ADOP SDK Android ver.

Developer guide

ADOP

- Contents -

1. Outline

This is a guideline document on how to apply the ADOP Compass SDK Android version to the project.

Currently supported advertising platforms:

- Google adx
- Cauly
- Facebook Audience Network
- Mobfox
- Linkmine
- DawinClick
- Avocarrot

Reference : Types of advertisements per every single network

	Banner			Interstitial	Native	Ending pop up
	320x50	320x100	300x250			
Google adx	O	O	O	O		
Cauly	O		O	O	O	O
Facebook	O		O	O	O	O
Mobfox	O		O	O		
Linkmine	O		O			
DawinClick	O			O		
Avocarrot					O	O

- ADOP Compass Mobile SDK Android 2.0.+ version provides Banner, Interstitial, Native and Ending pop up advertisements.
- ADOP Compass Mobile SDK could be used after getting the ID.
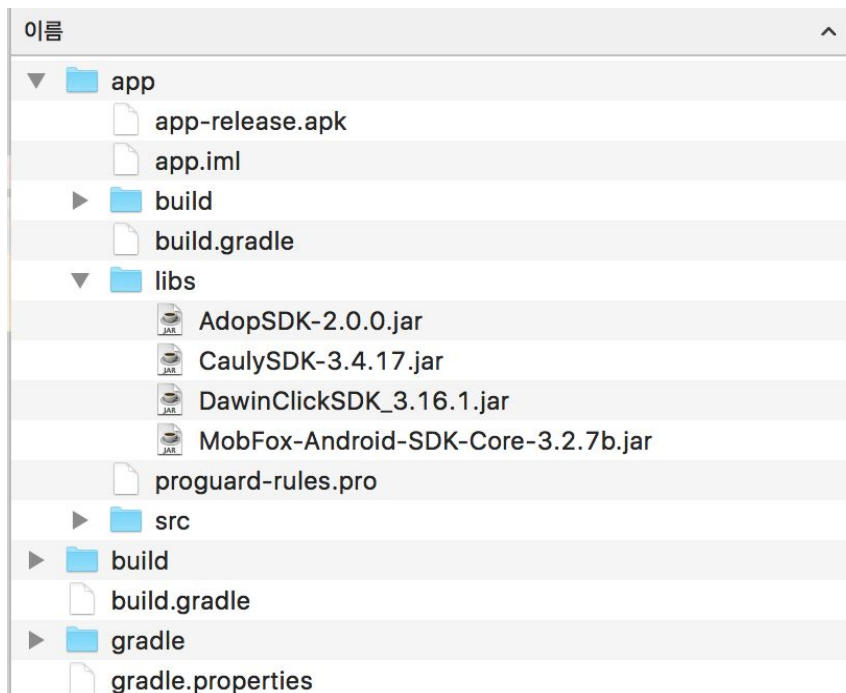
2. Development Environment

- Android Studio version : 2.3.3
- Android SDK version : At least above API 16

3. SDK Installation Guide

1) When using Android Studio

1. Please copy and paste the SDK below to the 'libs' folder of the relevant project.

- AdopSDK-2.0.0.jar
- CaulySDK-3.x.x.jar
- MobFox-Android-SDK-Core-3.2.7b.jar
- DawinClickSDK_3.16.1.jar

이름	∧
▼ 📁 app	
📄 app-release.apk	
📄 app.iml	
▶ 📁 build	
📄 build.gradle	
▼ 📁 libs	
🗄 AdopSDK-2.0.0.jar	
🗄 CaulySDK-3.4.17.jar	
🗄 DawinClickSDK_3.16.1.jar	
🗄 MobFox-Android-SDK-Core-3.2.7b.jar	
📄 proguard-rules.pro	
▶ 📁 src	
▶ 📁 build	
📄 build.gradle	
▶ 📁 gradle	
📄 gradle.properties	

2. Please add the compile command below to 'build.gradle (Module: app)' of the relevant project.

```
dependencies {
  ...
  compile fileTree(dir: 'libs', include: ['*.jar'])

  compile 'com.google.android.gms:play-services-ads:11.2.0'

  //Add Facebook Audience Network SDK

  compile 'com.facebook.android:audience-network-sdk:4.+'

  //Add avocarrot SDK

  compile 'com.avocarrot.sdk:mediation-sdk-nativead:4.6.0'

  //In need of MobFox's Interstitial advertisement

  compile 'com.danikula:videocache:2.7.0'

}
```

* Reference: Advertising Platform SDK-site supported by ADOP
-   Cauly : Link
-   Facebook Audience Network : Link
-   MobFox : Link
-   Google Adx : Link
-   DawinClick : Link
-   Avocarrot : Link

