ADOP SDK Android ver.

Developer guide

Version 2.1.0
2018. 4. 11.

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
- ATOM

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
ATOM	O		O	O		

- ADOP Compass Mobile SDK Android 2.1.0 version provides Banner, Interstitial, Native and Ending pop up advertisements.
- ADOP Compass Mobile SDK could be used after getting the ID.
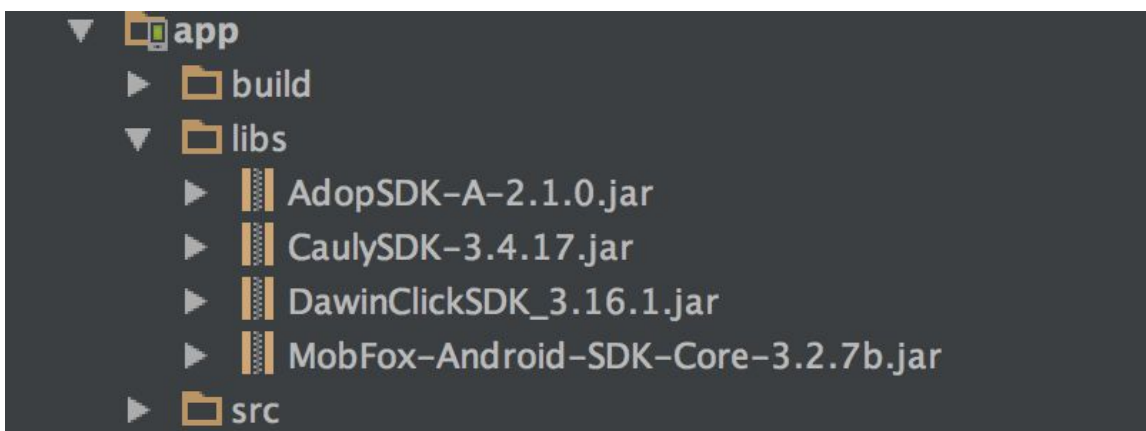
2. Development Environment

- 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-A-2.1.0.jar
- CaulySDK-3.4.17.jar
- MobFox-Android-SDK-Core-3.2.7b.jar
- DawinClickSDK_3.16.1.jar

* Reference : Please add one of between AdopSDK-A-2.1.0.jar(Android Studio Version) or AdopSDK-E-2.1.0.jar(Eclipse Version) in accordance with your development tools.

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:4.7.1'

