```
--# -*- coding: utf-8 -*-
"""AI ASSIGNMENT(2)

Automatically generated by Colaboratory.

Original file is located at

https://colab.research.google.com/drive/1_YnVp2uDHlvdIuWSHyZJCkN2sXFiId-s

# Basic Python

## 1. Split this string--
"""

s = "Hi there Sam!"

x = s.split()
print(x)

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

### Output should be: The diameter of Earth is 12742 kilometers.
"""

planet = "Earth"
diameter = 12742

x="The diameter of {} is {} kilometers"
print(x.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']}
]}]}

print(d['k1'][3]["tricky"][3]['target'][3])

"""# Numpy"""

import numpy as np

"""## 4.1 Create an array of 10 zeros?
## 4.2 Create an array of 10 fives?
"""

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

fives=np.ones(10)*5
print(fives)

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

```
array=np.arange(20,36,2)
print(array)

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

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

"""## 7. Concatenate 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])
c = np.concatenate((a,b))
print(c)

"""# Pandas

## 8. Create a dataframe with 3 rows and 2 columns
"""

import pandas as pd

data = {'Name': ['Tom', 'John', 'Krish'], 'Age': [21, 20, 19]}
df=pd.DataFrame(data,index=[1,2,3])
df

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

period = pd.date_range(start ='01-01-2023', end ='02-10-2023')
for val in period:
    print(val)

"""## 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 =['1-digits', 'letters','2-digits'])
print(df)
```