ASSIGNMENT – 1

Python Programming

Assignment Date	**15/09/2022**
Student Name	**M .Fargath Shahani**
Student Roll No.	**913219104004**
Maximum Marks	**2 Marks**

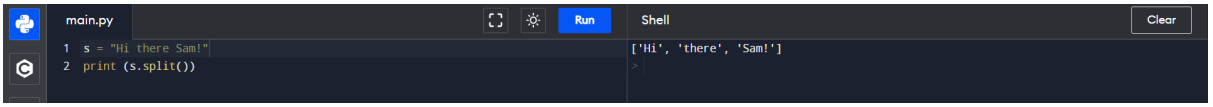
Basic Python

1. Split this string

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

```
s = "Hi there Sam!"
print (s.split())
```

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



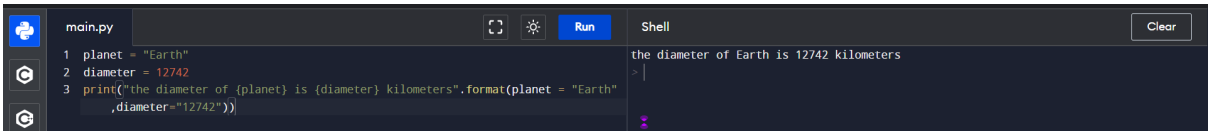
2. Use .format() to print the following string.

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

```
planet = "Earth"
diameter = 12742
```

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

the diameter of Earth is 12742 kilometers

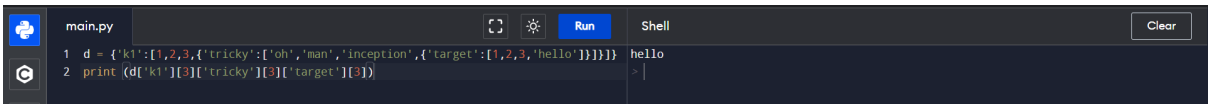


3. In this nest dictionary grab the word "hello"

```
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']}]}]}
print (d['k1'][3]['tricky'][3]['target'][3])
```

Hello



Numpy

```
import numpy as np
```

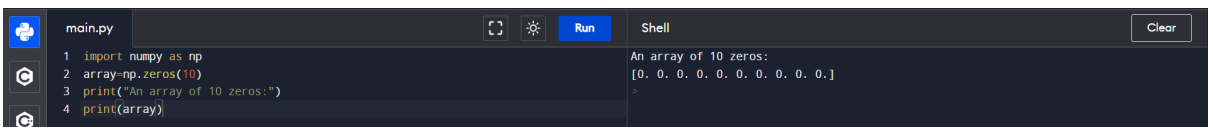
4.1 Create an array of 10 zeros?

4.2 Create an array of 10 fives?

```
import numpy as np
array=np.zeros(10)
print("An array of 10 zeros:")
print(array)
```

An array of 10 zeros:

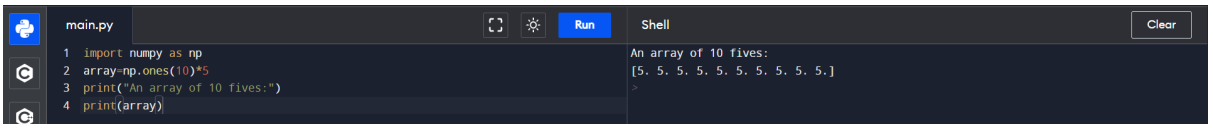
[0. 0. 0. 0. 0. 0. 0. 0. 0. 0.]



```
array=np.ones(10)*5
print("An array of 10 fives:")
print(array)
```

An array of 10 fives:

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

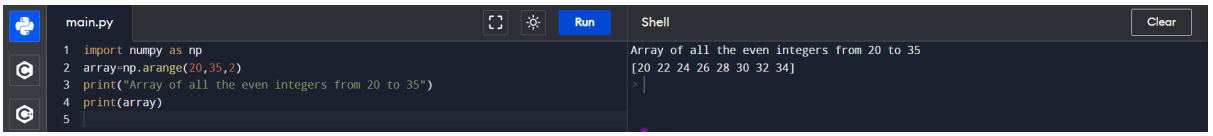


5. Create an array of all the even integers from 20 to 35

```
import numpy as np
array=np.arange(20,35,2)
print("Array of all the even integers from 20 to 35")
print(array)
```

