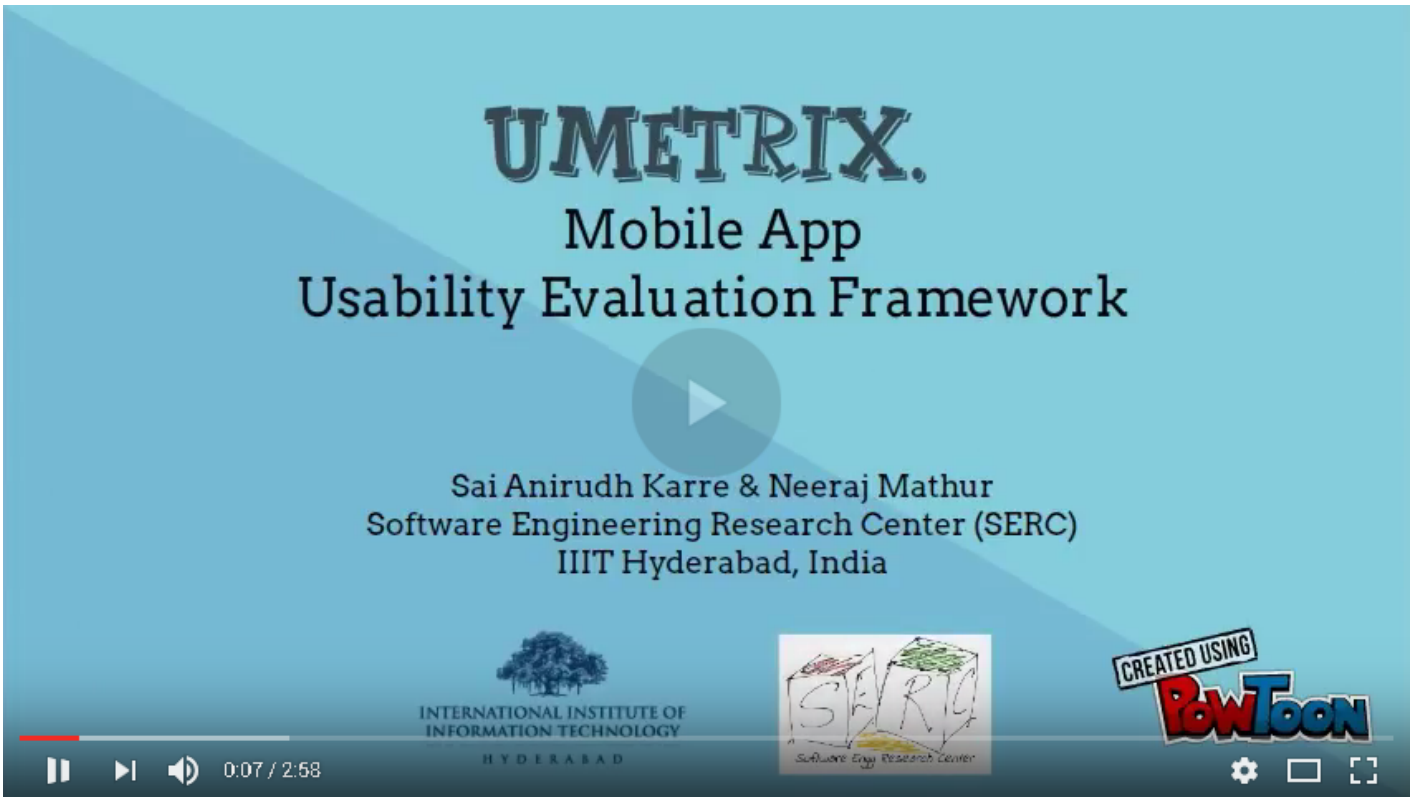
Usability Evaluation Framework for Mobile Apps based on Code Pattern Analysis

The increasing usage of smartphones has resulted in mo-bile applications replacing or supplementing traditional web-based applications. Given the limitations of the form factor in smartphones, Usability can be considered as one of the important attributes that determine the success of a mobile application. The measures available for assessing the usability of mobile applications tend to focus more on human aspects and less on the functional aspects of Usability. As part of this paper, we propose a usability evaluation framework called UMETRIX to identify functional usability issues specific to mobile applications. This framework uses usability guidelines associated with usability code patterns in mobile applications to improve usability. As proof of concept, we have built an end-to-end system using the framework to validate and verify usability issues in Android mobile applications and generate recommendations to enhance functional aspects of Usability.