3. Please add the compile command below to 'build.gradle (Project : Project name)' of the relevant project.

```
repositories {
    ...
    maven {
        url "https://maven.google.com"
```
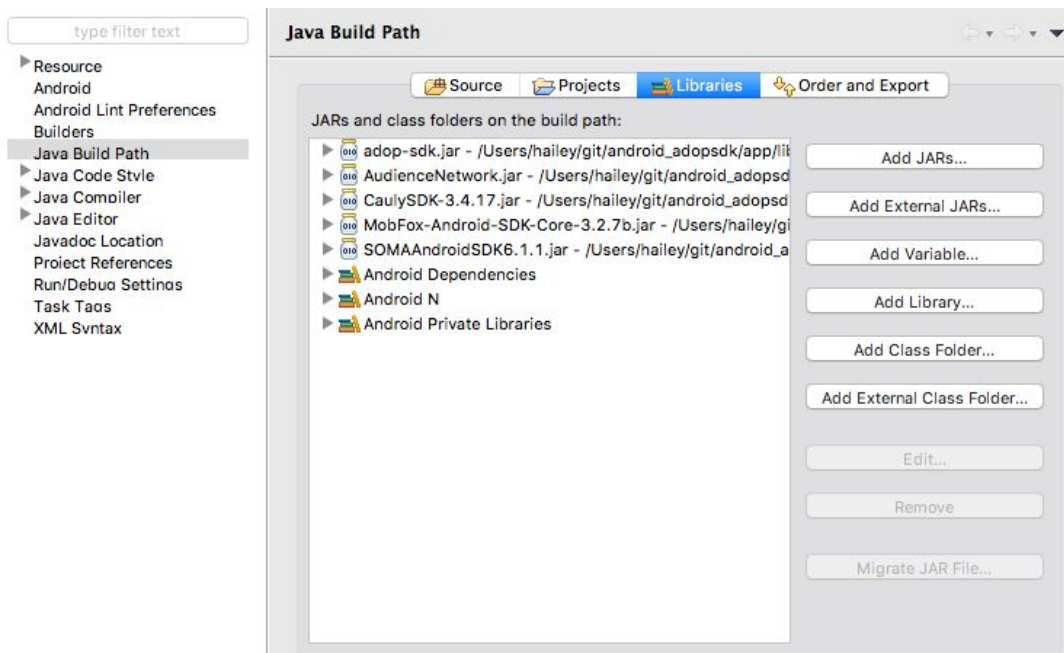
```
        }
    // Avocarrot (When using Native advertisement)
    maven {
        url "https://s3.amazonaws.com/avocarrot-android-builds/dist/"
    }
}
```
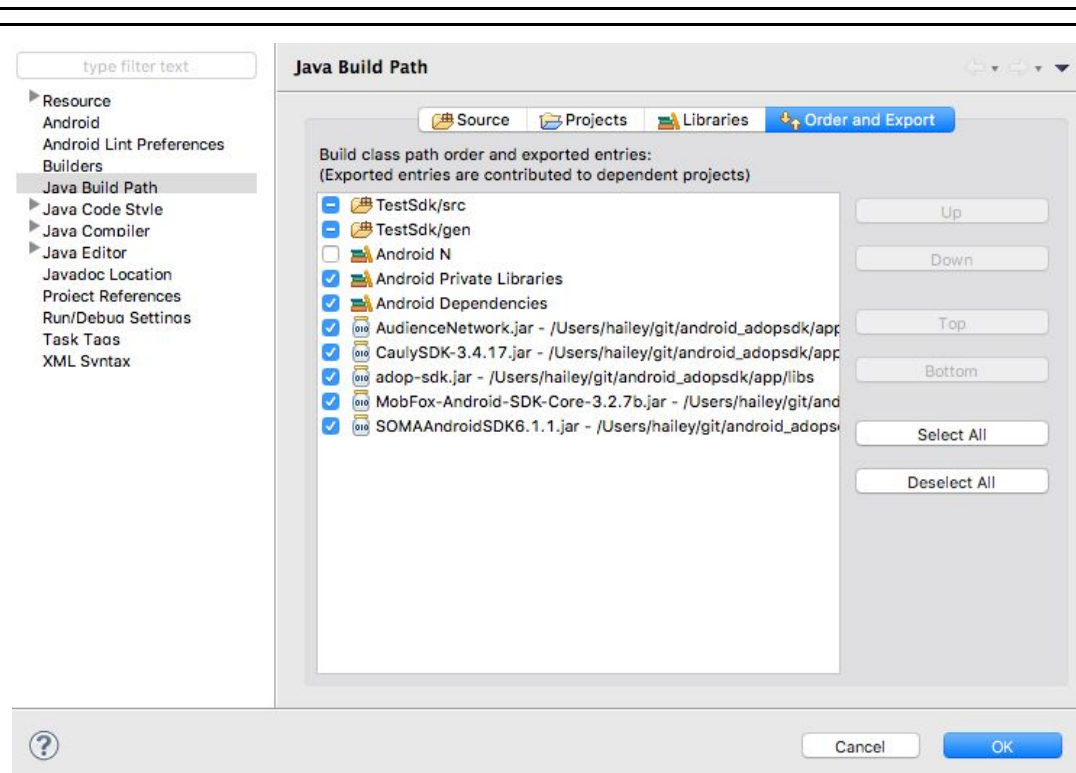
2) When using ADT
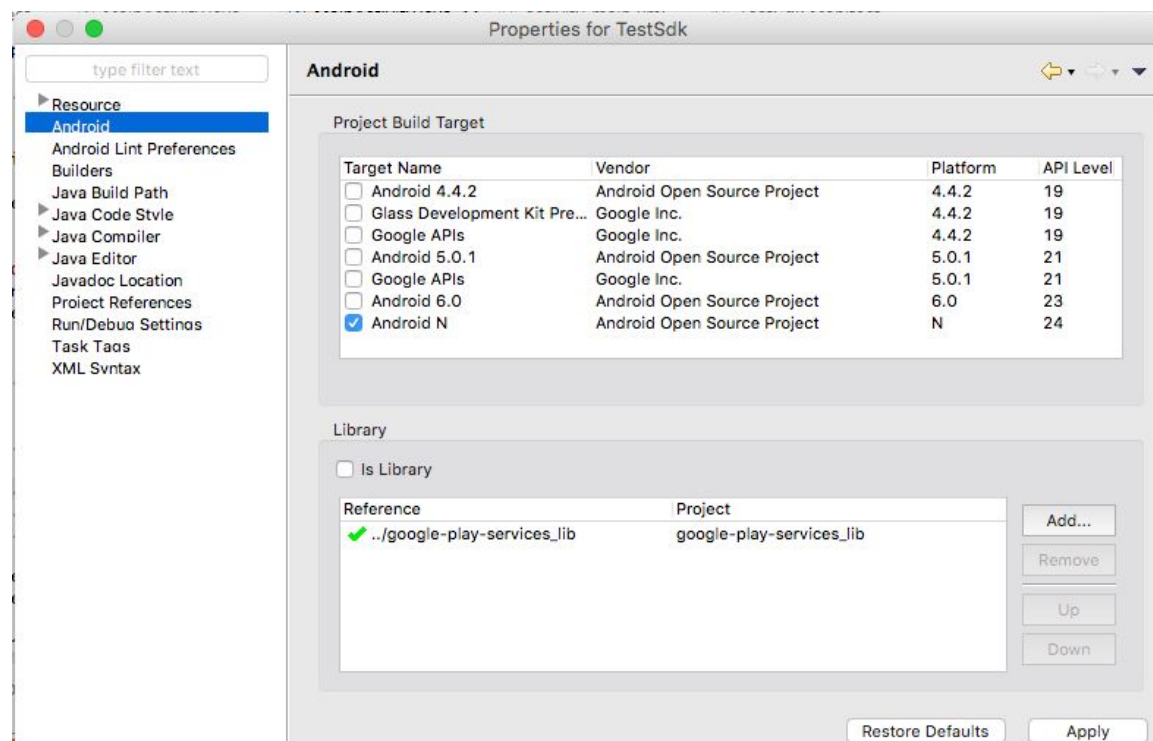
1. Import the SDK into the library in the project.

