

Projeto: Paralelização Série de Taylor em Python

Trabalho feito por:

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```
PS D:\> measure-command {python claytonserial.py}
```

```
Days           : 0
Hours          : 0
Minutes        : 0
Seconds        : 10
Milliseconds    : 677
Ticks          : 106779651
TotalDays      : 0,000123587559027778
TotalHours     : 0,00296610141666667
TotalMinutes    : 0,177966085
TotalSeconds    : 10,6779651
TotalMilliseconds : 10677,9651
```

```
soma = 0
for i in range(1,1000000000+1):
    soma = soma + (1/i)

print(soma)
```

```
= RESTART: D:\Minhas coisas\Mackenzie\5º semestre\Computação\
claytonserial.py
18.997896413852555
```

```
Days           : 0
Hours          : 0
Minutes        : 0
Seconds        : 24
Milliseconds   : 210
Ticks          : 242103730
TotalDays      : 0,000280212650462963
TotalHours     : 0,006725103611111111
TotalMinutes   : 0,4035062166666667
TotalSeconds   : 24,210373
TotalMilliseconds : 24210,373
```

Speed-up: 0,43806439687186316128252257502361

```
from multiprocessing import Pool, cpu_count
from functools import reduce

def taylor(param):
    return (1/param)

if __name__ == "__main__":
    num_cores = cpu_count()
    print("Num de processadores: ", num_cores)
    with Pool(num_cores) as pool:
        r = range(1, 100000000+1)
        result = pool.map(taylor, r)
    total = reduce(lambda x, y: x + y, result)
    print("Soma = %s" % total)
```

```
===== RESTART: D:\multiprocessing.py =====
Num de processadores: 12
Soma = 18.997896413852555
|
```