






Test security and privacy of your mobile application (iOS & Android), detect OWASP Mobile Top 10 and other weaknesses.

Summary of Mobile Application Security Test

	APP NAME	APP ID	APP VERSION
	Coronapas	dk.sum.ssicpas	1.4.6
	DEVICE TYPE	TEST STARTED	TEST FINISHED
	Android	May 12th 2022, 14:17	May 12th 2022, 14:32

			
Mobile App Permissions and Privacy	OWASP Mobile Top 10 Security Test	Mobile App External Communications	Software Composition Analysis
8 PERMISSIONS	1 MAJOR RISK FOUND	NOT FOUND	36 COMPONENTS FOUND

Malware test: no malicious code or behavioral patterns detected in the mobile app.

Mobile Application Permissions and Privacy Test

If the application processes or stores any PII of EU residents, the following requirements of [EU GDPR](#) may apply:

Privacy Policy

Privacy Policy was not found in application

Misconfiguration or weakness

Mobile Application Functionality

The mobile application requests access to the following functionality that may endanger user's privacy under certain circumstances:

Camera

The mobile application can use the camera for taking pictures or videos.

Mobile Application Permissions

The mobile application requests the following permissions that may endanger user's privacy under certain circumstances:



CAMERA dangerous

Allows application to take pictures and videos with the camera. This allows the application to collect images that the camera is seeing at any time.

ACCESS_NETWORK_STATE normal

Allows an application to view the status of all networks.

FLASHLIGHT normal

Allows the application to control the flashlight.

INTERNET normal

Allows an application to create network sockets.

USE_BIOMETRIC normal

Allows an app to use device supported biometric modalities.

USE_FINGERPRINT normal

This constant was deprecated in API level 28. Applications should request USE_BIOMETRIC instead.

VIBRATE normal

Allows the application to control the vibrator.

WAKE_LOCK normal

Allows an application to prevent the phone from going to sleep.

OWASP Mobile Top 10 Security Test

The automated audit revealed the following security flaws and weaknesses that may impact the application:

HIGH RISK**MEDIUM RISK****LOW RISKS****WARNINGS**

0

1

2

6

Zero false-positive SLA and advanced manual testing of application is only available in ImmuniWeb® MobileSuite.

ENABLED APPLICATION BACKUP [M2] [CWE-921] [SAST]

MEDIUM

Description:

The mobile application uses external backup functionality (default Android backup mechanism) that may store inside sensitive data from the application. In certain conditions, this may lead to information disclosure (e.g. when a backup server or your Gmail account is compromised).

Example of insecure code:

```
android:allowBackup="true"
```

Example of secure code:

```
android:allowBackup="false"
```

Details:

There is '**android:allowBackup="true"**' found in file '**android/AndroidManifest.xml**':

```
[line 18:      <application android:allowBackup="true"
android:appComponentFactory="androidx.core.app.CoreComponentFactory"
android:debuggable="false" android:extractNativeLibs="false"
android:icon="@mipmap/icon" android:isSplitRequired="true" android:label="Coronapas"
android:localeConfig="@xml/locales_config" android:name="android.app.Application"
android:theme="@style/MainTheme">]
```

CVSSv3 Base Score:

5.9 (AV:N/AC:H/PR:N/UI:N/S:U/C:H/I:N/A:N)

Reference:

- <https://developer.android.com/guide/topics/manifest/application-element.html>
- <http://resources.infosecinstitute.com/android-hacking-security-part-15-hacking-android-apps-using-backup-techniques/>

MISSING TAPJACKING PROTECTION [M1] [CWE-451] [SAST]

LOW

Description:

The mobile application does not have a tapjacking protection required to mitigate tapjacking attacks. By default, Android OS permits a mobile application to display its user interface over the user interface of another application installed and run on the device. When user touches the screen, application may pass the touch event to another application below its user interface layer that the user does not see, serving like a proxy to pass unintended touch activities. This attack is quite similar to clickjacking but for mobile devices. In order to be successfully exploited, a malicious application shall be already installed on the mobile phone of the victim. An example of exploitation would be a malware app that tricks user to unwittingly tap on a payment button (or any other functionality) of a sensitive application when playing a game or doing other innocent activity in the malicious application screen.

Example of secure code:

```
public class MyActivity extends Activity {
    protected void onCreate(Bundle bundle) {
        super.onCreate(bundle);

        final Button myButton = (Button)findViewById(R.id.button_id);
        myButton.setFilterTouchesWhenObscured(true);

        myButton.setOnClickListener(new View.OnClickListener() {
            // Perform action on click
        })
    }
}

<Button
    android:layout_height="wrap_content"
    android:layout_width="wrap_content"
    android:text="@string/self_destruct"
    android:onClick="selfDestruct"
    android:filterTouchesWhenObscured="true" />
```

Details:

There is **android:filterTouchesWhenObscured="true"** missing in files:

- [android/res/layout-v22/mtrl_alert_dialog_actions.xml](#)
- [android/res/layout-v22/abc_alert_dialog_button_bar_material.xml](#)
- [android/res/layout-watch/abc_alert_dialog_button_bar_material.xml](#)
- [android/res/layout-watch/abc_alert_dialog_title_material.xml](#)
- [android/res/layout-land/mtrl_picker_header_dialog.xml](#)
- [android/res/layout/text_view_with_theme_line_height.xml](#)
- [android/res/layout/mtrl_picker_text_input_date.xml](#)
- [android/res/layout/camerafragment.xml](#)
- [android/res/layout/mtrl_alert_dialog_actions.xml](#)
- [android/res/layout/abc_list_menu_item_checkbox.xml](#)
- [android/res/layout/zxingscanneractivitylayout.xml](#)
- [android/res/layout/design_layout_snackbar_include.xml](#)
- [android/res/layout/design_text_input_start_icon.xml](#)
- [android/res/layout/abc_alert_dialog_button_bar_material.xml](#)
- [android/res/layout/mtrl_picker_header_fullscreen.xml](#)
- [android/res/layout/flyoutcontent.xml](#)
- [android/res/layout/abc_activity_chooser_view_list_item.xml](#)
- [android/res/layout/notification_template_big_media.xml](#)
- [android/res/layout/text_view_with_line_height_from_layout.xml](#)
- [android/res/layout/design_layout_tab_icon.xml](#)
- [android/res/layout/abc_screen_content_include.xml](#)
- [android/res/layout/mtrl_picker_dialog.xml](#)
- [android/res/layout/abc_activity_chooser_view.xml](#)
- [android/res/layout/abc_select_dialog_material.xml](#)
- [android/res/layout/test_toolbar_elevation.xml](#)
- [android/res/layout/abc_action_bar_title_item.xml](#)
- [android/res/layout/mtrl_calendar_year.xml](#)
- [android/res/layout/mtrl_alert_dialog_title.xml](#)
- [android/res/layout/test_toolbar.xml](#)
- [android/res/layout/fallbacktabbardontuse.xml](#)
- [android/res/layout/abc_screen_toolbar.xml](#)
- [android/res/layout/text_view_with_line_height_from_appearance.xml](#)
- [android/res/layout/abc_dialog_title_material.xml](#)

- android/res/layout/mtrl_picker_header_dialog.xml
- android/res/layout/abc_search_view.xml
- android/res/layout/abc_search_dropdown_item_icons_2line.xml
- android/res/layout/abc_action_menu_item_layout.xml
- android/res/layout/design_bottom_sheet_dialog.xml
- android/res/layout/mtrl_calendar_months.xml
- android/res/layout/design_bottom_navigation_item.xml
- android/res/layout/abc_action_bar_up_container.xml
- android/res/layout/notification_template_icon_group.xml
- android/res/layout/abc_list_menu_item_layout.xml
- android/res/layout/design_text_input_end_icon.xml
- android/res/layout/design_navigation_item_separator.xml
- android/res/layout/mtrl_calendar_day_of_week.xml
- android/res/layout/mtrl_picker_header_toggle.xml
- android/res/layout/mtrl_calendar_month_navigation.xml
- android/res/layout/test_reflow_chipgroup.xml
- android/res/layout/notification_media_cancel_action.xml
- android/res/layout/mtrl_calendar_month.xml
- android/res/layout/notification_action_tombstone.xml
- android/res/layout/toolbar.xml
- android/res/layout/abc_action_menu_layout.xml
- android/res/layout/notification_template_part_time.xml
- android/res/layout/shellcontent.xml
- android/res/layout/notification_action.xml
- android/res/layout/abc_list_menu_item_radio.xml
- android/res/layout/mtrl_layout_snackbar_include.xml
- android/res/layout/custom_dialog.xml
- android/res/layout/mtrl_calendar_horizontal.xml
- android/res/layout/loadingdialoglayout.xml
- android/res/layout/mtrl_alert_select_dialog_multichoice.xml
- android/res/layout/activity_webview.xml
- android/res/layout/test_toolbar_custom_background.xml
- android/res/layout/abc_screen_simple_overlay_action_mode.xml
- android/res/layout/mtrl_calendar_vertical.xml
- android/res/layout/abc_popup_menu_item_layout.xml
- android/res/layout/mtrl_picker_header_title_text.xml
- android/res/layout/mtrl_picker_fullscreen.xml
- android/res/layout/design_menu_item_action_area.xml
- android/res/layout/select_dialog_singlechoice_material.xml
- android/res/layout/browser_actions_context_menu_page.xml
- android/res/layout/select_dialog_item_material.xml
- android/res/layout/browser_actions_context_menu_row.xml
- android/res/layout/design_navigation_menu.xml
- android/res/layout/mtrl_picker_header_selection_text.xml
- android/res/layout/test_action_chip.xml
- android/res/layout/test_chip_zero_corner_radius.xml
- android/res/layout/support_simple_spinner_dropdown_item.xml
- android/res/layout/notification_media_action.xml
- android/res/layout/bottomtablayout.xml
- android/res/layout/notification_template_media.xml
- android/res/layout/abc_alert_dialog_material.xml
- android/res/layout/mtrl_alert_select_dialog_item.xml
- android/res/layout/design_navigation_item.xml
- android/res/layout/abc_tooltip.xml
- android/res/layout/zxingscannerfragmentlayout.xml
- android/res/layout/abc_action_mode_bar.xml
- android/res/layout/design_navigation_item_header.xml
- android/res/layout/test_design_checkbox.xml