- Properties > Java Build Path > Libraries tab > 'Add External JARs'
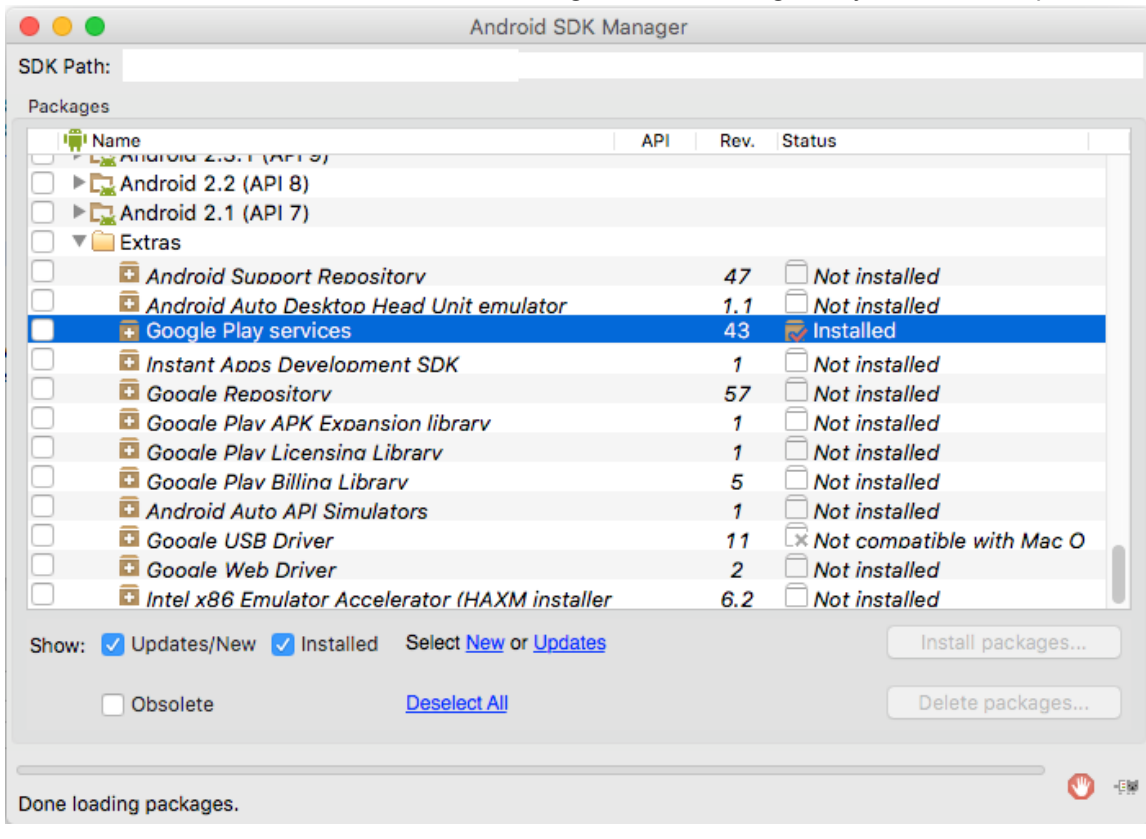- Properties > Java Build Path > Order and Export tab > Check the SDK File

