

# CSCI 135 Software Design and Analysis, C++

## Lab 2

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### Lab A: FIZZ BUZZ

This is a famous question. You need to print the numbers from 1 to 100. But if the number is a multiple of three, print “FIZZ” instead. If it is a multiple of five, print “BUZZ” instead. If it is a multiple of both, print “FIZZBUZZ” instead.

### Lab B: Leap years

(a) A leap year is one that is divisible by 4 but not 100, unless it is divisible by 400. Write a function that accepts an integer as a parameter (the year), and returns true if the year is a leap year, and false otherwise.

(b) Then, from main, use that function to output “LEAP” or “NOT LEAP” for all the years from 1900 until 2014.

### Lab C: Strange sum

(a) Write a function that takes as parameter an integer and returns the sum of its digits. To do this, use the division and modulus operators to extract the digits one at a time. For example, if the number is 123, observe that  $123\%10$  is 3 and  $123/10$  is 12. You will need to use a loop.

(b) From main, write a program that outputs the sum of digits for all numbers from 0 to 100.