

Assignment_1_Answer

```
#!/usr/bin/env python
```

```
# coding: utf-8
```

```
# # Basic Python
```

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

```
# In[1]:
```

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

```
# In[2]:
```

```
s.split()
```

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

```
#
```

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

```
# In[3]:
```

```
planet = "Earth"
```

```
diameter = 12742
```

```
# In[4]:
```

```
print("The diameter of {} is {} kilometers.".format(planet,diameter))
```

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

```
# In[6]:
```

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

```
# In[7]:
```

```
d['k1'][3]['tricky'][3]['target'][3]
```

```
# # Numpy
```

```
# In[8]:
```

```
import numpy as np
```

```
# ## 4.1 Create an array of 10 zeros?
```

```
#
```

```
# > Indented block
```

```
#
```

```
#
```

```
# ## 4.2 Create an array of 10 fives?
```

```
# In[10]:
```

```
array_zeros=np.zeros(10)
```

```
print(array_zeros)
```

```
# In[12]:
```

```
array_fives=np.ones(10)*5
```

```
print(array_fives)
```

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

```
# In[13]:
```

```
array=np.arange(20,35,2)
print(array)
```

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

```
# In[14]:
```

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

```
# ## 7. Concatenate a and b
```

```
# ## a = np.array([1, 2, 3]), b = np.array([4, 5, 6])
```

```
# In[15]:
```

```
a = np.array([1, 2, 3])
b = np.array([4, 5, 6])
np.concatenate((a, b), axis=0)
```

```
# # Pandas
```

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

```
# In[16]:
```

```
import pandas as pd
```

```
# In[18]:
```

```
data = {'Name': ['AR', 'Arsh', 'Aira'],
```

```
'Age': [21, 25, 23]}
```

```
df = pd.DataFrame(data)  
print(df)
```

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

```
# In[19]:
```

```
per1 = pd.date_range(start='1-1-2023',  
end='10-02-2023')
```

```
for val in per1:  
    print(val)
```

```
# ## 10. Create 2D list to DataFrame
```

```
#  
# lists = [[1, 'aaa', 22],  
#          [2, 'bbb', 25],  
#          [3, 'ccc', 24]]
```

```
# In[23]:
```

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

```
# In[ ]:
```