  //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.
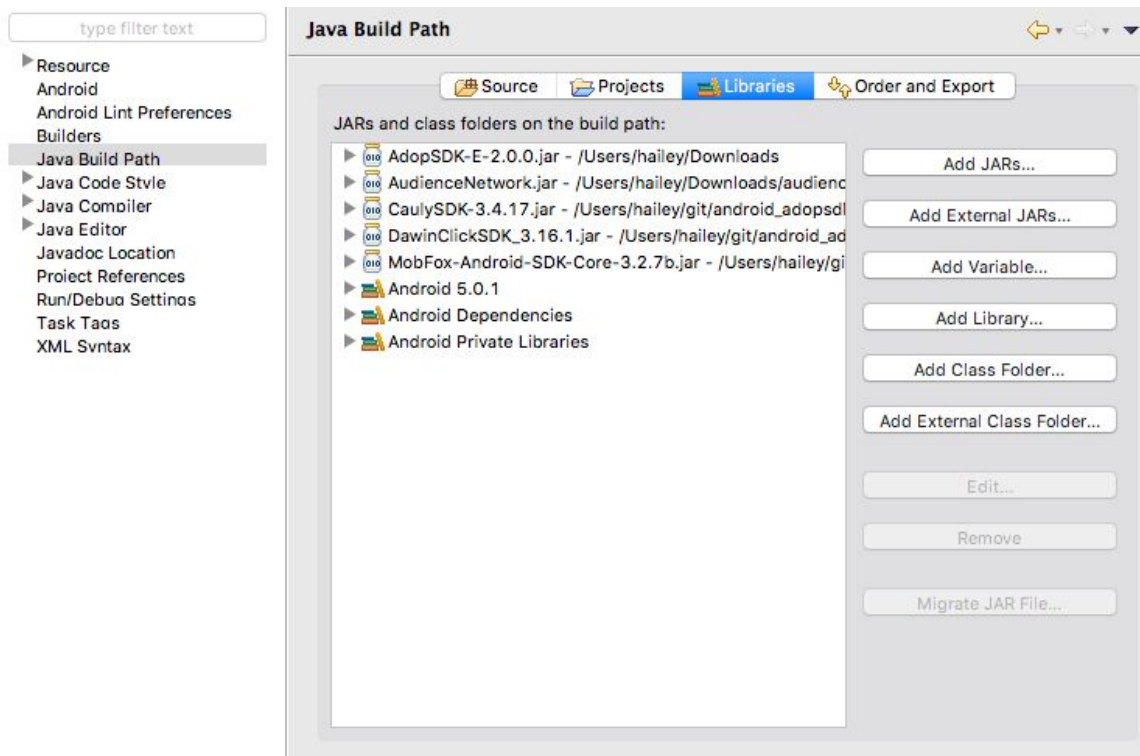
```
repositories {
    ...
    maven {
      url "https://maven.google.com"
    }
    // Avocarrot (When using Native advertisement)
    maven {
      url "https://s3.amazonaws.com/avocarrot-android-builds/dist/"
```
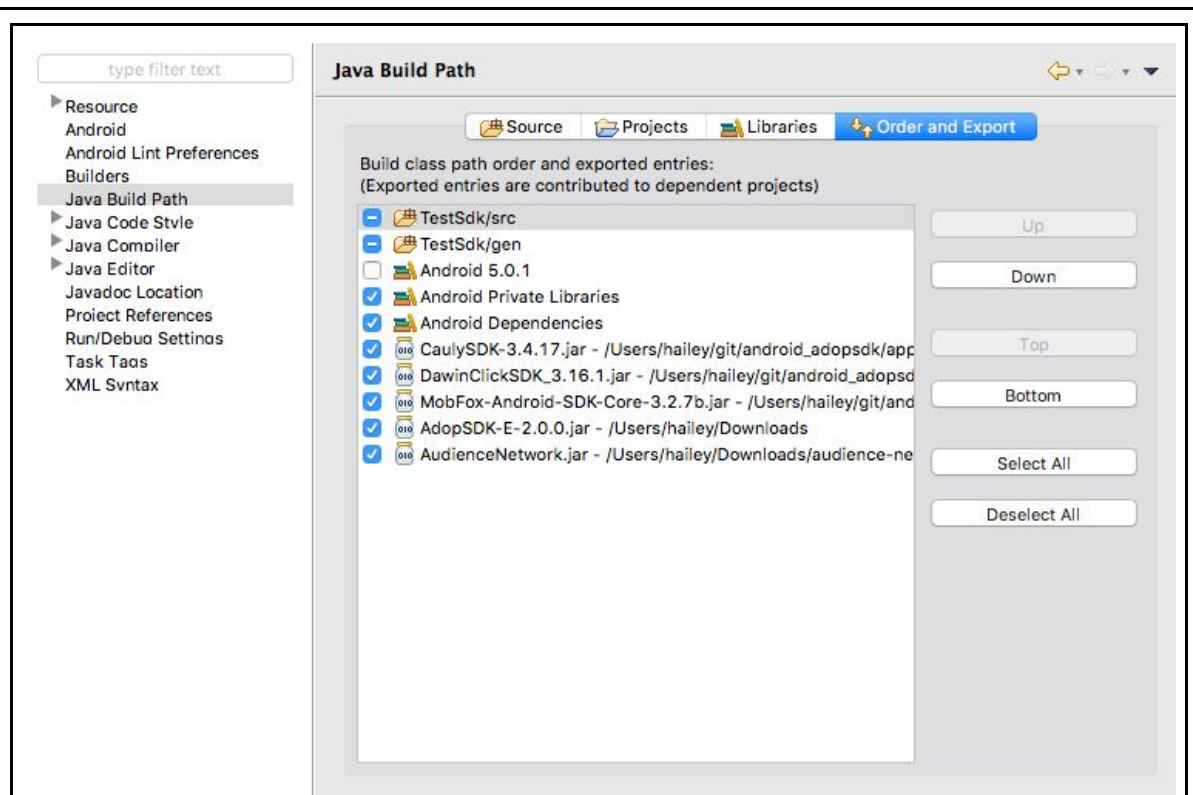
```
    }
}
```

