Becoming a Pro
IN Mobile Applications Testing

Mobile Test Industry Standards
Testing Strategies for Mobile Apps : LETS PRACTICE

Test case	Sub-Category	Description	Result
1. Installation		Verify that app can be Installed Successfully	App should be able to install Successfully
2. Un-installation		Verify that app can be Uninstall Successfully	User should be able to uninstall the app successfully
3. Network Test Cases		Verify the behavior of app when there is Network problem and user is performing operations for data call	User should get proper error message like "Network error. Please try later"…
		Verify that User is able to establish data call when Network is back in action	User should be able to establish data call when Network is back in action

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TC	Sub-Category	Description	Result
4. Voice Call Handling	Call Accept	Verify that User can accept Voice call at the time when app is running and can resume back in app from the same point	User should be able to accept Voice call at the time when app is running and can resume back in app from the same point
	Call Rejection	Verify that User can reject the Voice call at the time when app is running and can resume back in app from the same point	User should be able to reject the Voice call at the time when app is running and can resume back in app from the same point
	Call Establish	Verify that User can establish a Voice call in case when app data call is running in background	User should be able to establish a Voice call in case when app data call is running in background

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TC	Sub-Category	Description	Result
5. SMS Handling		Verify that User can get SMS alert when app is running	User should be able to get SMS alert when app is running
		Verify that User can resume back from the same point after reading the SMS	User should be able to resume back from the same point after reading the SMS
6. Unmapped Keys		Verify that unmapped keys are not working on any screen of app	Unmapped key should not work on any screen of app
7. Application Logo		Verify that app logo with App Name is present in app manager, on the App screen page, widgets (opt.) and user can select it	Application Logo with App Name should be present in app manager, on the App screen page, widgets (opt.) and User can select it.

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TC	Sub-Category	Description	Result
8. Splash Screen		Verify that when User selects app Logo in Splash is displayed. **Note:** Splash do not remain for fore than 3 sec **Note:** A splash screen is an image that appears while a game or program is loading.	When User selects app, Logo in app Splash should be displayed
9. Low Memory		Verify that app displays proper error message when device memory is low and exits gracefully from the situation	App should display proper error message when device memory is low and exits gracefully from the situation
10. Clear/Back Key		Verify that Clear key should navigate the User to previous screen	Clear Key should navigate the User to previous screen
11. End/Home Key		Verify that End Key should navigate the User to native Device screen	End Key should navigate the User to native Device screen

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TC	Sub-Category	Description	Result
12.Visual Feedback		Verify that there is visual feedback when response to any action takes more than 3 sec	There should be visual feedback given when response time for any action is longer than 3 sec
13. Continual Keypad Entry		Verify that continual key pad entry do not cause any problem. **Note:** Continual Keypad test consist in a multiple key press, done quickly as possible, in order to load at maximum capacity the handset's memory	Continual key pad entry should not cause any problem in app
14. Exit Application		Verify that User is able to exit from app with every form of exit modes such as Flap, Slider, Home Key or Exit option from any point of app	User should be able to exit with every from of exit mode such as Flap, Slider, Home Key or Exit option from any point of app
15. Charger Effect		Verify that when app is running then inserting and removing charger do not cause any problem and proper message is displayed when charger is inserted in device	When app is running, then insertion or remove of charger not cause any problem, and proper message displayed .

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TC	Sub-Category	Description	Result
16. Low Battery		Verify that when app is running and battery is low, then proper message is displayed to the User.	When app is running and battery is low, there should be proper message displayed to the User
17. Removal of Battery		Verify that removal of battery at the time of app data call is going on do not cause interruption and data call is completed after battery is inserted back in the device	Removal of battery at the time of app data call is going on should not cause interruption and data call should be completed after battery is inserted back in the device
18. Battery Consumption		Verify that app does not consume battery excessively	The app should not consume battery excessively
19. Application Start/Restart		Find the app icon and select it. Press tab on the Device to launch the app. Observe the app launch in the timeline defined.	App must not take longer than 25 sec to start

TC	Sub-Category	Description	Result
20. Application Side Effects		Make sure that your app is not causing other apps of device to hamper	Installed app should not cause other apps of device to hamper
21. External incoming communication infrared		App should gracefully handle the condition when incoming communication is made via InfraRed	When incoming communication enters the device, the app must at least respect one of the following: A. Go into pause state during InfraRed session and automatically continue from the point it was suspended at after the InfraRed session is done B. Give a visual or audible notification The app must not crash or hung.

