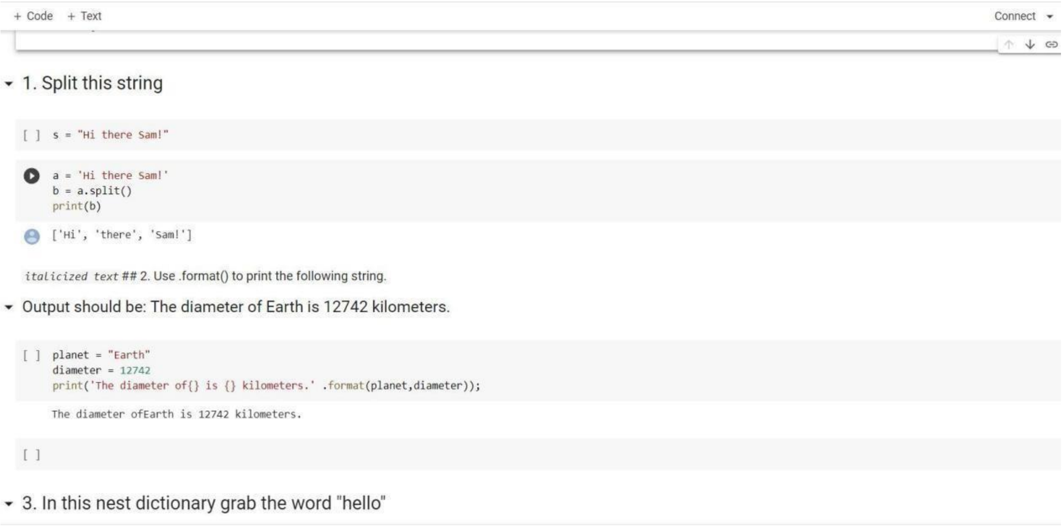
Assignment 1

AI-based localization and classification of skin disease with erythema

Basics of Python:

1. Split this string
2. Output should be:The diameter of Earth is 12742 kilometers
3. In this nest dictionary grab the word “hello”



1. Split this string

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

```
a = 'Hi there Sam!'
b = a.split()
print(b)
```

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

`italicized text` ## 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));
```

```
The diameter ofEarth is 12742 kilometers.
```

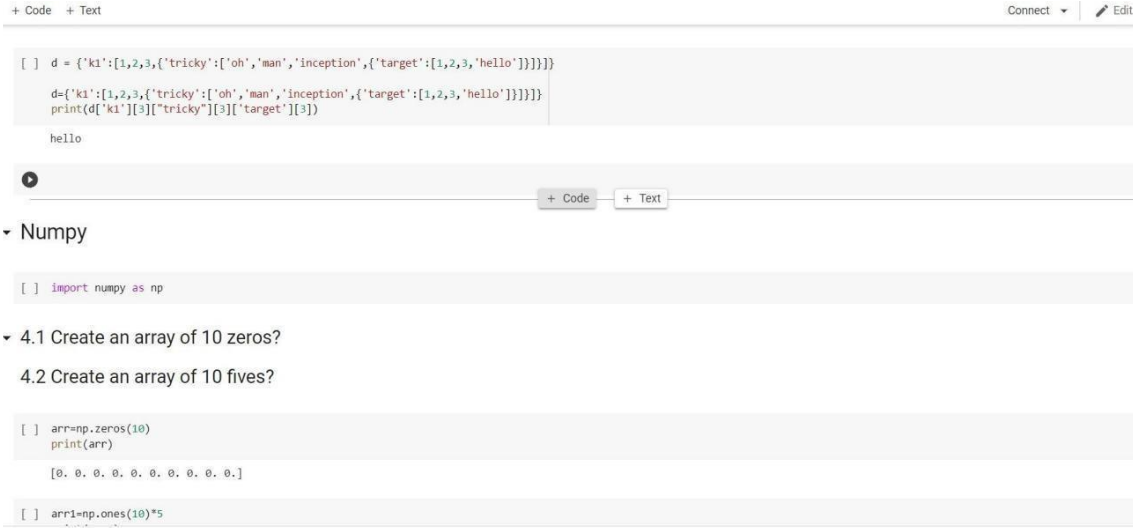
```
[ ]
```

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

4. Numpy

4.1 Create an array of 10 zeros?

4.2 Create an array of 10 fives?



```
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?

