assignment 1

1.s="Hi there Sam!"

x=s.split()

print(x)

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

```
In [4]: s="Hi there Sam!"
        x=s.split()
        print(x)
        print("The diameter of {} is {} kilometers".format('Earth','12742'))

        ['Hi', 'there', 'Sam!']
        The diameter of Earth is 12742 kilometers
```

2.import numpy as np

arr=np.zeros(10)

print("An array of 10 zeros:")

print(arr)

```
In [5]: import numpy as np
        arr=np.zeros(10)
        print("An array of 10 zeros:")
        print(arr)

        An array of 10 zeros:
        [0. 0. 0. 0. 0. 0. 0. 0. 0. 0.]
```

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

d['k1'][3]['tricky'][3]['target'][3]

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

'hello'
```

```
4.1.import numpy as np

arr=np.ones(10)*5

print("An array of 10 fives:")

print(arr)
```

```
In [7]: import numpy as np
        arr=np.ones(10)*5
        print("An array of 10 fives:")
        print(arr)

        An array of 10 fives:
        [5. 5. 5. 5. 5. 5. 5. 5. 5. 5.]
```

```
4.2.import numpy as np

arr=np.arange(20,35,2)

print("An array of all even integers from 20 to 35:")

print(arr)
```

```
In [8]: import numpy as np
        arr=np.arange(20,35,2)
        print("An array of all even integers from 20 to 35:")
        print(arr)

        An array of all even integers from 20 to 35:
        [20 22 24 26 28 30 32 34]
```

```
5.import numpy as np

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

print(x)
```

```
In [9]: import numpy as np
        x=np.arange(0,9).reshape((3,3))
        print(x)

        [[0 1 2]
         [3 4 5]
         [6 7 8]]
```

6.import numpy as np

arr=np.arange(20,35,2)

print("An array of all even integers from 20 to 35:")

print(arr)

```
In [8]: import numpy as np
        arr=np.arange(20,35,2)
        print("An array of all even integers from 20 to 35:")
        print(arr)

        An array of all even integers from 20 to 35:
        [20 22 24 26 28 30 32 34]
```

7.import numpy as np

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

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

arr=np.concatenate((a,b))

print(arr)

```
In [11]: import numpy as np
         a=np.array([1,2,3])
         b=np.array([4,5,6])
         arr=np.concatenate((a,b))
         print(arr)

         [1 2 3 4 5 6]
```

8.import pandas as pd

```
data=[['tom',10],['nick',15],['juli',14]]

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

df
```

```
In [13]: import pandas as pd
         data=[['tom',10],['nick',15],['juli',14]]
         df=pd.DataFrame(data,columns=['Name','Ag'])
         df
```

Out[13]:

	Name	Ag
0	tom	10
1	nick	15
2	juli	14

9. `import pandas as pd`

`period=pd.date_range(start='1-1-2023',end='10-2-2023')`

`for val in period:`

  `print(val)`

```
In [14]: import pandas as pd
         period=pd.date_range(start='1-1-2023',end='10-2-2023')
         for val in period:
           print(val)
         2023-01-01 00:00:00
         2023-01-02 00:00:00
         2023-01-03 00:00:00
         2023-01-04 00:00:00
         2023-01-05 00:00:00
         2023-01-06 00:00:00
         2023-01-07 00:00:00
         2023-01-08 00:00:00
         2023-01-09 00:00:00
         2023-01-10 00:00:00
         2023-01-11 00:00:00
         2023-01-12 00:00:00
         2023-01-13 00:00:00
         2023-01-14 00:00:00
         2023-01-15 00:00:00
         2023-01-16 00:00:00
         2023-01-17 00:00:00
         2023-01-18 00:00:00
         2023-01-19 00:00:00
```

10. `import pandas as pd`

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

```
df=pd.DataFrame(lst,columns=['Tag','Name','Age'],dtype=float)

print(df)
```

```
In [15]: import pandas as pd
         lst=[[1,'aaa',22],[2,'bbb',25],[3,'ccc',24]]
         df=pd.DataFrame(lst,columns=['Tag','Name','Age'],dtype=float)
         print(df)

            Tag Name   Age
         0  1.0  aaa  22.0
         1  2.0  bbb  25.0
         2  3.0  ccc  24.0
```