Array of all the even integers from 20 to 35

[20 22 24 26 28 30 32 34]



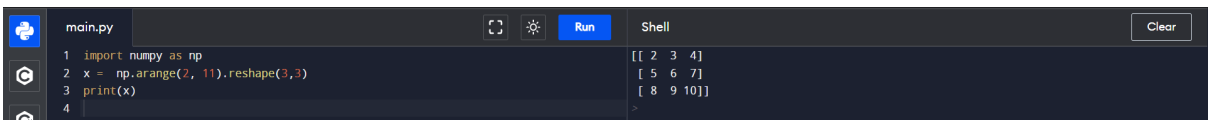
6. Create a 3x3 matrix with values ranging from 0 to 8

```
import numpy as np
x =  np.arange(2, 11).reshape(3,3)
print(x)
```

[[2 3 4]

 [5 6 7]

 [8 9 10]]

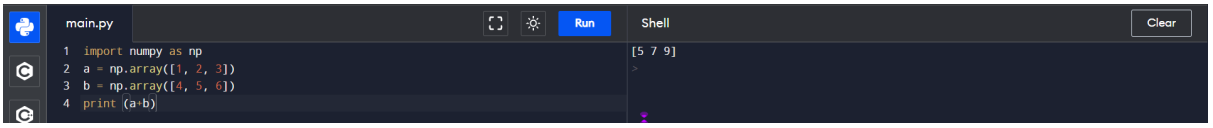


7. Concatenate a and b

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

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

[5 7 9]



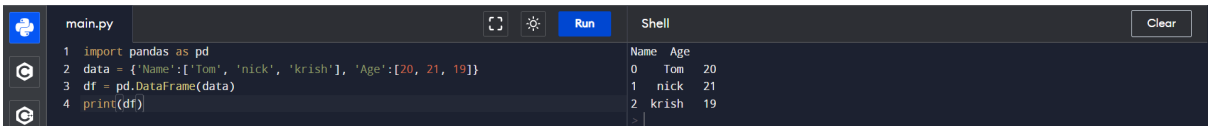
Pandas

8. Create a dataframe with 3 rows and 2 columns

```
import pandas as pd
```

```
data = {'Name':['Tom', 'nick', 'krish'], 'Age':[20, 21, 19]}
df = pd.DataFrame(data)
print(df)
```

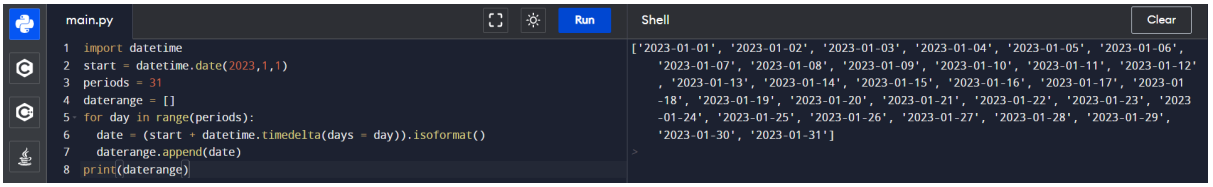
	Name	Age
0	Tom	20
1	nick	21
2	krish	19



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

```
import datetime
start = datetime.date(2023,1,1)
periods = 31
daterange = []
for day in range(periods):
 date = (start + datetime.timedelta(days = day)).isoformat()
 daterange.append(date)
print(daterange)
```

['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']



10. Create 2D list to DataFrame

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

In [16]:

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

In [17]:

```
import pandas as pd
lists = [[1,'aaa', 22], [2,'bbb', 25], [3,'ccc', 24]]
df=pd.DataFrame(lists)
df
```

Out[17]:

	0	1	2
0	1	aaa	22
1	2	bbb	25
2	3	ccc	24


main.py
Run
Shell
Clear
1 import pandas as pd
2 lists = [[1,'aaa', 22], [2,'bbb', 25], [3,'ccc', 24]]
3 df=pd.DataFrame(lists)
4 print (df)
0 1 2
0 1 aaa 22
1 2 bbb 25
2 3 ccc 24