**Assignment -1**

Python Programming

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| Assignment Date | 19 September 2022 |
| Student Name | R.Ranjith |
| Student Roll Number | CS19034 |
| Maximum Marks | 2 Marks |

# Basic Python

## 1. Split this string

In [ ]:

s = "Hi there Sam!"

In [ ]:

x = s.split() print(x)

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

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

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

In [ ]:

planet = "Earth" diameter

= 12742

In [ ]:

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"

In [ ]:

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

In [ ]:

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

# Numpy

In [ ]:

import numpy as np

**4.1 Create an array of 10 zeros?**

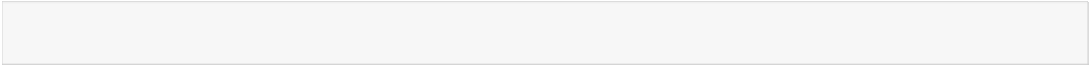
**4.2 Create an array of 10 fives?**

In [ ]:

In [ ]:

[0. 0. 0. 0. 0. 0. 0. 0. 0. 0.] In [ ]:

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



arr



=



np



.



ones(



10



)



\*5



print



(



arr



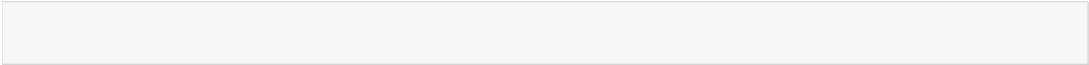
)



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

In [ ]:

print ( arr )



arr



=



np



.



arange(



20



,



35



,



2



)



[20 22 24 26 28 30 32 34]

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

In [ ]:



np



.



arange(



0



,



9



)



.



reshape((



3



,



3



))

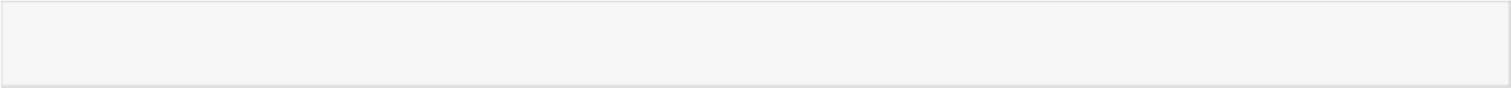


Out[ ]:

array([[0, 1, 2],

[3, 4, 5],

[6, 7, 8]])



arr



=



np



.



zeros(



10



)



print



(



arr

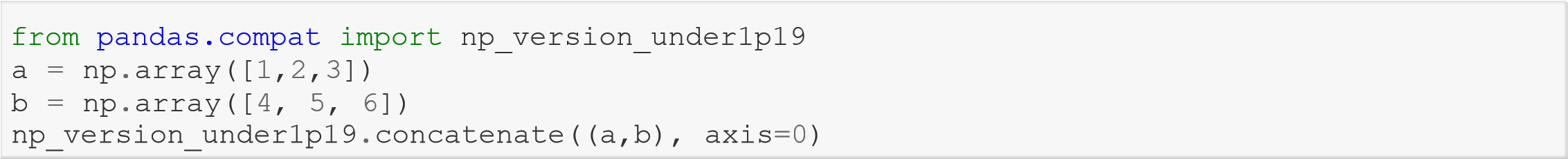


)



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

In [ ]:



Out[ ]:

array([1, 2, 3, 4, 5, 6])

# Pandas

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

In [3]:



import



pandas



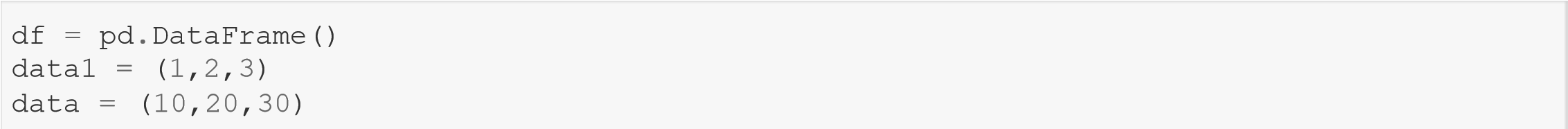
as



pd



In [10]:

df = pd.DataFrame(data1,data, columns=['numbers']) df Out[10]:

**numbers**

**10** 1

**20** 2

**30** 3

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

In [15]:

pd.date\_range(start='1/1/2023', end='10/02/2023') Out[15]:

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')

## 10. Create 2D list to DataFrame

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

In [21]:

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

In [29]:

df = pd.DataFrame(lists, columns =['FName', 'LName', 'Age'], dtype = int) print(df)

FName LName Age 0

1 aaa 22

1. 2 bbb 25
2. 3 ccc 24

/usr/local/lib/python3.7/dist-packages/IPython/core/interactiveshell.py:3326: FutureWarni ng: Could not cast to int64, falling back to object. This behavior is deprecated. In a fu ture version, when a dtype is passed to 'DataFrame', either all columns will be cast to t hat dtype, or a TypeError will be raised exec(code\_obj, self.user\_global\_ns, self.user\_ns)

In [ ]: