**Assignment -1**

Python Programming

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| Assignment Date | 19 September 2022 |
| Student Name | K KARPAGAVALLI |
| Student Roll Number | 912419106004 |
| Maximum Marks | 2 Marks |

## 1.Split this string

In [ ]:

s **=** "Hi there Sam!"

In [ ]:

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x **=** s**.**split()print(x)

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

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

In [13]:

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

**OUTPUT**

The diameter of Earth is 12742 kilometers.

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

In [14]:

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

Out[14]:

'hello'

# Numpy

In [ ]:

**import** numpy **as** np

## 4.1 Create an array of 10 zeros?

## 4.2 Create an array of 10 fives?

In [16]:

**import** numpy **as** npnp**.**zeros(10)

Out[16]:

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

In [17]:

**import** numpy **as** npnp**.**ones(10)**\***5

Out[17]:

array([5., 5., 5., 5., 5., 5., 5., 5., 5., 5.])

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

In [19]:

**import** numpy **as** npnp**.**arange(20,35,2)

Out[19]:

array([20, 22, 24, 26, 28, 30, 32, 34])

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

In [20]:

**import** numpy **as** npa **=** np**.**arange(9)a**.**reshape(3,3)

Out[20]:

array([[0, 1, 2],

[3, 4, 5],

[6, 7, 8]])

## 7. Concatenate a and b

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

In [22]:

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

Out[22]:

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

# Pandas

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

In [42]:

**import** pandas **as** pdd**=**{"ID":[300,400,500],"NAME": ["SAFRIN","NIHAR","YAZRIN"]}df**=**pd**.**DataFrame(d)df

Out[42]:

|  | **ID** | **NAME** |
| --- | --- | --- |
| **0** | 300 | SAFRIN |
| **1** | 400 | NIHAR |
| **2** | 500 | YAZRIN |

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

In [41]:

**import** pandas **as** pddate\_series **=** pd**.**Series(pd**.**date\_range("2023-01-01","2023-02-10"))date\_series

Out[41]:

0 2023-01-01

1 2023-01-02

2 2023-01-03

3 2023-01-04

4 2023-01-05

5 2023-01-06

6 2023-01-07

7 2023-01-08

8 2023-01-09

9 2023-01-10

10 2023-01-11

11 2023-01-12

12 2023-01-13

13 2023-01-14

14 2023-01-15

15 2023-01-16

16 2023-01-17

17 2023-01-18

18 2023-01-19

19 2023-01-20

20 2023-01-21

21 2023-01-22

22 2023-01-23

23 2023-01-24

24 2023-01-25

25 2023-01-26

26 2023-01-27

27 2023-01-28

28 2023-01-29

29 2023-01-30

30 2023-01-31

31 2023-02-01

32 2023-02-02

33 2023-02-03

34 2023-02-04

35 2023-02-05

36 2023-02-06

37 2023-02-07

38 2023-02-08

39 2023-02-09

40 2023-02-10

dtype: datetime64[ns]

In [ ]:

## 10. Create 2D list to DataFrame

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

In [32]:

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

In [33]:

list1**=**zip(lists)df**=**pd**.**DataFrame(list1)df

Out[33]:

|  | **0** |
| --- | --- |
| **0** | [1, aaa, 22] |
| **1** | [2, bbb, 25] |
| **2** | [3, ccc, 24] |