Connexions module: m33718

# TIMING AND PROFILING - EXERCISES\*

## Charles Severance Kevin Dowd

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#### Exercise 1

Profile the following program using gprof. Is there any way to tell how much of the time spent in routine c was due to recursive calls?

```
main()
{
    int i, n=10;
    for (i=0; i<1000; i++) {
        c(n);
        a(n);
    }
}
c(n)
int n;
{
    if (n > 0) {
        a(n-1);
        c(n-1);
    }
}
a(n)
int n;
{
    c(n);
}
```

#### Exercise 2

Profile an engineering code (floating-point intensive) with full optimization on and off. How does the profile change? Can you explain the change?

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### Exercise 3

Write a program to determine the overhead of the getrusage and the etime calls. Other than consuming processor time, how can making a system call to check the time too often alter the application performance?