- android/res/layout/mtrl_picker_text_input_date_range.xml
- android/res/layout/notification_template_lines_media.xml
- android/res/layout/test_design_radiobutton.xml
- android/res/layout/design_layout_snackbar.xml
- android/res/layout/notification_template_big_media_narrow_custom.xml
- android/res/layout/mtrl_calendar_month_labeled.xml
- android/res/layout/tabbar.xml
- android/res/layout/abc_action_mode_close_item_material.xml
- android/res/layout/test_toolbar_surface.xml
- android/res/layout/design_navigation_item_subheader.xml
- android/res/layout/abc_list_menu_item_icon.xml
- android/res/layout/fallbacktoolbaronotuse.xml
- android/res/layout/abc_expanded_menu_layout.xml
- android/res/layout/notification_template_media_custom.xml
- android/res/layout/abc_cascading_menu_item_layout.xml
- android/res/layout/mtrl_calendar_days_of_week.xml
- android/res/layout/text_view_without_line_height.xml
- android/res/layout/mtrl_calendar_day.xml
- android/res/layout/mtrl_layout_snackbar.xml
- android/res/layout/design_navigation_menu_item.xml
- android/res/layout/notification_template_custom_big.xml
- android/res/layout/text_view_with_line_height_from_style.xml
- android/res/layout/fingerprint_dialog_layout.xml
- android/res/layout/mtrl_alert_select_dialog_singlechoice.xml
- android/res/layout/abc_popup_menu_header_item_layout.xml
- android/res/layout/abc_alert_dialog_title_material.xml
- android/res/layout/notification_template_big_media_custom.xml
- android/res/layout/notification_template_big_media_narrow.xml
- android/res/layout/rootlayout.xml
- android/res/layout/notification_template_part_chronometer.xml
- android/res/layout/mtrl_alert_dialog.xml
- android/res/layout/mtrl_picker_actions.xml
- android/res/layout/abc_screen_simple.xml
- android/res/layout/select_dialog_multichoice_material.xml
- android/res/layout/design_layout_tab_text.xml
- android/res/layout-sw600dp/design_layout_snackbar.xml
- android/res/layout-sw600dp/mtrl_layout_snackbar.xml
- android/res/layout-v26/abc_screen_toolbar.xml
- android/res/layout-v26/mtrl_calendar_month.xml

There is '**extends RecyclerView**' found in file '['crc643f46942d9dd1fff9/RecyclerViewContainer.java'](#):

```
[line 10: ]
[line 11: public class RecyclerViewContainer extends RecyclerView implements
IGCUserPeer {}
[line 12:     public static final String __md_methods = "";]
```

There is '**extends RecyclerView**' found in file '['crc643f46942d9dd1fff9/ItemsViewRenderer_3.java'](#):

```
[line 10: ]
[line 11: public abstract class ItemsViewRenderer_3 extends RecyclerView implements
IGCUserPeer {}
[line 12:     public static final String __md_methods = "n_onLayout:
(ZIIII)V:GetOnLayout_ZIIIIHandler\n";]
```

There is '**extends ViewGroup**' found in file '['crc643f46942d9dd1fff9/FlyoutPageContainer.java'](#):

```
[line 11: ]
[line 12: public class FlyoutPageContainer extends ViewGroup implements IGCUserPeer {}
[line 13:     public static final String __md_methods = "n_onLayout:
(ZIIII)V:GetOnLayout_ZIIIIHandler\\nn_onAttachedToWindow:
()V:GetOnAttachedToWindowHandler\\nn_onInterceptTouchEvent:
(Landroid/view/MotionEvent;)Z:GetOnInterceptTouchEvent_Landroid_view_MotionEvent_Handle
r\\n";]
```

There is '**extends ViewGroup**' found in file '['crc643f46942d9dd1fff9/PlatformRenderer.java'](#):

```
[line 11: ]
[line 12: public class PlatformRenderer extends ViewGroup implements IGCUserPeer {}
[line 13:     public static final String __md_methods = "n_dispatchTouchEvent:
(Landroid/view/MotionEvent;)Z:GetDispatchTouchEvent_Landroid_view_MotionEvent_Handler\\n
n_onLayout:(ZIIII)V:GetOnLayout_ZIIIIHandler\\nn_onMeasure:
(II)V:GetOnMeasure_IIHandler\\n";]
```

There is '**extends ViewGroup**' found in file '['crc643f46942d9dd1fff9/ContainerView.java'](#):

```
[line 10: ]
[line 11: public class ContainerView extends ViewGroup implements IGCUserPeer {}
[line 12:     public static final String __md_methods = "n_onLayout:
(ZIIII)V:GetOnLayout_ZIIIIHandler\\nn_onMeasure:(II)V:GetOnMeasure_IIHandler\\n";]
```

There is '**extends ViewGroup**' found in file '['crc643f46942d9dd1fff9/ItemContentView.java'](#):

```
[line 10: ]
[line 11: public class ItemContentView extends ViewGroup implements IGCUserPeer {}
[line 12:     public static final String __md_methods = "n_onLayout:
(ZIIII)V:GetOnLayout_ZIIIIHandler\\nn_onMeasure:(II)V:GetOnMeasure_IIHandler\\n";]
```

There is '**extends ViewGroup**' found in file '['crc643f46942d9dd1fff9/PageContainer.java'](#):

```
[line 10: ]
[line 11: public class PageContainer extends ViewGroup implements IGCUserPeer {}
[line 12:     public static final String __md_methods = "n_onLayout:
(ZIIII)V:GetOnLayout_ZIIIIHandler\\nn_onMeasure:(II)V:GetOnMeasure_IIHandler\\n";]
```

There is '**extends ViewGroup**' found in file '['crc643f46942d9dd1fff9/ViewCellRenderer_ViewCellContainer.java'](#):

```
[line 11: ]
[line 12: public class ViewCellRenderer_ViewCellContainer extends ViewGroup implements
IGCUserPeer {}
[line 13:     public static final String __md_methods = "n_onInterceptTouchEvent:
(Landroid/view/MotionEvent;)Z:GetOnInterceptTouchEvent_Landroid_view_MotionEvent_Handle
r\\nn_dispatchTouchEvent:
(Landroid/view/MotionEvent;)Z:GetDispatchTouchEvent_Landroid_view_MotionEvent_Handler\\n
n_onLayout:(ZIIII)V:GetOnLayout_ZIIIIHandler\\nn_onMeasure:
(II)V:GetOnMeasure_IIHandler\\n";]
```

There is '**extends ViewGroup**' found in file '['crc643f46942d9dd1fff9/MasterDetailContainer.java'](#):

```
[line 11: ]
[line 12: public class MasterDetailContainer extends ViewGroup implements IGCUserPeer
{}
[line 13:     public static final String __md_methods = "n_onInterceptTouchEvent:
(Landroid/view/MotionEvent;)Z:GetOnInterceptTouchEvent_Landroid_view_MotionEvent_Handle
r\\nn_onLayout:(ZIIII)V:GetOnLayout_ZIIIIHandler\\n";]
```

There is '**extends ViewGroup**' found in file '['crc643f46942d9dd1fff9/ScrollViewContainer.java'](#):

```
[line 10: ]
[line 11: public class ScrollViewContainer extends ViewGroup implements IGCUserPeer {}
[line 12:     public static final String __md_methods = "n_onLayout:
(ZIIII)V:GetOnLayout_ZIIIIHandler\\nn_onMeasure:(II)V:GetOnMeasure_IIHandler\\n";]
```

There is '**extends ViewGroup**' found in file '['crc643f46942d9dd1fff9/ListViewRenderer_Container.java'](#):

```
[line 10: ]
[line 11: public class ListViewRenderer_Container extends ViewGroup implements
IGCUserPeer {}
[line 12:     public static final String __md_methods = "n_onLayout:
(ZIIII)V:GetOnLayout_ZIIIIHandler\\nn_onMeasure:(II)V:GetOnMeasure_IIHandler\\n";]
```

There is '**extends ViewGroup**' found in file '['crc64720bb2db43a66fe9/Platform_ModalContainer.java'](#):

```
[line 10: ]
[line 11: public class Platform_ModalContainer extends ViewGroup implements IGCUserPeer
{}
[line 12:     public static final String __md_methods = "n_onLayout:
(ZIIII)V:GetOnLayout_ZIIIIHandler\\n";]
```

There is '**extends ViewGroup**' found in file '['crc64720bb2db43a66fe9/NavigationPageRenderer_Container.java'](#):

```
[line 10: ]
[line 11: public class NavigationPageRenderer_Container extends ViewGroup implements
IGCUserPeer {}
[line 12:     public static final String __md_methods = "n_onLayout:
(ZIIII)V:GetOnLayout_ZIIIIHandler\\nn_onMeasure:(II)V:GetOnMeasure_IIHandler\\n";]
```

There is '**extends ViewGroup**' found in file '['com/xamarin/forms/platform/android/FormsViewGroup.java'](#):

```
[line 8: ]
[line 9: public class FormsViewGroup extends ViewGroup {}
[line 10:     boolean inputTransparent;]
```

There is '**extends View**' found in file '['crc643f46942d9dd1fff9/ShapeView.java'](#):

```
[line 11: ]
[line 12: public class ShapeView extends View implements IGCUserPeer {}
[line 13:     public static final String __md_methods = "n_onDraw:
(Landroid/graphics/Canvas;)V:GetOnDraw_Landroid_graphics_Canvas_Handler\\n";]
```

