

Informe parcial 2

Pruebas automáticas

Juan Camilo Gaviria Acosta - 201528434

Todos los archivos fuente se encuentran en el siguiente repositorio:

<https://github.com/juancamilogaviriaacosta/pruebas-auto-parcial2>

Mutante 10

NOTA: Este mutante fue realizado durante el examen presencial el miércoles 22 de noviembre

Tipo: NullValueIntentPutExtra

Archivo: TransactionsListFragment.java

<pre>id) { t(getActivity(), TransactionDetailActivity.class); t.SELECTED_TRANSACTION_UID, mTransactionsDbAdapter.getUID(id)); t.SELECTED_ACCOUNT_UID, mAccountUID);</pre>	→	<pre>id) { it(getActivity(), TransactionDetailActivity.class); it.SELECTED_TRANSACTION_UID, new android.os.Parcelable[0]); it.SELECTED_ACCOUNT_UID, mAccountUID);</pre>
---	---	---

Al lado Izquierdo de la imagen se encuentra la versión original, al lado derecho la versión modificada por MDroid+

Test para matar al mutante: TransaccionesMutanteTest.java

Error en logcat al ejecutar el test: ClassCastException un String no se puede castear a Placeable[]

```
: Key selected_transaction_uid expected String but value was a [Landroid.os.Parcelable;. The default value <null> was
: Attempt to cast generated internal exception:
: java.lang.ClassCastException: android.os.Parcelable[] cannot be cast to java.lang.String
:   at android.os.BaseBundle.getString(BaseBundle.java:995)
:   at android.content.Intent.getStringExtra(Intent.java:6211)
:   at org.gnucash.android.ui.transaction.TransactionDetailActivity.onCreate(TransactionDetailActivity.java:67)
:   at android.app.Activity.performCreate(Activity.java:6662)
:   at android.app.Instrumentation.callActivityOnCreate(Instrumentation.java:1118)
:   at android.app.ActivityThread.performLaunchActivity(ActivityThread.java:2599)
:   at android.app.ActivityThread.handleLaunchActivity(ActivityThread.java:2707)
:   at android.app.ActivityThread.-wrap12(ActivityThread.java)
:   at android.app.ActivityThread$H.handleMessage(ActivityThread.java:1460)
:   at android.os.Handler.dispatchMessage(Handler.java:102)
:   at android.os.Looper.loop(Looper.java:154)
:   at android.app.ActivityThread.main(ActivityThread.java:6077)
:   at java.lang.reflect.Method.invoke(Native Method)
:   at com.android.internal.os.ZygoteInit$MethodAndArgsCaller.run(ZygoteInit.java:866)
:   at com.android.internal.os.ZygoteInit.main(ZygoteInit.java:756)
runtime: Shutting down VM
```

Mutante 65

Tipo: InvalidIDFindView

Archivo: ColorPickerDialog.java

<pre>from(getActivity()).inflate(R.layout.color_picker_dialog, null); iew.findViewById(android.R.id.progress); tte) view.findViewById(R.id.color_picker); ns, this);</pre>	→	<pre>from(getActivity()).inflate(R.layout.color_picker_dialog, null); iew.findViewById(android.R.id.progress); tte) view.findViewById(149); ns, this);</pre>
--	---	--

Al lado izquierdo de la imagen se encuentra la versión original, al lado derecho la versión modificada por MDroid+

