

## **ASSIGNMENT 1**

**NAME : Sheenu S.L**

**TEAM ID : PNT2022TMID51283**

**REG NO: 960319104033**

### **Basic Python**

#### **1. Split this string**

```
[ ]s = "Hi there Sam!"
```

```
[ ]
```

```
s = "Hi there Sam!"
```

```
a=s.split()
```

```
print(a[0])
```

```
print(a[1])
```

```
print(a[2])
```

**OUTPUT:**

**Hi there Sam!**

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

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

```
[ ]
```

```
planet = "Earth"
diameter = 12742

[ ]

planet = "Earth"
diameter = 12742

print("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"**

```
[ ]

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

[ ]

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

a=d['k1']
b=a[3]
c=b['tricky']
```

```
e=c[3]
f=e['target']
g=f[3]
print(g)
```

**OUTPUT:**

**hello**

**Numpy**

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

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

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

```
[ ] np.zeros((10))
```

**OUTPUT:**

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

```
[ ]np.ones(10,dtype=int)*5
```

**OUTPUT:**

```
array([5, 5, 5, 5, 5, 5, 5, 5, 5, 5])
```

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

```
[ ]np.arange(20,35,2)
```

**OUTPUT:**

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

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

```
[ ]a=np.arange(0,9,1)
```

```
a.reshape(3,3)
```

**OUTPUT:**

```
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])
```

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

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

```
c=[a]+[b]
```

**C**

**OUTPUT:**

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

**Pandas**

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

```
[ ]import pandas as pd
```

```
[ ]d={'Name':['Vivek','Max'],'Age':['22','44'],'Salary':[30000,60000]}
```

```
d
```

```
df=pd.DataFrame(d)
```

```
Df
```

**OUTPUT:**

	Name	Age	Salary
0	Vivek	22	30000
1	Max	44	60000

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

```
[ ]a=np.arange(1,32,1)
```

```
b=np.arange(1,11,1)
```

```
c={'day':a,'month':'jan','year':2023}
```

```
d={'day':b,'month':'feb','year':2023}
```

```
e=pd.DataFrame(c)
```

```
f=pd.DataFrame(d)
```

```
g=pd.concat([e,f])
```

**G**

**OUTPUT:**

	<b>day</b>	<b>month</b>	<b>year</b>
<b>0</b>	<b>1</b>	<b>jan</b>	<b>2023</b>
<b>1</b>	<b>2</b>	<b>jan</b>	<b>2023</b>
<b>2</b>	<b>3</b>	<b>jan</b>	<b>2023</b>
<b>3</b>	<b>4</b>	<b>jan</b>	<b>2023</b>
<b>4</b>	<b>5</b>	<b>Jan</b>	<b>2023</b>
<b>5</b>	<b>6</b>	<b>jan</b>	<b>2023</b>
<b>6</b>	<b>7</b>	<b>jan</b>	<b>2023</b>
<b>7</b>	<b>8</b>	<b>jan</b>	<b>2023</b>
<b>8</b>	<b>9</b>	<b>jan</b>	<b>2023</b>
<b>9</b>	<b>10</b>	<b>jan</b>	<b>2023</b>
<b>10</b>	<b>11</b>	<b>jan</b>	<b>2023</b>
<b>11</b>	<b>12</b>	<b>jan</b>	<b>2023</b>
<b>12</b>	<b>13</b>	<b>jan</b>	<b>2023</b>
<b>13</b>	<b>14</b>	<b>jan</b>	<b>2023</b>
<b>14</b>	<b>15</b>	<b>jan</b>	<b>2023</b>
<b>15</b>	<b>16</b>	<b>jan</b>	<b>2023</b>
<b>16</b>	<b>17</b>	<b>jan</b>	<b>2023</b>
<b>17</b>	<b>18</b>	<b>jan</b>	<b>2023</b>
<b>18</b>	<b>19</b>	<b>jan</b>	<b>2023</b>
<b>19</b>	<b>20</b>	<b>jan</b>	<b>2023</b>
<b>20</b>	<b>21</b>	<b>jan</b>	<b>2023</b>
<b>21</b>	<b>22</b>	<b>jan</b>	<b>2023</b>
<b>22</b>	<b>23</b>	<b>jan</b>	<b>2023</b>
<b>23</b>	<b>24</b>	<b>jan</b>	<b>2023</b>

24	25	jan	2023
25	26	jan	2023
26	27	jan	2023
27	28	jan	2023
28	29	jan	2023
29	30	jan	2023
30	31	jan	2023
0	1	feb	2023
1	2	feb	2023
2	3	feb	2023
3	4	feb	2023
4	5	feb	2023
5	6	feb	2023
6	7	feb	2023
7	8	feb	2023
8	9	feb	2023
9	10	feb	2023

## 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]]
```

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

```
c=pd.DataFrame(lists)
```

C

**OUTPUT:**

	0	1	2
--	---	---	---

<b>0</b>	<b>1</b>	<b>aaa</b>	<b>22</b>
<b>1</b>	<b>2</b>	<b>bbb</b>	<b>25</b>
<b>2</b>	<b>3</b>	<b>ccc</b>	<b>24</b>