Exercise - McDonald’s

*General*

Development tool – Visual Studio, C#

Help tools – Internet, MSDN.

*Your goals*

1. Design the class interface.
2. Design the object model used for implementation.

*Note: After finalizing 1 and 2 the proposed solution should be presented.*

1. Implement designed solution.
2. The code should be properly documented and to follow common coding standards.
3. The performance implication should be considered.

*Task*

1. Develop program, which emulates McDonald’s workflow.
2. There are following dish types:
3. Hamburger;
4. Cheeseburger;
5. mac-chicken;
6. chipped potato;
7. ice cream.
8. There are five cooks working in McDonald’s. Everyone is responsible for own dish type preparing.

Prepared food is located on five different tables. When cook complete preparing he should put dish on the table. Every table can consist no more than 10 dishes. If table is full then cook has a rest.

1. There are three cashiers in the McDonald’s. Everyone has own cash desk.
2. When a new client comes, he should select free cashier or goes to the smallest queue. One cashier can serve one client. The client orders what he wants to eat based on menu he sees on the wall (for example 2 cheeseburgers, chipped potato and ice cream). Cashier goes to the appropriate tables to get the dish and gives it to the client. Client pays money and goes out.
3. At the end of the day (keyboard event), All clients which are still in the queues go out, all cooks go home, and cashiers send they profit to the McDonald’s manager, which prints the result to his book (on the screen).
4. The McDonald’s should perform well in a multi-threaded environment
5. A small test application should be written to test the module. It should supply the clients for the McDonald’s - every X seconds it should create Y clients and send them in.

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***Good luck!***