

Programming Assignment

Imagine, if you will, that you have a long, long corridor that stretches out as far as the eye can see. In that corridor attached to the ceiling are lights that are operated with a pull cord.

Let's say there are 20,000 lights in the row.

In the beginning, all of the lights are turned off. Somebody comes along and pulls on each of the chains turning on each of the lights. Another person comes behind the individual and pulls the chain on every second light. Now, a third person comes along and pulls the cord on every third light. That is, lights number 3, 6, 9, 12, 15, etc. Another person comes along and pulls the cord on lights number 4, 8, 12, 16, etc. Of course, each person is turning on some lights and turning other lights off. If there are 20,000 lights, at some point someone is going to come skipping along and pull every 20,000th chain.

Some lights will be on, and some will be off. Can you predict which lights will be on?

Write a program to determine which lights will be on. The program must have a main menu and a toolbar. You must use nested for loops or a do while loop and a for loop to accomplish the task.

Due date for the assignment is Wednesday, December 7, 2005.