.zeros(10,dtype='int')

print("An array of 10 zeros:",array)

4.2 Create an array of 10 fives?

Solution:

import numpy as np

array=np.ones(10,dtype='int')*5

print("An array of 10 fives:",array)

```
[ ]  import numpy as np
     array=np.zeros(10,dtype='int')
     print("An array of 10 zeros:",array)

     An array of 10 zeros: [0 0 0 0 0 0 0 0 0 0]


[ ]  import numpy as np
     array=np.ones(10,dtype='int')*5
     print("An array of 10 fives:",array)

     An array of 10 fives: [5 5 5 5 5 5 5 5 5 5]
```

Question-5:

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

Solution:

import numpy as np

arr=np.arange(20,35,2)

print(arr)

```
import numpy as np
arr=np.arange(20,35,2)
print(arr)

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

Question-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)

```
import numpy as np
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:

import numpy as np

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

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

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

print("before concatenation")

print("a \n",a)

print("b \n",b)

print("after concatenation \n",arr)

```
[ ]  import numpy as np
     a = np.array([1, 2, 3])
     b = np.array([4, 5, 6])
     arr = np.concatenate((a,b))
     print("before concatenation")
     print("a \n",a)
     print("b \n",b)
     print("after concatenation \n",arr)

     before concatenation
     a
      [1 2 3]
     b
      [4 5 6]
     after concatenation
      [1 2 3 4 5 6]
```

Question-8:

Create a data frame with 3 rows and 2 columns

Solution:

import pandas as pd

print("FOOTBALL PLAYERS\n")

data = [['PELE', 1279], ['LIONEL MESSI', 773],['CRISTIANO RONALDO',815]]

df = pd.DataFrame(data, columns=['PLAYER', 'CAREER GOALS'])

print(df)

```
import pandas as pd
print("FOOTBALL PLAYERS\n")
data = [['PELE', 1279], ['LIONEL MESSI', 773],['CRISTIANO RONALDO',815]]
df = pd.DataFrame(data, columns=['PLAYER', 'CAREER GOALS'])
print(df)

FOOTBALL PLAYERS

               PLAYER  CAREER GOALS
0                PELE          1279
1        LIONEL MESSI           773
2   CRISTIANO RONALDO           815
```

Question-9:

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

Solution:

import pandas as pd

x=pd.date_range('1st Jan, 2023','10th Feb, 2023')

print("series of dates\n",x)

```
[ ] import pandas as pd
    x=pd.date_range('1st Jan, 2023','10th Feb, 2023')
    print("series of dates\n",x)

    series of dates
     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:

import pandas as pd

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

df = pd.DataFrame(lists, columns=['A', 'B','C'])

print(df)

```
[ ] import pandas as pd
    lists = [[1, 'aaa', 22], [2, 'bbb', 25], [3, 'ccc', 24]]
    df = pd.DataFrame(lists, columns=['A', 'B','C'])
    print(df)

       A    B   C
    0  1  aaa  22
    1  2  bbb  25
    2  3  ccc  24
```