There is '**extends View**' found in file '['crc6480997b3ef81bf9b2/ZxingOverlayView.java'](#):


```
[line 11: ]
[line 12: public class ZxingOverlayView extends View implements IGCUserPeer {}
[line 13:     public static final String __md_methods = "n_onDraw:
(Landroid/graphics/Canvas;)V:GetOnDraw_Landroid_graphics_Canvas_Handler\n";]
```

There is '**extends View**' found in file '['crc648e35430423bd4943/SKCanvasView.java'](#):

```
[line 11: ]
[line 12: public class SKCanvasView extends View implements IGCUserPeer {}
[line 13:     public static final String __md_methods = "n_onDraw:
(Landroid/graphics/Canvas;)V:GetOnDraw_Landroid_graphics_Canvas_Handler\n\n_onSizeChange
d:(IIII)V:GetOnSizeChanged_IIIIHandler\n\n_onDetachedFromWindow:
()V:GetOnDetachedFromWindowHandler\n";]
```

There is '**extends DrawerLayout**' found in file '['crc643f46942d9dd1fff9/FlyoutPageRenderer.java'](#):

```
[line 12: ]
[line 13: public class FlyoutPageRenderer extends DrawerLayout implements IGCUserPeer,
DrawerListener {}
[line 14:     public static final String __md_methods = "n_onAttachedToWindow:
()V:GetOnAttachedToWindowHandler\n\n_onDetachedFromWindow:
()V:GetOnDetachedFromWindowHandler\n\n_onLayout:
(ZIIII)V:GetOnLayout_ZIIIIHandler\n\n_onDrawerClosed:
(Landroid/view/View;)V:GetOnDrawerClosed_Landroid_view_View_Handler:AndroidX.DrawerLayo
ut.Widget.DrawerLayout/IDrawerListenerInvoker,
Xamarin.AndroidX.DrawerLayout\n\n_onDrawerOpened:
(Landroid/view/View;)V:GetOnDrawerOpened_Landroid_view_View_Handler:AndroidX.DrawerLayo
ut.Widget.DrawerLayout/IDrawerListenerInvoker,
Xamarin.AndroidX.DrawerLayout\n\n_onDrawerSlide:
(Landroid/view/View;F)V:GetOnDrawerSlide_Landroid_view_View_FHandler:AndroidX.DrawerLay
out.Widget.DrawerLayout/IDrawerListenerInvoker,
Xamarin.AndroidX.DrawerLayout\n\n_onDrawerStateChanged:
(I)V:GetOnDrawerStateChanged_IHandler:AndroidX.DrawerLayout.Widget.DrawerLayout/IDrawer
ListenerInvoker, Xamarin.AndroidX.DrawerLayout\n";]
```

There is '**extends DrawerLayout**' found in file '['crc643f46942d9dd1fff9/MasterDetailRenderer.java'](#):

```
[line 12: ]
[line 13: public class MasterDetailRenderer extends DrawerLayout implements
IGCUserPeer, DrawerListener {}
[line 14:     public static final String __md_methods = "n_onAttachedToWindow:
()V:GetOnAttachedToWindowHandler\n\n_onDetachedFromWindow:
()V:GetOnDetachedFromWindowHandler\n\n_onLayout:
(ZIIII)V:GetOnLayout_ZIIIIHandler\n\n_onDrawerClosed:
(Landroid/view/View;)V:GetOnDrawerClosed_Landroid_view_View_Handler:AndroidX.DrawerLayo
ut.Widget.DrawerLayout/IDrawerListenerInvoker,
Xamarin.AndroidX.DrawerLayout\n\n_onDrawerOpened:
(Landroid/view/View;)V:GetOnDrawerOpened_Landroid_view_View_Handler:AndroidX.DrawerLayo
ut.Widget.DrawerLayout/IDrawerListenerInvoker,
Xamarin.AndroidX.DrawerLayout\n\n_onDrawerSlide:
(Landroid/view/View;F)V:GetOnDrawerSlide_Landroid_view_View_FHandler:AndroidX.DrawerLay
out.Widget.DrawerLayout/IDrawerListenerInvoker,
Xamarin.AndroidX.DrawerLayout\n\n_onDrawerStateChanged:
(I)V:GetOnDrawerStateChanged_IHandler:AndroidX.DrawerLayout.Widget.DrawerLayout/IDrawer
ListenerInvoker, Xamarin.AndroidX.DrawerLayout\n";]
```

There is '**extends DrawerLayout**' found in file '['crc643f46942d9dd1fff9/ShellFlyoutRenderer.java'](#):

```
[line 14: ]
[line 15: public class ShellFlyoutRenderer extends DrawerLayout implements IGCUserPeer,
DrawerListener {}]
[line 16:     public static final String __md_methods = "n_onInterceptTouchEvent:
(Landroid/view/MotionEvent;)Z:GetOnInterceptTouchEvent_Landroid_view_MotionEvent_Handle
r\n\n_drawChild:
(Landroid/graphics/Canvas;Landroid/view/View;J)Z:GetDrawChild_Landroid_graphics_Canvas_
Landroid_view_View_JHandler\n\n_onDrawerClosed:
(Landroid/view/View;)V:GetOnDrawerClosed_Landroid_view_View_Handler:AndroidX.DrawerLayo
ut.Widget.DrawerLayout/IDrawerListenerInvoker,
Xamarin.AndroidX.DrawerLayout\n\n_onDrawerOpened:
(Landroid/view/View;)V:GetOnDrawerOpened_Landroid_view_View_Handler:AndroidX.DrawerLayo
ut.Widget.DrawerLayout/IDrawerListenerInvoker,
Xamarin.AndroidX.DrawerLayout\n\n_onDrawerSlide:
(Landroid/view/View;F)V:GetOnDrawerSlide_Landroid_view_View_FHandler:AndroidX.DrawerLay
out.Widget.DrawerLayout/IDrawerListenerInvoker,
Xamarin.AndroidX.DrawerLayout\n\n_onDrawerStateChanged:
(I)V:GetOnDrawerStateChanged_IHandler:AndroidX.DrawerLayout.Widget.DrawerLayout/IDrawer
ListenerInvoker, Xamarin.AndroidX.DrawerLayout\n";]
```

There is '**extends ImageView**' found in file '['crc643f46942d9dd1fff9/FormsImageView.java'](#):

```
[line 10: ]
[line 11: public class FormsImageView extends ImageView implements IGCUserPeer {}]
[line 12:     public static final String __md_methods = "n_invalidate:
()V:GetInvalidateHandler\n";]
```

There is '**extends ImageView**' found in file '['crc64ee486da937c010f4/ImageRenderer.java'](#):

```
[line 12: ]
[line 13: public class ImageRenderer extends ImageView implements IGCUserPeer {}]
[line 14:     public static final String __md_methods = "n_onLayout:
(ZIIII)V:GetOnLayout_ZIIIIHandler\n\n_invalidate:()V:GetInvalidateHandler\n\n_draw:
(Landroid/graphics/Canvas;)V:GetDraw_Landroid_graphics_Canvas_Handler\n\n_onTouchEvent:
(Landroid/view/MotionEvent;)Z:GetOnTouchEvent_Landroid_view_MotionEvent_Handler\n";]
```

There is '**extends AppCompatRadioButton**' found in file '['crc643f46942d9dd1fff9/RadioButtonRenderer.java'](#):

```
[line 15: ]
[line 16: public class RadioButtonRenderer extends AppCompatRadioButton implements
IGCUserPeer, OnFocusChangeListener, OnCheckedChangeListener {}]
[line 17:     public static final String __md_methods = "n_onTouchEvent:
(Landroid/view/MotionEvent;)Z:GetOnTouchEvent_Landroid_view_MotionEvent_Handler\n\n_onFo
cusChange:
(Landroid/view/View;Z)V:GetOnFocusChange_Landroid_view_View_ZHandler:Android.Views.View
/IOFocusChangeListenerInvoker, Mono.Android, Version=0.0.0.0, Culture=neutral,
PublicKeyToken=null\n\n_onCheckedChanged:
(Landroid/widget/CompoundButton;Z)V:GetOnCheckedChanged_Landroid_widget_CompoundButton_
ZHandler:Android.Widget.CompoundButton/IOCheckedChangeListenerInvoker, Mono.Android,
Version=0.0.0.0, Culture=neutral, PublicKeyToken=null\n";]
```

There is '**extends ProgressBar**' found in file '['crc643f46942d9dd1fff9/CircularProgress.java'](#)':

```
[line 11: ]
[line 12: public class CircularProgress extends ProgressBar implements IGCUserPeer {}
[line 13:     public static final String __md_methods = "n_draw:
(Landroid/graphics/Canvas;)V:GetDraw_Landroid_graphics_Canvas_Handler\\nn_layout:
(IIII)V:GetLayout_IIIIHandler\\n";]
```

There is '**extends VideoView**' found in file '['crc643f46942d9dd1fff9/FormsVideoView.java'](#)':

```
[line 12: ]
[line 13: public class FormsVideoView extends VideoView implements IGCUserPeer {}
[line 14:     public static final String __md_methods = "n_setVideoPath:
(Ljava/lang/String;)V:GetSetVideoPath_Ljava_lang_String_Handler\\nn_setVideoURI:
(Landroid/net/Uri;Ljava/util/Map;)V:GetSetVideoURI_Landroid_net Uri_Ljava_util_Map_Hand
ler\\nn_setVideoURI:(Landroid/net/Uri;)V:GetSetVideoURI_Landroid_net Uri_Handler\\n";]
```

There is '**extends VideoView**' found in file '['crc642e1c7a98bdb5c44a/FormsVideoView.java'](#)':

```
[line 12: ]
[line 13: public class FormsVideoView extends VideoView implements IGCUserPeer {}
[line 14:     public static final String __md_methods = "n_setVideoPath:
(Ljava/lang/String;)V:GetSetVideoPath_Ljava_lang_String_Handler\\nn_setVideoURI:
(Landroid/net/Uri;Ljava/util/Map;)V:GetSetVideoURI_Landroid_net Uri_Ljava_util_Map_Hand
ler\\n";]
```

