

日語 50 音練習 APP

組員：賴璟霆、黃一烜

創作動機

希望能用自己學的Android開發技術
來與興趣做結合



機能介紹



幫助記憶 50 音

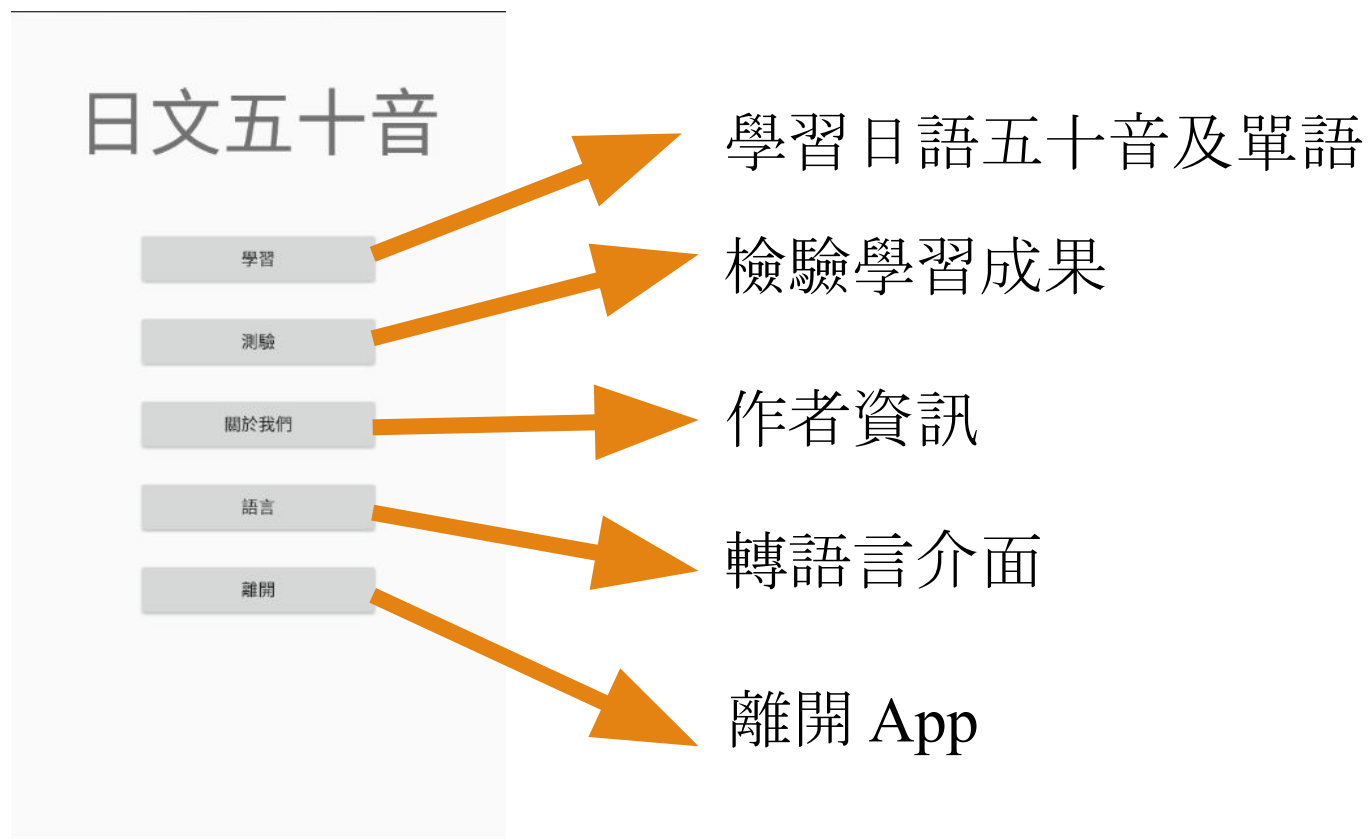


學習生活實用單字



支援英文介面

UI 簡介



學習方式



單字卡形式

讀音
a

あ ア

平假名 片假名

相關圖片

← →

詞語
あき
意思
秋天

↶

讀音
si

し シ

平假名 片假名

