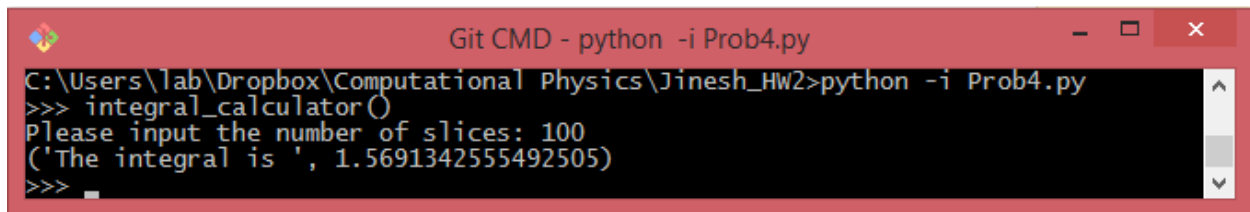
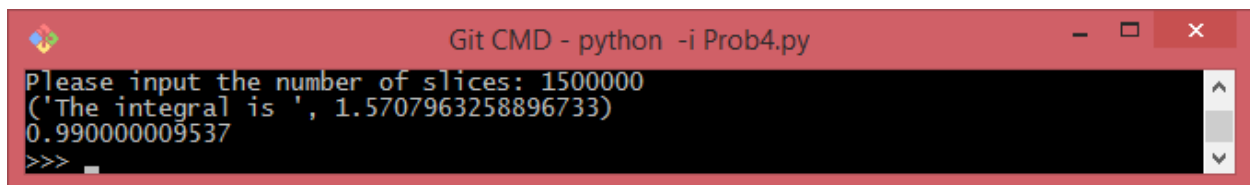


Problem 4:



```
Git CMD - python -i Prob4.py
C:\Users\lab\Dropbox\Computational Physics\Jinesh_HW2>python -i Prob4.py
>>> integral_calculator()
Please input the number of slices: 100
('The integral is ', 1.5691342555492505)
>>>
```

For part A, this is the integral for 100 slices, which isn't exactly far from the value of  $\pi/2$  but is far enough that it could cause more rounding error.



```
Git CMD - python -i Prob4.py
Please input the number of slices: 1500000
('The integral is ', 1.5707963258896733)
0.9900000009537
>>>
```

Using the `time.clock()` function in python, I was able to time the total computation time for the integral, and found that around 1500000 slices was sufficient for the integral to take about 1 second of time, which drastically increased the accuracy.