Assignment -1

Basic Python Programming in ipynb

Assignment Date	12 September 2022
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Maximum Marks	2 Marks

BASIC PYTHON

1.SPLITING THE STRING

```
s="Hi there Sam!"
print(s)
x=s.split(' ')
print(x)
1.SPLITING THE STRING
```

```
[1] s="Hi there Sam!"
print(s)
```

Hi there Sam!

```
[2] x=s.split('')
print(x)
```

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

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

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

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

The diameter of Earth is 12742 kilometers.

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

print(array)

An array of 10 fives:

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

```
d={'k1':[1,2,3,{'tricky':['oh','man','inception',{'target':[1,2,3,'hell
o']}]}]}
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.
Numpy
4.1 Create an array of 10 zeros?
array=np.zeros(10)
print("An array of 10 zeros:")
print(array)
[6] 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?
array=np.ones(10)
array=np.ones(10)*5
print("An array of 10 fives:")
print(array)
  array=np.ones(10)
       array=np.ones(10)*5
       print("An array of 10 fives:")
```

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

```
array=np.arange(20,35,2)
print("Array of all the even integers from 20 to 35")
print(array)
```

- Array of all the even integers from 20 to 35 [20 22 24 26 28 30 32 34]
 - 6. Create a 3x3 matrix with values ranging from 0 to 8

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

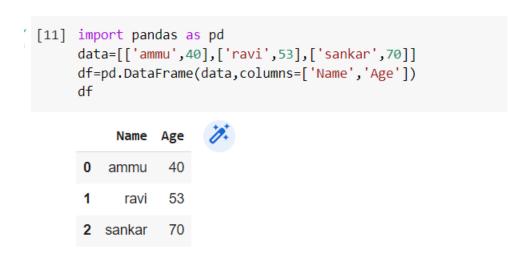
[[0 1 2]
   [3 4 5]
   [6 7 8]]
```

7. Concatenate a and b

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

Pandas

8. Create a dataframe with 3 rows and 2 columns



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

```
[12] import pandas as pd
    from datetime import datetime
    pd.date_range(start="2023-01-01",end="2023-02-01").to_pydatetime().tolist()
```

```
[datetime.datetime(2023, 1, 1, 0, 0),
datetime.datetime(2023, 1, 2, 0, 0),
datetime.datetime(2023, 1, 3, 0, 0),
datetime.datetime(2023, 1, 4, 0, 0),
datetime.datetime(2023, 1, 5, 0, 0),
datetime.datetime(2023, 1, 6, 0, 0),
datetime.datetime(2023, 1, 7, 0, 0),
datetime.datetime(2023, 1, 8, 0, 0),
datetime.datetime(2023, 1, 9, 0, 0),
datetime.datetime(2023, 1, 10, 0, 0),
datetime.datetime(2023, 1, 11, 0, 0),
datetime.datetime(2023, 1, 12, 0, 0),
datetime.datetime(2023, 1, 13, 0, 0),
datetime.datetime(2023, 1, 14, 0, 0),
datetime.datetime(2023, 1, 15, 0, 0),
datetime.datetime(2023, 1, 16, 0, 0),
datetime.datetime(2023, 1, 17, 0, 0),
datetime.datetime(2023, 1, 18, 0, 0),
datetime.datetime(2023, 1, 19, 0, 0),
datetime.datetime(2023, 1, 20, 0, 0),
datetime.datetime(2023, 1, 21, 0, 0),
datetime.datetime(2023, 1, 22, 0, 0),
datetime.datetime(2023, 1, 23, 0, 0),
datetime.datetime(2023, 1, 24, 0, 0),
datetime.datetime(2023. 1. 25. 0. 0).
datetime.datetime(2023, 1, 23, 0, 0),
datetime.datetime(2023, 1, 24, 0, 0),
datetime.datetime(2023, 1, 25, 0, 0),
datetime.datetime(2023, 1, 26, 0, 0),
datetime.datetime(2023, 1, 27, 0, 0),
datetime.datetime(2023, 1, 28, 0, 0),
datetime.datetime(2023, 1, 29, 0, 0),
datetime.datetime(2023, 1, 30, 0, 0),
datetime.datetime(2023, 1, 31, 0, 0),
datetime.datetime(2023, 2, 1, 0, 0)]
```

10. Create 2D list to DataFrame

```
[13] lists = [[1, 'aaa', 22], [2, 'bbb', 25], [3, 'ccc', 24]]
    df=pd.DataFrame(lists, columns=['s.no', 'alphabet', 'number'])
    print(df)
```