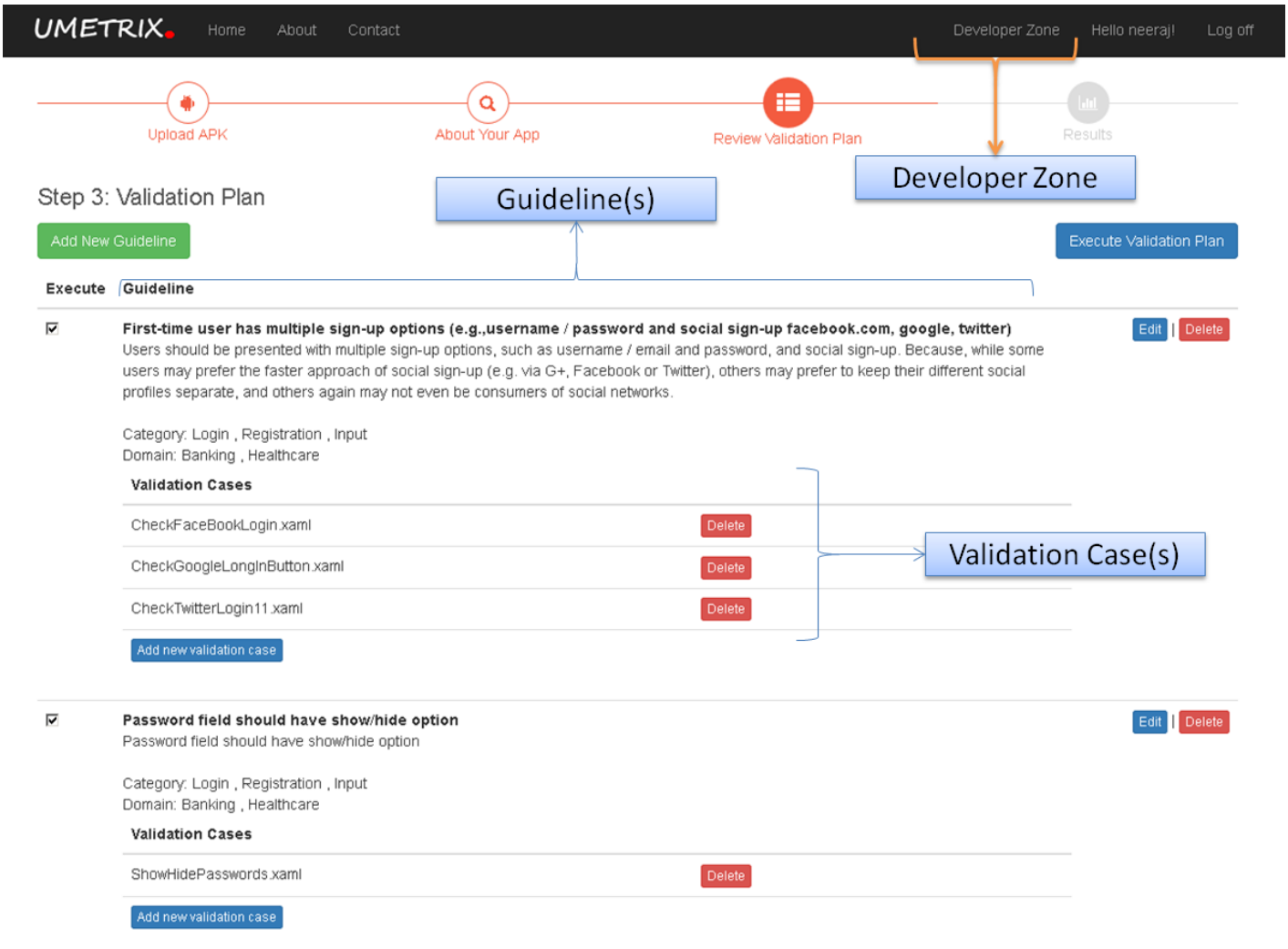
Download Tool here - https://github.com/neerajmathur/UMETRIX

