

## Assignment 1 Test results:

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.

```
In [1]: #Number divisible by 7 and not multiple of 5.
#Use List comprehension to build List
number_string=[str(number) for number in range(2000,3201) if number %7 ==0 and number %5 !=0]

#Convert List to string
number_string=''.join(number_string)

#Display results
print(number_string, end="")

2002,2009,2016,2023,2037,2044,2051,2058,2072,2079,2086,2093,2107,2114,2121,2128,2142,2149,2156,2163,2177,2184,2191,2198,221
2,2219,2226,2233,2247,2254,2261,2268,2282,2289,2296,2303,2317,2324,2331,2338,2352,2359,2366,2373,2387,2394,2401,2408,2422,24
29,2436,2443,2457,2464,2471,2478,2492,2499,2506,2513,2527,2534,2541,2548,2562,2569,2576,2583,2597,2604,2611,2618,2632,2639,2
646,2653,2667,2674,2681,2688,2702,2709,2716,2723,2737,2744,2751,2758,2772,2779,2786,2793,2807,2814,2821,2828,2842,2849,2856,
2863,2877,2884,2891,2898,2912,2919,2926,2933,2947,2954,2961,2968,2982,2989,2996,3003,3017,3024,3031,3038,3052,3059,3066,307
3,3087,3094,3101,3108,3122,3129,3136,3143,3157,3164,3171,3178,3192,3199
```

- 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

```
In [9]: #Get first Name
first_name = input("Please enter your First Name: ")

#Get Last Name
last_name = input("Please enter your Last Name: ")

#Reverse name
rfirst_name=(first_name[::-1]).strip()
rlast_name=(last_name[::-1]).strip()

#Reverse user name using string slicing
print("Reverse of user first name and last name is:",rfirst_name,rlast_name)

Please enter your First Name: Ajay
Please enter your Last Name: Patil
Reverse of user first name and last name is: yajA litaP
```

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 [10]: import math

#Diameter is given and find the volume of a sphere
diameter = 12
pi_value = math.pi

#Calculate radius (half of diameter)
radius = diameter/2

#Formula of sphere volume
volume_formula = 4/3*pi_value*radius**3

#Round volume to to digit float value
print(f"Volume of a sphere with diameter 12 cm is {round(volume_formula,2)} cubic cm.")

Volume of a sphere with diameter 12 cm is 904.78 cubic cm.
```

## Task 2

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

```
In [11]: #Note: User input is not validated and expected to enter comma separated values  
#User input  
user_input=input("Please enter comma separated numbers: ")  
  
#Convert string to list  
number_list=[int(item) for item in user_input.split(",")]  
  
number_list
```

Please enter comma separated numbers: 4,6,7,1,0,2

Out[11]: [4, 6, 7, 1, 0, 2]

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

```
In [12]: #print 4 pattern - forward and then reversed  
  
#Function takes two arguments -  
#icount: # of stars to be printed;  
#direction: direction of print (Print forward for F and reverse for any value)  
  
def starPatter(icount,direction):  
    if direction == "F":  
        for i in range(icount+1):  
            print("*"*i,end="\n")  
    else:  
        for i in range(icount+1):  
            #Adding condition to skip printing 5 stars which are already printed in earlier step  
            if i>0:  
                print("*"*(icount-i),end="\n")  
  
#Display results  
starPatter(5,"F")  
starPatter(5,"R")
```

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

```

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

```
In [13]: #Get user input value  
use_input=input("Please enter the word to be reversed: ")  
print("Hello")  
  
#Let's show result and give an opportunity for user to try more words  
while len(use_input)>0:  
  
    #Display result  
    print(f"\nReversed word for '{use_input}' is '{use_input[::-1]}")  
  
    #Check if user want to try another word  
    play =input("Do you want to try another word (Y)es or N(o)?")  
  
    #Check user response  
    if play.upper() == "Y":  
        use_input=input("\nPlease enter the word to be reversed: ")  
    else:  
        use_input=""
```

Please enter the word to be reversed: This is Python Learning  
Hello

Reversed word for 'This is Python Learning' is 'gninrael nohtyP si siht'  
Do you want to try another word (Y)es or N(o)?n

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 [14]: #Sample text
sample_text = "WE, THE PEOPLE OF INDIA, having solemnly resolved to constitute India into a SOVEREIGN, SOCIALIST, SECULAR, DE
#Use string fuctions to replace and fromat
formatted_text = sample_text.replace("INDIA, ", "INDIA,\n\t").replace("SOVEREIGN, ", "SOVEREIGN, !\t").replace("SOCIALIST, ", "\
print ("Formatted output :\n\n " + formatted_text)
```

Formatted 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
```