There is '**extends EditText**' found in file '['crc643f46942d9dd1fff9/EntryCellEditText.java'](#)':

```
[line 12: ]
[line 13: public class EntryCellEditText extends EditText implements IGCUserPeer {}
[line 14:     public static final String __md_methods = "n_onKeyPreIme:
(ILandroid/view/KeyEvent;)Z:GetOnKeyPreIme_ILandroid_view_KeyEvent_Handler\\nn_onFocusCh
anged:
(ZILandroid/graphics/Rect;)V:GetOnFocusChanged_ZILandroid_graphics_Rect_Handler\\n";]
```

There is '**extends EditText**' found in file '['crc643f46942d9dd1fff9/FormsEditTextBase.java'](#)':

```
[line 11: ]
[line 12: public class FormsEditTextBase extends EditText implements IGCUserPeer {}
[line 13:     public static final String __md_methods = "n_requestFocus:
(ILandroid/graphics/Rect;)Z:GetRequestFocus_ILandroid_graphics_Rect_Handler\\n";]
```

There is '**extends AppCompatActivity**' found in file '[crc643f46942d9dd1fff9/ImageButtonRenderer.java](#)':

```
[line 16: ]
[line 17: public class ImageButtonRenderer extends AppCompatActivity implements
IGCUserPeer, OnFocusChangeListener, OnClickListener, OnTouchListener {}]
[line 18:     public static final String __md_methods = "n_onLayout:
(ZIIII)V:GetOnLayout_ZIIIIHandler\\nn_invalidate:()V:GetInvalidateHandler\\nn_draw:
(Landroid/graphics/Canvas;)V:GetDraw_Landroid_graphics_Canvas_Handler\\nn_onTouchEvent:
(Landroid/view/MotionEvent;)Z:GetOnTouchEvent_Landroid_view_MotionEvent_Handler\\nn_onFo
cusChange:
(Landroid/view/View;Z)V:GetOnFocusChange_Landroid_view_View_ZHandler:Android.Views.View
/IOnFocusChangeListenerInvoker, Mono.Android, Version=0.0.0.0, Culture=neutral,
PublicKeyToken=null\\nn_onClick:
(Landroid/view/View;)V:GetOnClick_Landroid_view_View_Handler:Android.Views.View/IOnClic
kListenerInvoker, Mono.Android, Version=0.0.0.0, Culture=neutral,
PublicKeyToken=null\\nn_onTouch:
(Landroid/view/View;Landroid/view/MotionEvent;)Z:GetOnTouch_Landroid_view_View_Landroid
_view_MotionEvent_Handler:Android.Views.View/IOnTouchListenerInvoker, Mono.Android,
Version=0.0.0.0, Culture=neutral, PublicKeyToken=null\\n";]
```

There is '**extends AppCompatActivity**' found in file '[crc643f46942d9dd1fff9/CheckBoxRendererBase.java](#)':

```
[line 14: ]
[line 15: public class CheckBoxRendererBase extends AppCompatActivity implements
IGCUserPeer, OnFocusChangeListener, OnCheckedChangeListener {}]
[line 16:     public static final String __md_methods = "n_onFocusChange:
(Landroid/view/View;Z)V:GetOnFocusChange_Landroid_view_View_ZHandler:Android.Views.View
/IOnFocusChangeListenerInvoker, Mono.Android, Version=0.0.0.0, Culture=neutral,
PublicKeyToken=null\\nn_onCheckedChanged:
(Landroid/widget/CompoundButton;Z)V:GetOnCheckedChanged_Landroid_widget_CompoundButton_
ZHandler:Android.Widget.CompoundButton/IOnCheckedChangeListenerInvoker, Mono.Android,
Version=0.0.0.0, Culture=neutral, PublicKeyToken=null\\n";]
```

There is '**extends NestedScrollView**' found in file '[crc643f46942d9dd1fff9/ScrollViewRenderer.java](#)':

```
[line 12: ]
[line 13: public class ScrollViewRenderer extends NestedScrollView implements
IGCUserPeer {}]
[line 14:     public static final String __md_methods = "n_draw:
(Landroid/graphics/Canvas;)V:GetDraw_Landroid_graphics_Canvas_Handler\\nn_onInterceptTou
chEvent:
(Landroid/view/MotionEvent;)Z:GetOnInterceptTouchEvent_Landroid_view_MotionEvent_Handle
r\\nn_onTouchEvent:
(Landroid/view/MotionEvent;)Z:GetOnTouchEvent_Landroid_view_MotionEvent_Handler\\nn_onAt
tachedToWindow:()V:GetOnAttachedToWindowHandler\\nn_onDetachedFromWindow:
()V:GetOnDetachedFromWindowHandler\\nn_onLayout:
(ZIIII)V:GetOnLayout_ZIIIIHandler\\nn_onScrollChanged:
(IIII)V:GetOnScrollChanged_IIIIHandler\\n";]
```

There is '**extends LinearLayout**' found in file '[crc643f46942d9dd1fff9/IndicatorViewRenderer.java](#)':

```
[line 10: ]
[line 11: public class IndicatorViewRenderer extends LinearLayout implements
IGCUserPeer {}]
[line 12:     public static final String __md_methods = "";
```

There is '**extends LinearLayout**' found in file '['crc643f46942d9dd1fff9/BaseCellView.java'](#):

```
[line 10: ]
[line 11: public class BaseCellView extends LinearLayout implements IGCUserPeer {}
[line 12:     public static final String __md_methods = "";
```

There is '**extends LinearLayout**' found in file '['crc643f46942d9dd1fff9/EntryCellView.java'](#):

```
[line 18: ]
[line 19: public class EntryCellView extends LinearLayout implements IGCUserPeer,
TextWatcher, NoCopySpan, OnFocusChangeListener, OnEditorActionListener {}
[line 20:     public static final String __md_methods = "n_afterTextChanged:
(Landroid/text/Editable;)V:GetAfterTextChanged_Landroid_text_Editable_Handler:Android.T
ext.ITextWatcherInvoker, Mono.Android, Version=0.0.0.0, Culture=neutral,
PublicKeyToken=null\n\n_beforeTextChanged:
(Ljava/lang/CharSequence;III)V:GetBeforeTextChanged_Ljava_lang_CharSequence_IIIHandler:
Android.Text.ITextWatcherInvoker, Mono.Android, Version=0.0.0.0, Culture=neutral,
PublicKeyToken=null\n\n_onTextChanged:
(Ljava/lang/CharSequence;III)V:GetOnTextChanged_Ljava_lang_CharSequence_IIIHandler:Andr
oid.Text.ITextWatcherInvoker, Mono.Android, Version=0.0.0.0, Culture=neutral,
PublicKeyToken=null\n\n_onFocusChange:
(Landroid/view/View;Z)V:GetOnFocusChange_Landroid_view_View_ZHandler:Android.Views.View
/IOOnFocusChangeListenerInvoker, Mono.Android, Version=0.0.0.0, Culture=neutral,
PublicKeyToken=null\n\n_onEditorAction:
(Landroid/widget/TextView;ILandroid/view/KeyEvent;)Z:GetOnEditorAction_Landroid_widget_
TextView_ILandroid_view_KeyEvent_Handler:Android.Widget.TextView/IOOnEditorActionListene
rInvoker, Mono.Android, Version=0.0.0.0, Culture=neutral, PublicKeyToken=null\n";]
```

There is '**extends LinearLayout**' found in file

['crc643f46942d9dd1fff9/ShellFlyoutRecyclerViewAdapter_LinearLayoutWithFocus.java'](#):

```
[line 11: ]
[line 12: public class ShellFlyoutRecyclerViewAdapter_LinearLayoutWithFocus extends
LinearLayout implements IGCUserPeer {}
[line 13:     public static final String __md_methods = "n_focusSearch:
(I)Landroid/view/View;:GetFocusSearch_IHandler\n";]
```

There is '**extends LinearLayout**' found in file '['crc643f46942d9dd1fff9/ConditionalFocusLayout.java'](#):

```
[line 13: ]
[line 14: public class ConditionalFocusLayout extends LinearLayout implements
IGCUserPeer, OnTouchListener {}
[line 15:     public static final String __md_methods = "n_onTouch:
(Landroid/view/View;Landroid/view/MotionEvent;)Z:GetOnTouch_Landroid_view_View_Landroid
_view_MotionEvent_Handler:Android.Views.View/IOOnTouchListenerInvoker, Mono.Android,
Version=0.0.0.0, Culture=neutral, PublicKeyToken=null\n";]
```

There is '**extends SwipeRefreshLayout**' found in file '['crc643f46942d9dd1fff9/RefreshViewRenderer.java'](#):

```
[line 11: ]
[line 12: public class RefreshViewRenderer extends SwipeRefreshLayout implements
IGCUserPeer, OnRefreshListener {}]
[line 13:     public static final String __md_methods = "n_isRefreshing:
()Z:GetIsRefreshingHandler\ nn_setRefreshing:
(Z)V:GetSetRefreshing_ZHandler\ nn_canChildScrollUp:
()Z:GetCanChildScrollUpHandler\ nn_onLayout:
(ZIIII)V:GetOnLayout_ZIIIIHandler\ nn_onRefresh:
()V:GetOnRefreshHandler:AndroidX.SwipeRefreshLayout.Widget.SwipeRefreshLayout/IOnRefres
hListenerInvoker, Xamarin.AndroidX.SwipeRefreshLayout\n";]
```