2. Please add the Google play service library
- Location :
  {*Android_SDK_Location*}\extras\google\google_play_services\libproject\google-play-services_lib

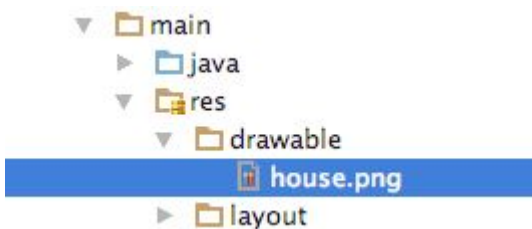-   If it does not exist, install the SDK Manager > Extras/Google Play Services and proceed.

* Common

[Setting up House Banner]

: Please add the House Banner into the /res/drawable folder in the project.

(if you have no desired House Banner, add ADOP's house.png file which was sent to you together with the SDK)

[AndroidManifest.xml setting]

- Because this is a mandatory permission setting, you need to set it up to display advertisements correctly.

```xml
<uses-permission android:name="android.permission.INTERNET" />
```

```xml
<uses-permission android:name="android.permission.ACCESS_WIFI_STATE" />
```

```xml
<uses-permission android:name="android.permission.ACCESS_NETWORK_STATE" />
```

- Set up the Google Play service information.

```xml
<meta-data android:name="com.google.android.gms.version"
android:value="@integer/google_play_services_version"/>
```

- Set up the configChanges="orientation" in the Activity where the advertisement would be inserted.

* If the target Api Level is above 13

```
android:configChanges="keyboard|keyboardHidden|orientation|screenLayout|uiMode|screenSize|smallestScreenSize"
```

* If the target Api Level is below 13

```
android:configChanges="keyboard|keyboardHidden|orientation|screenLayout|uiMode"
```

- When using Facebook Interstitial advertisements, set up as below.

```xml
<activity android:name="com.facebook.ads.InterstitialAdActivity"
android:configChanges="keyboard|keyboardHidden|orientation|screenSize" />
```

- When using MobFox Interstitial advertisements, set up as below.

```xml
<activity android:name="com.mobfox.sdk.interstitialads.InterstitialActivity"
android:hardwareAccelerated="true" />
```

```xml
<service android:name="com.mobfox.sdk.services.MobFoxService"
android:launchMode="singleTop" />
```

- When using DawinClick set up as below.

```xml
<activity android:name="com.skplanet.tad.AdActivity"

android:configChanges="keyboard|keyboardHidden|orientation|screenLayout|uiMode|screenSize|smallestScreenSize"

android:label="Ad Activity"

android:theme="@android:style/Theme.NoTitleBar" />

<receiver android:name="com.skplanet.tad.SyrupAdReceiver" >

  <intent-filter>

    <action android:name="com.skplanet.syrupad.action.SAID_CHANGED" />

  </intent-filter>

</receiver>
```

4. Banner Advertisement

[activity_main.xml]

```xml
<?xml version="1.0" encoding="utf-8"?>
<android.support.constraint.ConstraintLayout ...>

…
 <!-- Set up the layout for displaying the advertisement (the layout format can be freely edited) -->
  <android.support.constraint.ConstraintLayout
    android:id="@+id/bannerLayout"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintLeft_toLeftOf="parent"
    app:layout_constraintRight_toRightOf="parent">
  </android.support.constraint.ConstraintLayout>

…

</android.support.constraint.ConstraintLayout>
```

