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# Basic Python
## 1. Split this string
s = "Hi there Sam!"
w=s.split(" ")
print(w)
## 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));
## 3. In this nest dictionary grab the word "hello"
d = {'k1':[1,2,3,{'tricky':['oh','man','inception',{'target':[1,2,3,'hello']}]}]}
w=d['k1'][3]['tricky'][3]['target'][3]
print(w)
# 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)
arr=np.ones(10)*5
print(arr)
## 5. Create an array of all the even integers from 20 to 35
arr=np.arange(20,35,2)
print(arr)
## 6. Create a 3x3 matrix with values ranging from 0 to 8
mat=np.arange(0,9).reshape(3,3)
print(mat)
## 7. Concatenate a and b
## a = np.array([1, 2, 3]), b = np.array([4, 5, 6])
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a = np.array([1, 2, 3])
b = np.array([4, 5, 6])
carr=np.concatenate((a,b),axis=0)
print(carr)
# Pandas
## 8. Create a dataframe with 3 rows and 2 columns
import pandas as pd

data=[['kaviya',13],['keerthana',14],['ranjith',34]]
df=pd.DataFrame(data,columns=['Name','Reg.No'])
df
## 9. Generate the series of dates from 1st Jan, 2023 to 10th Feb, 2023
df = pd.DataFrame()

df['Date'] = pd.date_range(start="1/1/2023",end="2/10/2023")



df.head(len(df["Date"]))
## 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, columns=['Sno','Name','Age']);
print(df)
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