

# Software Testing and Verification

Orgzly

## 期末報告

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06/23/2018

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## 1. Introduction and References

Android Application: Orgzly

[https://play.google.com/store/apps/details?id=com.orgzly&hl=zh\\_HK](https://play.google.com/store/apps/details?id=com.orgzly&hl=zh_HK)

Orgzly is an outliner for taking notes and managing to-do lists.

You can keep notebooks stored in plain-text and have them synchronized with a directory on your mobile device, SD card, Dropbox, or over WebDAV.

Notebooks are saved in Org mode's file format. "Org mode is for keeping notes, maintaining TODO lists, planning projects, and authoring documents with a fast and effective plain-text system." See <http://orgmode.org> for more information.

## 2. Test Criteria

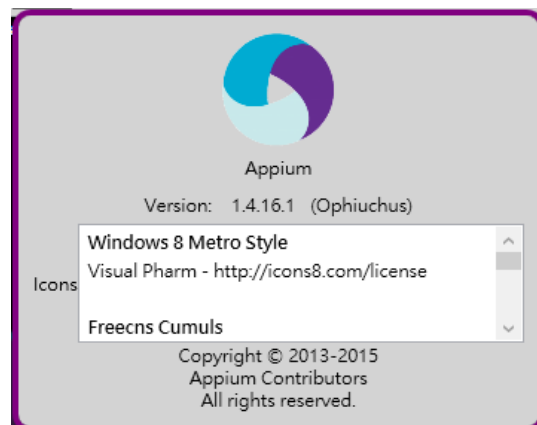
- (1) Test Case 的每個 Scenario 都測試通過
- (2) 依據 Test Case 設計的自動化測試腳本，必須通過 80%

## 3. Features To Be Tested

- (1) 新增、編輯、刪除 筆記本
- (2) 新增、編輯、刪除 筆記
- (3) 筆記搜尋
- (4) 筆記的排程顯示
- (5) 筆記順序調整
- (6) 搜尋條件編輯、新增

## 4. Testing Tools

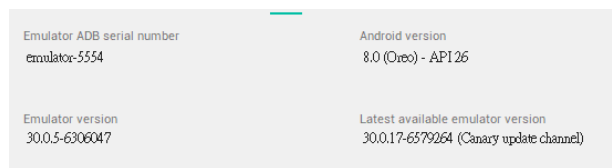
- ◆ Application : Orgzly
- ◆ PC : Windows 10
- ◆ Testing Device
  - Google Pixel (Android Emulator)
- ◆ Testing Environments
  - Appium 1.4.16.1



## ■ Android Studio 3.6.1



## ■ Android Emulator



## 5. Sample Test Cases Design

### (1) 新增筆記本：

- 點選左上角側拉式頁面選擇 筆記本
- 點選右下角的 +
- 輸入筆記本名稱並按下 新增 按鈕完成新增

以下是針對 Notebook 做測試時輸入的值

object	Input item	Input value	Description
Notebook	Name	測試	中文
		test	英文
			空值

### (2) 編輯筆記本：

- 長按已存在的筆記本
- 點選右上角的按鈕再選擇重新命名
- 修改筆記本名稱並按下重新命名

以下是針對 Notebook 做測試時輸入的值

object	Input item	Input value	Description
Notebook	Name	測試	中文
		test	英文
			空值

(3) 刪除筆記本：

- 長按已存在的筆記本
- 點選右上角的按鈕再選擇刪除
- 選擇刪除

## 6. Test Scripts

(1) Set Up

```
@Before
public void setUp() throws Exception {
    File classpathRoot = new File(System.getProperty("user.dir"));
    File appDir = new File(classpathRoot, "/src/main/java/apps/");
    File app = new File(appDir, "app-fdroid-debug.apk");

    DesiredCapabilities capabilities = new DesiredCapabilities();
    capabilities.setCapability(capabilityName: "deviceName", value: "Pixel");
    capabilities.setCapability(capabilityName: "platformVersion", value: "8.0.0");
    capabilities.setCapability(capabilityName: "app", app.getAbsolutePath());
    capabilities.setCapability(capabilityName: "appPackage", value: "com.orgzly");
    capabilities.setCapability(capabilityName: "appActivity", value: ".android.ui.LauncherActivity");
    capabilities.setCapability(capabilityName: "automationName", value: "UiAutomator1");

    // use to key the chinese
    capabilities.setCapability(capabilityName: "unicodeKeyboard", value: "True");
    capabilities.setCapability(capabilityName: "resetKeyboard", value: "True");

    driver = new AndroidDriver<>(new URL("http://127.0.0.1:4723/wd/hub"), capabilities);
}
```

(2) Tear Down

```
@After
public void tearDown() throws Exception {
    driver.quit();
}
```

(3) Create Notebook

```
// test create notebook
// name: chinese
@Test
public void test_createNoteBookWithChinese() {
    driver.findElement(By.xpath("//*[text='好的']")).click();
    driver.navigate().back();
    driver.findElement(By.id("fab")).click();
    driver.findElement(By.id("dialog_input")).sendKeys("測試");
    driver.findElement(By.id("button1")).click();

    Assert.assertEquals("測試", driver.findElement(By.xpath("//*[text='測試']")).getText());
}
```