Test para matar al mutante: ColorPickerTest.java

Error en logcat al ejecutar el test: NullPointerException

```
FATAL EXCEPTION: main
Process: org.gnucash.android, PID: 3670
java.lang.RuntimeException: Unable to pause activity {org.gnucash.android/org.gnucash.android.ui.common.FormActivity}: java.lang.NullPointerException
    at android.app.ActivityThread.performPauseActivityIfNeeded(ActivityThread.java:3722)
    at android.app.ActivityThread.performPauseActivity(ActivityThread.java:3688)
    at android.app.ActivityThread.performPauseActivity(ActivityThread.java:3662)
    at android.app.ActivityThread.handlePauseActivity(ActivityThread.java:3636)
    at android.app.ActivityThread.-wrap16(ActivityThread.java)
    at android.app.ActivityThread$H.handleMessage(ActivityThread.java:1481)
    at android.os.Handler.dispatchMessage(Handler.java:102)
    at android.os.Looper.loop(Looper.java:154)
    at android.app.ActivityThread.main(ActivityThread.java:6077)
    at java.lang.reflect.Method.invoke(Native Method)
    at com.android.internal.os.ZygoteInit$MethodAndArgsCaller.run(ZygoteInit.java:866)
    at com.android.internal.os.ZygoteInit.main(ZygoteInit.java:756)
Caused by: java.lang.NullPointerException: Attempt to invoke virtual method 'void org.gnucash.android.ui.colorpicker.ColorPickerPalette.init(
    at org.gnucash.android.ui.colorpicker.ColorPickerDialog.onCreateDialog(ColorPickerDialog.java:110)
    at android.support.v4.app.DialogFragment.getLayoutInflater(DialogFragment.java:312)
    at android.support.v4.app.FragmentManagerImpl.moveToState(FragmentManager.java:1299)
    at android.support.v4.app.FragmentManagerImpl.moveToState(FragmentManager.java:1528)
    at android.support.v4.app.FragmentManagerImpl.moveToState(FragmentManager.java:1595)
    at android.support.v4.app.FragmentManagerImpl.dispatchPause(FragmentManager.java:2920)
    at android.support.v4.app.FragmentController.dispatchPause(FragmentController.java:234)
    at android.support.v4.app.FragmentActivity.onPause(FragmentActivity.java:448)
    at org.gnucash.android.ui.passcode.PasscodeLockActivity.onPause(PasscodeLockActivity.java:76)
    at android.app.Activity.performPause(Activity.java:6802)
    at android.app.Instrumentation.callActivityOnPause(Instrumentation.java:1322)
    at android.support.test.runner.MonitoringInstrumentation.callActivityOnPause(MonitoringInstrumentation.java:570)
    at android.app.ActivityThread.performPauseActivityIfNeeded(ActivityThread.java:3711)
```

Mutante 174

Tipo: InvalidKeyIntentPutExtra

Archivo: TransactionsListFragment.java

<pre>Intent intent = new Intent(getActivity(), FormActivity.class); intent.putExtra(UxArgument.FORM_TYPE, FormActivity.FormType.TRANSACTION); intent.putExtra(UxArgument.SELECTED_TRANSACTION_UID, transactionId); intent.putExtra(UxArgument.SELECTED_ACCOUNT_UID, mAccountUID); startActivity(intent);</pre>	<pre>Intent intent = new Intent(getActivity(), FormActivity.class); intent.putExtra("32c15d07f9a6417dbc71b16360b45862", FormActivity.class); intent.putExtra(UxArgument.SELECTED_TRANSACTION_UID, transactionId); intent.putExtra(UxArgument.SELECTED_ACCOUNT_UID, mAccountUID); startActivity(intent);</pre>
--	---

Al lado izquierdo de la imagen se encuentra la versión original, al lado derecho la versión modificada por MDroid+

Test para matar al mutante: Mutante174Test.java

Error en logcat al ejecutar el test: Ocurre un error en espresso al esperar a que aparezca el componente con el nombre de la transacción que fue seleccionada, esta nunca aparece porque la mutación provocó que en el intent no se envíe

```
at android.support.test.espresso.matcher.ViewMatchers.assertThat(ViewMatchers.java:1053)
at android.support.test.espresso.assertion.ViewAssertions$2.check(ViewAssertions.java:89)
at android.support.test.espresso.ViewInteraction$2.run(ViewInteraction.java:170)
at java.util.concurrent.Executors$RunnableAdapter.call(Executors.java:428)
at java.util.concurrent.FutureTask.run(FutureTask.java:237)
at android.os.Handler.handleCallback(Handler.java:751)
at android.os.Handler.dispatchMessage(Handler.java:95)
at android.os.Looper.loop(Looper.java:154)
at android.app.ActivityThread.main(ActivityThread.java:6077) <1 internal calls>
at com.android.internal.os.ZygoteInit$MethodAndArgsCaller.run(ZygoteInit.java:866)
at com.android.internal.os.ZygoteInit.main(ZygoteInit.java:756)
|
Tests ran to completion.
```