There is '**extends SwipeRefreshLayout**' found in file '['crc643f46942d9dd1fff9/ListViewRenderer_SwipeRefreshLayoutWithFixedNestedScrolling.java'](#):

```
[line 12: ]
[line 13: public class ListViewRenderer_SwipeRefreshLayoutWithFixedNestedScrolling
extends SwipeRefreshLayout implements IGCUserPeer {}]
[line 14:     public static final String __md_methods = "n_onInterceptTouchEvent:
(Landroid/view/MotionEvent;)Z:GetOnInterceptTouchEvent_Landroid_view_MotionEvent_Handle
r\ nn_onNestedScrollAccepted:
(Landroid/view/View;Landroid/view/View;I)V:GetOnNestedScrollAccepted_Landroid_view_View
_Landroid_view_View_IHandler\ nn_onStopNestedScroll:
(Landroid/view/View;)V:GetOnStopNestedScroll_Landroid_view_View_Handler\ nn_onNestedScro
ll:(Landroid/view/View;IIII)V:GetOnNestedScroll_Landroid_view_View_IIIIHandler\n";]
```

There is '**extends TextView**' found in file '['crc643f46942d9dd1fff9/FormsTextView.java'](#):

```
[line 10: ]
[line 11: public class FormsTextView extends TextView implements IGCUserPeer {}]
[line 12:     public static final String __md_methods = "";]
```

There is '**extends CoordinatorLayout**' found in file '['crc643f46942d9dd1fff9/ShellFlyoutLayout.java'](#):

```
[line 10: ]
[line 11: public class ShellFlyoutLayout extends CoordinatorLayout implements
IGCUserPeer {}]
[line 12:     public static final String __md_methods = "n_onLayout:
(ZIIII)V:GetOnLayout_ZIIIIHandler\n";]
```

There is '**extends SeekBar**' found in file '['crc643f46942d9dd1fff9/FormsSeekBar.java'](#):

```
[line 11: ]
[line 12: public class FormsSeekBar extends SeekBar implements IGCUserPeer {}]
[line 13:     public static final String __md_methods = "n_onTouchEvent:
(Landroid/view/MotionEvent;)Z:GetOnTouchEvent_Landroid_view_MotionEvent_Handler\ nn_isPr
essed:()Z:GetIsPressedHandler\ nn_setPressed:(Z)V:GetSetPressed_ZHandler\n";]
```


There is '**extends FrameLayout**' found in file '['crc643f46942d9dd1fff9/CustomFrameLayout.java'](#):

```
[line 11: ]
[line 12: public class CustomFrameLayout extends FrameLayout implements IGCUserPeer {}
[line 13:     public static final String __md_methods = "n_onApplyWindowInsets:
(Landroid/view/WindowInsets;)Landroid/view/WindowInsets;:GetOnApplyWindowInsets_Landroi
d_view_WindowInsets_Handler\n";]
```

There is '**extends FrameLayout**' found in file '['crc643f46942d9dd1fff9/ShellSearchView.java'](#):

```
[line 16: ]
[line 17: public class ShellSearchView extends FrameLayout implements IGCUserPeer,
OnEditorActionListener, TextWatcher, NoCopySpan {}
[line 18:     public static final String __md_methods = "n_onAttachedToWindow:
()V:GetOnAttachedToWindowHandler\n\n_onLayout:
(ZIIII)V:GetOnLayout_ZIIIIHandler\n\n_onMeasure:
(II)V:GetOnMeasure_IIHandler\n\n_onEditorAction:
(Landroid/widget/TextView;ILandroid/view/KeyEvent;)Z:GetOnEditorAction_Landroid_widget_
TextView_ILandroid_view_KeyEvent_Handler:Android.Widget.TextView/IOnEditorActionListene
rInvoker, Mono.Android, Version=0.0.0.0, Culture=neutral,
PublicKeyToken=null\n\n_afterTextChanged:
(Landroid/text/Editable;)V:GetAfterTextChanged_Landroid_text_Editable_Handler:Android.T
ext.ITextWatcherInvoker, Mono.Android, Version=0.0.0.0, Culture=neutral,
PublicKeyToken=null\n\n_beforeTextChanged:
(Ljava/lang/CharSequence;III)V:GetBeforeTextChanged_Ljava_lang_CharSequence_IIIHandler:
Android.Text.ITextWatcherInvoker, Mono.Android, Version=0.0.0.0, Culture=neutral,
PublicKeyToken=null\n\n_onTextChanged:
(Ljava/lang/CharSequence;III)V:GetOnTextChanged_Ljava_lang_CharSequence_IIIHandler:Andr
oid.Text.ITextWatcherInvoker, Mono.Android, Version=0.0.0.0, Culture=neutral,
PublicKeyToken=null\n";]
```

There is '**extends FrameLayout**' found in file '['crc642e1c7a98bdb5c44a/CameraViewRenderer.java'](#):

```
[line 11: ]
[line 12: public class CameraViewRenderer extends FrameLayout implements IGCUserPeer {}
[line 13:     public static final String __md_methods = "n_onTouchEvent:
(Landroid/view/MotionEvent;)Z:GetOnTouchEvent_Landroid_view_MotionEvent_Handler\n";]
```

There is '**extends FrameLayout**' found in file '['crc642e1c7a98bdb5c44a/MediaElementRenderer.java'](#):

```
[line 15: ]
[line 16: public class MediaElementRenderer extends FrameLayout implements IGCUserPeer,
OnCompletionListener, OnInfoListener, OnPreparedListener, OnErrorListener {}
[line 17:     public static final String __md_methods = "n_getAlpha:
()F:GetGetAlphaHandler\n\n_setAlpha:(F)V:GetSetAlpha_FHandler\n\n_onCompletion:
(Landroid/media/MediaPlayer;)V:GetOnCompletion_Landroid_media_MediaPlayer_Handler:Andro
id.Media.MediaPlayer/IOnCompletionListenerInvoker, Mono.Android, Version=0.0.0.0,
Culture=neutral, PublicKeyToken=null\n\n_onInfo:
(Landroid/media/MediaPlayer;II)Z:GetOnInfo_Landroid_media_MediaPlayer_IIHandler:Android
.Media.MediaPlayer/IOnInfoListenerInvoker, Mono.Android, Version=0.0.0.0,
Culture=neutral, PublicKeyToken=null\n\n_onPrepared:
(Landroid/media/MediaPlayer;)V:GetOnPrepared_Landroid_media_MediaPlayer_Handler:Android
.Media.MediaPlayer/IOnPreparedListenerInvoker, Mono.Android, Version=0.0.0.0,
Culture=neutral, PublicKeyToken=null\n\n_onError:
(Landroid/media/MediaPlayer;II)Z:GetOnError_Landroid_media_MediaPlayer_IIHandler:Androi
d.Media.MediaPlayer/IOnErrorListenerInvoker, Mono.Android, Version=0.0.0.0,
Culture=neutral, PublicKeyToken=null\n";]
```

There is '**extends HorizontalScrollView**' found in file '['crc643f46942d9dd1fff9/AHorizontalScrollView.java'](#):

```
[line 12: ]
[line 13: public class AHorizontalScrollView extends HorizontalScrollView implements
IGCUserPeer {}
[line 14:     public static final String __md_methods = "n_onInterceptTouchEvent:
(Landroid/view/MotionEvent;)Z:GetOnInterceptTouchEvent_Landroid_view_MotionEvent_Handle
r\n\n_onTouchEvent:
(Landroid/view/MotionEvent;)Z:GetOnTouchEvent_Landroid_view_MotionEvent_Handler\n\n_onSc
rollChanged:(IIII)V:GetOnScrollChanged_IIIIHandler\n\n_draw:
(Landroid/graphics/Canvas;)V:GetDraw_Landroid_graphics_Canvas_Handler\n\n_isHorizontalSc
rollBarEnabled:
()Z:GetIsHorizontalScrollBarEnabledHandler\n\n_setHorizontalScrollBarEnabled:
(Z)V:GetSetHorizontalScrollBarEnabled_ZHandler\n";]
```

There is '**extends CheckBox**' found in file '['crc643f46942d9dd1fff9/CheckBoxDesignerRenderer.java'](#):

```
[line 14: ]
[line 15: public class CheckBoxDesignerRenderer extends CheckBox implements
IGCUserPeer, OnFocusChangeListener, OnCheckedChangeListener {}
[line 16:     public static final String __md_methods = "n_onFocusChange:
(Landroid/view/View;Z)V:GetOnFocusChange_Landroid_view_View_ZHandler:Android.Views.View
/IOnFocusChangeListenerInvoker, Mono.Android, Version=0.0.0.0, Culture=neutral,
PublicKeyToken=null\n\n_onCheckedChanged:
(Landroid/widget/CompoundButton;Z)V:GetOnCheckedChanged_Landroid_widget_CompoundButton_
ZHandler:Android.Widget.CompoundButton/IOnCheckedChangeListenerInvoker, Mono.Android,
Version=0.0.0.0, Culture=neutral, PublicKeyToken=null\n";]
```

There is '**extends CardView**' found in file '['crc64ee486da937c010f4/FrameRenderer.java'](#):

```
[line 12: ]
[line 13: public class FrameRenderer extends CardView implements IGCUserPeer {}
[line 14:     public static final String __md_methods = "n_onLayout:
(ZIIII)V:GetOnLayout_ZIIIIHandler\n\n_draw:
(Landroid/graphics/Canvas;)V:GetDraw_Landroid_graphics_Canvas_Handler\n\n_onTouchEvent:
(Landroid/view/MotionEvent;)Z:GetOnTouchEvent_Landroid_view_MotionEvent_Handler\n\n_onSi
zeChanged:(IIII)V:GetOnSizeChanged_IIIIHandler\n";]
```


