CS 121 **Programming Assignment #3**
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February 20, 2019 **Due:** March 1, 2019

Objective Write a program to simulate customer transactions in a bank using queues (implemented as classes).

Program Description The bank has 3 teller lines (queues). Each line is to be simulated by a queue. One of the teller lines is an express line (check cashing/deposit only).

Rules

1. Customers go to shortest line (can't look at the transactions that the other customer(s) in front of them have).
2. If a line has no customers in it, a customer may move *from the end* of a line (queue) to an open line.
3. Express line transactions take two clock cycles, the other lines process transactions at the rate of one transaction for each four clock cycles.

Requirements

1. Write functions to:
   - Remove a customer from the end of a queue
   - Move a customer from one queue to another
   - Display the contents of all queues (testing)
2. Test your program.
   - Read data from an external file
   - Create reasonable display of the banking process.

Deliverables

- Program—fully documented.
- A program design. Describe all classes and methods needed to implement your program.
- Programming Log:
  - Record the time required to design and implement your program.
  - Record of things you encountered/learned while implementing your program.
- Output—proof that your program worked.

If you have any questions regarding this assignment, do not hesitate to contact me. Start working on this assignment as soon as possible.