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Reflection Paper

The way I tackled this assignment was first coding it in C, I have been coding in C the longest so I did the recursive and non-recursive functions in C first. I just followed the algorithm given to us and went on from there. Once I finished it in C I then moved on to doing it in Fortran, it was somewhat easy doing it in this language because it just seemed like I was deriving it from what I coded in C. The same goes for Ada I just derived what I had for C.

BENIFITS

- C has familiarity
- Fortron code to C was almost identical except for syntax
- C easy way to calculate the time of the function
- Fortron easy way to calculate to of function
- Ada easy way to calculate the time of the function
- All math functions are benefits
- I also thought with ADA and Fortran my lack of experience in those languages I had trouble working with the loop for the non-recursive functions.

Limitations

- I thought Ada it was tough to set up the unsigned environment
- Peronsonally I don't like how you have to declare variables in ADA.

At the end of the day, I didn't find this assignment too difficult and agree it was a fun learning experience because:

1. I first wrote down the algorithm that in the assignment description
2. I then figured out what logic I would use for the non-recursive algorithm
3. Coded both things I wrote down in C
4. Coded it in Fortran deriving it from C
5. Coded it in Ada deriving it in from C
6. I then implemented the time function in C first
7. Then I implemented the time function in fortran from the blog.
8. Then I implemented the time fucntion in Ada which I got from the blog

Next, I would Like to talk about in table form the information I have learned from this assignment.

Program	Test Case	Time
peasant.c	A = 20 b= 30 answer = 600	0.000053
peasantp2.c	A = 20 b = 30 answer = 600	0.000041
peasant.c	A = 23459 b= 234567 answer = 1207739957	0.000044
peasantp2.c	A = 23459 b= 234567 answer = 1207739957	0.000053
peasant.f95	A = 20 b= 30 answer = 600	4.99999151E-05
peasantp2.f95	A = 20 b = 30 answer = 600	5.60001936E-05
peasant.f95	A = 23459 b= 234567 answer = 1207739957	5.69999684E-05
peasantp2.f95	A = 23459 b= 234567 answer = 1207739957	5.20001631E-05
peasant.adb	A = 20 b= 30 answer = 600	0.000046000
peasantp2.adb	A = 20 b = 30 answer = 600	0.000045000
peasant.adb	A = 23459 b= 234567 answer = 1207739957	0.000045000
peasantp2.adb	A = 23459 b= 234567 answer = 1207739957	0.000047000

- With C: The recursive program was better for bigger numbers and the nonrecursive was better for smaller numbers.
- With Fortran: The recursive function was better with smaller numbers and the non-recursive function was better with bigger numbers.
- With Ada: The recursive program was better for bigger numbers and the nonrecursive was better for smaller numbers.

The slowest Language was fortron I think this because of the process it takes to read and write data.