

#####TASK 1#####

(1) 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.

```
In [8]: nl=[]
for x in range(1999, 3201):
    if (x%7==0) and (x%5!=0):
        nl.append(str(x))
print(','.join(nl))
```

```
2002,2009,2016,2023,2037,2044,2051,2058,2072,2079,2086,2093,2107,2114,2121,2128,2142,2149,2156,2163,2177,2184,2191,2198,2212,22
19,2226,2233,2247,2254,2261,2268,2282,2289,2296,2303,2317,2324,2331,2338,2352,2359,2366,2373,2387,2394,2401,2408,2422,2429,243
6,2443,2457,2464,2471,2478,2492,2499,2506,2513,2527,2534,2541,2548,2562,2569,2576,2583,2597,2604,2611,2618,2632,2639,2646,2653,
2667,2674,2681,2688,2702,2709,2716,2723,2737,2744,2751,2758,2772,2779,2786,2793,2807,2814,2821,2828,2842,2849,2856,2863,2877,28
84,2891,2898,2912,2919,2926,2933,2947,2954,2961,2968,2982,2989,2996,3003,3017,3024,3031,3038,3052,3059,3066,3073,3087,3094,310
1,3108,3122,3129,3136,3143,3157,3164,3171,3178,3192,3199
```

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

```
In [10]: fname = input("Input your First Name : ")  
lname = input("Input your Last Name : ")  
print ("Hello " + lname + " " + fname)
```

```
Input your First Name : Shubham  
Input your Last Name : Gaikwad  
Hello Gaikwad Shubham
```

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

```
In [12]: pi = 3.1415926535897931
r= 12.0
V= 4.0/3.0*pi* r**3
print('The volume of the sphere is: ',V)
```

The volume of the sphere is: 7238.229473870882

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

```
In [20]: pi = 3.1415926535897931
r = 12.0
V = 4.0/3.0*pi*r**3
print('The volume of the sphere is: ',V)
```

The volume of the sphere is: 7238.229473870882

## #####TASK 2#####

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

Python list:

A list is a container which holds comma separated values (items or elements) between square brackets where items or elements need not all have the same type. In general, we can define a list as an object that contains multiple data items (elements). The contents of a list can be changed during program execution. The size of a list can also change during execution, as elements are added or removed from it.

Python tuple:

A tuple is container which holds a series of comma separated values (items or elements) between parentheses such as an (x, y) co-ordinate. Tuples are like lists, except they are immutable (i.e. you cannot change its content once created) and can hold mix data types.

```
In [13]: values = input("Input some comma seprated numbers : ")
list = values.split(",")
tuple = tuple(list)
print('List : ',list)
print('Tuple : ',tuple)
```

```
Input some comma seprated numbers : 11,44,33,22,99,77,55,88,66
List :  ['11', '44', '33', '22', '99', '77', '55', '88', '66']
Tuple :  ('11', '44', '33', '22', '99', '77', '55', '88', '66')
```

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

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

```
In [15]: n=5;
for i in range(n):
    for j in range(i):
        print('*', end='')
    print('\n')

for i in range(n,0,-1):
    for j in range(i):
        print('*', end='')
    print('\n')
```

```
In [15]: n=5;
for i in range(n):
    for j in range(i):
        print('*', end='')
    print('\n')

for i in range(n,0,-1):
    for j in range(i):
        print('*', end='')
    print('\n')
```

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

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

Sample Output: Input word:

AcadGild Output: diIGdacA

```
In [16]: word = input("Input a word to reverse: ")

for char in range(len(word) - 1, -1, -1):
    print(word[char], end="")
print("\n")
```

Input a word to reverse: Shubham  
mahbuS



(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

```
In [19]: print("WE, THE PEOPLE OF INDIA,\n\thaving solemnly resolved to constitute India into a SOVEREIGN, \n\t\t!SOCIALIST, \n\t\tSECULAR
```

```
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
```