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COMP3230 Tutorial 3 Exercise 2

Performance Evaluation

```
basofjan@workbench:~$ ./hw2 10240000 4
Vector size=10240000    threads num=4.
[C library: memcpy]start
[C library: memcpy]The throughput is 61.91 Gbps.
[Singlethreading]start
[Singlethreading]The throughput is 99.44 Gbps.
[Multithreading]start
[Multithreading]The throughput is 170.23 Gbps.
[Multithreading with affinity]start
Main thread runs on CPU 3
Set affinity mask to include CPUs (1, 3, 5, ...  2n+1)
[Multithreading with affinity]The throughput is 218.72 Gbps.
```

It is immediately apparent that C library's memcpy has the lowest throughput, multithreading increases the throughput of the program and setting an affinity mask with multithreading further increases the throughput of the program.