Assignment 1

Problem Statement:

Real Time Communication System Powered By AI For Specially Abled

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Assignment 1: Basic Python

Basic Python

1. Split this string

In [2]:
```
s="Hi there Sam!"
```

In [3]:
```
print(s.split(' '))
```

```
['Hi', 'there', 'Sam!']
```

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

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

In [4]:
```
planet="
```

In [5]:
```
print("The diameter of {} is {}
```

```
The diameter of Earth is 12742 kilometers
```

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

In [6]:
```
d={'k1':[1,2,3,{'tricky':['oh','man','inception',{'target':[1,2,3,'he
```

In [7]:
```
print(d['k1'][3]['tricky'][2]['target'][2])
```

```
hello
```

Numpy

In [8]:
```
import numpy as np
```

4.1 Create an array of 10 zeros?

4.2 Create an array of 10 fives?

In [9]:
```
arr=np.z
```

```
[0. 0. 0. 0. 0. 0. 0. 0. 0. 0.]
```

In [10]:
```
arr=np.o
```

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

In [11]:
```
arr=np.ara
```

```
[20 22 24 26 28 30 32 34]
```

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

In [12]:
```
arr=np.arange(0,
```

```
[[0 1 2]
 [3 4 5]
 [6 7 8]]
```

7. Concatenate a and b

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

In [13]:
```
a=np.array([1,2,3])
```

```
[1 2 3 4 5 6]
```

Pandas

8. Create a dataframe with 3 rows and 2 columns

In [14]:
```
import pandas as pd
```

In [15]:
```
records={
  'Name':
```

Out[15]:

1	user2 19
2	user3 20

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

In [17]:
```
dates=pd.date_range(start='1-1-2023',end='10-2-2023')
```

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```

10. Create 2D list to DataFrame

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

In [18]:

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

In [19]:

```
df=pd.DataFrame(lists,colu
```

```
   S.no Name Points 0   1 aaa      22
1  2 bbb               25
2  3 ccc               24
```

In [ ]: