

CSCI 2170 Homework 2 (Due: beginning of class Monday, Feb 2nd)

1. Write a program, named **coin.cc**, 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. The following is one possible sample run of the program:

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

2. This program (named **and.cc**) finds the first three position of the string “and” in a sentence entered by user. The positions should be stored in int variables called first, second, and third. The values of these three variables are then displayed. After the program is executed, the content of the sentence should remain unchanged. For example, the user enters the sentence:

The two kids played and played, and finally got tired, and fall asleep.

Your program should output:

```
first: 20
second: 32
third: 55
```

If there are less than 3 “and” in the sentence, the missing position should have a value “no position” printed. For example, the user enters the sentence:

Tom and Jerry are lovely characters.

Your program should output:

```
first: 4
second: no position
third: no position
```

3. This program (named **upper.cc**) prompts the user to enter a sentence and outputs the sentence with the first letter of each word capitalized. For example, the user enters the sentence:

We drank our coffee the Russian way. That is to say we had vodka before it and vodka afterwards.

Your program should output:

We Drank Our Coffee The Russian Way. That Is To Say We Had Vodka Before It And Vodka Afterwards.

****bold, italic font indicates content entered by the user ****

Electronically submit the three programs in D2L Dropbox named “Homework 2”. You are only required to submit the three source files: **coin.cc**, **and.cc** and **upper.cc**.