WT Assignment 5

Q.1. Write a simple Timer that can periodically print a timeout message.

Q.2. Write a simulation program for the fruit market. The farmer will be able to produce different types of fruits (apple, orange, grape, and watermelon), and put them in the market to sell. The market has limited capacity and farmers have to stand in a queue if the capacity is exceeded to sell their fruits. Consumers can come to the market any time and purchase their desired fruits; and if the fruits they want to buy runs out, they are willing to wait until the supply of that kind is ready. (Hint: implementing this market will encounter the producer and consumer problem, and it probably needs multiple buffers for different kinds of fruits).

Q.3. Write a program to create a simple counting thread. It will count to 100, pausing one second between each number. Also, in keeping with counting theme, it will output a string every ten number.

Q.4. Write a program that uses multiple threads to find the integer in the range 1 to 10000 that has the largest number of divisors but for the range 1 to 100000 (or less, if you don't have a fast computer).At the end of the program, output the elapsed time, the integer that has the largest number of divisors, and the number of divisors that it has.

Q.5. You are given a paragraph, which contain n number of words, you are given m threads. What you need to do is, each thread should print one word and give the control to next thread, this way each thread will keep on printing one word , in case last thread come, it should invoke the first thread. Printing will repeat until all the words are printed in paragraph. Finally all threads should exit gracefully. Write a program to implement this.