

Lab: While loops

We have the ability to delete customers. But you realize of course that this process could be run by two or more people simultaneously. These processes could interfere by altering the same Customer.txt file.

Let's fix that. We're going to create a lockfile solution. Before a delete, each process checks for a lockfile. If it exists, we know someone else is running right now so we wait until the file is gone. Once it is gone, we can run along ourselves.

1. Open your customerFunctions library file.
2. At the start of that file, create a variable called \$LOCKFILE. Set it equal to some filename of your own choosing. It should live in the /tmp directory. Make it unique to you but put "LockFile" in the name of it somewhere.
3. Now find your deleteCustomer function. At the top of deleteCustomer(), check for the existence of this file. (hint: use the test command).
4. Use a *while* to loop endlessly until the file no longer exists.
5. Make sure there is a sleep 1 or sleep 2 in the loop or this process will chew up system resources.
6. Once the file is gone, your function should create that file, putting your username and the current date and time in it.

Remove the lockfile

Alright, at this point you're pausing until another process is finished and creating the lockfile so no one else can run simultaneously with us. But the lockfile will be there forever.

7. At the end of the deleteCustomer() function, delete your \$LOCKFILE from the /tmp directory. (hint: use rm)
8. Run and test your delete customer web page to make sure that it still deletes a customer as expected. Fix any problems you find.

Testing out the lock

9. In another shell window, manually create your lockfile. (hint: you can use the touch command to do this).
10. Open a browser and navigate to your delete customer web page. Go ahead and delete a customer. Your process should hang because the lockfile exists.
11. Without stopping the web page in any way, go back to your shell window and manually remove the lockfile. You should see your webpage immediately respond by deleting the record.

Once it is waiting on the lockfile properly, you can be finished.

12. Bonus! In the while loop, when you're waiting for the lockfile to be removed, write to a logfile somewhere that your process is waiting. Add a process ID, your username and a date/time to it.