```
# -*- coding: utf-8 -*-
"""Assignment_1_Group_ECE14.ipynb

Automatically generated by Colaboratory.

Original file is located at

https://colab.research.google.com/drive/1M51SUGe1SFqCpWQaNZ0E7QcDzYWP1QNi

# Basic Python

## 1. Split this string
"""

s = "Hi there Sam!"

s.split(" ")

"""## 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']}
]}]}

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?
"""

array_zeros = np.zeros(10)
array_zeros

array_fives = np.ones(10)*5
array_fives

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

array_even = np.arange(20,35,2)
```

```
array_even

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

array_three = np.arange(0, 9).reshape(3,3)
array_three

"""## 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])
array_concat = np.concatenate((a, b), axis=0)

array_concat

"""# Pandas

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

import pandas as pd

list1 = [['John', 21], ['Jane', 25], ['Mary', 21]]

list1 = pd.DataFrame(list1)

list1

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

dates = pd.date_range(start='2023-01-01', end='2023-02-10')
dates

"""## 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]]

pd.DataFrame(lists)
```