[MainActivity.java] - 1

```java
import com.adop.sdk.adview.BaseAdView;

public class MainActivity extends AppCompatActivity {

  static String ZONE_ID = "xxxxxxx-xxxx-xxxx-xxxx-xxxxxxxxxxxx"; //  Given ZONE ID

  ConstraintLayout layout;

  private BaseAdView mAdView;

  @Override
  protected void onCreate(Bundle savedInstanceState) {
    super.onCreate(savedInstanceState);
    setContentView(R.layout.activity_main);

    layout = (ConstraintLayout) findViewById(R.id.bannerLayout);
    mAdView = new BaseAdView(MainActivity.this);

    mAdView.setHouseImg(R.drawable.house);// House banner image from [3.SDK installation Guide-common]
    mAdView.setAdInfo(ZONE_ID);    // Insert the given ID
    mAdView.setGravity(Gravity.CENTER); // Arrange in the middle (optional)
    mAdView.setInterval(30); // Advertisement refresh interval (unit: second)
                // Minimum 10 seconds ~ Maximum 120 seconds (Default without settings: 60
                seconds)
    mAdView.load(); // Load advertising enforcement

    layout.addView(mAdView);
  }
}
```
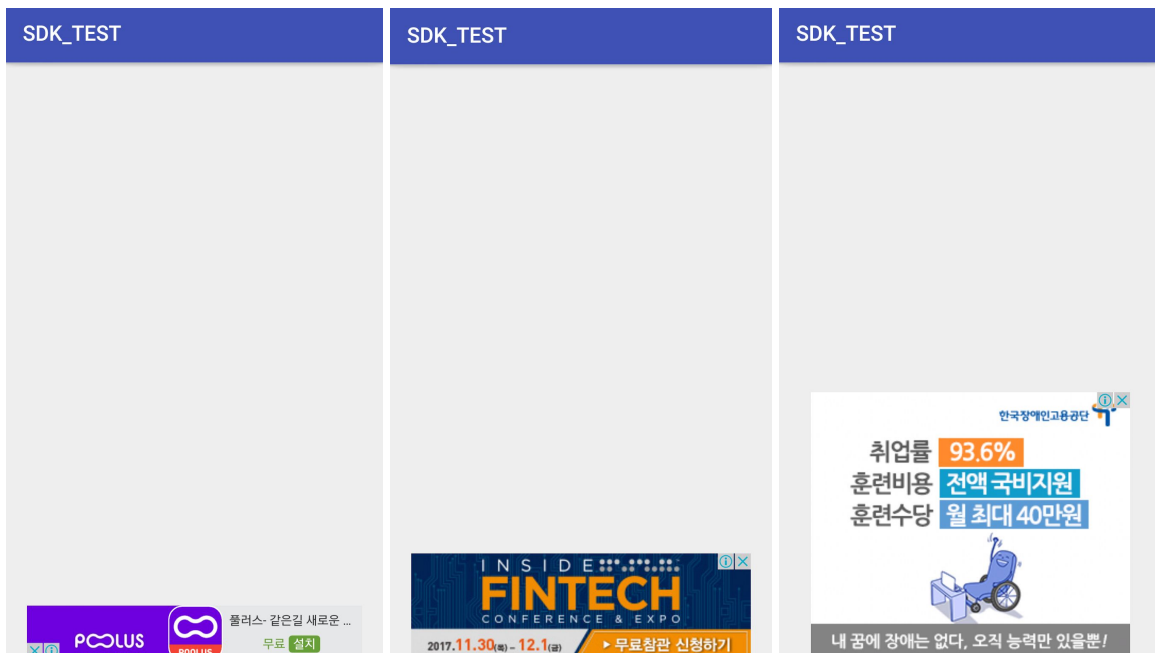
Reference : The size of Banner depends on Compass setting.

[MainActivity.java] - 2

```java
//Add function of Activity Life Cycle
  @Override
  public void onPause() {
    super.onPause();
    mAdView.onPause();
  }
  @Override
  public void onResume() {
    super.onResume();
    mAdView.onResume();
  }
```