There is '**extends AppCompatActivity**' found in file '[crc64ee486da937c010f4/ButtonRenderer.java](#)':

```
[line 17: ]
[line 18: public class ButtonRenderer extends AppCompatActivity implements IGCUserPeer,
OnAttachStateChangeListener, OnFocusChangeListener, OnClickListener, OnTouchListener {}]
[line 19:     public static final String __md_methods = "n_draw:
(Landroid/graphics/Canvas;)V:GetDraw_Landroid_graphics_Canvas_Handler\`nn_onTouchEvent:
(Landroid/view/MotionEvent;)Z:GetOnTouchEvent_Landroid_view_MotionEvent_Handler\`nn_onLa
yout:(ZIIII)V:GetOnLayout_ZIIIIHandler\`nn_onViewAttachedToWindow:
(Landroid/view/View;)V:GetOnViewAttachedToWindow_Landroid_view_View_Handler:Android.Vie
ws.View/IOnAttachStateChangeListenerInvoker, Mono.Android, Version=0.0.0.0,
Culture=neutral, PublicKeyToken=null\`nn_onViewDetachedFromWindow:
(Landroid/view/View;)V:GetOnViewDetachedFromWindow_Landroid_view_View_Handler:Android.V
iews.View/IOnAttachStateChangeListenerInvoker, Mono.Android, Version=0.0.0.0,
Culture=neutral, PublicKeyToken=null\`nn_onFocusChange:
(Landroid/view/View;Z)V:GetOnFocusChange_Landroid_view_View_ZHandler:Android.Views.View
/IOnFocusChangeListenerInvoker, Mono.Android, Version=0.0.0.0, Culture=neutral,
PublicKeyToken=null\`nn_onClick:
(Landroid/view/View;)V:GetOnClick_Landroid_view_View_Handler:Android.Views.View/IOnClic
kListenerInvoker, Mono.Android, Version=0.0.0.0, Culture=neutral,
PublicKeyToken=null\`nn_onTouch:
(Landroid/view/View;Landroid/view/MotionEvent;)Z:GetOnTouch_Landroid_view_View_Landroid
_view_MotionEvent_Handler:Android.Views.View/IOnTouchListenerInvoker, Mono.Android,
Version=0.0.0.0, Culture=neutral, PublicKeyToken=null\`n";]
```

There is '**extends ViewPager**' found in file '[crc64720bb2db43a66fe9/FormsViewPager.java](#)':

```
[line 11: ]
[line 12: public class FormsViewPager extends ViewPager implements IGCUserPeer {}]
[line 13:     public static final String __md_methods = "n_onInterceptTouchEvent:
(Landroid/view/MotionEvent;)Z:GetOnInterceptTouchEvent_Landroid_view_MotionEvent_Handle
r\`nn_onTouchEvent:
(Landroid/view/MotionEvent;)Z:GetOnTouchEvent_Landroid_view_MotionEvent_Handler\`n";]
```

There is '**extends SurfaceView**' found in file '[crc6480997b3ef81bf9b2/ZXingSurfaceView.java](#)':

```
[line 13: ]
[line 14: public class ZXingSurfaceView extends SurfaceView implements IGCUserPeer,
Callback {}]
[line 15:     public static final String __md_methods = "n_onTouchEvent:
(Landroid/view/MotionEvent;)Z:GetOnTouchEvent_Landroid_view_MotionEvent_Handler\`nn_onAt
tachedToWindow:()V:GetOnAttachedToWindowHandler\`nn_onWindowVisibilityChanged:
(I)V:GetOnWindowVisibilityChanged_IHandler\`nn_onWindowFocusChanged:
(Z)V:GetOnWindowFocusChanged_ZHandler\`nn_surfaceChanged:
(Landroid/view/SurfaceHolder;III)V:GetSurfaceChanged_Landroid_view_SurfaceHolder_IIIHan
dler:Android.Views.ISurfaceHolderCallbackInvoker, Mono.Android, Version=0.0.0.0,
Culture=neutral, PublicKeyToken=null\`nn_surfaceCreated:
(Landroid/view/SurfaceHolder;)V:GetSurfaceCreated_Landroid_view_SurfaceHolder_Handler:A
ndroid.Views.ISurfaceHolderCallbackInvoker, Mono.Android, Version=0.0.0.0,
Culture=neutral, PublicKeyToken=null\`nn_surfaceDestroyed:
(Landroid/view/SurfaceHolder;)V:GetSurfaceDestroyed_Landroid_view_SurfaceHolder_Handler
:Android.Views.ISurfaceHolderCallbackInvoker, Mono.Android, Version=0.0.0.0,
Culture=neutral, PublicKeyToken=null\`n";]
```

There is '**extends SurfaceView**' found in file '['crc648e35430423bd4943/SKSurfaceView.java'](#):

```
[line 12: ]
[line 13: public class SKSurfaceView extends SurfaceView implements IGCUserPeer,
Callback {}
[line 14:     public static final String __md_methods = "n_surfaceChanged:
(Landroid/view/SurfaceHolder;III)V:GetSurfaceChanged_Landroid_view_SurfaceHolder_IIIHan
dler:Android.Views.ISurfaceHolderCallbackInvoker, Mono.Android, Version=0.0.0.0,
Culture=neutral, PublicKeyToken=null\n\n_surfaceCreated:
(Landroid/view/SurfaceHolder;)V:GetSurfaceCreated_Landroid_view_SurfaceHolder_Handler:A
ndroid.Views.ISurfaceHolderCallbackInvoker, Mono.Android, Version=0.0.0.0,
Culture=neutral, PublicKeyToken=null\n\n_surfaceDestroyed:
(Landroid/view/SurfaceHolder;)V:GetSurfaceDestroyed_Landroid_view_SurfaceHolder_Handler
:Android.Views.ISurfaceHolderCallbackInvoker, Mono.Android, Version=0.0.0.0,
Culture=neutral, PublicKeyToken=null\n";]
```

There is '**extends GLSurfaceView**' found in file '['crc648e35430423bd4943/SKGLSurfaceView.java'](#):

```
[line 10: ]
[line 11: public class SKGLSurfaceView extends GLSurfaceView implements IGCUserPeer {}
[line 12:     public static final String __md_methods = "";]
```

There is '**extends TextureView**' found in file '['crc648e35430423bd4943/GLTextureView.java'](#):

```
[line 14: ]
[line 15: public class GLTextureView extends TextureView implements IGCUserPeer,
SurfaceTextureListener, OnLayoutChangeListener {}
[line 16:     public static final String __md_methods = "n_onAttachedToWindow:
()V:GetOnAttachedToWindowHandler\n\n_onDetachedFromWindow:
()V:GetOnDetachedFromWindowHandler\n\n_onSurfaceTextureAvailable:
(Landroid/graphics/SurfaceTexture;II)V:GetOnSurfaceTextureAvailable_Landroid_graphics_S
urfaceTexture_IIHandler:Android.Views.TextureView/ISurfaceTextureListenerInvoker,
Mono.Android, Version=0.0.0.0, Culture=neutral,
PublicKeyToken=null\n\n_onSurfaceTextureDestroyed:
(Landroid/graphics/SurfaceTexture;)Z:GetOnSurfaceTextureDestroyed_Landroid_graphics_Sur
faceTexture_Handler:Android.Views.TextureView/ISurfaceTextureListenerInvoker,
Mono.Android, Version=0.0.0.0, Culture=neutral,
PublicKeyToken=null\n\n_onSurfaceTextureSizeChanged:
(Landroid/graphics/SurfaceTexture;II)V:GetOnSurfaceTextureSizeChanged_Landroid_graphics
_SurfaceTexture_IIHandler:Android.Views.TextureView/ISurfaceTextureListenerInvoker,
Mono.Android, Version=0.0.0.0, Culture=neutral,
PublicKeyToken=null\n\n_onSurfaceTextureUpdated:
(Landroid/graphics/SurfaceTexture;)V:GetOnSurfaceTextureUpdated_Landroid_graphics_Surfa
ceTexture_Handler:Android.Views.TextureView/ISurfaceTextureListenerInvoker,
Mono.Android, Version=0.0.0.0, Culture=neutral, PublicKeyToken=null\n\n_onLayoutChange:
(Landroid/view/View;IIIIIIII)V:GetOnLayoutChange_Landroid_view_View_IIIIIIIIHandler:And
roid.Views.View/IOnLayoutChangeListenerInvoker, Mono.Android, Version=0.0.0.0,
Culture=neutral, PublicKeyToken=null\n";]
```

There is '**extends TextureView**' found in file '['crc642e1c7a98bdb5c44a/AutoFitTextureView.java'](#):

```
[line 10: ]
[line 11: public class AutoFitTextureView extends TextureView implements IGCUserPeer {}
[line 12:     public static final String __md_methods = "n_onMeasure:
(II)V:GetOnMeasure_IIHandler\n";]
```

CVSSv3 Base Score:

3.3 (AV:L/AC:H/PR:L/UI:R/S:U/C:L/I:L/A:N)

Reference:

- <https://developer.android.com/guide/topics/ui/declaring-layout.html>
- <https://developer.android.com/guide/topics/resources/layout-resource.html>
- <https://blog.lookout.com/blog/2010/12/09/android-touch-event-hijacking/>

EXPORTED BROADCAST RECEIVERS [M1] [CWE-925] [SAST]

LOW

Description:

The mobile application contains an exported receiver enabling other applications, including malicious ones, to send intents without restrictions.

By default, Broadcast Receivers is exported in Android, as the result any application will be able to send an intent to the Broadcast Receiver of the application. To define which applications can send intents to mobile application's Broadcast Receiver set relevant permissions in the Android Manifest file.

