Excerpt from *The Big Book of Simulation Modeling: Multimethod Modeling with AnyLogic 8*
by Borshchev and Grigoryev (2020)

Example 2.2: Bank

Consider a bank with an ATM inside. The process in the bank is described as follows:

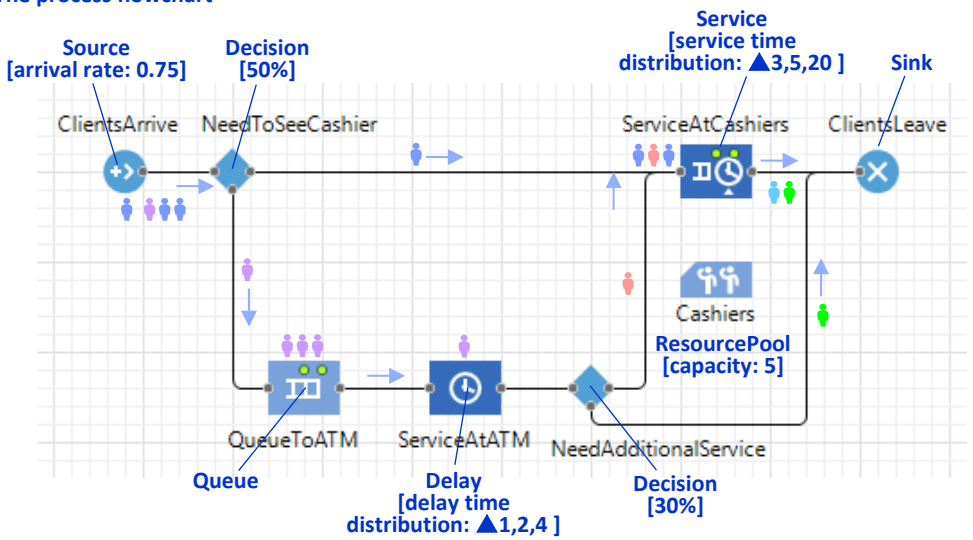
- On average, 45 clients per hour enter the bank.
- Having entered the bank, half of the clients go to the ATM, and the other half go straight to the cashiers.
- Usage of the ATM has a minimum duration of 1 minute, a maximum of 4 minutes, and a most likely duration of 2 minutes.

- Service with a cashier takes a minimum of 3 minutes and a maximum of 20 minutes, with a most likely duration of 5 minutes.
- After using the ATM, 30% of the clients go to the cashiers. The others exit the bank.
- There are 5 cashiers in the bank, and there is a single shared queue for all the cashiers.
- After being served by a cashier, clients exit the bank.

We need to find out the:

- Utilization of cashiers,
- Average queue lengths, both to the ATM and to the cashiers, and the
- Distribution of time spent by a customer in the bank.

The process flowchart



The model output

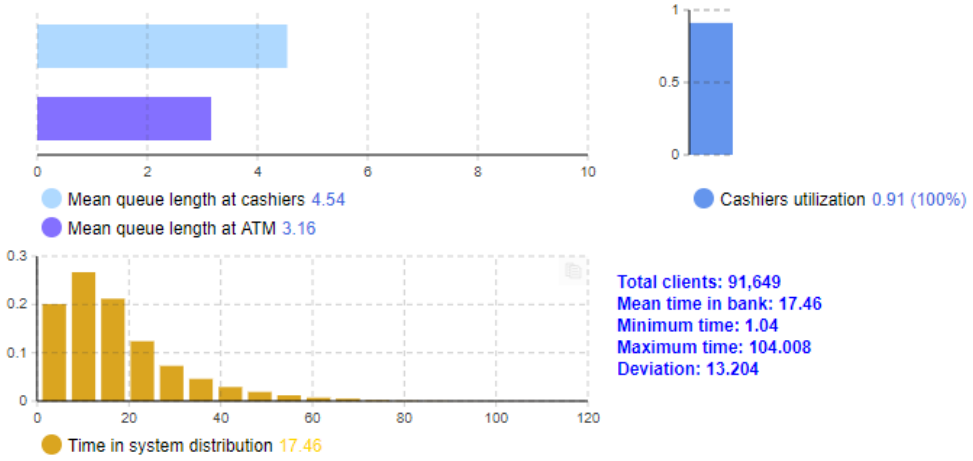


Figure 2.4 Discrete event model of a bank