Ineuron Assignment

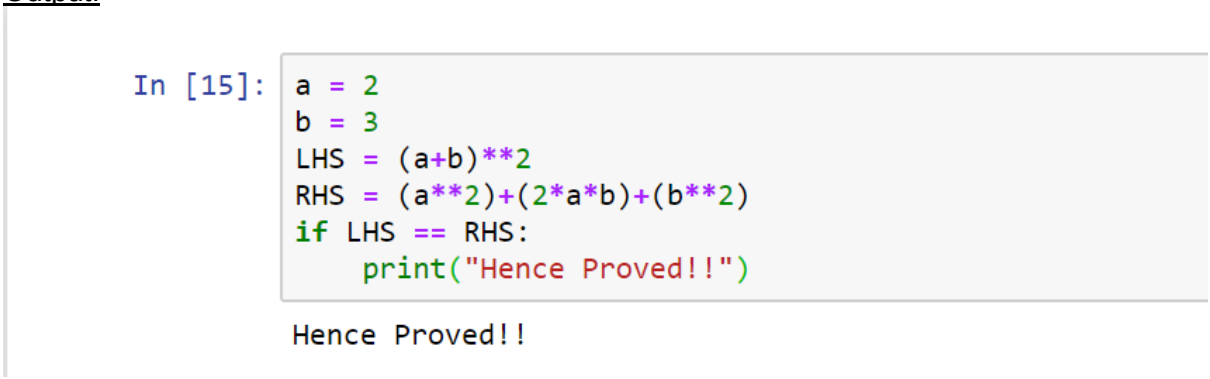
Task 1:

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:

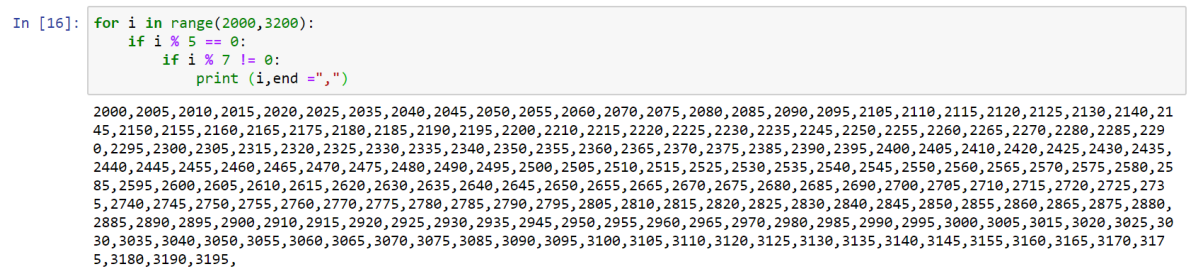


2. Write a program which will find all such numbers which are divisible by 7 but are not a multiple of 5, between 2000 and 3200 (both included). The numbers obtained should be printed in a comma-separated sequence on a single line.

   Source code:

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

   Output:



3.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.

   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: $V=4/3 * \pi * r^3$

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"+"  "+"and"+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"+"  "+"and"+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
```