Taimoor Hafeez CISC 3320 ET6

Assignment 2

I created a class that extends the threads class. The instance variables that I created were an integer that keeps track of the thread number, an integer that keeps track of the pid number that is used by the thread, a long number for the minimum amount of sleep time which is 5000 milliseconds , a long number for the maximum amount of sleep time which is 20000 milliseconds, and a long number that generates a random sleep time ranging from 5000 to 20000.

I created a construct for a thread object so I can assign a number to each thread that I am making and show that they are unique.

The run() method carries out the action of the thread when the thread is started. It prints out the thread number that is in use and allocated a pid to the thread. The thread sleeps for a random amount of time anywhere from 5000 to 20000 milliseconds. After the sleep time, it prints out which thread is about to be released as well as how long the sleep time was. The pid number is then released. An exception if the thread is interrupted.

The main method first calls allocate\_map() which is a method from last assignment that creates an array of size 4700 and assigns a value of 0 to every index meaning every pid is ready to assigned. I used a for loop to create 25 different threads, using the constructor I created, that will perform the actions in the run() method at the same time. All threads are started which means they will perform the actions in the run() method. All threads are assigned a pid number. Each thread sleeps for a random amount from 5000 to 20000 milliseconds and then releases the pid it was allocated. An exception if the thread is interrupted.