UMETRIX - Introduction Video

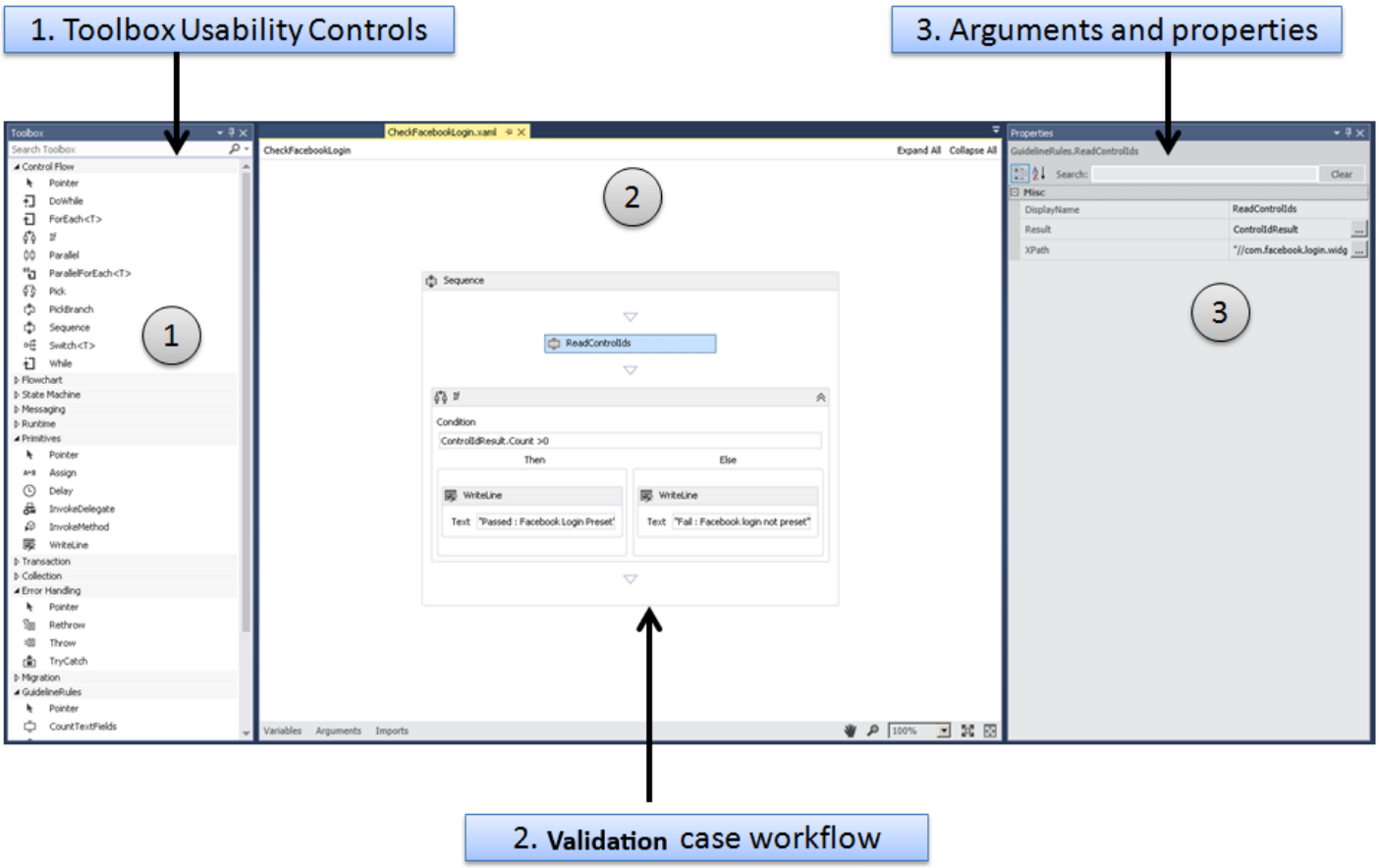


UMETRIX - Working Demo Video

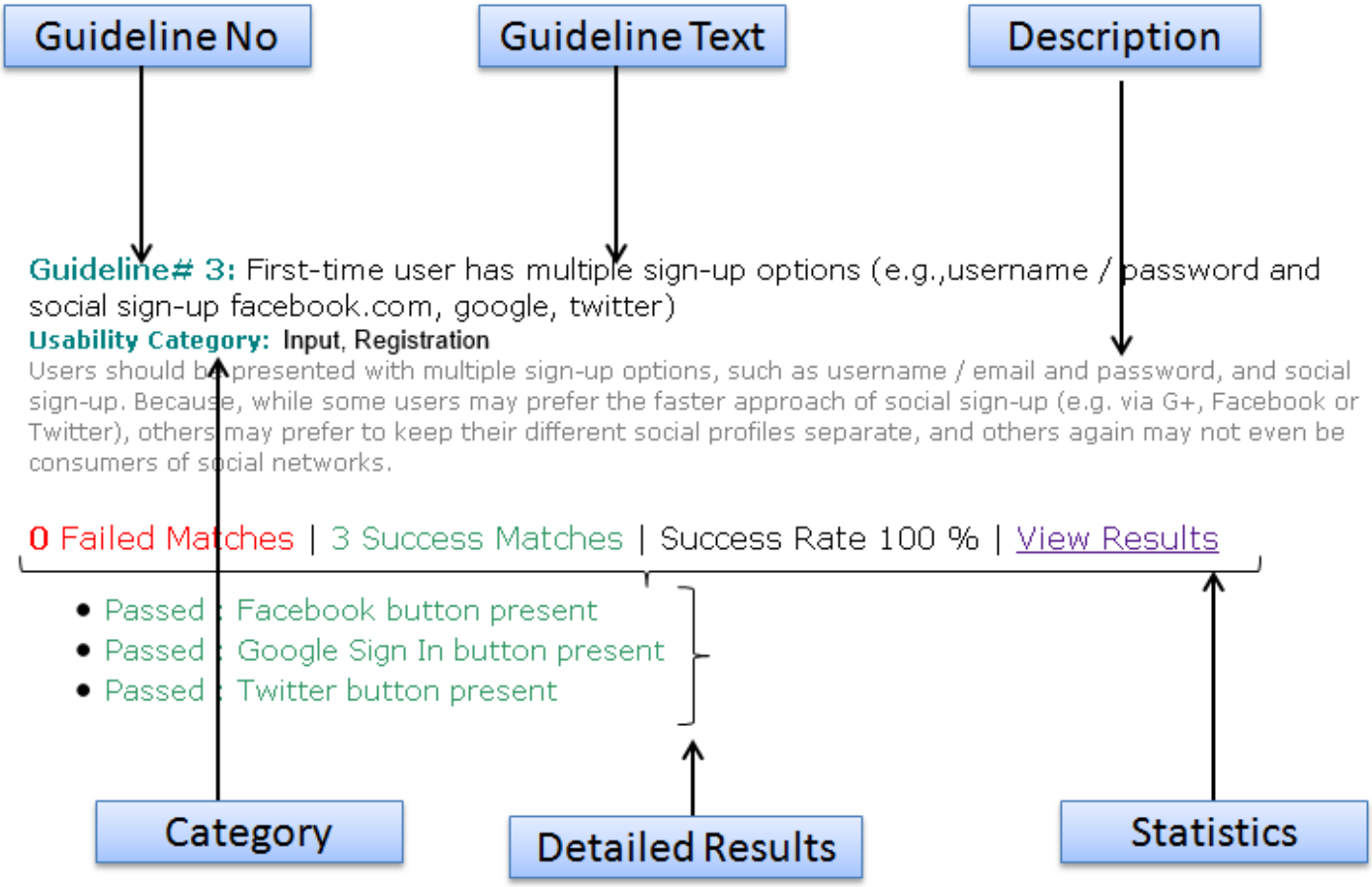
UMETRIX - Web Evaluator



Validation Case Designer



Test Case Results


Guideline No
Guideline Text
Description
Guideline# 3: First-time user has multiple sign-up options (e.g.,username / password and social sign-up facebook.com, google, twitter)
Usability Category: Input, Registration
Users should be presented with multiple sign-up options, such as username / email and password, and social sign-up. Because, while some users may prefer the faster approach of social sign-up (e.g. via G+, Facebook or Twitter), others may prefer to keep their different social profiles separate, and others again may not even be consumers of social networks.
0 Failed Matches | 3 Success Matches | Success Rate 100 % | View Results
Passed : Facebook button present
Passed : Google Sign In button present
Passed : Twitter button present
Category
Detailed Results
Statistics