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Assignment\_1.ipynb

Python (Pyodide)

Basic Python

1. Split this string

[ ]: s = "Hi there Sam!"

[ ]: 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

[ ]: planet = "Earth"  
diameter = 12742  
print('The diameter of {planet} is {measure} kilometers'.format(planet="Earth", measure=12742.34))

3. In this nest dictionary grab the word "hello"

[ ]: d = {'k1':[1,2,3,{'tricky':['oh','man','inception',{'target':[1,2,3,'hello']}]}]}

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Numpy

[ ]: import numpy as np

4.1 Create an array of 10 zeros?

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Python (Pyodide)

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

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('First array:')  
print(a)  
print('\n')

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Python (Pyodide)

```
print ('Second array:')
print (b)
print ('\n')
# both the arrays are of same dimensions

print ('Joining the two arrays along axis 0:')
print (np.concatenate((a,b)) )
print ('\n')

print ('Joining the two arrays along axis 1:')
print (np.concatenate((a,b),axis = 1))
```

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Python (Pyodide) | Idle

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Assignment\_1.ipynb

## Pandas

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

```
[ ]: import pandas as pd

[ ]: import pandas as pd

data = [[10,20],[30,40],[50,60]]

# Create the pandas DataFrame with column name is provided explicitly
df = pd.DataFrame(data, columns=['Numbers','Numbers2'])

# print dataframe.
df
```

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

```
[2]: import datetime
import pandas as pd
start = datetime.datetime.strptime("01-01-2023", "%d-%m-%Y")
date_generated = pd.date_range(start, periods=41)
print(date_generated.strftime("%d-%m-%Y"))

Index(['01-01-2023', '02-01-2023', '03-01-2023', '04-01-2023', '05-01-2023',
```

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Python (Pyodide)

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      '06-01-2023', '07-01-2023', '08-01-2023', '09-01-2023', '10-01-2023',
      '11-01-2023', '12-01-2023', '13-01-2023', '14-01-2023', '15-01-2023',
      '16-01-2023', '17-01-2023', '18-01-2023', '19-01-2023', '20-01-2023',
      '21-01-2023', '22-01-2023', '23-01-2023', '24-01-2023', '25-01-2023',
      '26-01-2023', '27-01-2023', '28-01-2023', '29-01-2023', '30-01-2023',
      '31-01-2023', '01-02-2023', '02-02-2023', '03-02-2023', '04-02-2023',
      '05-02-2023', '06-02-2023', '07-02-2023', '08-02-2023', '09-02-2023',
      '10-02-2023'],
      dtype='object')
```

### 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]]

[8]: import pandas as pd
lists = [[1, 'aaa', 22], [2, 'bbb', 25], [3, 'ccc', 24]]
pd.DataFrame( lists, columns=['a', 'b', 'c'])

[8]: .....
      a  b  c
0  1  aaa  22
```

Simple

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Python (Pyodide) | Idle

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