2) When using ADT

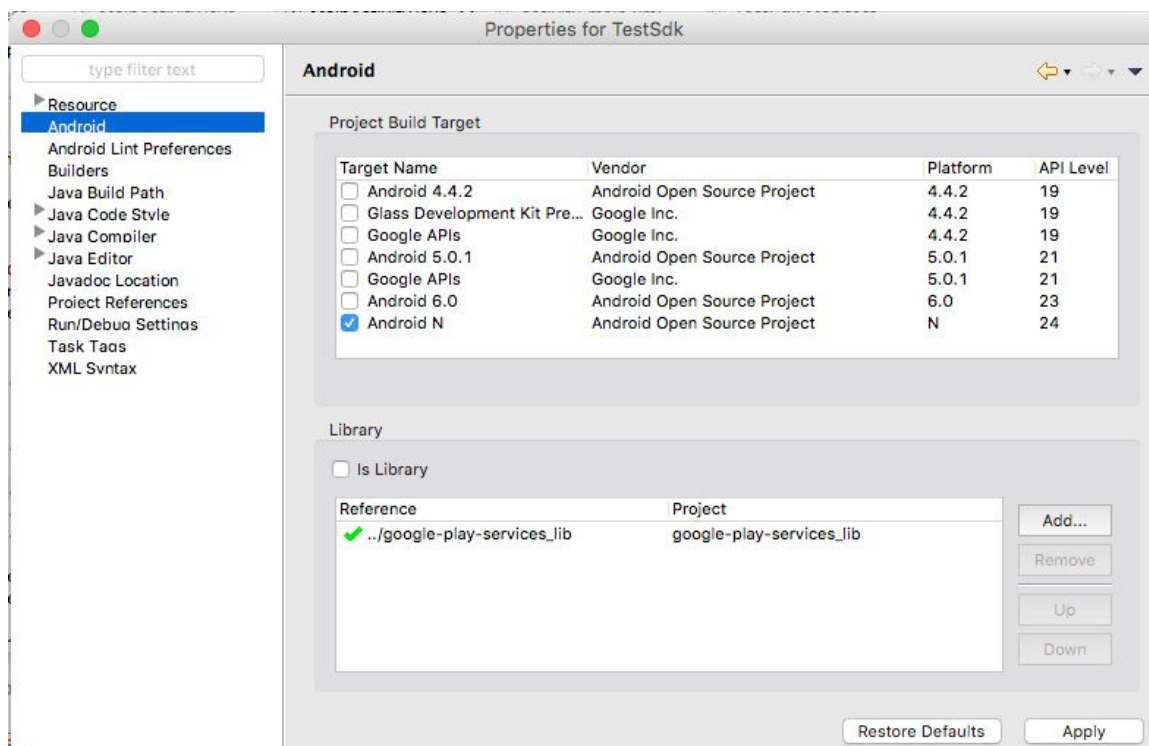**1**. Import the SDK into the library in the project.

- AdopSDK-E-2.1.0.jar

- AudienceNetwork.jar (Facebook Audience Network)