TC	Sub-Category	Description	Result
22. Bluetooth interrupt:		When a file transfer is taking place with Bluetooth, the application must be paused and should be resumed from the same point after the transfer is done	

LETS PRACTICE

Write as many Test Cases you can for this simple app on Mobile device with three buttons (A, B and C) that making different sounds upon tapping on it.

A - for Audio 1
B - for Audio 2
C - for Audio 3

You are free to create conditions and Rules for each button , but be consistent.

Write Test Cases (use previous slides for hints).

HAVE FUN !

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My Application Features

| A | B | C |

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HOMEWORK REVIEW

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My Application Features

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Functional Test

Case	Description	Result
Button A	Verify that when Button A is pressed, sound tone A appeared	When button A is pressed the sound tone A should be audible
Button B	Verify that when Button B is pressed, sound tone B appeared	When button B is pressed the sound tone B should be audible
Button C	Verify that when Button C is pressed, sound tone C appeared	When button C is pressed the sound tone C should be audible
Combination of buttons and sounds	Verify that when A,B,C buttons are pressed consecutively, the specific sound A,B,C is appeared	When buttons A,B, C are pressed consecutively, the audible tones A, B, C should be observed

HOMEWORK REVIEW

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UI Test

Case	Description	Result
Panning (sliding horizontally left-right) **Swiping**	Verify that when main Page is panned/swiped, the sound buttons A,B,C remains in the same order, the same position on the page screen, and do not make sound	The buttons A,B,C, should not loose the order or make any sound during panning/swiping gestural input procedures
Rotation	Verify that when device is rotated, Buttons ABC should not loose it's order and make any sound	During device's rotation Buttons ABC should not loose it's order and make any sound
Zooming	Verify that buttons A,B, C should not loose the order or make any sound during the Zooming gestural procedure	Buttons A,B,C should not loose the order or make and sound during the Zooming procedure

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Interruption Test

Case	Description	Result
Phone Call Interruption	Verify that when Phone Call is initiate, buttons ABC are in "pause" mode and do not perform assigned sound tones.	When Phone Call is occurred, the Buttons ABC should be saved in 'pause" mode and do not perform assigned sound tone.
Text message interruption	Verify that when SMS notifications/ message appears, the main app page will response with safe, end session	When SMS action occurs, proper error message should be displayed and app will be closed gracefully with saved information
Verge App Notification (w/ TuneTone)	Verify that when TechNews Notification with the Ringtone occurs, buttons ABC will pause and perform assigned sound tones after Notification Ringtone is done.	When TechNews Notification (w/Ringtone) occurs the Buttons ABC should be pause until Ringtone tune are done, and continue to perform ABC assigned sound after no more than 3 sec delay.

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Connectivity Test

Case	Description	Result
Flight Mode of Mobile Device	Verify that when Device has Flight Mode ON, the Buttons ABC are still active and performing sound	**Buttons ABC should be active and perform assigned sounds when Mobile Device is in Offline Mode.**
Bluetooth Connection active with Wearable Device	Verify that when Wearable Device BT connected and play Music, the Buttons ABC are still active and performing sound	**Buttons ABC should be active and perform assigned sounds when Mobile Device is in active Bluetooth Mode.**
Low bandwidth Network	Verify that when Device is in Frequently changed "hopping" area the Buttons ABC are still active and performing sound	**Buttons ABC should be active and perform assigned sounds when Mobile Device is in the "hopping mode"**

HOMEWORK REVIEW

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My Application Features

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Performance Test

Module	Description	Result
Define the maximum amount of load that a system can handle	Verify that when 10,000 Users press A,B,C buttons pressed simultaneously, the designed combination of three sound tone is appeared	When buttons ABC are pressed simultaneously the tune combined of three sounds should appeared
The number of concurrent user that application can handle	Verify that when 10,000 User concurrently press Buttons A, there is not drop in functionality and sound quality.	When 10,000 User concurrently press Button Ait should be not affect the functionality or sound quality
Check application scalability	Verify that during the Device OS/Firmware/ Native App upgrades application can run without drop in performance	When Device OS/or Phone Firmware/or Phone Native App upgrades occurs the application runs without significant performance degradation

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Smoke TEST aka "build verification test"

Performed after software build to ascertain that the critical functionalities of the program is working fine.

