Lab 3.4.3 Second step further: finding day of year

Objectives

Improve the student's skills in:

- building a set of cooperating functions;
- using structured types.

Scenario

Let's add another powerful tool to our calendar toolkit.

Now write a **function** which:

- is named "dayOfYear"
- accepts one argument of type **Date** – it's a structure similar to the one you were using before;
- returns an **int** value, being the number of the day within a certain year (assuming that 1st January is the first day of every year);
- should be *mute*.

A skeleton of the code is here for you, as well as an example of input and output.

```cpp
#include <iostream>

using namespace std;

struct Date {
 int year;
 int month;
 int day;
};

bool isLeap(int year) {
 // The code you've inserted already
}

int monthLength(int year, int month) {
 // The code you've inserted already
}

int dayOfYear(Date date) {

 // Insert your code here

}

int main(void) {

 Date d;
 cout << "Enter year month day: ";
 cin >> d.year >> d.month >> d.day;
 cout << dayOfYear(d) << endl;
 return 0;
}
```

Example input

```
2016 3 1
```

Example output

```
61
```

Example input

```
2015 3 1
```

Example output

```
60
```

Example input

```
2016 12 30
```

Example output

```
365
```

Example input

```
2015 12 31
```

Example output

```
365
```