**Assignment -1**

Python Programming

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| Assignment Date | 19 September 2022 |
| Student Name | Abirami. P |
| Student Roll Number | 422719104001 |
| Maximum Marks | 2 Marks |

QUESTION 1 :

1. Split this string

s = "Hi there Sam!"

s1=s.split()

Print('s1')

OUTPUT :

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

QUESTION 2 :

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

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

planet = "Earth"

diameter = 12742

print( 'The diameter of {} is {} kilometers.' .format(planet,diameter));

OUTPUT :

The diameter of Earth is 12742 kilometers.

QUESTION 3 :

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

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

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

OUTPUT :

hello

Numpy

QUESTION 4:

4.1Create an array of 10 zeros?

4.2 Create an array of 10 fives?

import numpy as np

array=np.zeros(10)

print("An array of 10 zeros:")

print(array)

OUTPUT :

An array of 10 zeros:

[0. 0. 0. 0. 0. 0. 0. 0. 0. 0.]

QUESION 4.2

import numpy as np

array=np.ones(10)\*5

print("An array of 10 fives:")

print(array)

OUTPUT :

An array of 10 fives:

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

QUESTION 5 :

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)

OUTPUT :

Array of all the even integers from 20 to 35

[20 22 24 26 28 30 32 34]

QUESTION 6:

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

import numpy as np

x = np.arange(0, 9).reshape(3,3)

OUTPUT :

print(x)

[[0 1 2]

[3 4 5]

[6 7 8]]

QUESTION 7 :

7. Concatenate a and b

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

import numpy as np

arr1 = np.array([1, 2, 3])

arr2 = np.array([4, 5, 6])

arr = np.concatenate((arr1, arr2))

print(arr)

OUTPUT :

[1 2 3 4 5 6]

Pandas

QUESTION 8 :

8. Create a dataframe with 3 rows and 2 column

import pandas as pd

data = [10,20,30]

df = pd.DataFrame(data, columns=['Numbers'])

Print (df)

OUTPUT :

Numbers

0 10

1 20

3 30

QUESTION 9 :

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

import pandas as pd

a = pd.date\_range(start='1/1/2023', end='2/10/2023')

for i in a:

print(i.date())

OUTPUT :

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

QUESTION 10 :

10. Create 2D list to DataFrame

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

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

import pandas as pd

lst = [[1,'aaa', 25], [2,'bbb', 30],[3, 'ccc', 24]]

df = pd.DataFrame(lst, columns =['number','Tag', 'number'])

print(df)

OUTPUT :

number Tag number

0 1 aaa 25

1 2 bbb 30

2 3 ccc 24