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Test Case Report for Guest Identity & Reservation Smart Contract

Test No.	User Story (Redeemer)	Conditions	Steps	Expected Output	Accepted Output	Result
1	SubmitIdentity – Valid initial identity submission	• guestAddress == ""• adminPKH == empty• initiateCheckIn == False	Create SubmitIdentity redeemer with a new non-empty guestAddress & admin key; call validator	Validator allows update; sets guestAddress, adminPKH and initiateCheckIn == True	Update accepted and committed	✅ Pass
2	SubmitIdentity – Reject when guest address exists	• guestAddress != ""	Call SubmitIdentity on a datum whose guestAddress is already non-empty	Validator rejects update due to existing address	Update rejected	✅ Pass
3	VerifyIdentity – Valid identity verification by admin	• guestAddress != ""• adminPKH set• initiateCheckIn == True• isDigitalKeyValidated == False	Sign transaction with admin key; apply VerifyIdentity redeemer	Validator allows update; sets isDigitalKeyValidated == True	Update accepted and committed	✅ Pass
4	VerifyIdentity – Reject without	• all other fields valid but tx not	Sign transaction with a non-	Validator rejects update for	Update rejected	✅ Pass

	admin signature	signed by admin	admin key; apply VerifyIdentity	missing admin signature		
5	ConfirmIdentity – Valid identity confirmation	• isDigitalKeyValidated == True	Apply ConfirmIdentity redeemer	Validator allows confirmation	Update accepted and committed	✅ Pass
6	ConfirmIdentity – Reject when user not verified	• isDigitalKeyValidated == False	Apply ConfirmIdentity	Validator rejects confirmation	Update rejected	✅ Pass
7	ReserveRoom – Valid room reservation	• no existing reservation on datum	Apply ReserveRoom redeemer with room details	Validator allows update; reservation recorded	Update accepted and committed	✅ Pass
8	ReserveRoom – Reject when already reserved	• datum already has a reservation	Apply ReserveRoom	Validator rejects reservation	Update rejected	✅ Pass
9	ConfirmReservation – Valid reservation confirmation	• previous reservation exists	Apply ConfirmReservation	Validator allows update; reservation status confirmed	Update accepted and committed	✅ Pass
10	ConfirmReservation – Reject when not reserved	• no existing reservation	Apply ConfirmReservation	Validator rejects confirmation	Update rejected	✅ Pass
11	InitiateCheckIn – Valid check-in initiation	• reservation confirmed• identity confirmed	Apply InitiateCheckIn redeemer	Validator allows update; sets initiateCheckIn == True	Update accepted and committed	✅ Pass
12	InitiateCheckIn – Reject when user not verified	• reservation not confirmed or identity not confirmed	Apply InitiateCheckIn	Validator rejects check-in initiation	Update rejected	✅ Pass
13	CheckOut –	• check-in	Apply	Validator	Update	✅ Pass

	Valid check-out	has been initiated	CheckOut redeemer	allows update; guest may check out	accepted and committed	
14	CheckOut – Reject when not reserved	• reservation not confirmed or no check-in	Apply CheckOut	Validator rejects check-out	Update rejected	✅ Pass

Screenshot

```
/home/rajesh/Blockchain/HGE_SC/dist-newstyle/build/x86_64-linux/ghc-8.10.7/smart-contract-1.0.0/t/digital-key-test/test/smart-contract-1.0.0-digital-key-test.l
og
1 of 1 test suites (1 of 1 test cases) passed.
Running 1 test suites...
Test suite hge-test: RUNNING...
HGE Hotel Guest Experience Validator Tests
  SubmitIdentity Redeemer
    Valid initial identity submission:             OK
    Reject submission when guest address already exists: OK
  VerifyIdentity Redeemer
    Valid identity verification by admin:          OK
    Reject verification without admin signature:   OK
  ConfirmIdentity Redeemer
    Valid identity confirmation:                   OK
    Reject confirmation when user not verified:    OK
  ReserveRoom Redeemer
    Valid room reservation:                        OK
    Reject reservation when already reserved:      OK
  ConfirmReservation Redeemer
    Valid reservation confirmation:                OK
    Reject confirmation when not reserved:         OK
  InitiateCheckIn Redeemer
    Valid check-in initiation:                     OK
    Reject check-in when user not verified:        OK
  CheckOut Redeemer
    Valid check-out:                               OK
    Reject check-out when not reserved:            OK

All 14 tests passed (0.00s)
Test suite hge-test: PASS
Test suite logged to:
/home/rajesh/Blockchain/HGE_SC/dist-newstyle/build/x86_64-linux/ghc-8.10.7/smart-contract-1.0.0/t/hge-test/test/smart-contract-1.0.0-hge-test.log
1 of 1 test suites (1 of 1 test cases) passed.
```