

Assignment -1

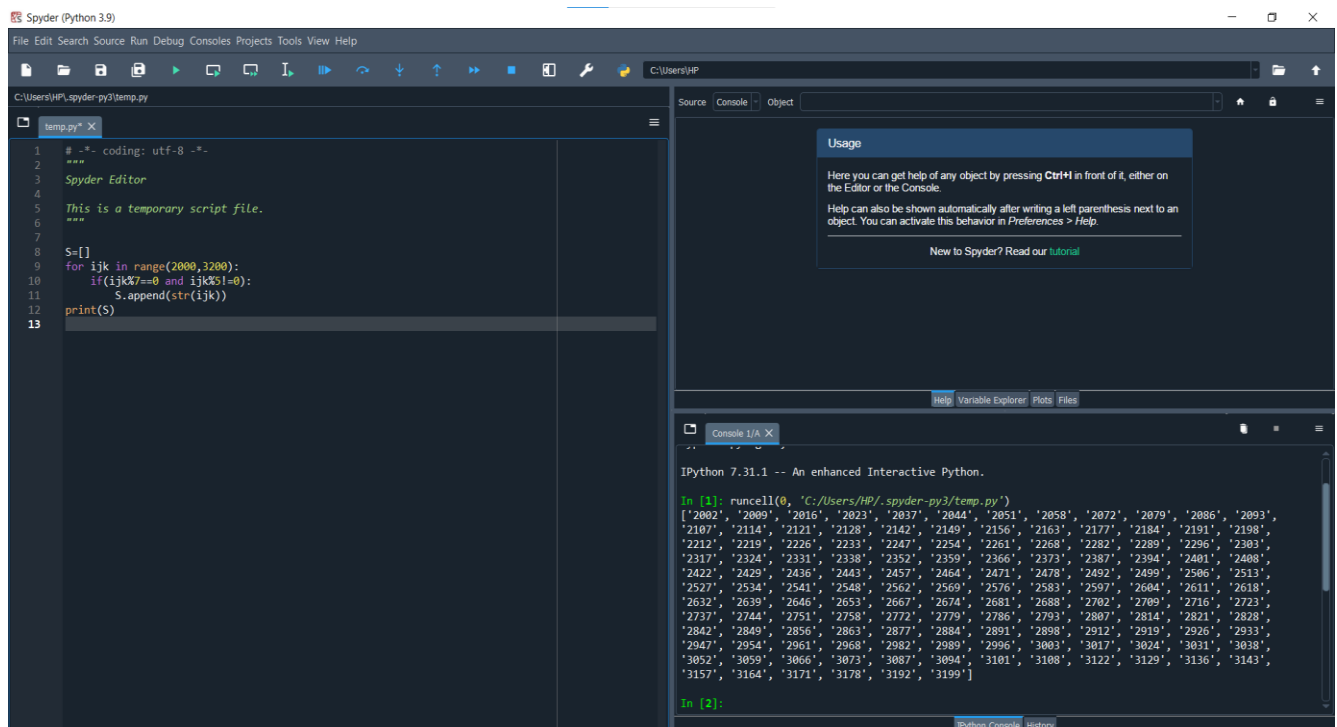
Python Programming

Assignment Date	27 October 2022
Student Name	Swetha M
Student Roll Number	412419205093
Maximum Marks	2 Marks

Question-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.

Solution:



The screenshot shows the Spyder Python IDE interface. The left pane displays a Python script in a file named 'temp.py'. The script is as follows:

```
1 # -*- coding: utf-8 -*-
2 """
3 Spyder Editor
4 This is a temporary script file.
5 """
6
7
8 S=[]
9 for ijk in range(2000,3200):
10     if(ijk%7==0 and ijk%5!=0):
11         S.append(str(ijk))
12 print(S)
13
```

The right pane shows the IPython console output for the script. The output is a long list of numbers, each enclosed in single quotes and separated by commas, representing all numbers between 2000 and 3200 that are divisible by 7 but not by 5.

```
IPython 7.31.1 -- An enhanced Interactive Python.
In [1]: runcell(0, 'C:/Users/HP/.spyder-py3/temp.py')
['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', '2219', '2226', '2233', '2247', '2254', '2261', '2268', '2282', '2289', '2296', '2303',
'2317', '2324', '2331', '2338', '2352', '2359', '2366', '2373', '2387', '2394', '2401', '2408',
'2422', '2429', '2436', '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', '2884', '2891', '2898', '2912', '2919', '2926', '2933',
'2947', '2954', '2961', '2968', '2982', '2989', '2996', '3003', '3017', '3024', '3031', '3038',
'3052', '3059', '3066', '3073', '3087', '3094', '3101', '3108', '3122', '3129', '3136', '3143',
'3157', '3164', '3171', '3178', '3192', '3199']
In [2]:
```

Question-2:

With a given integral number n , write a program to generate a dictionary that contains $(i, i*i)$ such that i is an integral number between 1 and n (both included). and then the program should print the dictionary.