Example of insecure code:

```
<receiver
  android:name=".receivers.BatteryMonitoringReceiver"
  ...
</receiver>
```

Example of secure code:

```
<permission
  android:name="com.yourpage.permission.YOUR_PERMISSION"
  android:protectionLevel="signature" />

<uses-permission
  android:name="com.yourpage.permission.YOUR_PERMISSION" />

<receiver
  android:name=".receivers.BatteryMonitoringReceiver"
  android:permission="com.yourpage.permission.YOUR_PERMISSION"
  ...
</receiver>
```

Details:

There is '**NewlandReceiver**' found in file '[android/AndroidManifest.xml](#)':

```
[line 27:      <receiver android:name="crc643c5bae673f4ba5d4.NewlandReceiver"/>]
```

There is '**DataWedgeReceiver**' found in file '[android/AndroidManifest.xml](#)':

```
[line 28:      <receiver android:name="crc643c5bae673f4ba5d4.DataWedgeReceiver"/>]
```

There is '**CHDReceiver**' found in file '[android/AndroidManifest.xml](#)':

```
[line 29:      <receiver android:name="crc643c5bae673f4ba5d4.CHDReceiver"/>]
```

There is '**CustomTabsActionsBroadcastReceiver**' found in file '[android/AndroidManifest.xml](#)':

```
[line 43:      <receiver
android:name="crc64f98dd38067c0c88b.CustomTabsActionsBroadcastReceiver" />]
```

CVSSv3 Base Score:

3.6 (AV:L/AC:H/PR:L/UI:N/S:U/C:L/I:L/A:N)

Reference:

- <https://developer.android.com/guide/topics/manifest/receiver-element.html>
- <https://developer.android.com/reference/android/content/BroadcastReceiver.html>

USAGE OF IMPLICIT INTENT [M1] [CWE-927] [SAST]

WARNING

Description:

The mobile application uses implicit intent that may be insecure under certain conditions. Intents enable mobile applications to communicate with each other by requesting to perform different actions for which they are better suited. An implicit intent, however, does not specify to which particular application it sends a request to perform an action. If a malicious application is installed on victim's device, it may also receive the implicit intent, respond to it and perform some action instead, or in addition to, a legitimate application.

Example of insecure code:

```
Intent sendIntent = new Intent();
```

Example of secure code:

```
Intent downloadIntent = new Intent(this, DownloadService.class);
```

Details:

There is '**new Intent()**' found in file '[com/cipherlab/barcode/ReaderManagerAPI.java](#)':

```
[line 2312:      if (!this.bindServiceFlag) {}
[line 2313:      Intent intent = new Intent();]
[line 2314:      intent.setComponent(new
ComponentName("com.cipherlab.clbarcodeservice",
"com.cipherlab.clbarcodeservice.MainService"))];]
```

Reference:

- <https://developer.android.com/guide/components/intents-filters.html>
- <https://developer.android.com/training/articles/security-tips.html>

USAGE OF INTENT FILTER [M1] [CWE-927] [SAST]

WARNING

Description:

The mobile application uses an intent filter that may be a serious security risk if not properly implemented and filtered. Developers should not solely rely on intent filters for security purposes because they place no restrictions on explicit

intents. Intent filters are defined in the Android Manifest file, they let developers choose which type of intents their application components are supposed to receive and handle.

Example of insecure code:

```
<intent-filter>
  <action android:name="android.intent.action.VIEW" />
  <action android:name="android.intent.action.EDIT" />
  <action android:name="android.intent.action.PICK" />
  <category android:name="android.intent.category.DEFAULT" />
  <data mimeType:name="vnd.android.cursor.dir/vnd.google.note" />
</intent-filter>
```

Example of secure code:

```
// When you use intent-filter, you have to perform input validation in your code.
```

Details:

There is '**<intent-filter>**' found in file '[android/AndroidManifest.xml](#)':

```
[line 21:      <activity android:icon="@mipmap/icon" android:label="Coronapas"
android:launchMode="singleInstance" android:name="crc645a23998331bf56a8.SplashActivity"
android:roundIcon="@mipmap/icon_round" android:theme="@style/SSICPAS.Splash">]
[line 22:      <intent-filter>]
[line 23:      <action android:name="android.intent.action.MAIN"/>]
```

```
[line 30:      <activity android:label="AuthUrlSchemeInterceptorActivity"
android:launchMode="singleTop"
android:name="md52eac344ff43f7bff7f1301c3ba1d0d0c.AuthUrlSchemeInterceptorActivity"
android:noHistory="true">]
[line 31:      <intent-filter>]
[line 32:      <action android:name="android.intent.action.VIEW"/>]
```

Reference:

- <https://developer.android.com/guide/components/intents-filters.html>
- <https://developer.android.com/training/articles/security-tips.html>

DYNAMIC LOAD OF CODE [M7] [CWE-94] [SAST]

WARNING

Description:

The mobile application uses dynamic load of executable code. Under certain circumstances, dynamic load of code can be dangerous. For example, if the code is located on an external storage (e.g. SD card), this can lead to code injection vulnerability if the external storage is world readable and/or writable and an attacker can access it.

Example of insecure code:

```
Object test = loader.loadClass("Test", true).newInstance();
```

Example of secure code:

```
// If you are using code from unsafe place (like external storage),
// you should sign and cryptographically verify your code.
```

Details:

There is '**ClassLoader**' found in file '['crc643f46942d9dd1fff9/ShellFragmentPagerAdapter.java'](#):

```
[line 12: public class ShellFragmentPagerAdapter extends FragmentPagerAdapter
implements IGCUserPeer {}
[line 13:     public static final String __md_methods = "n_getCount:
()I:GetGetCountHandler\|nn_getItem:
(I)Landroidx/fragment/app/Fragment;:GetGetItem_IHandler\|nn_getItemId:
(I)J:GetGetItemId_IHandler\|nn_getItemPosition:
(Ljava/lang/Object;)I:GetGetItemPosition_Ljava_lang_Object_Handler\|nn_getPageTitle:
(I)Ljava/lang/CharSequence;:GetGetPageTitle_IHandler\|nn_restoreState:
(Landroid/os/Parcelable;Ljava/lang/ClassLoader;)V:GetRestoreState_Landroid_os_Parcelabl
e_Ljava_lang_ClassLoader_Handler\|n";]
[line 14:     private ArrayList refList;]
```

```
[line 16:     static {}
[line 17:
Runtime.register("Xamarin.Forms.Platform.Android.ShellFragmentPagerAdapter,
Xamarin.Forms.Platform.Android", ShellFragmentPagerAdapter.class, "n_getCount:
()I:GetGetCountHandler\|nn_getItem:
(I)Landroidx/fragment/app/Fragment;:GetGetItem_IHandler\|nn_getItemId:
(I)J:GetGetItemId_IHandler\|nn_getItemPosition:
(Ljava/lang/Object;)I:GetGetItemPosition_Ljava_lang_Object_Handler\|nn_getPageTitle:
(I)Ljava/lang/CharSequence;:GetGetPageTitle_IHandler\|nn_restoreState:
(Landroid/os/Parcelable;Ljava/lang/ClassLoader;)V:GetRestoreState_Landroid_os_Parcelabl
e_Ljava_lang_ClassLoader_Handler\|n");]
[line 18:     }]
```

```
[line 43: ]
[line 44:     private native void n_restoreState(Parcelable parcelable, ClassLoader
ClassLoader);]
[line 45: ]
```

```
[line 79: ]
[line 80:     public void restoreState(Parcelable parcelable, ClassLoader ClassLoader)
{}
[line 81:         n_restoreState(parcelable, ClassLoader);]
[line 82:     }]
```

There is '**ClassLoader**' found in file '['crc64720bb2db43a66fe9/FormsPagerAdapter_1.java'](#):

```
[line 12: public class FormsPagerAdapter_1 extends FragmentPagerAdapter
implements IGCUserPeer {}
[line 13:     public static final String __md_methods = "n_getCount:
()I:GetGetCountHandler\`nn_getItem:
(I)Landroidx/fragment/app/Fragment;:GetGetItem_IHandler\`nn_getItemId:
(I)J:GetGetItemId_IHandler\`nn_getItemPosition:
(Ljava/lang/Object;)I:GetGetItemPosition_Ljava_lang_Object_Handler\`nn_getPageTitle:
(I)Ljava/lang/CharSequence;:GetGetPageTitle_IHandler\`nn_restoreState:
(Landroid/os/Parcelable;Ljava/lang/ClassLoader;)V:GetRestoreState_Landroid_os_Parcelabl
e_Ljava_lang_ClassLoader_Handler\`n";]
[line 14:     private ArrayList refList;]
```

```
[line 16:     static {}
[line 17: Runtime.register("Xamarin.Forms.Platform.Android.AppCompat.FormsPagerAdapter`1,
Xamarin.Forms.Platform.Android", FormsPagerAdapter_1.class, "n_getCount:
()I:GetGetCountHandler\`nn_getItem:
(I)Landroidx/fragment/app/Fragment;:GetGetItem_IHandler\`nn_getItemId:
(I)J:GetGetItemId_IHandler\`nn_getItemPosition:
(Ljava/lang/Object;)I:GetGetItemPosition_Ljava_lang_Object_Handler\`nn_getPageTitle:
(I)Ljava/lang/CharSequence;:GetGetPageTitle_IHandler\`nn_restoreState:
(Landroid/os/Parcelable;Ljava/lang/ClassLoader;)V:GetRestoreState_Landroid_os_Parcelabl
e_Ljava_lang_ClassLoader_Handler\`n");]
[line 18:     }]
```

```
[line 43: ]
[line 44:     private native void n_restoreState(Parcelable parcelable, ClassLoader
ClassLoader);]
[line 45: ]
```

```
[line 79: ]
[line 80:     public void restoreState(Parcelable parcelable, ClassLoader ClassLoader)
{}
[line 81:         n_restoreState(parcelable, ClassLoader);]
[line 82:     }]
```

There is '**ClassLoader**' found in file '['mono/MonoPackageManager.java'](#):

```
[line 36:         String nativeLibraryPath = getNativeLibraryPath(context);]
[line 37:         ClassLoader classLoader = context.getClassLoader();]
[line 38:         String nativeLibraryPath2 =
getNativeLibraryPath(applicationInfo);]
```

```
[line 50:         System.loadLibrary("monodroid");]
[line 51:         Runtime.initInternal(stringBuilder2, strArr,
nativeLibraryPath2, strArr2, ClassLoader, MonoPackageManager_Resources.Assemblies,
VERSION.SDK_INT, isEmulator());]
[line 52:         ApplicationRegistration.registerApplications();]
```

