Assignment -1

Basic Python Programming in ipynb

Assignment Date	12 September 2022
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Maximum Marks	2 Marks

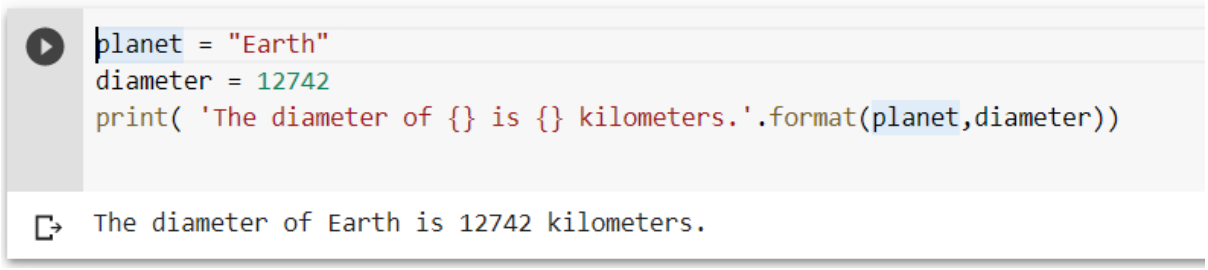
BASIC PYTHON

1.SPLITING THE STRING

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

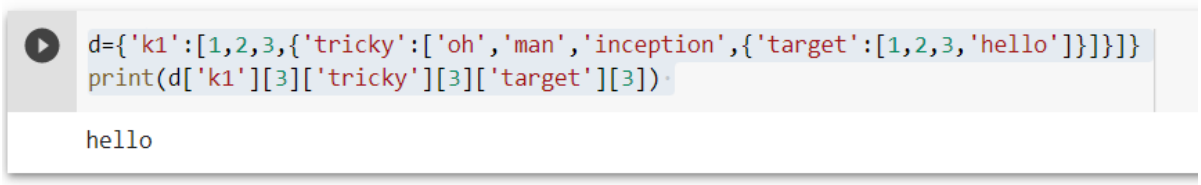
2. Use .format() to print the following string.

```
planet = "Earth"
diameter = 12742
print( 'The diameter of {} is {} kilometers.'.format(planet,diame
ter))
```



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

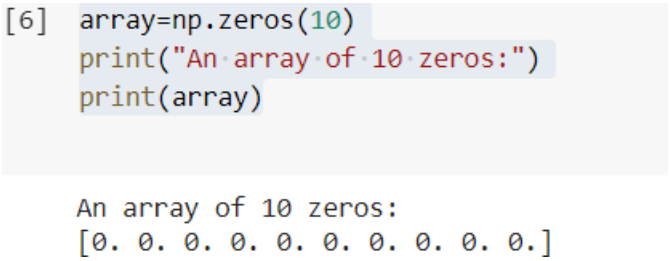
```
d={'k1':[1,2,3,{'tricky':['oh','man','inception',{'target':[1,2,3,'hello']}]}]}
print(d['k1'][3]['tricky'][3]['target'][3])
```



Numpy

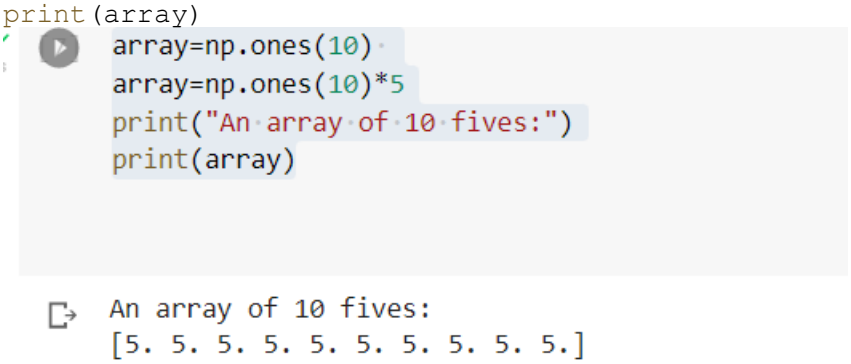
4.1 Create an array of 10 zeros?

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



4.2 Create an array of 10 fives?

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



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")
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

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

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

7. Concatenate a and b

```
[10] 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

8. Create a dataframe with 3 rows and 2 columns

```
[11] import pandas as pd
     data=[['ammu',40],['ravi',53],['sankar',70]]
     df=pd.DataFrame(data,columns=['Name','Age'])
     df
```

	Name	Age
0	ammu	40
1	ravi	53
2	sankar	70

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

```
[12] import pandas as pd
     from  datetime import datetime
     pd.date_range(start="2023-01-01",end="2023-02-01").to_pydatetime().tolist()
```

```
[datetime.datetime(2023, 1, 1, 0, 0),
 datetime.datetime(2023, 1, 2, 0, 0),
 datetime.datetime(2023, 1, 3, 0, 0),
 datetime.datetime(2023, 1, 4, 0, 0),
 datetime.datetime(2023, 1, 5, 0, 0),
 datetime.datetime(2023, 1, 6, 0, 0),
 datetime.datetime(2023, 1, 7, 0, 0),
 datetime.datetime(2023, 1, 8, 0, 0),
 datetime.datetime(2023, 1, 9, 0, 0),
 datetime.datetime(2023, 1, 10, 0, 0),
 datetime.datetime(2023, 1, 11, 0, 0),
 datetime.datetime(2023, 1, 12, 0, 0),
 datetime.datetime(2023, 1, 13, 0, 0),
 datetime.datetime(2023, 1, 14, 0, 0),
 datetime.datetime(2023, 1, 15, 0, 0),
 datetime.datetime(2023, 1, 16, 0, 0),
 datetime.datetime(2023, 1, 17, 0, 0),
 datetime.datetime(2023, 1, 18, 0, 0),
 datetime.datetime(2023, 1, 19, 0, 0),
 datetime.datetime(2023, 1, 20, 0, 0),
 datetime.datetime(2023, 1, 21, 0, 0),
 datetime.datetime(2023, 1, 22, 0, 0),
 datetime.datetime(2023, 1, 23, 0, 0),
 datetime.datetime(2023, 1, 24, 0, 0),
 datetime.datetime(2023, 1, 25, 0, 0),
datetime.datetime(2023, 1, 23, 0, 0),
datetime.datetime(2023, 1, 24, 0, 0),
datetime.datetime(2023, 1, 25, 0, 0),
datetime.datetime(2023, 1, 26, 0, 0),
datetime.datetime(2023, 1, 27, 0, 0),
datetime.datetime(2023, 1, 28, 0, 0),
datetime.datetime(2023, 1, 29, 0, 0),
datetime.datetime(2023, 1, 30, 0, 0),
datetime.datetime(2023, 1, 31, 0, 0),
datetime.datetime(2023, 2, 1, 0, 0)]
```

10. Create 2D list to DataFrame

```
[13] lists = [[1, 'aaa', 22], [2, 'bbb', 25], [3, 'ccc', 24]]
     df=pd.DataFrame(lists, columns=['s.no', 'alphabet', 'number'])
     print(df)
```

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