**CST 231 PLTL Week 4**

**Exercise 1:**

Work on each of these individually first, then partner up. Switch partners between exercises.

Convert this while loop into a for loop:

|  |  |
| --- | --- |
| int k = 0;  while (k < 7)  {  cout << “Hola ” << k << endl;  k = k + 2;  } |  |

a. What is the output of the loop?

b. What is the value of k after the loop completes?

c. Watch your peer leader be a human compiler on this loop.

**Exercise 2:**

Convert this for loop into a while loop:

|  |  |
| --- | --- |
| for (int countdown = 10; countdown >=0; countdown--)  {  cout << “T-minus ” << countdown << endl;  }  cout << “BLASTOFF!!!” << endl; |  |

**Exercise 3:**

Write a program that prints all prime numbers from 1 to 10,000.

\*Hint: Use a big loop with if statements to print out all the prime numbers.

**Exercise 4:**

Create a random number guessing game! The program will prompt the user to create an end number range. For example all the ranges start at 1, the user would input the ending number e.g. 10, 100, 1000, etc. The program will create a random number within that range. The program would then run in a loop giving the user 3 guesses, for each wrong guess prompt the user with higher or lower and if the guess is correct letting the user know and ending the loop.