- CaulySDK-3.4.17.jar

- MobFox-Android-SDK-Core-3.2.7.b.jar

- DawinClickSDK_3.16.1.jar

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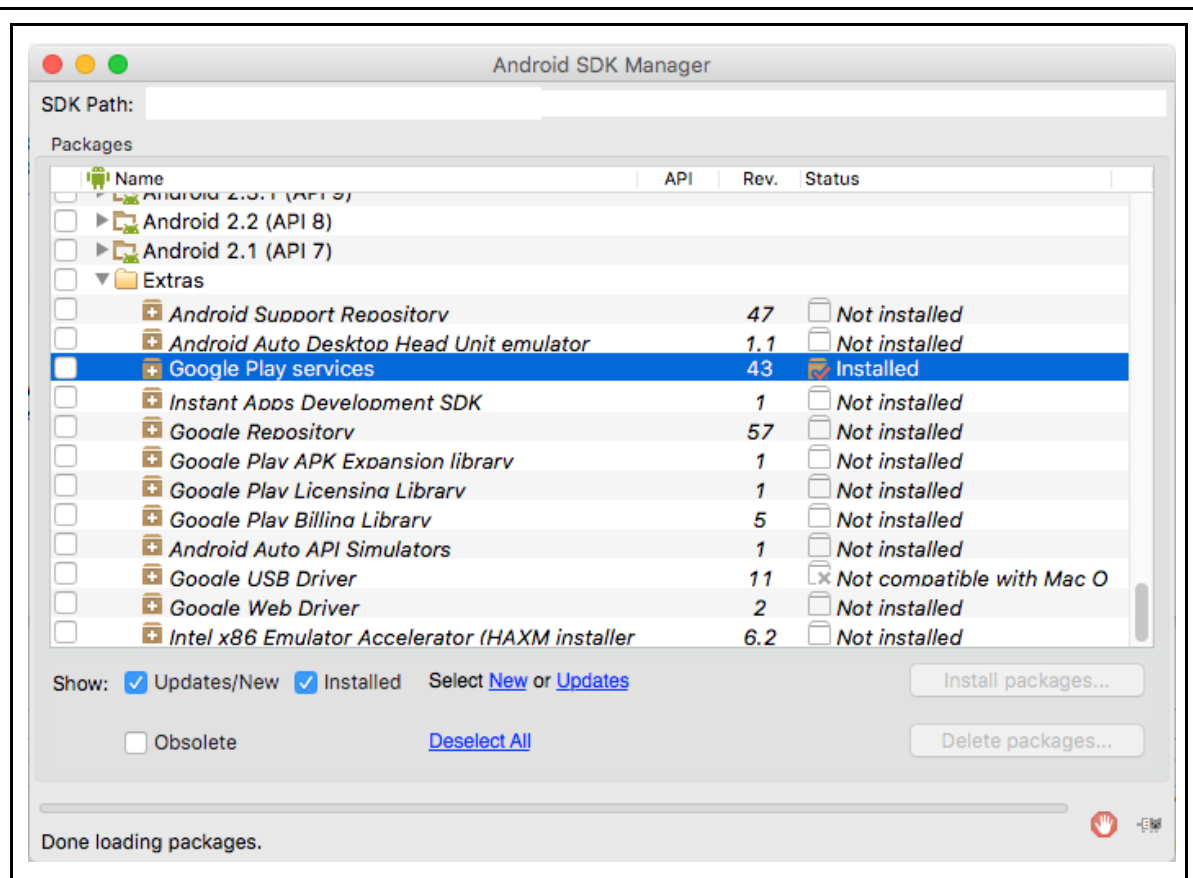- Properties > Java Build Path > Order and Export tab > Check the SDK File

Java Build Path

Source | Projects | Libraries | **Order and Export**

Build class path order and exported entries:
(Exported entries are contributed to dependent projects)

- ☐ 📁 TestSdk/src
- ☐ 📁 TestSdk/gen
- ☐ 📱 Android 5.0.1
- ☑ 📱 Android Private Libraries
- ☑ 📱 Android Dependencies
- ☑ 📄 CaulySDK-3.4.17.jar - /Users/hailey/git/android_adopsdk/app
- ☑ 📄 DawinClickSDK_3.16.1.jar - /Users/hailey/git/android_adopsd
- ☑ 📄 MobFox-Android-SDK-Core-3.2.7b.jar - /Users/hailey/git/and
- ☑ 📄 AdopSDK-E-2.0.0.jar - /Users/hailey/Downloads
- ☑ 📄 AudienceNetwork.jar - /Users/hailey/Downloads/audience-ne

Up | Down | Top | Bottom | Select All | Deselect All

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

Properties for TestSdk

Android

Project Build Target

Target Name	Vendor	Platform	API Level
☐ Android 4.4.2	Android Open Source Project	4.4.2	19
☐ Glass Development Kit Pre...	Google Inc.	4.4.2	19
☐ Google APIs	Google Inc.	4.4.2	19
☐ Android 5.0.1	Android Open Source Project	5.0.1	21
☐ Google APIs	Google Inc.	5.0.1	21
☐ Android 6.0	Android Open Source Project	6.0	23
☑ Android N	Android Open Source Project	N	24

Library

☐ Is Library

Reference	Project	
✔ ../google-play-services_lib	google-play-services_lib	Add...
		Remove
		Up
		Down

