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## First Thing First

In order to attack this problem using threads I needed to know more about my computer:

A screenshot of a dark grey box containing white text that lists the specifications of an iMac. The text is as follows:

iMac (21.5-inch, Mid 2014)  
Processor 1.4 GHz Intel Core i5  
Memory 8 GB 1600 MHz DDR3

## Second

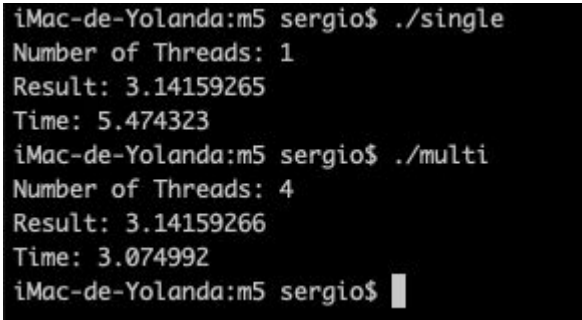
There are 2 key components for this program:

The first one is about measuring time. All I do is set a start time and a finish time in order to determine the time (seconds) in in order to execute the program. This functionality is valuable, since it will help to determine the execution time in order to make an appropriate conclusion.

The second part is about dividing a PI function into 4 four of them (4 threads). At the end, the results are joined in order to sumed and as a result we obtain an accurate Pi number (In this case 8 digits).

*\*\*to see the code, please have a look the the respective C programs.*

## Conclusion

A screenshot of a terminal window with a black background and white text. It shows the execution of two programs, ./single and ./multi, on a machine named iMac-de-Yolanda. The output for each program includes the number of threads, the result of the calculation, and the time taken in seconds.

```
iMac-de-Yolanda:m5 sergio$ ./single
Number of Threads: 1
Result: 3.14159265
Time: 5.474323
iMac-de-Yolanda:m5 sergio$ ./multi
Number of Threads: 4
Result: 3.14159266
Time: 3.074992
iMac-de-Yolanda:m5 sergio$
```

After executing both, the single and the multi threaded programs we can see that using threads to solve the problem is 1.78 times faster than a “conventional” solution.