App Widget

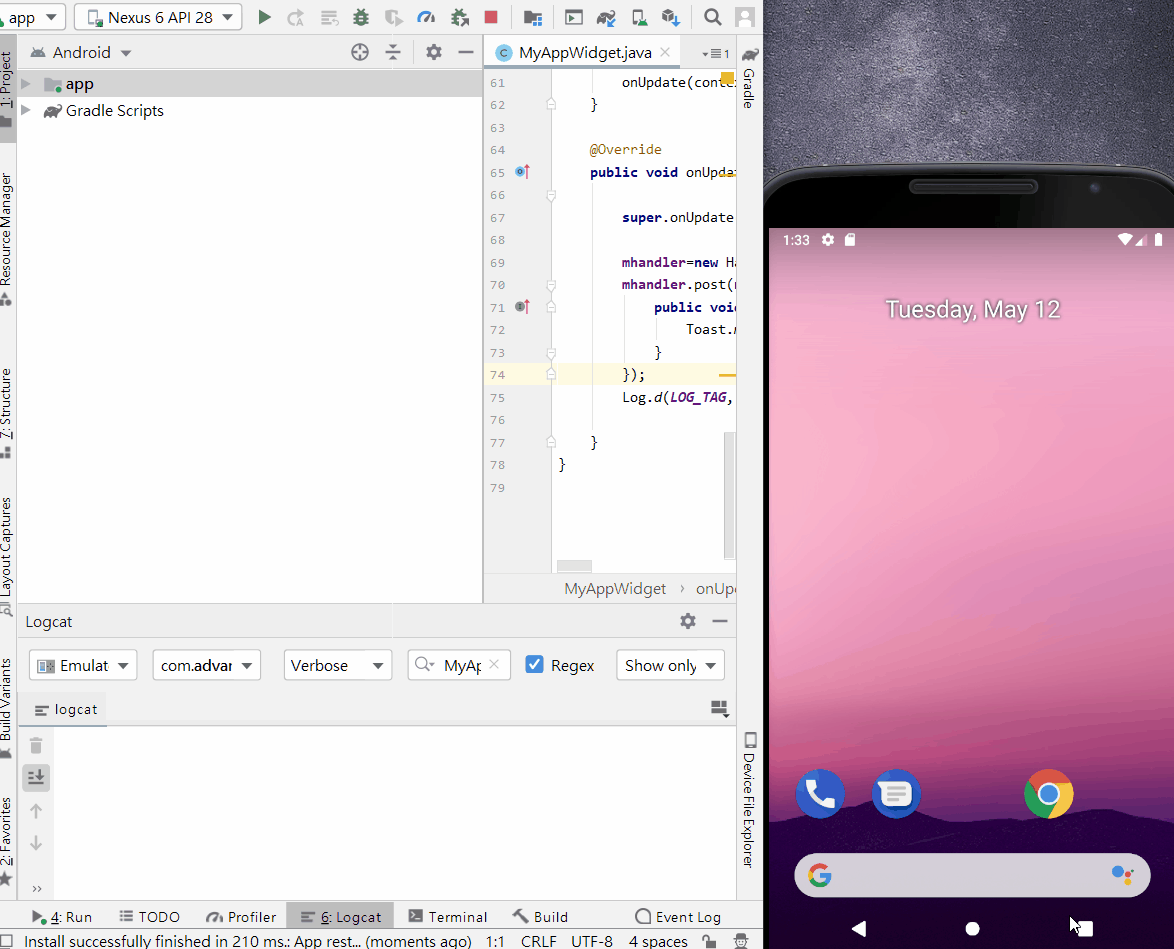
1. 請參考投影片內容，建立以下的Android應用程式

並請將1.**建立過程**; 2.程式**執行結果**截圖; 2.程式**原始檔 copy&paste**置入作業中

1. 請參考範例
   1. 建立App Widget其屬性設定與功能如下
      1. App Widget的圖示為 MCU的圖示

改自範例49

觀看gif檔，需另存為”以篩選網頁版”為html檔



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* + 1. 其功能為**每10秒**顯示 **Toast訊息**一次

AppWidgetConfigActivity.java

**package** com.advancedappwidget;  
  
**import** android.app.AlarmManager;  
**import** android.app.PendingIntent;  
**import** android.appwidget.AppWidgetManager;  
**import** android.content.Intent;  
**import** android.support.v7.app.AppCompatActivity;  
**import** android.os.Bundle;  
**import** android.widget.RemoteViews;  
  
**import** java.util.Calendar;  
  
**public class** AppWidgetConfigActivity **extends** AppCompatActivity {  
  
 **int mAppWidgetId**;  
  
 @Override  
 **protected void** onCreate(Bundle savedInstanceState) {  
 **super**.onCreate(savedInstanceState);  
 setContentView(R.layout.***activity\_app\_widget\_config***);  
  
 Intent itIn = getIntent();  
 Bundle extras = itIn.getExtras();  
 **if** (extras != **null**) {  
 **mAppWidgetId** = extras.getInt(  
 AppWidgetManager.***EXTRA\_APPWIDGET\_ID***,  
 AppWidgetManager.***INVALID\_APPWIDGET\_ID***);  
 }  
  
