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Computer Organization II

Benchmark Project Report

Computer Specifications

1. Brand of CPU (Intel or AMD) - Intel
2. Model of CPU - Dual-Core Intel Core i7
3. Number of cores on CPU - 2
4. Clock rate of CPU in GHz – 2.9 GHz
5. Amount of memory in GB - 16 GB
6. Speed of memory - 2133 MHz LPDDR3
7. Capacity of hard drive - 500.28 GB
8. Type of hard drive – SSD
9. SSD Specifications
     i. Max sequential read speed - 1539.5 MB/s
     ii. Max sequential write speed - 1353.2 MB/s
     iii. Max random read speed - 9.92 MB/s
     iv. Max random write speed - 10.74 MB/s

Screen Shots

32-bit Integer operation benchmark

```
nicolesullivan@Nicoles-MacBook-Pro corg_benchmark % g++ main.cpp benchmark.cpp
nicolesullivan@Nicoles-MacBook-Pro corg_benchmark % ./a.out
Integer Operation Benchmark Execution Time: 225.407 seconds
nicolesullivan@Nicoles-MacBook-Pro corg_benchmark %
```

32-bit Floating Point operation benchmark

```
[nicolesullivan@Nicoles-MacBook-Pro corg_benchmark % g++ main.cpp benchmark.cpp
[nicolesullivan@Nicoles-MacBook-Pro corg_benchmark % ./a.out
 Floating Point Operation Benchmark Execution Time: 383.028 seconds
nicolesullivan@Nicoles-MacBook-Pro corg_benchmark %
```

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Memory benchmark

```
[nicolesullivan@Nicoles-MacBook-Pro corg_benchmark % g++ main.cpp benchmark.cpp
[nicolesullivan@Nicoles-MacBook-Pro corg_benchmark % ./a.out
 Memory Benchmark Execution Time: 37.5136 seconds
 nicolesullivan@Nicoles-MacBook-Pro corg_benchmark %
```

Hard drive benchmark

```
nicolesullivan@Nicoles-MacBook-Pro corg_benchmark % g++ main.cpp benchmark.cpp
[nicolesullivan@Nicoles-MacBook-Pro corg_benchmark % ./a.out
 Hard Drive Benchmark Execution Time: 10.0479 seconds
 nicolesullivan@Nicoles-MacBook-Pro corg_benchmark %
```

Results

Benchmark	Execution Time
32-bit Integer operation benchmark	225.407 seconds
32-bit Floating Point operation benchmark	383.028 seconds
Memory benchmark	37.5136 seconds
Hard drive benchmark	10.0479 seconds
Total	**655.9965 seconds**