

Testing Tips For Handheld Developers

Author: Zaka Siddiqui
mindfire solutions, www.mindfiresolutions.com

Table of Contents

1. Introduction.....	3
2. Target audience.....	3
3. Package/Installation testing.....	4
4. Memory testing.....	4
5. General testing.....	5
6. Functionality testing.....	6
7. Help/Tips testing.....	6
8. Game testing.....	7

1. Introduction

Whenever someone starts a conversation with you regarding testing of your application you give him a negative nod by saying naaa!!!!

Don't you want:

- whenever you make an application it is bug free?, OR
- each time you get a “NO BUG”/ “NO ERROR” report from QA?, OR
- you are nominated as the “BEST DEVELOPER” in the team for the least number of bugs in your module?

Ofcourse, you do!!

In our efforts to help developers understand nitty gritty of testing, this document will present some general test cases which if made part of unit testing, will help bring out better, bug free modules.

We will start with test cases related to setup / installation and memory management. Then we move on to some functionality related testing. Since games (mobile) development has its own characteristics, we will take a look for games specific tests in a separate section.

2. Target Audience

This document will be useful for all developers who want to improve the quality of his / her application. Though it was written keeping in mind mobile / handheld games & applications development, but ideas percolate across platforms and development areas.

Package/Installation Testing

Y/N/NA

Application can be installed and can start easily.	
Application creates files only on the drive it was installed onto, except when the user has explicitly mention the location.	
Uninstalling the application provides the complete removal of all the files and the installed data (including icon).	
After un-installation reinstallation of the application done successfully.	

Memory Testing

Y/N/NA

If memory is low application does not start.	
Once the application is uninstalled the memory used by the application is released.	
Memory used by application is with in specified limits.	

General Testing

Y/N/NA

Application does not start automatically without any user operation.	
Application does not effect other system features.	
The speed/performance does not compromise the application's use or purpose.	
Each screen offers enough time to read its contents.	
Graphics (images) are clear and accurate.	
The consistency of the terms, layouts, colours and fonts is same throughout.	
There are no dead ends in application.	
If the time to load a screen is too much, a waiting/loading message appears.	
The application makes full use of the screen size available on the handset.	
There are not more than one occurrence of an item, menu, option.	
Each screen has focus on appropriate menu, button, input box or screen item.	
Sensitive data (password etc.) are handled using encryption.	
All error/failure messages are according to standards.	
All the options have sensible defaults.	

Functionality Testing

Y/N/NA

The application must do what it is meant to do.	
Application never hangs or cause system to hang.	
Settings are saved when the application is exited. Restarting the application restores these saved settings.	
An exit functionality is explicitly present in the application (e.g. Main Menu).	
Exit feature includes a Yes/No confirmation.	
Application provides About or Info feature.	
The details of the application (for ex. Name, Company, Logo) present in the About section.	
The user never trapped or stuck in a menu.	
The delete functionality includes a Yes/No confirmation.	
The options where ever they are provided have sensible defaults.	
Tab functionality works properly.	
All hot words/keys work properly.	
Application goes into pause state when in sleep mode and continues from the same location where it was left on waking up.	

Help/Tips Testing

Y/N/NA

Help is provided in the application.	
Help is available at a clear specific location in the application.	
Help includes the functionality and the use of buttons and/or keys.	
There is no truncated text, the system may automatically shorten a word. Current state of application is preserved if help is used while the application is being run.	

Game Testing

Y/N/NA

The game never crash or hang.	
Game graphics are very clear and accurate.	
While game is running a pause feature exist and the game returns to the point it was left.	
A method of abandoning the game is available (ideally at the main menu screen).	
Use of sound is appropriate to the game play and there is a provision to On/Off the sound.	
High scores remains across the Game play, even if the handset is turned off or power down.	