There is '**ClassLoader**' found in file '[mono/android/MultiDexLoader.java](#)':

```
[line 11: import java.util.List;]
[line 12: import mono.android.incrementaldeployment.IncrementalClassLoader;]
[line 13:]
```

```
[line 25:         if (dexList != null && dexList.size() > 0) {}
[line 26: IncrementalClassLoader.inject(MultiDexLoader.class.getClassLoader(), str2, cacheDir,
[line 27: str, dexList);]
[line 27:     }]
```

There is '**ClassLoader**' found in file '[mono/android/Runtime.java](#)':

```
[line 15: ]
[line 16:     public static native int createContext(String[] strArr, String[]
[line 17: strArr2, ClassLoader ClassLoader);]
[line 17: ]
[line 18:     public static native int createContextWithData(String[] strArr,
[line 19: String[] strArr2, byte[][] bArr, String[] strArr3, ClassLoader ClassLoader, boolean
[line 19: z);]
[line 19:]
```

```
[line 21: ]
[line 22:     public static native void init(String str, String[] strArr, String str2,
[line 23: String[] strArr2, ClassLoader ClassLoader, String[] strArr3, String[] strArr4, String
[line 24: str3, int i, String[] strArr5);]
[line 25: ]
[line 26:     public static native void initInternal(String str, String[] strArr,
[line 27: String str2, String[] strArr2, ClassLoader ClassLoader, String[] strArr3, int i,
[line 28: boolean z);]
[line 29:]
```

There is '**ClassLoader**' found in file '[mono/android/incrementaldeployment/IncrementalClassLoader.java](#)':

```
[line 3: import android.util.Log;]
[line 4: import dalvik.system.BaseDexClassLoader;]
[line 5: import java.io.File;]
```

```
[line 8: ]
[line 9: public class IncrementalClassLoader extends ClassLoader {}
[line 10:     private final DelegateClassLoader delegateClassLoader;]
[line 11: ]
[line 12:     class DelegateClassLoader extends BaseDexClassLoader {}
[line 13:         private DelegateClassLoader(String str, File file, String str2,
[line 14: ClassLoader ClassLoader) {}
[line 15:             super(str, file, str2, ClassLoader);]
[line 16:         }]
```



```
[line 21: ]
[line 22:     public IncrementalClassLoader(ClassLoader ClassLoader, String str, File
file, String str2, List list) {}
[line 23:         super(ClassLoader.getParent());]
[line 24:         this.delegateClassLoader = createDelegateClassLoader(file, str2,
list, ClassLoader);]
[line 25:     }]
[line 26: ]
[line 27:     private static DelegateClassLoader createDelegateClassLoader(File file,
String str, List list, ClassLoader ClassLoader) {}
[line 28:         StringBuilder stringBuilder = new StringBuilder();]
```

```
[line 40:         stringBuilder2.append(stringBuilder);]
[line 41:         String str3 = "IncrementalClassLoader";]
[line 42:         Log.v(str3, stringBuilder2.toString());]
```

```
[line 46:         Log.v(str3, stringBuilder2.toString());]
[line 47:         return new DelegateClassLoader(stringBuilder.toString(), file, str,
ClassLoader);]
[line 48:     }]
[line 49: ]
[line 50:     public static void inject(ClassLoader ClassLoader, String str, File file,
String str2, List list) {}
[line 51:         setParent(classLoader, new IncrementalClassLoader(ClassLoader, str,
file, str2, list));]
[line 52:     }]
[line 53: ]
[line 54:     private static void setParent(ClassLoader classLoader, ClassLoader
ClassLoader2) {}
[line 55:         try {}
[line 56:             Field declaredField =
ClassLoader.class.getDeclaredField("parent");]
[line 57:             declaredField.setAccessible(true);]
[line 58:             declaredField.set(classLoader, ClassLoader2);]
[line 59:         } catch (IllegalArgumentException e) {}]
```

```
[line 68:     public Class findClass(String str) {}
[line 69:         return this.delegateClassLoader.findClass(str);]
[line 70:     }]
```

There is 'ClassLoader' found in file 'com/honeywell/Message.java':

```
[line 11:         Message message = new Message();]
[line 12:         message.action = (String)
parcel.readValue(AnonymousClass1.class.getClassLoader());]
[line 13:         message.extras = (Map)
parcel.readValue(AnonymousClass1.class.getClassLoader());]
[line 14:         return message;]
```

There is '**ClassLoader**' found in file '[com/cipherlab/barcode/DataFormattingRuleV2.java](#)':

```
[line 203:      this.mCriterionPosition = parcel.readInt();]
[line 204:      parcel.readList(this.mActionId,
DataFormattingAction.class.getClassLoader());]
[line 205:      parcel.readStringList(this.mValue1);]
```

Reference:

- <https://developer.android.com/reference/java/lang/ClassLoader.html>
- <https://developer.android.com/reference/dalvik/system/DexClassLoader.html>
- <https://developer.android.com/reference/java/security/SecureClassLoader.html>
- <https://developer.android.com/reference/java/net/URLClassLoader.html>

OBJECT DESERIALIZATION FOUND [M7] [CWE-502] [SAST]

WARNING

Description:

Object deserialization performed on an untrusted resource (e.g. user-supplied input or external storage), can be dangerous if the data for deserialization is tampered by an attacker.

Example of insecure code:

```
bundle.putSerializable("exampleClass", exampleOfSerializabledClass);
exampleOfSerializabledClass = bundle.getSerializable("exampleClass");
```

Example of secure code:

```
// Use only serialization when you have the control over data
```

Details:

There is '**implements Serializable**' found in file '[com/symbol/emdk/simulscan/SimulScanData.java](#)':

```
[line 5: ]
[line 6: public class SimulScanData implements Serializable {}]
[line 7:     public SimulScanData() {}]
```

There is '**implements Serializable**' found in file '[com/symbol/emdk/simulscan/SimulScanTemplate.java](#)':

```
[line 5: ]
[line 6: public class SimulScanTemplate implements Serializable {}]
[line 7:     protected SimulScanTemplate() {}]
```

There is '**implements Serializable**' found in file '[com/symbol/emdk/simulscan/SimulScanElement.java](#)':

```
[line 4: ]
[line 5: public abstract class SimulScanElement implements Serializable {}]
[line 6:     protected SimulScanElement() {}]
```

There is '**implements Serializable**' found in file '[com/symbol/emdk/simulscan/SimulScanTemplateElement.java](#)':

```
[line 4: ]
[line 5: public abstract class SimulScanTemplateElement implements Serializable {}
[line 6:     protected SimulScanTemplateElement() {}]
```

There is '**implements Serializable**' found in file '[com/cipherlab/barcodebase/ReaderDataStruct.java](#)':

```
[line 5: ]
[line 6: public class ReaderDataStruct implements Serializable {}
[line 7:     private byte[] codeDataArray;]
```

There is '**implements Serializable**' found in file '[com/cipherlab/barcode/ReaderManagerAPI.java](#)':

```
[line 74: ]
[line 75: public class ReaderManagerAPI extends Application implements Serializable {}
[line 76:     private static ReaderManagerAPI _instance;]
```

Reference:

- <https://developer.android.com/reference/android/os/Bundle.html>

MISSING ANTI-EMULATION [SAST]

WARNING

Description:

The mobile application does not use any anti-emulation or anti-debugger techniques (e.g. detecting rooted devices or checking if contacts are authentic).

This can significantly facilitate application debugging and reverse-engineering processes.

Reference:

- <https://github.com/strazzere/anti-emulator>

NETWORK SECURITY CONFIGURATION IS NOT PRESENT [SAST]

WARNING

Description:

The mobile application does not use Network Security Configuration to define which certificates and Certificate Authorities (CA) can be used for different environments (e.g. Development, Test and Production). The Network Security Configuration on Android feature lets application developers customize their network security settings in a safe, declarative configuration file without modifying the application code.

Reference:

- <https://developer.android.com/training/articles/security-config.html>

Software Composition Analysis Test

The mobile application uses the following external and native libraries:

External

- crc645a23998331bf56a8
- crc646acbd0515738a876
- crc64fdbeeba101bd56dc
- crc64bb223c2be3a01e03
- crc64396a3fe5f8138e3f
- crc64515ee83f00766c60
- crc643f46942d9dd1fff9
- crc64ee486da937c010f4
- crc64f84f70ee2cf5bc6a
- crc64720bb2db43a66fe9
- crc647ec52b915f36f367
- crc64c4d4f61ef007b125
- crc6414252951f3f66c67
- crc643c5bae673f4ba5d4
- crc64435a5ac349fa9fda
- crc64234e47a113e7c1a9
- crc6480997b3ef81bf9b2
- xamarin.essentials
- crc64f98dd38067c0c88b
- crc64177c89b4d112e17b
- crc64a0e0a82d0db9a07d
- crc645b8ccbad6ecd7dce
- crc64e6d0b84c6264ccdd
- mono
- device.common
- device.sdk
- crc64b5ccde371e18b5d0
- crc648e35430423bd4943
- crc642e1c7a98bdb5c44a
- crc643eead1a2954d3917
- com.honeywell
- com.symbol
- com.xamarin
- com.cipherlab
- crc64cd8b23a5a735fc0f
- crc643dd37f507f3d9710

Android Native

- androidx.transition
- androidx.asynclayoutinflater
- androidx.collection
- androidx.core
- androidx.drawerlayout
- androidx.interpolator
- androidx.versionedparcelable
- androidx.activity
- androidx.viewpager
- androidx.vectordrawable
- androidx.lifecycle
- androidx.legacy
- androidx.documentfile
- androidx.annotation
- androidx.print
- androidx.localbroadcastmanager
- androidx.cursoradapter
- androidx.browser
- androidx.biometric
- androidx.swiperefreshlayout
- androidx.fragment
- androidx.loader
- androidx.recyclerview
- androidx.arch
- androidx.appcompat
- androidx.viewpager2
- androidx.customview
- androidx.slidingpanelayout
- androidx.coordinatorlayout
- androidx.savedstate
- androidx.cardview
- androidx.media
- android.runtime
- android.support