Mutante 253

Tipo: DifferentActivityIntentDefinition

Archivo: AccountsActivity.java

<pre> }, FirstRunWizardActivity.class)); plicitly entry), true).apply(); </pre>	→	<pre> }, org.gnucash.android.ui.homescreen.WidgetConfigurationActivity. plicitly entry), true).apply(); </pre>
---	---	--

Al lado izquierdo de la imagen se encuentra la versión original, al lado derecho la versión modificada por MDroid+

Test para matar al mutante: Mutante253Test.java

Error en logcat al ejecutar el test:

```

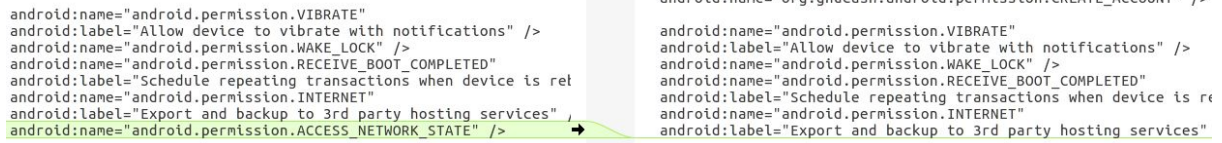
----- beginning of system
11-25 16:31:05.217 1589 2124 I ActivityManager: START u0 {act=android.intent.action.MAIN cat=[andr
|----- beginning of main
11-25 16:31:05.217 1352 1404 W audio_hw_generic: Not supplying enough data to HAL, expected positi
11-25 16:31:05.263 1589 1599 I ActivityManager: START u0 {cmp=org.gnucash.android/.ui.homescreen.v
11-25 16:31:05.273 1309 1314 D gralloc_ranchu: gralloc_alloc: Creating ashmem region of size 82944
11-25 16:31:05.372 6201 6201 V AccountsDbAdapter: Fetching all accounts from db
11-25 16:31:05.382 1589 1599 W InputMethodManagerService: Window already focused, ignoring focus c
11-25 16:31:05.407 1589 1609 I WindowManager: Destroying surface Surface(name=Starting org.gnucash
11-25 16:31:05.421 6201 6237 D EGL_emulation: eglMakeCurrent: 0xa5d059c0: ver 2 0 (tinfo 0xa5d0395
11-25 16:31:08.442 1352 1405 W audio_hw_generic: Not supplying enough data to HAL, expected positi
11-25 16:31:08.883 6201 6237 D EGL_emulation: eglMakeCurrent: 0xa5d059c0: ver 2 0 (tinfo 0xa5d0395
11-25 16:31:09.418 1589 1609 I WindowManager: Destroying surface Surface(name=Toast) called by cor

```

Mutante 271

Tipo: MissingPermissionManifest

Archivo: AndroidManifest.xml



```

android:name="android.permission.VIBRATE"
android:label="Allow device to vibrate with notifications" />
android:name="android.permission.WAKE_LOCK" />
android:name="android.permission.RECEIVE_BOOT_COMPLETED"
android:label="Schedule repeating transactions when device is ret
android:name="android.permission.INTERNET"
android:label="Export and backup to 3rd party hosting services" ,
android:name="android.permission.ACCESS_NETWORK_STATE" />

android:name="org.gnucash.android.permission.CREATE_ACCOUNT" />
android:name="android.permission.VIBRATE"
android:label="Allow device to vibrate with notifications" />
android:name="android.permission.WAKE_LOCK" />
android:name="android.permission.RECEIVE_BOOT_COMPLETED"
android:label="Schedule repeating transactions when device is r
android:name="android.permission.INTERNET"
android:label="Export and backup to 3rd party hosting services"

```

Al lado izquierdo de la imagen se encuentra la versión original, al lado derecho la versión modificada por MDroid+