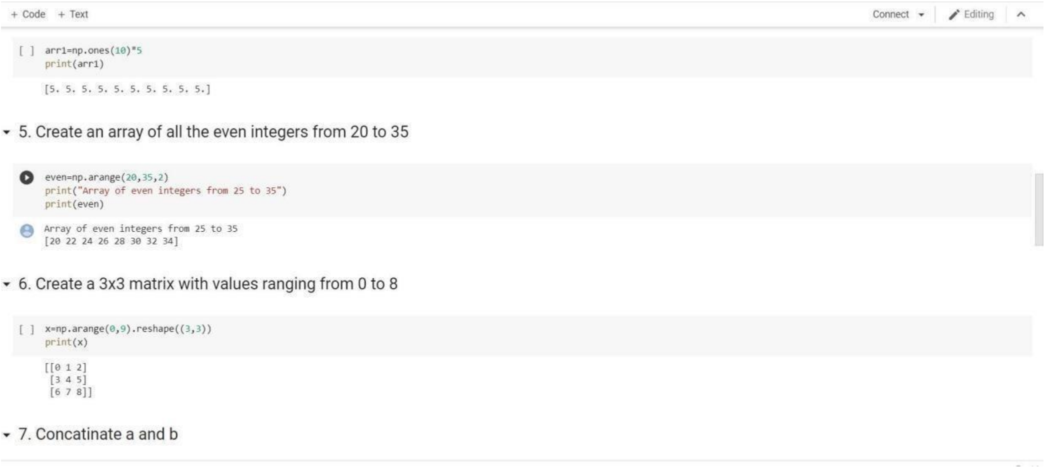
```
arr=np.zeros(10)
print(arr)
```

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

```
arr1=np.ones(10)*5
```

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

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



```
arr1=np.ones(10)*5
print(arr1)
```

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

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

```
even=np.arange(20,35,2)
print("Array of even integers from 25 to 35")
print(even)
```

```
Array of even integers from 25 to 35
[20 22 24 26 28 30 32 34]
```