 **if** (**mAppWidgetId** == AppWidgetManager.***INVALID\_APPWIDGET\_ID***) {  
 finish();  
 }  
  
 Intent itOut = **new** Intent(**"com.android.MY\_OWN\_WIDGET\_UPDATE"**);  
 PendingIntent penIt = PendingIntent.*getBroadcast*(**this**, 0, itOut, 0);  
 AlarmManager alarmMan = (AlarmManager)getSystemService(***ALARM\_SERVICE***);  
 Calendar calendar = Calendar.*getInstance*();  
 calendar.setTimeInMillis(System.*currentTimeMillis*());  
 calendar.add(Calendar.***SECOND***, 10);  
 alarmMan.setRepeating(AlarmManager.***RTC\_WAKEUP***,  
 calendar.getTimeInMillis(), 2\*1000, penIt);  
  
 MyAppWidget.*SaveAlarmManager*(alarmMan, penIt);  
  
 *// 以下是新加入的程式碼。* RemoteViews viewAppWidget = **new** RemoteViews(getPackageName(),  
 R.layout.***app\_widget***);  
 viewAppWidget.setImageViewResource(R.id.***imgViewAppWidget***,  
 R.drawable.***app\_widget\_icon***);  
 AppWidgetManager appWidgetMan = AppWidgetManager.*getInstance*(**this**);  
 appWidgetMan.updateAppWidget(**mAppWidgetId**, viewAppWidget);  
  
 Intent itAppWidgetConfigResult = **new** Intent();  
 itAppWidgetConfigResult.putExtra(AppWidgetManager.***EXTRA\_APPWIDGET\_ID***,  
 **mAppWidgetId**);  
 setResult(***RESULT\_OK***, itAppWidgetConfigResult);  
  
 finish();  
 }  
}

MyAppWidget.java

**package** com.advancedappwidget;  
  
**import** android.app.AlarmManager;  
**import** android.app.PendingIntent;  
**import** android.appwidget.AppWidgetManager;  
**import** android.appwidget.AppWidgetProvider;  
**import** android.content.ComponentName;  
**import** android.content.Context;  
**import** android.content.Intent;  
**import** android.os.Handler;  
**import** android.os.Looper;  
**import** android.util.Log;  
**import** android.widget.Toast;  
  
**public class** MyAppWidget **extends** AppWidgetProvider {  
 **private** Handler **mhandler**;  
 **private static final** String ***LOG\_TAG*** = **"MyAppWidget"**;  
  
 **private static** AlarmManager *mAlarmManager*;  
 **private static** PendingIntent *mPendingIntent*;  
  
 **static void** SaveAlarmManager(AlarmManager alarmManager, PendingIntent pendingIntent)  
 {  
 *mAlarmManager* = alarmManager;  
 *mPendingIntent* = pendingIntent;  
 }  
  
 @Override  
 **public void** onDeleted(Context context, **int**[] appWidgetIds) {  
 **super**.onDeleted(context, appWidgetIds);  
 Log.*d*(***LOG\_TAG***, **"onDeleted()"**);  
 *mAlarmManager*.cancel(*mPendingIntent*);  
 }  
  
 @Override  
 **public void** onDisabled(Context context) {  
 **super**.onDisabled(context);  
 Log.*d*(***LOG\_TAG***, **"onDisabled()"**);  
 }  
  
 @Override  
 **public void** onEnabled(Context context) {  
 **super**.onEnabled(context);  
 Log.*d*(***LOG\_TAG***, **"onEnabled()"**);  
 }  
  
 @Override  
 **public void** onReceive(Context context, Intent intent) {  
 **super**.onReceive(context, intent);  
  
 **if**(!intent.getAction().equals(**"com.android.MY\_OWN\_WIDGET\_UPDATE"**))  
 **return**;  
  
 Log.*d*(***LOG\_TAG***, **"onReceive()"**);  
  
 AppWidgetManager appWidgetMan = AppWidgetManager.*getInstance*(context);  
 ComponentName thisAppWidget = **new** ComponentName(context.getPackageName(),  
 MyAppWidget.**class**.getName());  
 **int**[] appWidgetIds = appWidgetMan.getAppWidgetIds(thisAppWidget);  
  
 onUpdate(context, appWidgetMan, appWidgetIds);  
 }  
  
 @Override  
 **public void** onUpdate(**final** Context context, AppWidgetManager appWidgetManager,  
 **int**[] appWidgetIds) {  
 **super**.onUpdate(context, appWidgetManager, appWidgetIds);  
  
 **mhandler**=**new** Handler(Looper.*getMainLooper*());  
 **mhandler**.post(**new** Runnable(){  
 **public void** run(){  
 Toast.*makeText*(context.getApplicationContext(), **"Toast訊息!"**, Toast.***LENGTH\_LONG***).show();  
 }  
 });  
 Log.*d*(***LOG\_TAG***, **"onUpdate()"**);  
  
 }  
}

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