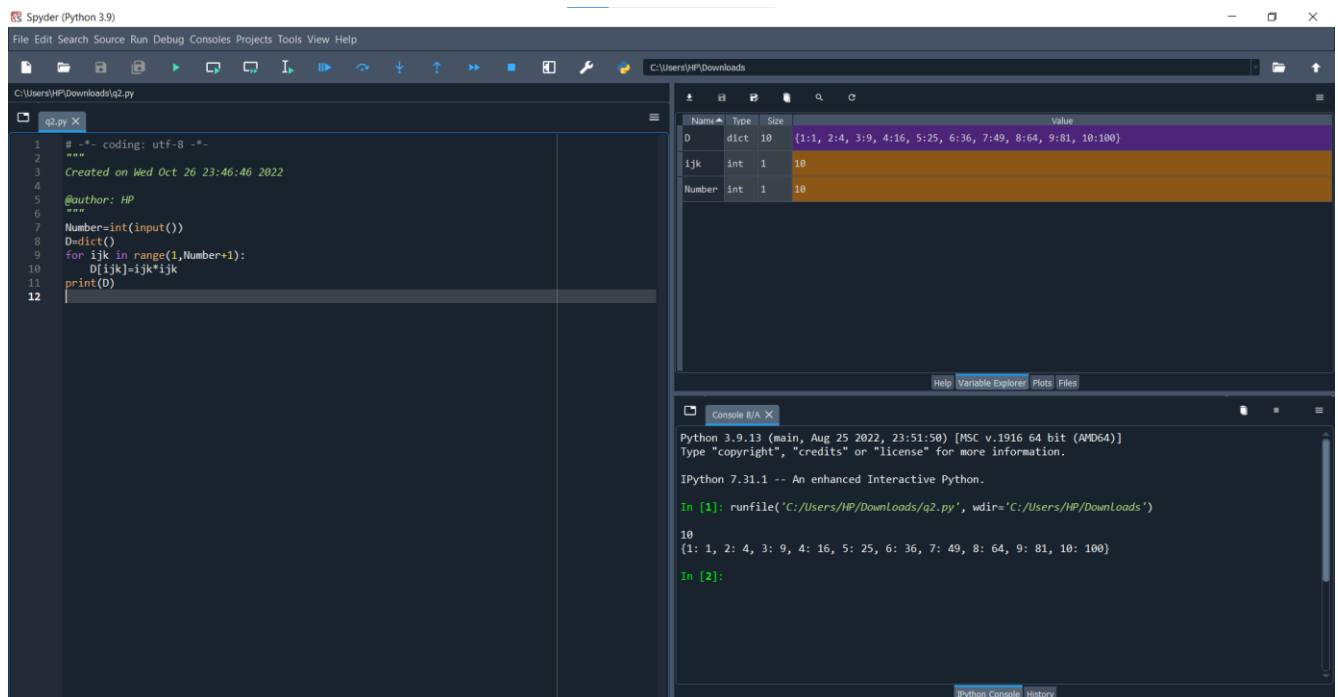
Suppose the following input is supplied to the program:

10

Then, the output will be:

{1: 1, 2: 4, 3: 9, 4: 16, 5: 25, 6: 36, 7: 49, 8: 64, 9: 81, 10: 100}

Solution:



The screenshot shows the Spyder Python IDE interface. The left pane displays a Python script named `q2.py` with the following code:

```
1 # -*- coding: utf-8 -*-
2 """
3 Created on Wed Oct 26 23:46:46 2022
4
5 @author: HP
6 """
7 Number=int(input())
8 D=dict()
9 for ijk in range(1,Number+1):
10     D[ijk]=ijk*ijk
11 print(D)
12
```

The right pane shows the Variable Explorer and the IPython console. The Variable Explorer displays the following variables:

Name	Type	Size	Value
D	dict	10	{1: 1, 2: 4, 3: 9, 4: 16, 5: 25, 6: 36, 7: 49, 8: 64, 9: 81, 10: 100}
ijk	int	1	10
Number	int	1	10

The IPython console shows the execution of the script:

```
Python 3.9.13 (main, Aug 25 2022, 23:51:50) [MSC v.1916 64 bit (AMD64)]
Type "copyright", "credits" or "license()" for more information.

IPython 7.31.1 -- An enhanced Interactive Python.

In [1]: runfile('C:/Users/HP/Downloads/q2.py', wdir='C:/Users/HP/Downloads')

10
{1: 1, 2: 4, 3: 9, 4: 16, 5: 25, 6: 36, 7: 49, 8: 64, 9: 81, 10: 100}

In [2]:
```