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**CLASS : CS531**

8. [String operation](#)

8. getopt.getopt method • •

- Please use [getopt.getopt method](#) to implement a Python script that finds the summation of

$1 + 2 + 3 + 4 + \dots + n$

```
$ sum.py -n 1
1
```

```
$ sum.py -n 3
6
```

```
$ sum.py -n 4
10
```

- References

- [Python Code Template for main\(\)](#)
- [String operation](#)

9. Loop

- Please use [loop](#) to implement a Python script that finds the summation of a sequence of numbers.

```
$ sum.py 1
1
```

```
$ sum.py 1 2 3
6
```

```
$ sum.py 1 2 3 8 7
21
```

- References

- [Python Code Template for main\(\)](#)
- [String operation](#)

10. Object-Oriented Python • •

**Q-8**

**Source Code:**

```
#!/usr/bin/python
```

```
# Add1.py
```

```
import sys, getopt
```

```
def usage():
```

```
    print ('Usage: hw2_q8.py -h')
```

```
print ('Usage: hw2_q8.py -n <number>')
```

```
print ('Usage: hw2_q8.py --num=<number>')
```

```
def main(argv):
```

```
    num = "
```

```
    try:
```

```
        opts, args = getopt.getopt(argv,"hn:",["num="])
```

```
    except getopt.GetoptError:
```

```
        usage()
```

```
        sys.exit(2)
```

```
    for opt, arg in opts:
```

```
        if opt == '-h':
```

```
            usage()
```

```
            sys.exit()
```

```
        elif opt in ("-n", "--num"):
```

```
            num = arg
```

```
            print ('Number is ',int(num))
```

```
        if(int(num) <= 0):
```

```
            print("Enter positive Number")
```

```
        else:
```

```
            pass
```

```
    sum1 = 0
```

```
    while(int(num) > 0):
```

```
        sum1 += int(num)
```

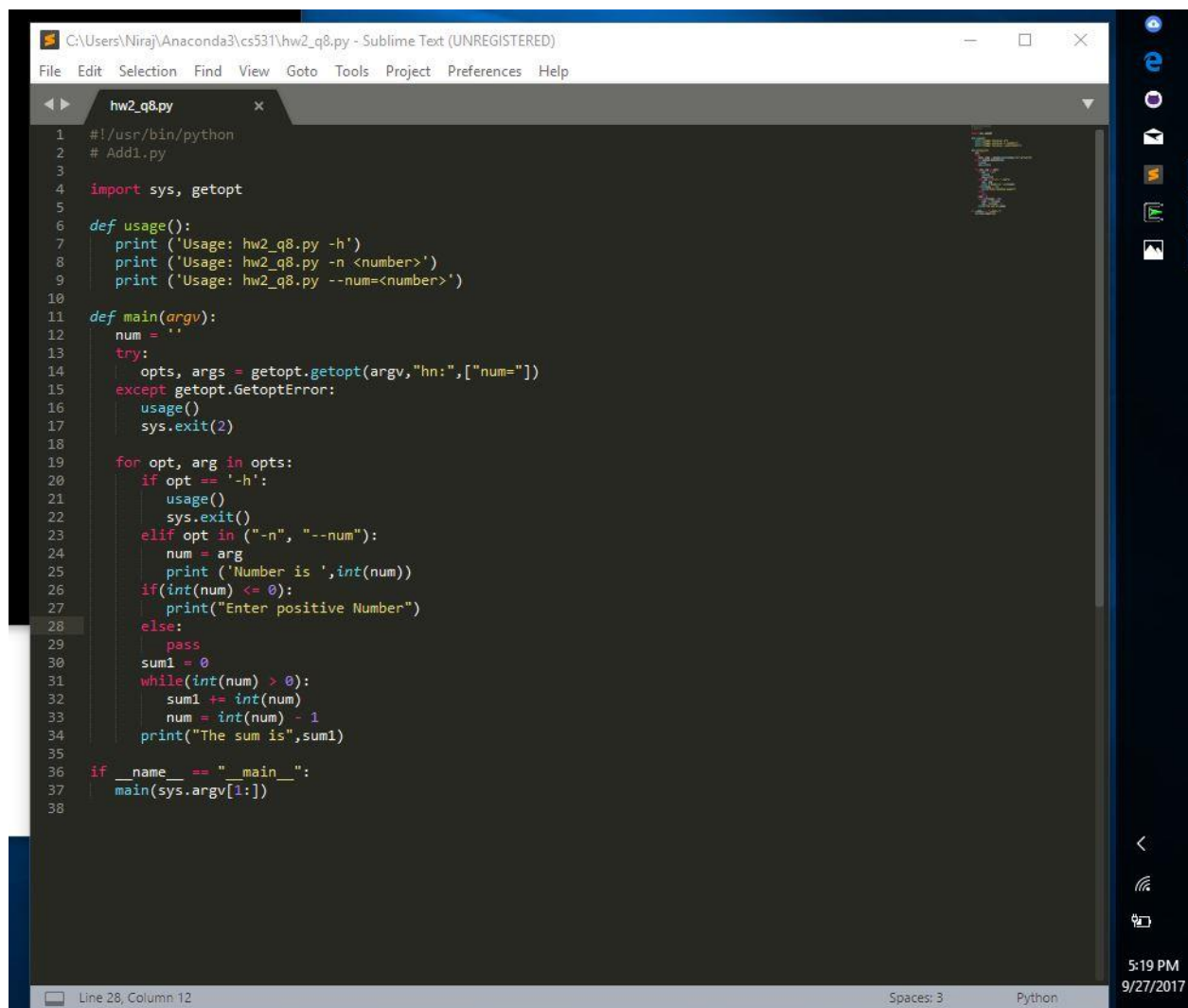
```
num = int(num) - 1
```

```
print("The sum is",sum1)
```

```
if __name__ == "__main__":
```

```
    main(sys.argv[1:])
```