[Result of Banner Advertisement]
- 320x50   /   320x100   /   300x250

5. Interstitial Advertisement

[MainActivity.java]

```java
import com.adop.sdk.interstitial.BaseInterstitial;

public class MainActivity extends AppCompatActivity {

    static String ZONE_ID = "xxxxxxx-xxxx-xxxx-xxxx-xxxxxxxxxxxx"; // Given ZONE ID

    private BaseInterstitial mInterstitial;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);

        mInterstitial = new BaseInterstitial(MainActivity.this);
        mInterstitial.setAdInfo(ZONE_ID);   // Insert the given ID
        mInterstitial.start(); // Advertising enforcement
    }
}
```
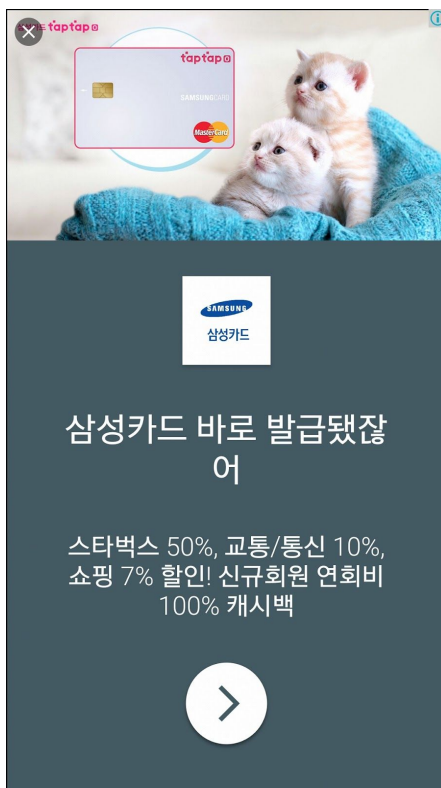
[Result of Interstitial Advertisement]

6. Native Advertisement

a. Template customising version

[activity_main.xml]

```xml
<?xml version="1.0" encoding="utf-8"?>
<android.support.constraint.ConstraintLayout ...>
…
<!-- Set up the layout for displaying the advertisement (the layout format can be freely edited) -->
  <android.support.constraint.ConstraintLayout
    android:id="@+id/native_ad_container"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintLeft_toLeftOf="parent"
    app:layout_constraintRight_toRightOf="parent">
  </android.support.constraint.ConstraintLayout>
…
</android.support.constraint.ConstraintLayout>
```

[ad_native.xml]

```xml
<?xml version="1.0" encoding="utf-8"?>

<!-- This is just for example below, the layout format can be freely edited -->
<android.support.constraint.ConstraintLayout
xmlns:android="http://schemas.android.com/apk/res/android"
  xmlns:app="http://schemas.android.com/apk/res-auto"
  xmlns:tools="http://schemas.android.com/tools"
  android:id="@+id/native_ad_unit"
  android:layout_width="match_parent"
  android:layout_height="match_parent"
  android:orientation="vertical">

  <TextView
    android:id="@+id/titleText"
    ... />
  <TextView
    android:id="@+id/bodyText"
    ... />
  <ImageView
    android:id="@+id/iconImage"
    … />
<!-- Facebook AdChoices icon (Essential element when calling Facebook advertisement) -->
  <LinearLayout
    android:id="@+id/adChoicesContainer"
    … />
  <!-- Facebook, Avocarrot CTA(Call To Action) button (Essential element when calling Facebook,
Avocarrot advertisement)-->
  <Button
    android:id="@+id/adCallToActionButton"
    … />
<!-- View creation for main page -->
  <com.adop.sdk.nativead.CustomNativeImageView
    android:id="@+id/imageView"
    … >
  </com.adop.sdk.nativead.CustomNativeImageView>

</android.support.constraint.ConstraintLayout>
```

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[MainActivity.java]

```java
import com.adop.sdk.nativead.BaseNativeAd;
import com.adop.sdk.nativead.CustomNativeImageView;

public class MainActivity extends AppCompatActivity {

    static String ZONE_ID = "xxxxxxx-xxxx-xxxx-xxxx-xxxxxxxxxxxx"; // Given ZONE ID

    private BaseNativeAd mNativeAd;

    private ConstraintLayout nativeAdContainer, adView;
    private TextView titleText, bodyText;
    private ImageView iconImage;
    private CustomNativeImageView imageView;

    private LinearLayout adChoicesContainer;
    private Button adCallToActionButton;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);

        nativeAdContainer = (ConstraintLayout) findViewById(R.id.native_ad_container);
        LayoutInflater inflater = LayoutInflater.from(MainActivity.this);
        adView = (ConstraintLayout) inflater.inflate(R.layout.ad_native, nativeAdContainer, false);
        nativeAdContainer.addView(adView);

        titleText = (TextView) findViewById(R.id.titleText);
        bodyText = (TextView) findViewById(R.id.bodyText);
        iconImage = (ImageView) findViewById(R.id.iconImage);
        imageView = (CustomNativeImageView) findViewById(R.id.imageView);

        adChoicesContainer = (LinearLayout) findViewById(R.id.adChoicesContainer);
        adCallToActionButton = (Button) findViewById(R.id.adCallToActionButton);

        mNativeAd = new BaseNativeAd(MainActivity.this);
        mNativeAd.setAdInfo(ZONE_ID);   // Insert given ID

        mNativeAd.setNativeAdContainer(nativeAdContainer);
        mNativeAd.setTitleText(titleText);       // the mapping of title text unit
        mNativeAd.setBodyText(bodyText);       // the mapping of body text unit
        mNativeAd.setIconImage(iconImage);    // the mapping of icon image unit
        mNativeAd.setMainImage(imageView);    // the mapping of main image unit

        mNativeAd.setAdChoicesContainer(adChoicesContainer);  // AdChoices icon unit mapping
(Essential element of Facebook)
        mNativeAd.setAdCallToAction(adCallToActionButton); // CTA(Call To Action) mapping of button
unit (Essential element of Facebook, Avocarrot)

        mNativeAd.setHouseTitleText("ADOP-ADOP"); // The title for House ad exposure
        mNativeAd.setHouseBodyText("For Advertising Revenue Optimization, Let's be together with
the ADOP."); // The body for House ad exposure
        mNativeAd.setHouseIconImage(R.drawable.adop_logo); // The icon image for House ad exposure
        mNativeAd.setHouseMainImage(R.drawable.house_300x250); // The main image for House ad
exposure

        mNativeAd.load();
    }
}
```

