```
[ ] #@title Default title text
    s = "Hi there Sam!"

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

Default title text

[ ]

1. Split this string

Basic Python

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.arrange(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

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

```
[ ] import numpy as np
    x = np.array(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.arraya([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(dt)
```

Type here to search

```
] import pandas as pd
```

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

```
[ ]
```

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)
```