Test Plan

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Project: Simulation of a Waiting Line
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Case	Input Parameters	Expected Result	Purpose
Valid Run	simulate(10, 0.65, 5)	Random arrivals; 4–6 served.	Normal behavior.
Always Busy	simulate(15, 1.0, 4)	Customer every minute; queue grows.	Stress arrival.
Quiet Line	simulate(10, 0.1, 5)	Few arrivals; many “No customers.”	Low probability.
Instant Service	simulate(10, 0.5, 1)	Average wait ≈ 0.	Shortest service boundary.
No Arrivals	simulate(10, 0.0, 5)	0 served; avg wait = 0.	Edge case.
Long Run	simulate(50, 0.5, 5)	Stable averages; no crash.	Performance test.

This assignment implements a time-driven queue simulation using C++ and the STL queue. Customers arrive randomly, each assigned a random transaction time, and are served by one agent. The program measures total and average waiting times and prints detailed simulation traces.