b. Template fix version

[activity_main.xml]

```xml
<?xml version="1.0" encoding="utf-8"?>
<android.support.constraint.ConstraintLayout ...>
…
<!-- Set up the layout for displaying the advertisement (the layout format can be freely edited) -->
  <android.support.constraint.ConstraintLayout
    android:id="@+id/native_ad_container"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    app:layout_constraintBottom_toBottomOf="parent"
    app:layout_constraintLeft_toLeftOf="parent"
    app:layout_constraintRight_toRightOf="parent">
  </android.support.constraint.ConstraintLayout>
…
</android.support.constraint.ConstraintLayout>
```

[MainActivity.java]

```java
import com.adop.sdk.nativead.BaseNativeTemplateAd;

public class MainActivity extends AppCompatActivity {

  static String ZONE_ID = "xxxxxxx-xxxx-xxxx-xxxx-xxxxxxxxxxxx"; // Given ZONE ID

  private BaseNativeTemplateAd mNativeTemp;
  private ConstraintLayout nativeAdContainer;

  @Override
  protected void onCreate(Bundle savedInstanceState) {
      super.onCreate(savedInstanceState);
      setContentView(R.layout.activity_main);

      mNativeTemp = new BaseNativeTemplateAd(MainActivity.this);
      mNativeTemp.setAdInfo(ZONE_ID);   // Insert the given ID

      nativeAdContainer = (ConstraintLayout) findViewById(R.id.native_ad_container);
      mNativeTemp.setNativeAdContainer(nativeAdContainer);

      mNativeTemp.setLayoutColor(Color.WHITE); //Designation of layout color (optional)
      mNativeTemp.setTitleTextColor(Color.BLACK); //Designation of title color (optional)
      mNativeTemp.setBodyTextColor(Color.GRAY); //Designation of body text color (optional)

      mNativeTemp.setButtonColor(Color.WHITE); //Designation of CTA(Call To Action) button color
(optional)
      mNativeTemp.setButtonTextColor(Color.GRAY); //Designation of CTA(Call To Action) text color
(optional)
      mNativeTemp.setButtonBorderColor(Color.BLACK); //Designation of CTA(Call To Action) outline
color (optional)

       mNativeTemp.setHouseTitleText("ADOP-ADOP"); // The title for House ad exposure
       mNativeTemp.setHouseBodyText("For Advertising Revenue Optimization, Let's be together
with the ADOP."); // the body for House ad exposure
       mNativeTemp.setHouseIconImage(R.drawable.adop_logo); // Icon image for House ad exposure
       mNativeTemp.setHouseMainImage(R.drawable.house_300x250); // Main image for House ad
exposure
```
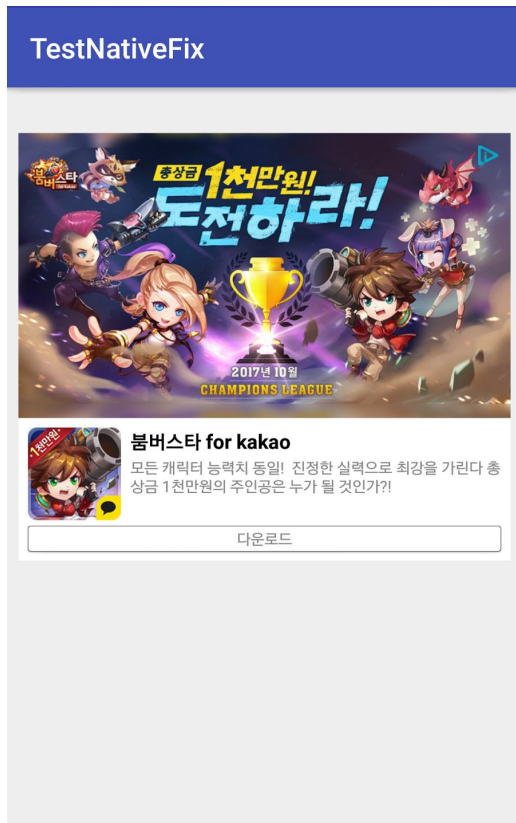
15

```
        nativeAdContainer.addView(mNativeTemp);

        mNativeTemp.load();
    }
}
```