ScreenShot :

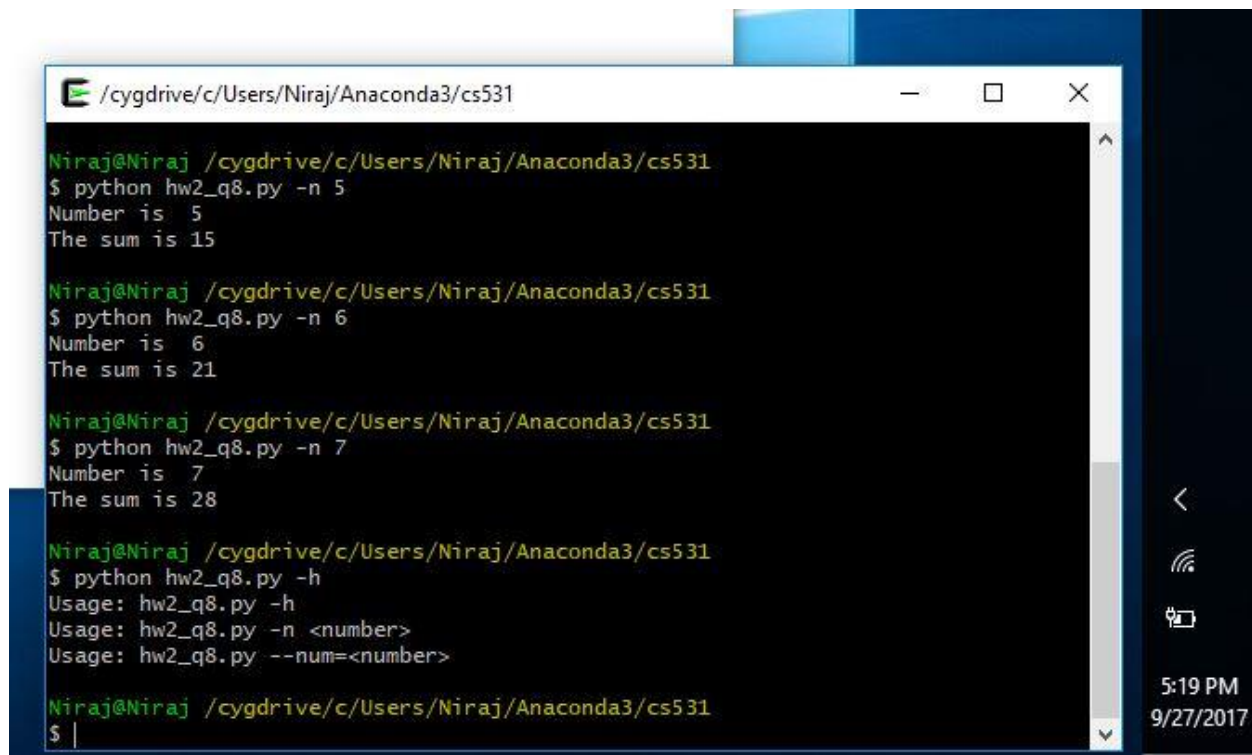


```
C:\Users\Niraj\Anaconda3\cs531\hw2_q8.py - Sublime Text (UNREGISTERED)
File Edit Selection Find View Goto Tools Project Preferences Help

hw2_q8.py x
1  #!/usr/bin/python
2  # Add1.py
3
4  import sys, getopt
5
6  def usage():
7      print ('Usage: hw2_q8.py -h')
8      print ('Usage: hw2_q8.py -n <number>')
9      print ('Usage: hw2_q8.py --num=<number>')
10
11 def main(argv):
12     num = ''
13     try:
14         opts, args = getopt.getopt(argv,"hn:",["num="])
15     except getopt.GetoptError:
16         usage()
17         sys.exit(2)
18
19     for opt, arg in opts:
20         if opt == '-h':
21             usage()
22             sys.exit()
23         elif opt in ("-n", "--num"):
24             num = arg
25             print ('Number is ',int(num))
26             if(int(num) <= 0):
27                 print("Enter positive Number")
28             else:
29                 pass
30             sum1 = 0
31             while(int(num) > 0):
32                 sum1 += int(num)
33                 num = int(num) - 1
34             print("The sum is",sum1)
35
36 if __name__ == "__main__":
37     main(sys.argv[1:])
38
```