Test para matar al mutante: HabilitarBackupCloudTest.java

Error en logcat al ejecutar el test: SecurityException, no tiene permiso para acceder a la red

```

FATAL EXCEPTION: Thread-9
Process: org.gnucash.android, PID: 6439
java.lang.SecurityException: ConnectivityService: Neither user 10111 nor current process has android.permission.ACCESS_NETWORK_STATE.
    at android.os.Parcel.readException(Parcel.java:1683)
    at android.os.Parcel.readException(Parcel.java:1636)
    at android.net.IConnectivityManager$Stub$Proxy.getActiveNetworkInfo(IConnectivityManager.java:1128)
    at android.net.ConnectivityManager.getActiveNetworkInfo(ConnectivityManager.java:736)
    at com.owncloud.android.lib.resources.status.GetRemoteStatusOperation.isOnline(GetRemoteStatusOperation.java:183)
    at com.owncloud.android.lib.resources.status.GetRemoteStatusOperation.run(GetRemoteStatusOperation.java:189)
    at com.owncloud.android.lib.common.operations.RemoteOperation.run(RemoteOperation.java:303)
    at java.lang.Thread.run(Thread.java:761)

```


Mutante 636

Tipo: NullIntent

Archivo: TransactionsActivity.java

<pre> e R.id.menu_edit_account: Intent editAccountIntent = new Intent(this, FormActivity.class); editAccountIntent.setAction(Intent.ACTION_INSERT_OR_EDIT); editAccountIntent.putExtra(UxArgument.SELECTED_ACCOUNT_UID, mAcc editAccountIntent.putExtra(UxArgument.FORM_TYPE, FormActivity.Fo startActivityForResult(editAccountIntent, AccountsActivity.REQUE return true; </pre>	<pre> ie R.id.menu_edit_account: Intent editAccountIntent = null; editAccountIntent.setAction(Intent.ACTION_INSERT_OR_EDIT); editAccountIntent.putExtra(UxArgument.SELECTED_ACCOUNT_UID, mAcc editAccountIntent.putExtra(UxArgument.FORM_TYPE, FormActivity.Fo startActivityForResult(editAccountIntent, AccountsActivity.REQUE return true; </pre>
--	---

Al lado izquierdo de la imagen se encuentra la versión original, al lado derecho la versión modificada por MDroid+

Test para matar al mutante: Mutante636Test.java

Error en logcat al ejecutar el test: NullPointerException

```

android.support.test.espresso.PerformException: Error performing 'single click' - At Coordinates: 812, 13
at android.support.test.espresso.PerformException$Builder.build(PerformException.java:83)
at android.support.test.espresso.base.DefaultFailureHandler.getUserFriendlyError(DefaultFailureHandler.java:56)
at android.support.test.espresso.base.DefaultFailureHandler.handle(DefaultFailureHandler.java:56)
at android.support.test.espresso.ViewInteraction.runSynchronouslyOnUiThread(ViewInteraction.java:184)
at android.support.test.espresso.ViewInteraction.doPerform(ViewInteraction.java:115)
at android.support.test.espresso.ViewInteraction.perform(ViewInteraction.java:87)
at org.gnucash.android.ui.account.Mutante636Test.mutante636Test(Mutante636Test.java:125) <6 internal calls>
at android.support.test.internal.statement.UiThreadStatement.evaluate(UiThreadStatement.java:55)
at android.support.test.rule.ActivityTestRule$ActivityStatement.evaluate(ActivityTestRule.java:270)
at org.junit.rules.RunRules.evaluate(RunRules.java:20) <20 internal calls>
at android.support.test.internal.runner.TestExecutor.execute(TestExecutor.java:59)
at android.support.test.runner.AndroidJUnitRunner.onStart(AndroidJUnitRunner.java:262)
at android.app.Instrumentation$InstrumentationThread.run(Instrumentation.java:1932)
Caused by: java.lang.NullPointerException: Attempt to invoke a virtual method on a null object reference
at org.gnucash.android.ui.transaction.TransactionsActivity.onOptionsItemSelected(TransactionsActivity.java:3204)
at android.app.Activity.onMenuItemSelected(Activity.java:3204)

```

Mutante 706

Tipo: FindViewByIdReturnsNull

Archivo: ColorPickerDialog.java

<pre>View view = LayoutInflater.from(getActivity()).inflate(R.layout. mProgress = (ProgressBar) view.findViewById(android.R.id.progres mPalette = (ColorPickerPalette) view.findViewById(R.id.color_pic mPalette.init(mSize, mColumns, this);</pre>	<pre>View view = LayoutInflater.from(getActivity()).inflate(R.layout. mProgress = (ProgressBar) view.findViewById(android.R.id.progres mPalette = (ColorPickerPalette) null; mPalette.init(mSize, mColumns, this);</pre>
---	--

