State Transition Table

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| Initial State | Event | Next State | Notes |
| No Account | Account not created due to user error | No Account | Errors include incorrect input or failed verification |
| No Account | Account successfully created | Logged Out Account | User signs up with valid details |
| Logged Out Account | Password reset via ‘Forgotten password’ option | Logged Out Account | User resets password, but is not yet signed in |
| Logged Out Account | Unsuccessful log in | Logged Out Account | Incorrect credentials entered |
| Logged Out Account | Successful log in | Signed In Account | Credentials correct and user is authenticated |
| Signed In Account | Change account details | Signed In Account | Account details like email or password updated while the user is still logged in |
| Signed In Account | Log out | Logged Out Account | Ends log in session |
| Signed in Account | Account successfully deleted | No Account | User deletes account. Deleted account shows as no account and the user would need to create a new account |

State Transition Test Case

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| --- | --- | --- |
| Event | State | Notes |
| Account not created due to user error | No Account | Start by testing with no account and user error to see if the system can prevent invalid sign-ups |
| Account successfully created | Logged Out Account | Testing that the account creates properly with valid user details |
| Unsuccessful log in | Logged Out Account | Validating that no unauthorised access is allowed |
| Password reset via ‘Forgotten password’ option | Logged Out Account | Most users would naturally reset their password after a failed login |
| Successful log in | Signed In Account | Testing that valid user details work and the transition to the signed in account works |
| Change account details | Signed In Account | Checking that internal updates work and the user stays signed in |
| Log out | Logged Out Account | Ensuring that the account transitions to logged out account |
| Successful log in | Signed In Account | Checks that the user can log back in after logging out and there are no errors- repeated event |
| Account successfully deleted | No Account | Verifies that the deletion event transitions correctly to the no account state. Note- assuming that the user data is removed from the database and not retained in a soft delete |