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

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

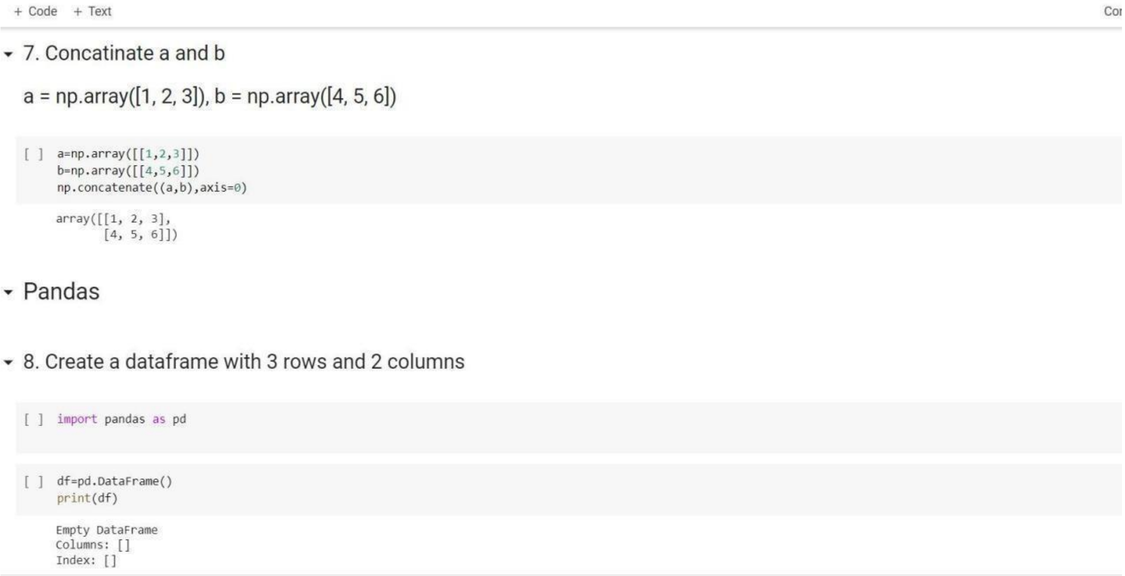
```
[[0 1 2]
 [3 4 5]
 [6 7 8]]
```

7. Concatinate a and b

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

Pandas

8. Create a dataframe with 3 rows and 2 columns



7. Concatinate 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]])
np.concatenate((a,b),axis=0)
```

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

Pandas

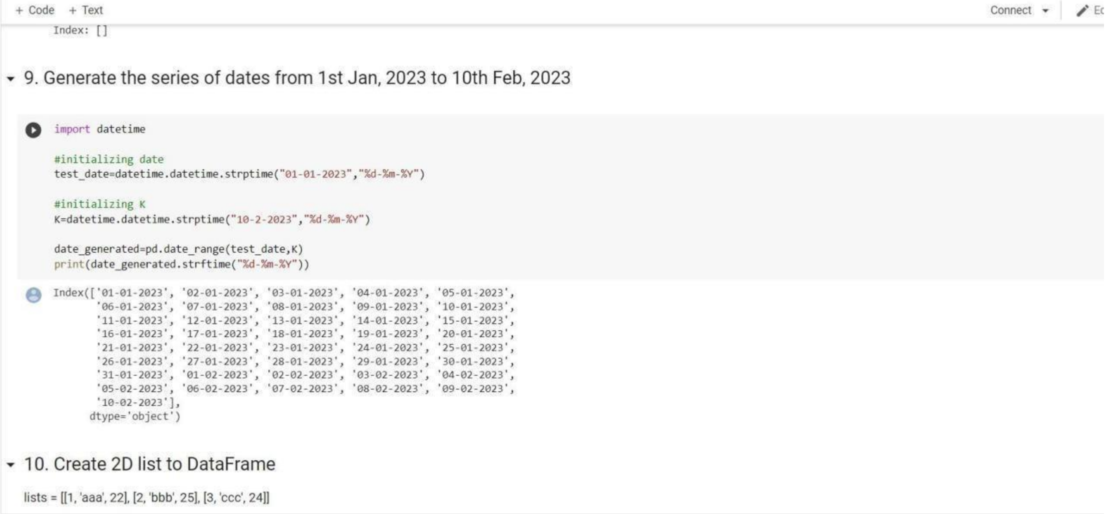
8. Create a dataframe with 3 rows and 2 columns

```
import pandas as pd
```

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

```
Empty DataFrame
Columns: []
Index: []
```

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



```
Index: []
```

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

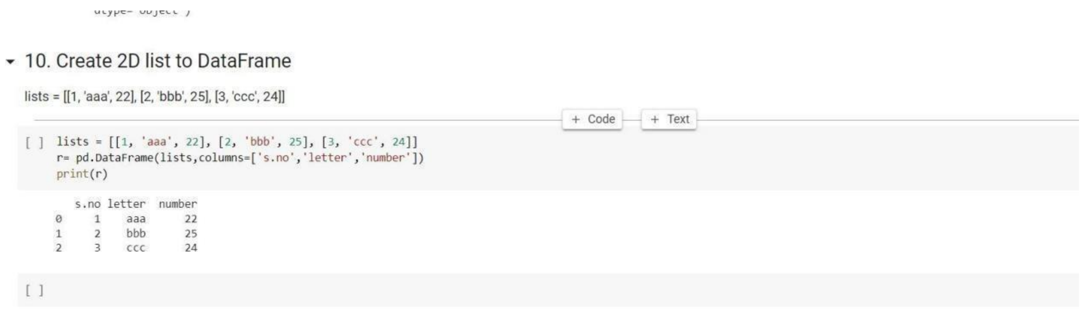
```
import datetime

#initializing date
test_date=datetime.datetime.strptime("01-01-2023","%d-%m-%Y")

#initializing K
K=datetime.datetime.strptime("10-2-2023","%d-%m-%Y")

date_generated=pd.date_range(test_date,K)
print(date_generated.strftime("%d-%m-%Y"))
```

```
Index(['01-01-2023', '02-01-2023', '03-01-2023', '04-01-2023', '05-01-2023',
       '06-01-2023', '07-01-2023', '08-01-2023', '09-01-2023', '10-01-2023',
       '11-01-2023', '12-01-2023', '13-01-2023', '14-01-2023', '15-01-2023',
       '16-01-2023', '17-01-2023', '18-01-2023', '19-01-2023', '20-01-2023',
       '21-01-2023', '22-01-2023', '23-01-2023', '24-01-2023', '25-01-2023',
       '26-01-2023', '27-01-2023', '28-01-2023', '29-01-2023', '30-01-2023',
       '31-01-2023', '01-02-2023', '02-02-2023', '03-02-2023', '04-02-2023',
       '05-02-2023', '06-02-2023', '07-02-2023', '08-02-2023', '09-02-2023',
       '10-02-2023'],
      dtype='object')
```

10. Create 2D list to DataFrame

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

10. Create 2D list to DataFrame



```
        dtype='object')
```

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]]
r= pd.DataFrame(lists,columns=['s.no','letter','number'])
print(r)
```

```
   s.no letter  number
0     1    aaa      22
1     2    bbb      25
2     3    ccc      24
```