# Test Cases for Ticket Booking System

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| Test Case | Class/Method | Input | Expected Output | Actual Output / Pass/Fail |
| Add Ticket to Pool | TicketPool.Add\_Ticket | Ticket Number, Vendor Details | Ticket is added to the pool. Log entry is generated. | TBD |
| Release Ticket from Pool | TicketPool.Release\_Ticket | Customer Details | Ticket is retrieved from the pool. Log entry is generated. | TBD |
| Vendor Releases Tickets | Vendor.run() | Vendor Details, Number of Tickets, Release Rate | Tickets are released to the pool at the specified rate. | TBD |
| Customer Purchases Tickets | Customer.run() | Customer Details, Number of Tickets, Retrieval Rate | Tickets are purchased from the pool at the specified rate. | TBD |
| System Configuration | Main.get\_ticket\_inputs, SystemConfig | Total Tickets, Release Rate, Retrieval Rate, Maximum Capacity | System configuration is set successfully. | TBD |
| Stop System | Main | User enters 'STOP'. | All threads (vendor and customer) are interrupted. Log entry confirms the system stop. | TBD |
| Ticket Pool Overflow | TicketPool.Add\_Ticket | Number of Tickets > Pool Capacity | Tickets exceeding capacity are blocked. System waits until space is available. | TBD |
| Customer Exceeds Tickets | TicketPool.Release\_Ticket | Customer attempts to purchase more tickets than available | Operation fails gracefully with appropriate message or error handling. | TBD |
| Log File Validation | TicketPool.LOG\_writer, Vendor, Customer | Actions logged by vendors and customers | Logs are consistent and capture all actions (e.g., added, removed, interrupted). | TBD |
| Thread Safety | TicketPool.Add\_Ticket, TicketPool.Release\_Ticket | Multiple threads (vendors/customers) access the pool simultaneously | System ensures synchronized access with no data corruption or race conditions. | TBD |
| Invalid Input Handling | Main.get\_Vendor\_Details, Main.get\_Customer\_Details | Non-numeric input for ticket counts, negative values, or invalid names | System rejects invalid inputs and prompts for correction. | TBD |