

# Tweaking our computation of the interval between two moments in time

[devblogs.microsoft.com/oldnewthing/20050415-52](http://devblogs.microsoft.com/oldnewthing/20050415-52)

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We can take our [computation of the interval between two moments in time](#) and combine it with the trick we developed for [using the powers of mathematics to simplify multi-level comparisons](#) to reduce the amount of work we impose upon the time/date engine.

```
static void PrintAge(DateTime bday, DateTime asof)
{
    // Accumulate years without going over.
    int years = asof.Year - bday.Year;
    if (asof.Month*32 + asof.Day < bday.Month*32 + bday.Day) years--;
    DateTime t = bday.AddYears(years);
    // Accumulate months without going over.
    int months = asof.Month - bday.Month;
    if (asof.Day < bday.Day) months--;
    months = (months + 12) % 12;
    t = t.AddMonths(months);
    // Days are constant-length, woo-hoo!
    int days = (asof - t).Days;
    SC.WriteLine("{0} years, {1} months, {2} days",
                years, months, days);
}
```

Observe that we avoided a call to the `AddYears` method (which is presumably rather complicated because years are variable-length) by replacing it with a multi-level comparison to determine whether the ending month/day falls later in the year than the starting month/day. Since no month has 32 days, a multiplier of 32 is enough to avoid an overflow of the day into the month field of the comparison key.



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