Restore Defaults | Apply

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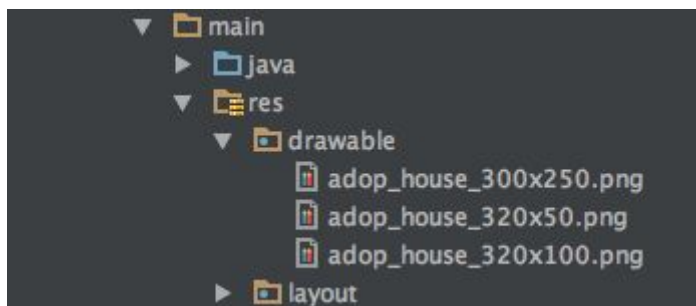
* Common

[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 fit with each size which was sent to you together with the SDK)

[AndroidManifest.xml setting]

```xml
<!-- Because this is a mandatory permission setting, you need to set it up to display
advertisements correctly. -->

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

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

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

<!-- Set up the Google Play service information. -->

<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. -->

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

<!-- When using ATOM Interstitial advertisements, set up as below. →

<activity android:name="com.adop.sdk.interstitial.InterstitialAdopActivity"
android:configChanges="keyboard|keyboardHidden|orientation|screenSize" />

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

<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. -->

<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.adop_house_320x50);// 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);
    }
}
```
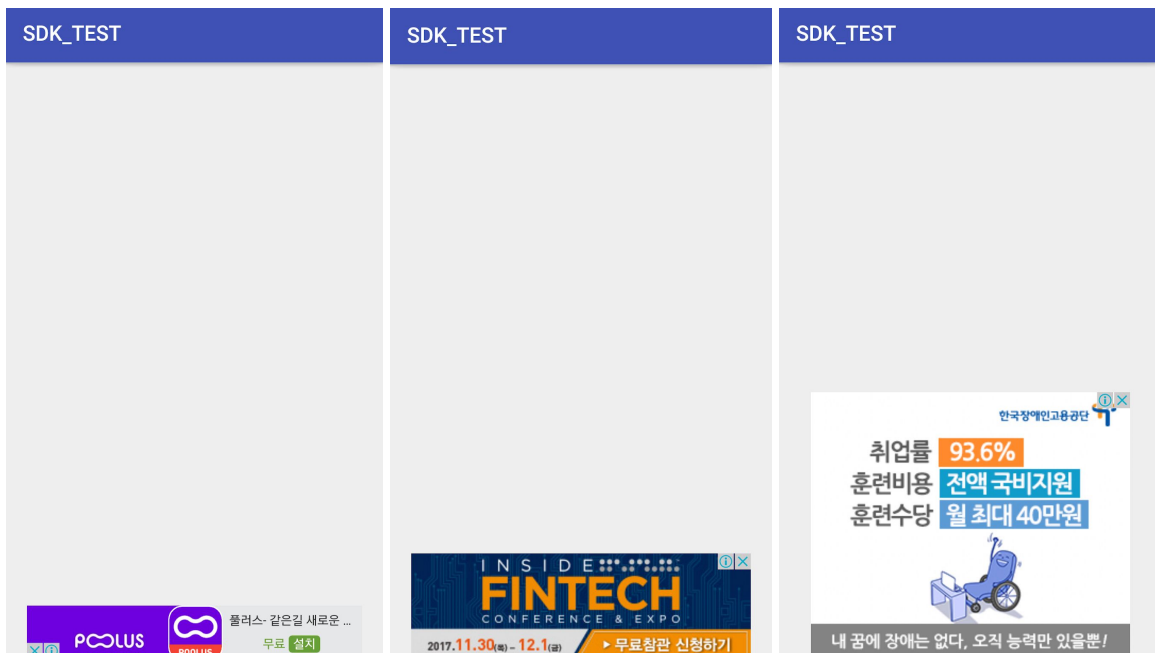
* Reference : The size of Banner depends on Compass setting.

[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
    }
}
```
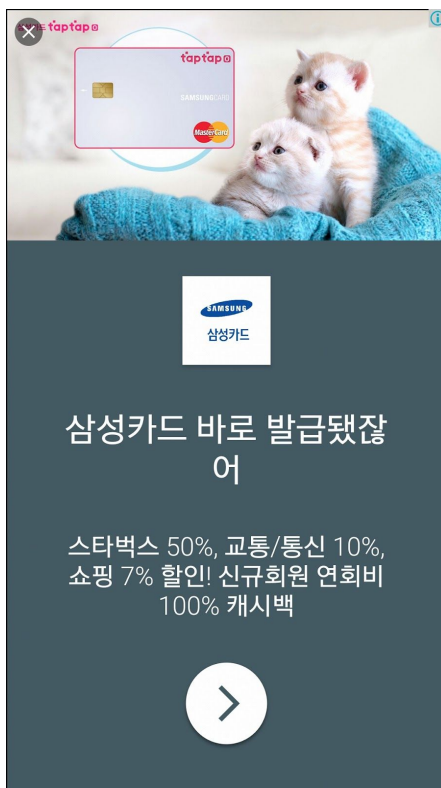
[Result of Interstitial Advertisement]

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>
```