Al lado izquierdo de la imagen se encuentra la versión original, al lado derecho la versión modificada por MDroid+

Test para matar al mutante: Mutante706Test.java

Error en logcat al ejecutar el test: NullPointerException

```
Caused by: java.lang.NullPointerException: Attempt to invoke virtual method 'void org.gnucash.android  
at org.gnucash.android.ui.colorpicker.ColorPickerDialog.onCreateDialog(ColorPickerDialog.java:110)  
at android.support.v4.app.DialogFragment.getLayoutInflater(DialogFragment.java:312)  
at android.support.v4.app.FragmentManagerImpl.moveToState(FragmentManager.java:1299)  
at android.support.v4.app.FragmentManagerImpl.moveFragmentToExpectedState(FragmentManager.java:1528)  
at android.support.v4.app.FragmentManagerImpl.moveToState(FragmentManager.java:1595)  
at android.support.v4.app.BackStackRecord.executeOps(BackStackRecord.java:758)  
at android.support.v4.app.FragmentManagerImpl.executeOps(FragmentManager.java:2363)  
at android.support.v4.app.FragmentManagerImpl.executeOpsTogether(FragmentManager.java:2149)  
at android.support.v4.app.FragmentManagerImpl.optimizeAndExecuteOps(FragmentManager.java:2103)  
at android.support.v4.app.FragmentManagerImpl.execPendingActions(FragmentManager.java:2013)
```

Mutante 772

Tipo: ActivityNotDefined

Archivo: AndroidManifest.xml

<pre><activity android:name=".ui.transaction.ScheduledActionsActivity" <activity android:name=".ui.passcode.PasscodePreferenceActivity" android:theme="@style/Theme.GnucashTheme" /> <activity android:name=".ui.transaction.TransactionsActivity" /> <activity android:name=".ui.homescreen.WidgetConfigurationActivit android:label="@string/label_widget_configuration" android:theme="@style/Dialog.WidgetConfiguration" android:excludeFromRecents="true"></pre>	<pre></activity> <activity android:name=".ui.transaction.ScheduledActionsActivity' <activity android:name=".ui.passcode.PasscodePreferenceActivity" android:theme="@style/Theme.GnucashTheme" /> <activity android:name=".ui.homescreen.WidgetConfigurationActivi android:label="@string/label_widget_configuration" android:theme="@style/Dialog.WidgetConfiguration" android:excludeFromRecents="true"></pre>
--	--

Al lado izquierdo de la imagen se encuentra la versión original, al lado derecho la versión modificada por MDroid+

Test para matar al mutante: Mutante772Test.java

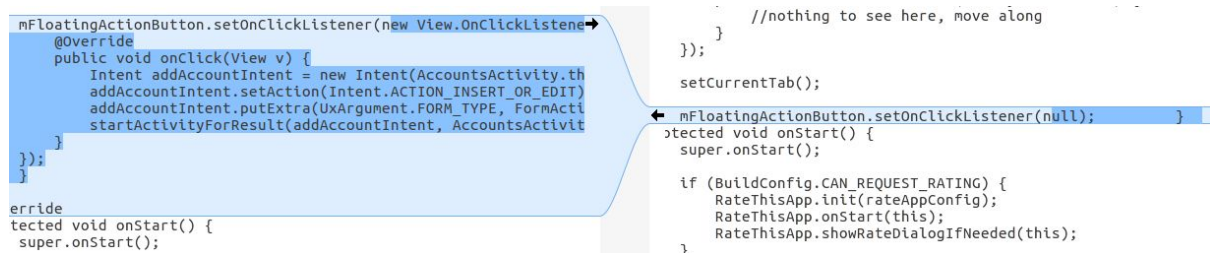
Error en logcat al ejecutar el test: ActivityNotFoundException

```
at android.support.test.espresso.ViewInteraction.doPerform(ViewInteraction.java:115)
at android.support.test.espresso.ViewInteraction.perform(ViewInteraction.java:87)
at org.gnucash.android.ui.account.Mutante772Test.mutante636Test(Mutante772Test.java:122) <6 internal calls>
at android.support.test.internal.statement.UiThreadStatement.evaluate(UiThreadStatement.java:55)
at android.support.test.rule.ActivityTestRule$ActivityStatement.evaluate(ActivityTestRule.java:270)
at org.junit.rules.RunRules.evaluate(RunRules.java:20) <20 internal calls>
at android.support.test.internal.runner.TestExecutor.execute(TestExecutor.java:59)
at android.support.test.runner.AndroidJUnitRunner.onStart(AndroidJUnitRunner.java:262)
at android.app.Instrumentation$InstrumentationThread.run(Instrumentation.java:1932)
Caused by: android.content.ActivityNotFoundException: Unable to find explicit activity class {org.gnucash.an
at android.app.Instrumentation.checkStartActivityResult(Instrumentation.java:1805)
```


