Basic Python

```
1. Split this string
s = "Hi there Sam!"
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 {} is {} kilometers.".format(planet,diameter))
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'][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?
a=np.zeros(10)
а
array([0., 0., 0., 0., 0., 0., 0., 0., 0.])
b=np.ones(10)*5
b
array([5., 5., 5., 5., 5., 5., 5., 5., 5.])
```

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5. Create an array of all the even integers from 20 to 35
array=np.arange(20,35,2)
а
array([0., 0., 0., 0., 0., 0., 0., 0., 0.])
6. Create a 3x3 matrix with values ranging from 0 to 8
array=np.arange(0,9).reshape(3,3)
array
array([[0, 1, 2],
   [3, 4, 5],
   [6, 7, 8]])
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
d={"names":["swetha","nasreen","anu"],"age":[20,19,20]}
df=pd.DataFrame(d)
df
names age
0
        roshini 20
1
        athira 19
```

```
9. Generate the series of dates from 1st Jan, 2023 to 10th Feb, 2023
p=pd.date_range(start='1-1-2023',end='10-2-2023')
for val in p:
print(val);
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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]]

df=pd.DataFrame(lists)

df

0 1 2

0 1 aaa 22

1 2 bbb 25

2 3 ccc 24