

ESE-532 Homework 1

James Bond

Partner: Donald Duck

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Feedback (optional)

This assignment was really easy. Even though my partner was lazy, I finished on time. Only question 3 was hard. I would have understood it quicker if a picture was provided.

Answers

1. (a) Stage A takes 3.1 Mcycles. Stage B takes 4.2 Mcycles. Therefore, the application takes $3.1 + 4.2 = 7.3$ Mcycles.
- (b) Table 1 shows the results for application A. Table 2 shows the results for application B.
- (c) According to the article about the "Central processing unit" on Wikipedia (https://en.wikipedia.org/wiki/Central_processing_unit), the computer industry has used the term CPU at least since the early 1960s.

Phase	Frequency (MHz)
Start	100
Middle	200
End	150

Table 1: Result for Application A

Phase	Frequency (MHz)
Start	130
End	250

Table 2: Result for Application B

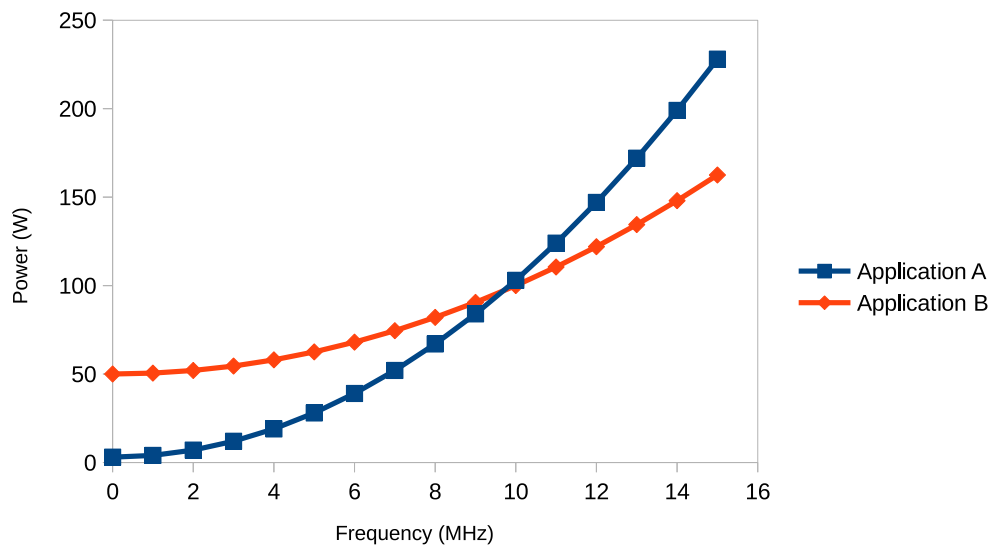


Figure 1: Linear Function

- Figure 1 shows how y varies with respect to x for a linear function. For this graph, we used the Fibonacci numbers in the appendix.

3. The code of application A is:

```
#include <stdio.h>

int main()
{
    int X = 3;
    int Y = X + 4;

    ...

    printf("Result: %i\n", Y);

    ...

    return 0;
}
```

4. Lorem ipsum dolor sit amet, consectetur adipiscing elit. Integer nec odio. Praesent libero. Sed cursus ante dapibus diam. Sed nisi. Nulla quis sem at nibh elementum imperdiet. **Therefore, the energy of application A is 60 J.** Duis sagittis ipsum. Praesent mauris. Fusce nec tellus sed augue semper porta. Mauris massa. Vestibulum lacinia arcu eget nulla. Class aptent taciti sociosqu ad litora torquent per conubia nostra, per inceptos himenaeos.

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I, James Bond, certify that I have complied with the
University of Pennsylvania's Code of Academic Integrity
in completing this final exercise.

Appendix: Fibonacci numbers

These are all 60 fibonacci numbers that I used for question 2.

1 1
2 1
3 2
4 3
5 5
6 8
7 13
8 21
9 34
10 55
11 89
12 144
13 233
14 377
15 610
16 987
17 1597
18 2584
19 4181
20 6765
21 10946
22 17711
23 28657
24 46368
25 75025
26 121393
27 196418

28 317811
29 514229
30 832040
31 1346269
32 2178309
33 3524578
34 5702887
35 9227465
36 14930352
37 24157817
38 39088169
39 63245986
40 102334155
41 165580141
42 267914296
43 433494437
44 701408733
45 1134903170
46 1836311903
47 2971215073
48 4807526976
49 7778742049
50 12586269025
51 20365011074
52 32951280099
53 53316291173
54 86267571272
55 139583862445
56 225851433717
57 365435296162
58 591286729879
59 956722026041
60 1548008755920