## 7. Test Results

### (1) Create/Edit/Delete Notebook

▼ ✓ NotebookTest (com.example.test)	6 m 59 s 626 ms
✓ test_editNoteBookToChinese	1 m 46 s 13 ms
✓ test_delete	52 s 197 ms
✓ test_editNoteBookToEnglish	1 m 5 s 901 ms
✓ test_createNoteBookWithChinese	44 s 662 ms
✓ test_editNoteBookToEmpty	59 s 670 ms
✓ test_createNoteBookWithEmpty	46 s 392 ms
✓ test_createNoteBookWithEnglish	44 s 791 ms

### (2) Create/Edit/Delete Note

▼ ✓ NoteTest (com.example.test)	1 h 8 m 5 s 14 ms
✓ test_NewNote	2 m 15 s 960 ms
✓ test_EditNote10	3 m 12 s 770 ms
✓ test_EditNote11	3 m 12 s 280 ms
✓ test_EditNote12	3 m 9 s 369 ms
✓ test_delete	2 m 5 s 409 ms
✓ test_NewNote2	2 m 14 s 889 ms
✓ test_NewNote3	2 m 16 s 703 ms
✓ test_NewNote4	2 m 15 s 324 ms
✓ test_NewNote5	2 m 13 s 14 ms
✓ test_NewNote6	2 m 15 s 162 ms
✓ test_NewNote7	2 m 15 s 412 ms
✓ test_NewNote8	2 m 14 s 655 ms
✓ test_NewNote9	2 m 5 s 260 ms
✓ test_EditNote2	3 m 22 s 451 ms
✓ test_EditNote3	3 m 23 s 990 ms
✓ test_EditNote4	3 m 19 s 699 ms
✓ test_EditNote5	3 m 29 s 115 ms
✓ test_EditNote6	3 m 17 s 147 ms
✓ test_EditNote7	3 m 17 s 355 ms
✓ test_EditNote8	3 m 15 s 362 ms
✓ test_EditNote9	3 m 9 s 983 ms
✓ test_EditNote	3 m 19 s 295 ms
✓ test_NewNote10	2 m 5 s 81 ms
✓ test_NewNote11	2 m 12 s 315 ms
✓ test_NewNote12	2 m 7 s 14 ms

(3) Search (Note, Create/Edit/Delete Conditions)

▼ ✓ SerachTest (com.example.test)	24 m 2 s 159 ms
✓ test_edit_Empty_EmptyQuery	1 m 27 s 402 ms
✓ test_edit_Empty_FalseQuery	1 m 15 s 813 ms
✓ test_Search_English_EmptyQuery	49 s 286 ms
✓ test_Search_English_FalseQuery	1 m 0 s 861 ms
✓ test_delete	1 m 1 s 998 ms
✓ test_SearchEnglish	1 m 16 s 920 ms
✓ test_edit_Empty_TrueQuery	1 m 8 s 104 ms
✓ test_edit_English_EmptyQuery	1 m 8 s 300 ms
✓ test_edit_English_FalseQuery	1 m 19 s 932 ms
✓ test_Search_Chinese_EmptyQuery	47 s 329 ms
✓ test_SearchNotExist	47 s 678 ms
✓ test_Search_Chinese_FalseQuery	57 s 675 ms
✓ test_edit_English_TrueQuery	1 m 15 s 567 ms
✓ test_Search_Empty_TrueQuery	46 s 834 ms
✓ test_Search_English_TrueQuery	54 s 899 ms
✓ test_SearchEmpty	47 s 249 ms
✓ test_edit_Chinese_TrueQuery	1 m 14 s 461 ms
✓ test_edit_Chinese_EmptyQuery	1 m 7 s 411 ms
✓ test_Search_Chinese_TrueQuery	55 s 330 ms
✓ test_edit_Chinese_FalseQuery	1 m 17 s 240 ms
✓ test_Search_Empty_EmptyQuery	41 s 675 ms
✓ test_SearchChinese	1 m 12 s 365 ms
✓ test_Search_Empty_FalseQuery	47 s 830 ms

(4) Note Order Adjusting/ Move Note/Check Note Date

▼ ✓ Display (com.example.test)	8 m 3 s 376 ms
✓ test_Display_MoveRight	1 m 19 s 887 ms
✓ test_Display_MoveNoteBook	1 m 30 s 727 ms
✓ test_Display_MoveDown	1 m 17 s 85 ms
✓ test_Display_MoveLeft	1 m 26 s 621 ms
✓ test_Display_Scheduled	1 m 12 s 698 ms
✓ test_Display_MoveUp	1 m 16 s 358 ms

## 8. Pass/Fail Recommendation

(1) Test Case 的每個 Scenario 都測試通過

(2) 依據 Test case 設計的自動化測試腳本，必須通過 80%

NO	Feature	1	2
1	Create/Edit/Delete Notebook	✓	✓
2	Create/Edit/Delete Note	✓	✓
3	Search (Note, Create/Edit/Delete Conditions)	✓	✓
4	Note Order Adjusting/ Move Note/Check Note Date	✓	✓

## 9. Team Member Contributions

Team Member	Task	Contributions
林柔璟	文件撰寫、環境架設、腳本撰寫、執行測試、簡報製作	20%
劉宏德	文件撰寫、環境架設、腳本撰寫、執行測試、簡報製作	20%
呂聖文	文件撰寫、環境架設、腳本撰寫、執行測試、簡報製作	20%
吳偉豪	文件撰寫、環境架設、腳本撰寫、執行測試、簡報製作	20%
羅芸岑	文件撰寫、環境架設、腳本撰寫、執行測試、簡報製作	20%