

Ineuron Assignment

Task 1:

1. Install Jupyter notebook and run the first program and share the screenshot of the output.

Source code:

```
a = 2
b = 3
LHS = (a+b)**2
RHS = (a**2)+(2*a*b)+(b**2)
if LHS == RHS:
    print("Hence Proved!!!")
```

Output:

```
In [15]: a = 2
          b = 3
          LHS = (a+b)**2
          RHS = (a**2)+(2*a*b)+(b**2)
          if LHS == RHS:
              print("Hence Proved!!!")
```

Hence Proved!!

2. Write a program which will find all such numbers which are divisible by 7 but are not a multiple of 5, between 2000 and 3200 (both included). The numbers obtained should be printed in a comma-separated sequence on a single line.

Source code:

```
for i in range(2000,3200):
    if i % 5 == 0:
        if i % 7 != 0:
            print(i,end = ",")
```

Output:

```
In [16]: for i in range(2000,3200):
          if i % 5 == 0:
              if i % 7 != 0:
                  print (i,end = ",")

2000,2005,2010,2015,2020,2025,2035,2040,2045,2050,2055,2060,2070,2075,2080,2085,2090,2095,2105,2110,2115,2120,2125,2130,2140,2145,2150,2155,2160,2165,2175,2180,2185,2190,2195,2200,2210,2215,2220,2225,2230,2235,2245,2250,2255,2260,2265,2270,2280,2285,2290,2295,2300,2305,2315,2320,2325,2330,2335,2340,2350,2355,2360,2365,2370,2375,2385,2390,2395,2400,2405,2410,2420,2425,2430,2435,2440,2445,2455,2460,2465,2470,2475,2480,2490,2495,2500,2505,2510,2515,2525,2530,2535,2540,2545,2550,2560,2565,2570,2575,2580,2585,2595,2600,2605,2610,2615,2620,2630,2635,2640,2645,2650,2655,2665,2670,2675,2680,2685,2690,2700,2705,2710,2715,2720,2725,2730,2740,2745,2750,2755,2760,2770,2775,2780,2785,2790,2795,2805,2810,2815,2820,2825,2830,2840,2845,2850,2855,2860,2865,2875,2880,2885,2890,2895,2900,2910,2915,2920,2925,2930,2935,2945,2950,2955,2960,2965,2970,2980,2985,2990,2995,3000,3005,3015,3020,3025,3030,3035,3040,3050,3055,3060,3065,3070,3075,3085,3090,3095,3100,3105,3110,3120,3125,3130,3135,3140,3145,3155,3160,3165,3170,3175,3180,3190,3195,
```

3. Write a Python program to accept the user's first and last name and then getting them printed in the reverse order with a space between first name and last name.

Source code:

```
User_name = input("Enter you name: ")
data = User_name.split(" ")
print(data[1][::-1]+" "+data[0][::-1])
```

Output:

```
In [17]: User_name = input("Enter you name: ")
data = User_name.split(" ")
print(data[1][::-1]+" "+data[0][::-1])
```

```
Enter you name: Michael Jackson
noskcaJ leahciM
```

4. Write a Python program to find the volume of a sphere with diameter 12 cm.
Formula: $V = \frac{4}{3} \pi r^3$

Source code:

```
import math
r = 12
volume = (4/3)*math.pi*(r*r*r)
print(volume)
```

Output:

```
In [18]: import math
r = 12
volume = (4/3)*math.pi*(r*r*r)
print(volume)
```

```
7238.229473870882
```

Task 2:

1. Write a program which accepts a sequence of comma-separated numbers from console and generate a list.

Source code:

```
get_data = input("enter data: ").split(",")
m = []
for i in get_data:
    m.append(int(i))
m
```

Output:

```
In [19]: get_data = input("enter data: ").split(",")
m = []
for i in get_data:
    m.append(int(i))
m
```

```
enter data: 3,7,1,8,7,1,9
```

```
Out[19]: [3, 7, 1, 8, 7, 1, 9]
```

2. Create the below pattern using nested for loop in Python.

```
*
* *
* * *
* * * *
* * * * *
* * * *
* * *
* *
*
```

Source code:

```
for i in range(1,6):
    for j in range(0,i):
        print("*"+" ",end = "")
    print("")
```

```
for i in reversed(range(1,5)):
    for j in reversed(range(0,i)):
        print("*"+" ",end = "")
    print("")
```

Output:

```
In [20]: for i in range(1,6):
          for j in range(0,i):
              print("*"+" ",end = "")
          print("")

          for i in reversed(range(1,5)):
              for j in reversed(range(0,i)):
                  print("*"+" ",end = "")
              print("")
```

```
*
* *
* * *
* * * *
* * * * *
* * * *
* * *
* *
*
```

3. Write a Python program to reverse a word after accepting the input from the user.

Source code:

```
word = input("Enter a word:")
print(word[::-1])
```

Output:

```
In [21]: word = input("Enter a word:")  
print(word[::-1])
```

```
Enter a word:pandemic  
cimednap
```

4. Write a Python Program to print the given string in the format specified in the **sample output**.

WE, THE PEOPLE OF INDIA, having solemnly resolved to constitute India into a SOVEREIGN, SOCIALIST, SECULAR, DEMOCRATIC REPUBLIC and to secure to all its citizens

Sample Output:

```
WE, THE PEOPLE OF INDIA,  
    having solemnly resolved to constitute India into a SOVEREIGN, !  
        SOCIALIST, SECULAR, DEMOCRATIC REPUBLIC  
            and to secure to all its citizens
```

Source code:

```
data = input("Enter string: ")  
data_1 = data.split(",")  
last_line = data_1[5].split("and")  
print(data_1[0]+","+data_1[1]+",")  
print("\t"+data_1[2]+","++"!")  
print("\t"+"\t"+data_1[3]+","+data_1[4]+","+last_line[0])  
print("\t"+"\t"+" "+last_line[1])
```

Output:

```
In [23]: data = input("Enter string: ")  
data_1 = data.split(",")  
last_line = data_1[5].split("and")  
print(data_1[0]+","+data_1[1]+",")  
print("\t"+data_1[2]+","++"!")  
print("\t"+"\t"+data_1[3]+","+data_1[4]+","+last_line[0])  
print("\t"+"\t"+" "+last_line[1])
```

```
Enter string: WE, THE PEOPLE OF INDIA, having solemnly resolved to constitute India into a SOVEREIGN, SOCIALIST, SECULAR, DEMOC  
RATIC REPUBLIC and to secure to all its citizens  
WE, THE PEOPLE OF INDIA,  
    having solemnly resolved to constitute India into a SOVEREIGN,!  
        SOCIALIST, SECULAR, DEMOCRATIC REPUBLIC  
            and to secure to all its citizens
```