[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"); // 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.adop_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"); // 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.adop_house_300x250); // Main image for House
ad exposure
        nativeAdContainer.addView(mNativeTemp);
```
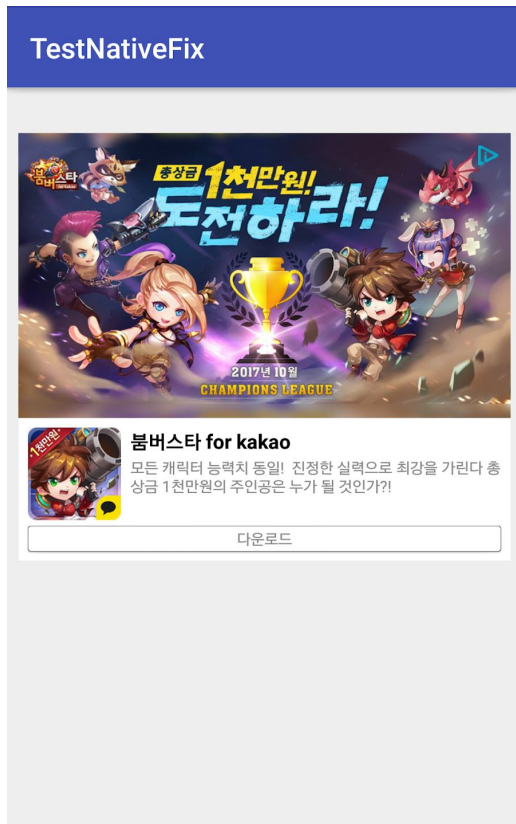
```
        mNativeTemp.load();
    }
}
```

[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 = "xxxxxx-xxxx-xxxx-xxxx-xxxxxxxxxxxx"; // Given ZONE ID

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
    }
```
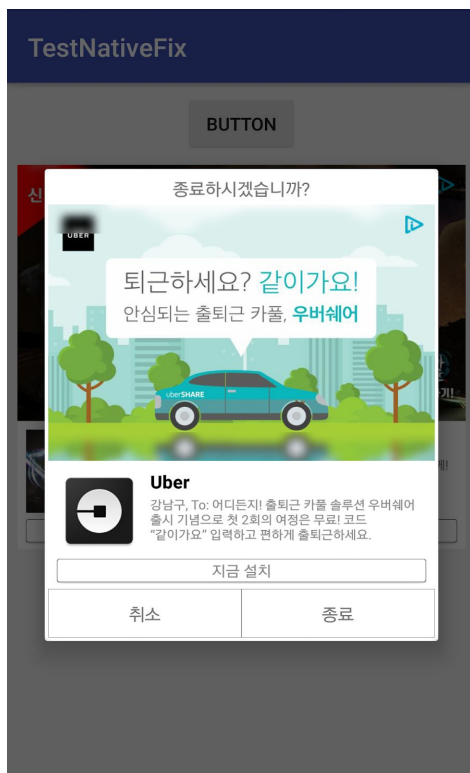
```
    @Override
  public boolean onKeyDown(int keyCode, KeyEvent event) {
      if( event.getAction() == KeyEvent.ACTION_DOWN) {
          if( keyCode == KeyEvent.KEYCODE_BACK) {   // Implement when clicking the back button
              mCustomDialog = new CustomDialog(MainActivity.this);

              mCustomDialog.setAdInfo(ZONE_ID);   // Insert the given ID
              mCustomDialog.setHouseTitleText("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.adop_house_300x250); // Main image for
House ad exposure
              mCustomDialog.load();   // calling the Ending pop up Advertisement
          }
      }
      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 *; }
-keep class com.adop.sdk.interstitial.InterstitialAdopActivity { *; }
-keep class com.adop.sdk.interstitial.InterstitialAdop { *; }

#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;
}
```