# Assignment -1
Python Programming

| Assignment Date | 17 September 2022 |
|---|---|
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| Student Roll Number | 510119104003 |
| Maximum Marks | 2 Marks |

## Basic Python

**Question-1:**

## 1. Split this string

```
s = "Hi I am Bharath!"
```

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

```
['Hi', 'I', 'am', 'Bharath!']
```

**Question-2:**

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

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

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

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

    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])
```

    hello

# Numpy

**Question-4:**

```
[ ] import numpy as np
```

## 4.1 Create an array of 10 zeros?

## 4.2 Create an array of 10 fives?

```
[ ] array = np.zeros(10)
    print("The array of 10 Zeros are:")
    print(array)
```

    The array of 10 Zeros are:
    [0. 0. 0. 0. 0. 0. 0. 0. 0. 0.]

```
[ ] array = np.ones(10)*5
    print("The array of 10 Fives are:")
    print(array)
```

    The array of 10 Fives are:
    [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 are:")
     print(array)

     Array of all the even integers from 20 to 35 are:
     [20 22 24 26 28 30 32 34]
```

**Question-6:**

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

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

```
[ ]  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

**Question-8:**

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

```python
import pandas as pd
```

```python
data = [['gaja', 20], ['jai', 18], ['billa', 14]]
df = pd.DataFrame(data, columns=['Name', 'Age'])
print(df)
```

```
    Name  Age
0   gaja   20
1    jai   18
2  billa   14
```

**Question-9:**

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

```python
[ ]  pd.date_range(start='1/1/2023', end='02/10/2023')
```

```
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:**

## 10. Create 2D list to DataFrame

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

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

```python
[ ]  df = pd.DataFrame(lists, columns =['S.No', 'Name', 'Age'])
     print(df)
```

```
   S.No Name  Age
0     1  aaa   22
1     2  bbb   25
2     3  ccc   24
```