**Simulation Report**

**Objective:**  
The purpose of this simulation was to evaluate the customer checkout process, focusing on the total time customers spend in the system and the time the checkout clerk remains idle.

**Methodology:**

1. **Data Configuration:**  
   The simulation involved 20 customers, with key variables including:
   * **Interarrival Time:** The time interval between customer arrivals.
   * **Service Time:** The duration it takes to serve each customer.
   * **Arrival Time:** The specific moment a customer arrives for service.
   * **Service Start and End Times:** The exact points when service starts and finishes for each customer.
2. **Key Metrics:**
   * **Waiting Time:** The amount of time a customer spends waiting before receiving service.
   * **Time in System:** The total time a customer remains in the system, from arrival to the end of service.
   * **Idle Time:** The period when the checkout clerk is not actively serving a customer.
3. **Simulation Replications:**  
   To capture variability in the process, the simulation was repeated multiple times. Each replication provided:
   * **Average Time in System:** The average duration customers stayed in the system.
   * **Clerk Idle Time Percentage:** The percentage of time the clerk was not serving customers.

**Conclusion:**  
This simulation delivered valuable insights into how to improve the checkout process. By reducing idle time and optimizing the flow of arrivals and services, overall efficiency can be enhanced.