Payment processing State diagram:

Initiated
Payment request created
Amount and method selected

Supports multiple payment methods:
- CashPayment
- CreditCardPayment
- PaypalPayment

Guest initiates payment

Payment process request

Invalid payment details

Pending
Awaiting gateway response
Payment method validation

Gateway rejects request

Insufficient funds / invalid card

Gateway accepts request

Authorizing
Verifying payment credentials
Checking available funds

Authorization failed

System error during authorization

Transaction rollback triggers:
- Release room reservation
- Cancel booking record
- Notify guest of failure

Declined
Payment rejected by gateway
Insufficient funds/invalid details
Booking cancelled

Authorization successful

Authorization expired

Failed
Payment unsuccessful
Booking cancelled
Error logged

Authorized
Funds reserved
Ready for capture
Booking hold placed

Capture failed

Guest cancellation before capture

Initiate fund capture

Refunded
Funds returned to guest
Booking cancelled
Refunded receipt issued

Capturing
Processing fund transfer
Finalizing transaction

Dispute handling failed

Payment disputed during capture

Process terminated

Refund requested

Capture successful

Payment disputed

Process terminated

Process completed

Completed
Payment successful
Booking confirmed
Receipt generated

Dispute resolved in favor of hotel

Disputed
Chargeback initiated
Under investigation
Additional documentation required

Process successful

Dispute resolved in favor of guest