Line 28, Column 12      Spaces: 3      Python      5:19 PM 9/27/2017

OutPut:



```
/cygdrive/c/Users/Niraj/Anaconda3/cs531
Niraj@Niraj /cygdrive/c/Users/Niraj/Anaconda3/cs531
$ python hw2_q8.py -n 5
Number is 5
The sum is 15

Niraj@Niraj /cygdrive/c/Users/Niraj/Anaconda3/cs531
$ python hw2_q8.py -n 6
Number is 6
The sum is 21

Niraj@Niraj /cygdrive/c/Users/Niraj/Anaconda3/cs531
$ python hw2_q8.py -n 7
Number is 7
The sum is 28

Niraj@Niraj /cygdrive/c/Users/Niraj/Anaconda3/cs531
$ python hw2_q8.py -h
Usage: hw2_q8.py -h
Usage: hw2_q8.py -n <number>
Usage: hw2_q8.py --num=<number>

Niraj@Niraj /cygdrive/c/Users/Niraj/Anaconda3/cs531
$ |
```

## Q-9

### Source Code:

```
#!/usr/bin/python
```

```
# Add1.py
```

```
import sys, getopt
```

```
def usage():
```

```
    print ('Usage: hw2_q9.py -h')
```

```
    print ('Usage: hw2_q9.py -n <number>')
```

```
    print ('Usage: hw2_q9.py --num=<number>')
```

```
def main(argv):
```

```
num = ""

try:

    opts, args = getopt.getopt(argv,"hn:",["num="])

except getopt.GetoptError:

    usage()

    sys.exit(2)


for opt, arg in opts:

    if opt == '-h':

        inputArgs = sys.argv[2:]

        b = sum(int(i) for i in inputArgs)

        print(b)

        sys.exit()

    elif opt in ("-n", "--num"):

        num = arg

        print ('Number is ',int(num))

    if(int(num) <= 0):

        print("Enter positive Number")

    else:

        pass

sum1 = 0

while(int(num) > 0):

    sum1 += int(num)

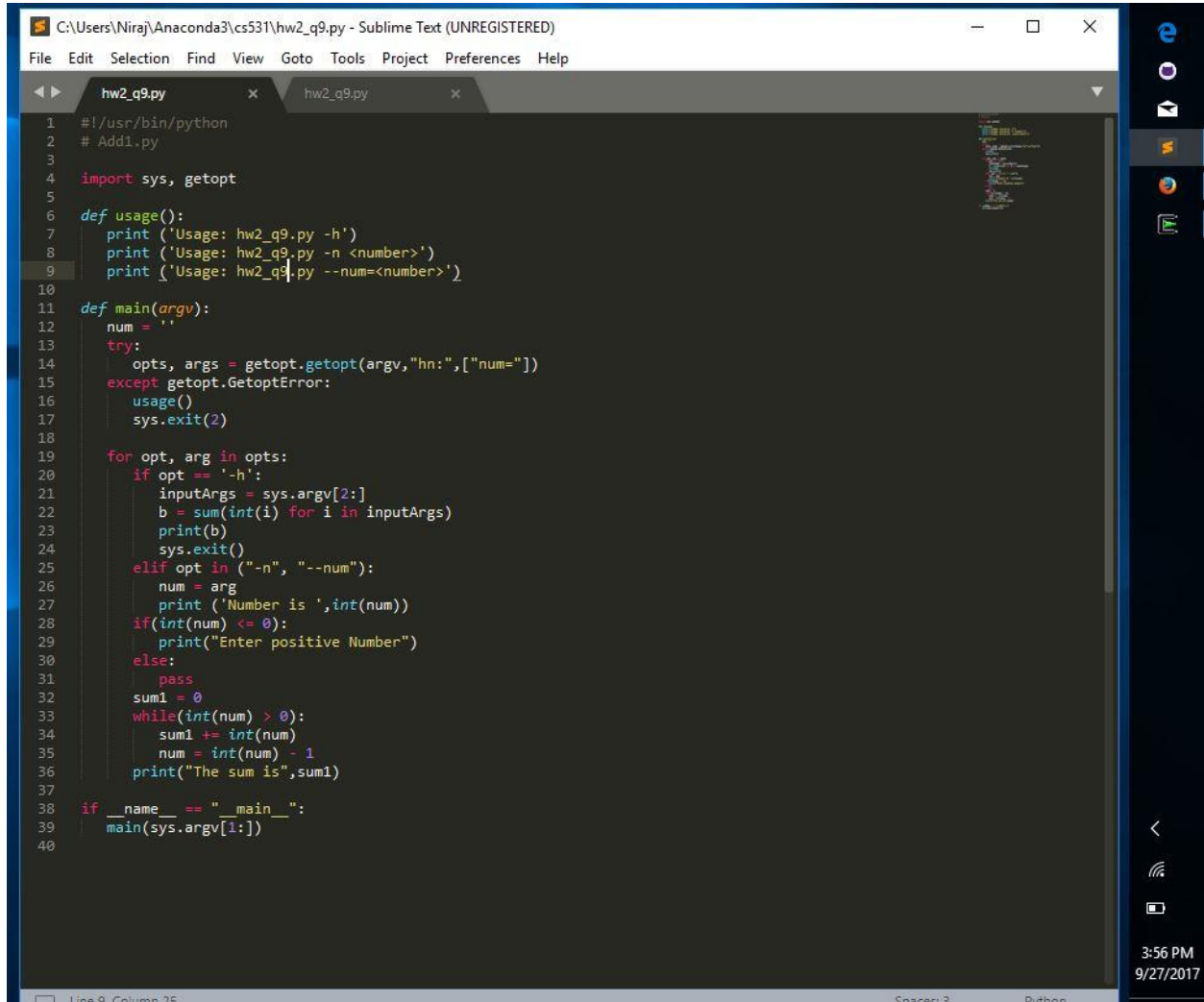
    num = int(num) - 1

print("The sum is",sum1)
```

```
if __name__ == "__main__":
```

```
    main(sys.argv[1:])
```

ScreenShot:

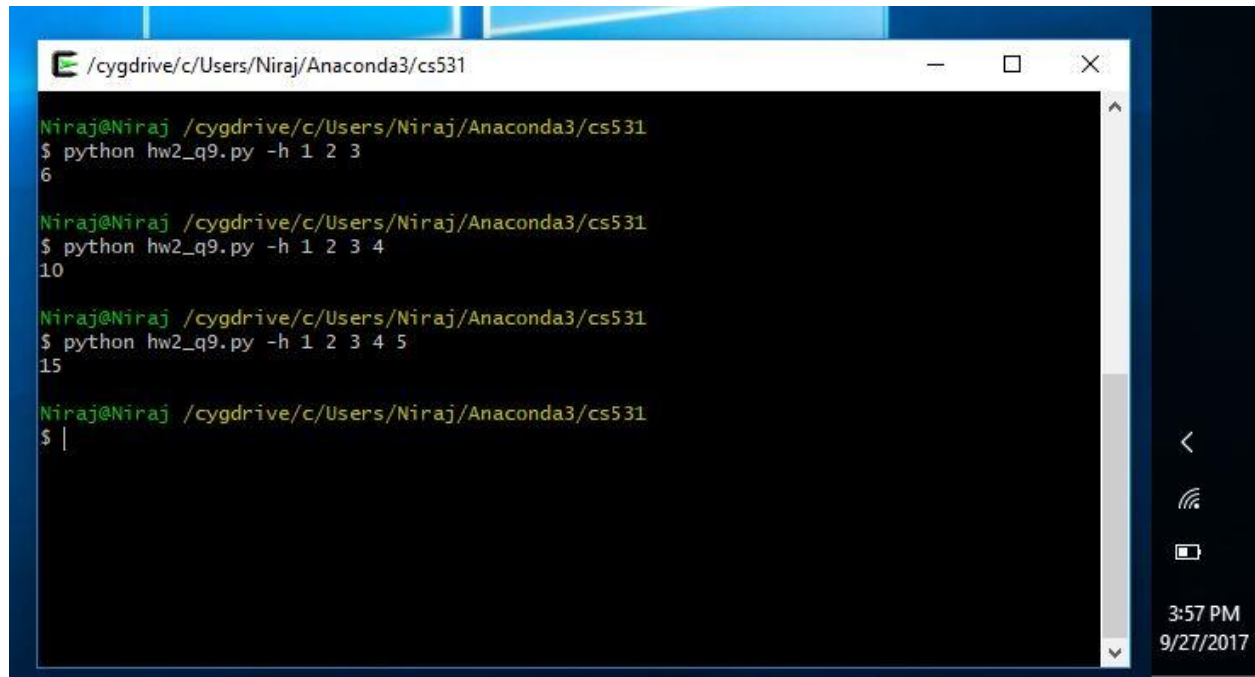


```
C:\Users\Niraj\Anaconda3\cs531\hw2_q9.py - Sublime Text (UNREGISTERED)
File Edit Selection Find View Goto Tools Project Preferences Help

hw2_q9.py x hw2_q9.py x
1 #!/usr/bin/python
2 # Add1.py
3
4 import sys, getopt
5
6 def usage():
7     print ('Usage: hw2_q9.py -h')
8     print ('Usage: hw2_q9.py -n <number>')
9     print ('Usage: hw2_q9.py --num=<number>')
10
11 def main(argv):
12     num = ''
13     try:
14         opts, args = getopt.getopt(argv,"hn:",["num="])
15     except getopt.GetoptError:
16         usage()
17         sys.exit(2)
18
19     for opt, arg in opts:
20         if opt == '-h':
21             inputArgs = sys.argv[2:]
22             b = sum(int(i) for i in inputArgs)
23             print(b)
24             sys.exit()
25         elif opt in ("-n", "--num"):
26             num = arg
27             print ('Number is ',int(num))
28             if(int(num) <= 0):
29                 print("Enter positive Number")
30             else:
31                 pass
32             sum1 = 0
33             while(int(num) > 0):
34                 sum1 += int(num)
35                 num = int(num) - 1
36             print("The sum is",sum1)
37
38 if __name__ == "__main__":
39     main(sys.argv[1:])
40
```

3:56 PM  
9/27/2017

OutPut:



The image shows a terminal window titled "/cygdrive/c/Users/Niraj/Anaconda3/cs531". The window contains the following text:

```
Niraj@Niraj /cygdrive/c/Users/Niraj/Anaconda3/cs531
$ python hw2_q9.py -h 1 2 3
6

Niraj@Niraj /cygdrive/c/Users/Niraj/Anaconda3/cs531
$ python hw2_q9.py -h 1 2 3 4
10

Niraj@Niraj /cygdrive/c/Users/Niraj/Anaconda3/cs531
$ python hw2_q9.py -h 1 2 3 4 5
15

Niraj@Niraj /cygdrive/c/Users/Niraj/Anaconda3/cs531
$ |
```

On the right side of the terminal window, there is a vertical toolbar with a back arrow, a Wi-Fi icon, and a battery icon. At the bottom right, the time and date are displayed: "3:57 PM" and "9/27/2017".