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# -*- coding: utf-8 -*-  
"""Assignment_1.ipynb
```

Automatically generated by Colaboratory.

Original file is located at

<https://colab.research.google.com/drive/1aWqhkVA1HUMnJ87bpk2QQB97yvcdjNul>

```
# Basic Python
```

```
## 1. Split this string  
"""
```

```
s = "Hi there Sam!"
```

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

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

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

```
planet = "Earth"  
diameter = 12742
```

```
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': [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?  
"""
```

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

```
import numpy as np
```

```

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"""

import numpy as np
array=np.arange(20,35,2)
print("Array of all the even integers from 20 to 35")
print(array)

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

import numpy as np
x = np.arange(9).reshape(3,3)
print(x)

"""## 7. Concatenate a and b
## a = np.array([1, 2, 3]), b = np.array([4, 5, 6])
"""

import numpy as np
a = np.array([1, 2, 3])
print()
b = np.array([4,5,6])
print()
print(np.concatenate((a,b)))

"""# Pandas

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

import pandas as pd

import pandas as pd
data = [10,20,30,]
column = [1,2,3]
df = pd.DataFrame(data,column)
print(df)

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

import pandas as pd
dates = pd.date_range('2023-01-01', periods=41, freq='D')
s = pd.Series(dates)
print (s)

"""## 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]]

```

```
import pandas as pd
lists = [[1, 'aaa', 22], [2, 'bbb', 25], [3, 'ccc', 24]]
df = pd.DataFrame(lists)
print(df)
```