

Algorithms Level 4



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Problem # 4/4 Solution Using C++

```
#include <iostream>
using namespace std;

bool isLeapYear(short Year)
{
    // if year is divisible by 4 AND not divisible by 100
    // OR if year is divisible by 400
    // then it is a leap year
    return (Year % 4 == 0 && Year % 100 != 0) || (Year % 400 == 0);
}

short NumberOfDaysInAYear(short Year)
{
    return isLeapYear(Year) ? 366 : 365;
}

short NumberOfHoursInAYear(short Year)
{
    return NumberOfDaysInAYear(Year) * 24;
}

int NumberOfMinutesInAYear(short Year)
{
    return NumberOfHoursInAYear(Year) * 60;
}

int NumberOfSecondsInAYear(short Year)
{
    return NumberOfMinutesInAYear(Year) * 60;
}

short ReadYear()
{
    short Year;
    cout << "\nPlease enter a year to check? ";
    cin >> Year;
    return Year;
}
```



Problem # 4/4 Solution Using C++

```
int main()
{
    short Year = ReadYear();
    cout << "\nNumber of Days    in Year [" << Year << "] is "
         << NumberOfDaysInAYear(Year);

    cout << "\nNumber of Hours   in Year [" << Year << "] is "
         << NumberOfHoursInAYear(Year);

    cout << "\nNumber of Minutes in Year [" << Year << "] is "
         << NumberOfMinutesInAYear(Year);

    cout << "\nNumber of Seconds in Year [" << Year << "] is "
         << NumberOfSecondsInAYear(Year);

    system("pause>0");
    return 0;
}
```