Mutante 870

Tipo: BuggyGUIListener

Archivo: AccountsActivity.java



Al lado Izquierdo de la imagen se encuentra la versión original, al lado derecho la versión modificada por MDroid+

Test para matar al mutante: Mutante870Test.java

Error en logcat al ejecutar el test: Ocurre un error en espresso en el assert que comprueba que apareció la pantalla con el título Create Account, esta nunca aparece porque el listener del botón fue eliminado y este no hace nada al pulsarlo

```

at dalvik.system.VMStack.getThreadStackTrace(Native Method)
at java.lang.Thread.getStackTrace(Thread.java:1566)
at android.support.test.espresso.base.DefaultFailureHandler.getUserFriendlyError(DefaultFailureHandler.java:92)
at android.support.test.espresso.base.DefaultFailureHandler.handle(DefaultFailureHandler.java:56)
at android.support.test.espresso.ViewInteraction.runSynchronouslyOnUiThread(ViewInteraction.java:184)
at android.support.test.espresso.ViewInteraction.check(ViewInteraction.java:158)
at org.gnucash.android.ui.account.Mutante870Test.mutante870Test(Mutante870Test.java:123) <6 internal calls>
at android.support.test.internal.statement.UiThreadStatement.evaluate(UiThreadStatement.java:55)
at android.support.test.rule.ActivityTestRule$ActivityStatement.evaluate(ActivityTestRule.java:270)
    
```

Mutante 901

Tipo: ClosingNullCursor

Archivo: TransactionsActivity.java

<pre>@Override protected void onDestroy() { super.onDestroy(); mAccountsCursor.close(); }</pre>	<pre>@Override protected void onDestroy() { super.onDestroy(); mAccountsCursor = null; mAccountsCursor.close(); }</pre>
---	---

Al lado izquierdo de la imagen se encuentra la versión original, al lado derecho la versión modificada por MDroid+

Test para matar al mutante: Mutante901Test.java

Error en logcat al ejecutar el test: NullPointerException

```
: FATAL EXCEPTION: main
Process: org.gnucash.android, PID: 25780
java.lang.RuntimeException: Unable to destroy activity {org.gnucash.android/org.gnucash.android.ui.transaction.TransactionActivity}
    at android.app.ActivityThread.performDestroyActivity(ActivityThread.java:4167)
    at android.app.ActivityThread.handleDestroyActivity(ActivityThread.java:4185)
    at android.app.ActivityThread.-wrap6(ActivityThread.java)
    at android.app.ActivityThread$H.handleMessage(ActivityThread.java:1521)
    at android.os.Handler.dispatchMessage(Handler.java:102)
    at android.os.Looper.loop(Looper.java:154)
    at android.app.ActivityThread.main(ActivityThread.java:6077) <1 internal calls>
    at com.android.internal.os.ZygoteInit$MethodAndArgsCaller.run(ZygoteInit.java:866)
    at com.android.internal.os.ZygoteInit.main(ZygoteInit.java:756)
Caused by: java.lang.NullPointerException: Attempt to invoke interface method 'void android.database.Cursor.close()'
    at org.gnucash.android.ui.transaction.TransactionsActivity.onDestroy(TransactionsActivity.java:469)
    at android.app.Activity.performDestroy(Activity.java:6864)
    at android.app.Instrumentation.callActivityOnDestroy(Instrumentation.java:1153)
    at android.app.ActivityThread.performDestroyActivity(ActivityThread.java:4154) <6 more...> <1 internal calls> <2 i
```