

## **Lab 4**

### ***Program One***

Write a C++ program that reads the year values determines wheather each of the years is a leap year or not.

Here is an example of the data:

*1984  
1345  
2004  
2015  
1800  
2021  
1900  
2000  
2020*

Your program reads in one year value, determines whether it is a leap year, output the result, and move on to read and process the next year value. Keep doing this until all the year values are processed

An example program output for this data file is shown below:

*yes  
no  
yes  
no  
no  
no  
no  
yes  
yes*

### ***Program Two***

Write a C++ program that simulates flipping a coin repeatedly and continues until three consecutive heads are tossed. At that point, your program should display the total number of coin flips that were made. Use rand() function to simulate random toss of the coin.

Here are a few example runs of the program:

Sample run 1:

*Head  
Tail  
Tail  
Head*

*Head*  
*Tail*  
*Head*  
*Tail*  
*Head*  
*Head*  
*Head*  
*It took 11 flips to get 3 consecutive heads.*

Sample run 2:

*Tail*  
*Head*  
*Tail*  
*Tail*  
*Tail*  
*Tail*  
*Tail*  
*Head*  
*Head*  
*Tail*  
*Head*  
*Tail*  
*Head*  
*Head*  
*Tail*  
*Tail*  
*Head*  
*Head*  
*Head*  
*It took 18 flips to get 3 consecutive heads.*