Smoke Testing

Executed "before" any detailed functional or regression tests

Example :
a smoke test may address basic questions like
"Does the app run?",
"Does it open a page ?", or **"Does tapping on the home key do anything?"**

The purpose is to reject a badly broken application, so that the QA team does not waste time installing and testing the software application.

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Sanity TEST aka "tester acceptance test"

After receiving a software build, with minor changes in code, or functionality, Sanity testing is performed

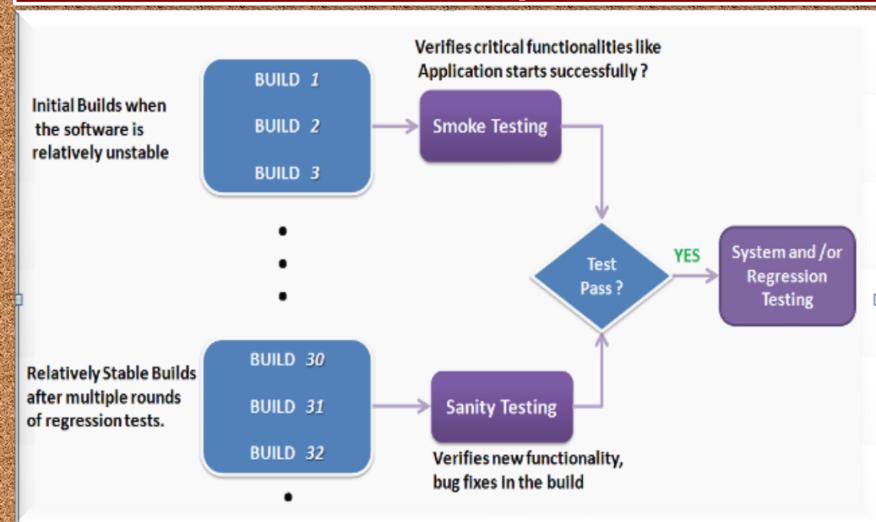The goal is to determine that the proposed functionality works roughly as expected.

Example :

if your scientific calculator gives the result **of 2 + 2 =5**!
Then, there is **no point** testing the advanced functionalities like **sin 30 + cos 50**

If sanity test fails, the build is rejected to save the time and costs involved in a more rigorous testing.

Smoke vs Sanity TEST

Initial Builds when the software is relatively unstable

BUILD 1
BUILD 2
BUILD 3

Verifies critical functionalities like Application starts successfully ?

Smoke Testing

Test Pass ?

YES

System and /or Regression Testing

Relatively Stable Builds after multiple rounds of regression tests.

BUILD 30
BUILD 31
BUILD 32

Sanity Testing

Verifies new functionality, bug fixes in the build

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Comparison SUMMARY

Smoke Testing	Sanity Testing
Smoke Testing is performed to ascertain that the critical functionalities of the program is working fine	Sanity Testing is done to check the new functionality / bugs have been fixed
The objective of this testing is to verify the "stability" of the system in order to proceed with more rigorous testing	The objective of the testing is to verify the "rationality" of the system in order to proceed with more rigorous testing
This testing is performed by the developers or testers	Sanity testing is usually performed by testers
Smoke testing is usually documented or scripted	Sanity testing is usually not documented and is unscripted
Smoke testing is a subset of Regression testing	Sanity testing is a subset of Acceptance testing
Smoke testing exercises the entire system from end to end	Sanity testing exercises only the particular component of the entire system
Smoke testing is like General Health Check Up	Sanity Testing is like specialized health check up