

Lab 3.4.1 Old problems, new methods: functions

Objectives

Familiarize the student with:

- the concept of defining and invoking a function;
- passing argument values into a function;
- refactoring existing code to meet new requirements.

Scenario

Some time ago we asked you to write a program to find out if a certain year was leap or common. We want to return to the issue, but in a completely different form.

We want you to write a **function** equipped with the following features:

- its name should be "isLeap";
- it accepts one argument of type int representing the year number;
- it returns a **bool** value: **true** if the year is leap and **false** otherwise;
- it should be *mute*! It mustn't write anything to the output – the only way it reveals its actions is by the value it returns.

We've prepared a skeleton of the program – fill the function body with the appropriate content.

We've also attached the output that is expected from your program.

```
using namespace std;

bool isLeap(int year) {

    // Insert your code here

}

int main(void) {

    for(int yr = 1995; yr < 2017; yr++)
        cout << yr << " -> " << isLeap(yr) << endl;
    return 0;
}
```

Example output

```
1995 -> 0
1996 -> 1
1997 -> 0
1998 -> 0
1999 -> 0
2000 -> 1
2001 -> 0
2002 -> 0
2003 -> 0
2004 -> 1
2005 -> 0
2006 -> 0
2007 -> 0
2008 -> 1
2009 -> 0
2010 -> 0
2011 -> 0
2012 -> 1
2013 -> 0
2014 -> 0
2015 -> 0
2016 -> 1
```