* **System Configuration:**

**1.Multiple Queues:**

The manager has established three separate lines or queues for customers. Each queue represents a distinct waiting line, and customers join the line that they choose or are directed to.

**2.Single Server:**

There is only one teller or service point available to assist customers. This server moves between the three queues, serving one customer from each line in a cyclical or round-robin fashion.

* **Queueing Dynamics:**

**1.Customer Arrival:**

Customers arrive at the bank branch and join one of the three queues.

The order of arrival determines their position in the respective queue.

**2.Service Process:**

The single server moves sequentially between the queues.

When the server becomes available, it serves the next customer in the first queue, then the next customer in the second queue, and so on.

This process continues in a loop, cycling through the queues.

**3.Customer Departure:**

After being served, customers leave the system.

The length of each queue decreases as customers are served, and it increases as new customers arrive.

* **Advantages:**

**1.Fairness:**

The round-robin approach ensures that customers in each queue are served in a fair and balanced manner.

No single queue consistently gets preferential treatment.

**2.Queue Length Distribution:**

Distributing the server's attention across multiple queues can help balance the overall queue lengths.

This may lead to shorter perceived wait times for customers, as the load is distributed more evenly.

**3.Simplicity:**

This queuing system is relatively simple to implement and manage compared to more complex schemes.

* **Considerations:**

**1.Server Efficiency:**

The efficiency of this system depends on the speed at which the server can transition between queues and serve customers.

**2.Customer Behavior:**

Customer satisfaction can be influenced by the perceived fairness and efficiency of the queuing system.

**3.Queue Management:**

Regular monitoring and adjustment may be necessary to optimize the system based on customer traffic patterns.

In summary, a multiple-queue, single-server system with a round-robin approach is a practical solution to manage customer queues in a bank branch, offering fairness in service distribution and simplicity in implementation.