[Example of Native Advertising]

7. Ending pop up Advertisement

[MainActivity.java]

```java
import com.adop.sdk.nativead.CustomDialog;

public class MainActivity extends AppCompatActivity {

    private CustomDialog mCustomDialog;
    static String ZONE_ID = "xxxxxxx-xxxx-xxxx-xxxx-xxxxxxxxxxxx"; // Given ZONE ID

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
```
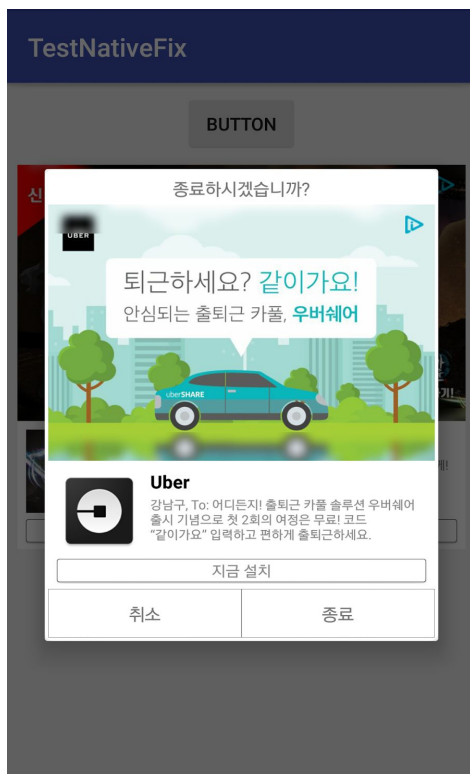
```
        setContentView(R.layout.activity_main);
        /* pre-order Ending pop up Advertisement */
        mCustomDialog = new CustomDialog(MainActivity.this);

        mCustomDialog.setAdInfo(ZONE_ID);   // Insert the given ID
        mCustomDialog.setHouseTitleText("ADOP-ADOP");   // Title for House ad exposure
        mCustomDialog.setHouseBodyText("For Advertising Revenue Optimization, Let's be together
with the ADOP.");  // Body for House ad exposure
        mCustomDialog.setHouseIconImage(R.drawable.adop_logo); // Icon image for House ad exposure
        mCustomDialog.setHouseMainImage(R.drawable.house_300x250);  // Main image for House ad
exposure
        mCustomDialog.load();   // calling the Ending pop up Advertisement
    }

    @Override
    public boolean onKeyDown(int keyCode, KeyEvent event) {
        if( event.getAction() == KeyEvent.ACTION_DOWN) {
            if( keyCode == KeyEvent.KEYCODE_BACK) {   // Implement when clicking the back button
                mCustomDialog.start();   // Implement of dialog
            }
        }
        return super.onKeyDown(keyCode, event);
    }
}
```

[Example of Ending pop up Advertisement]

8. ProGuard application method

- For code obfuscation, you need to add the comments below while setting up the ProGuard to properly display advertisements.

```
#Adop
-dontwarn android.webkit.**
-keep class com.adop.sdk.adview.BaseAdView { public *; }
-keep class com.adop.sdk.interstitial.BaseInterstitial { public *; }
-keep class com.adop.sdk.nativead.BaseNativeAd { public *; }
-keep class com.adop.sdk.nativead.BaseNativeTemplateAd { public *; }
-keep class com.adop.sdk.nativead.CustomNativeImageView { public *; }
-keep class com.adop.sdk.nativead.CustomDialog { public *; }
-keep class com.adop.sdk.AdEntry { public *; }

#Cauly
-dontwarn com.fsn.cauly.**
-keep public class com.fsn.cauly.** {
public protected *;
}
-keep public class com.trid.tridad.** {
public protected *;
}

#Facebook
-keep class com.facebook.ads.** { *; }
-dontwarn com.facebook.ads.**

#Google
-keep class com.google.android.gms.** { *; }
-dontwarn com.google.android.gms.**

#MobFox
-keep class com.mobfox.** { *; }
-keep class com.mobfox.adapter.** {*;}
-keep class com.mobfox.sdk.** {*;}

#Avocarrot
-keep class com.avocarrot.** { *; }
-dontwarn com.avocarrot.**

#DawinClick
-keep class com.skplanet.tad.** { *; }
-dontwarn com.skplanet.tad.**
-keep class * extends java.util.ListResourceBundle {
   protected Object[][] getContents();
}
-keep public class com.google.android.gms.common.internal.safeparcel.SafeParcelable {
   public static final *** NULL;
}
-keepnames @com.google.android.gms.common.annotation.KeepName class *
-keepclassmembernames class * {
   @com.google.android.gms.common.annotation.KeepName *;
}
-keepnames class * implements android.os.Parcelable {
   public static final ** CREATOR;
}
```