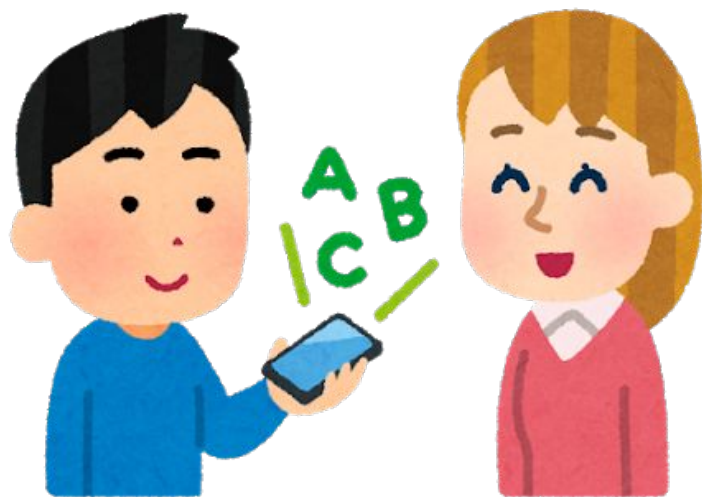
相關圖片

← →

詞語
しょくしゅ
意思
觸手

↶

測驗



無固定題數
枕上廁上馬上都可練習

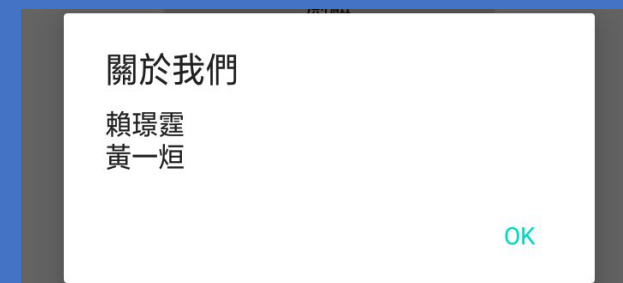
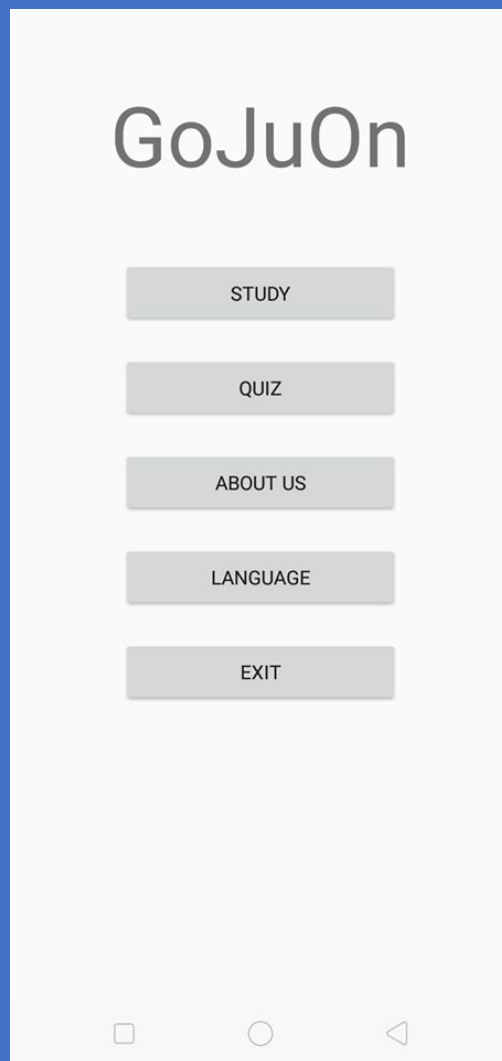


50 音模式



單字模式

MainActivity

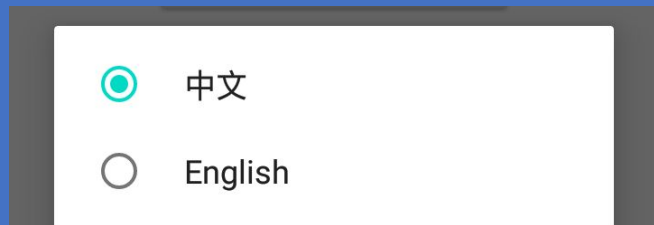


```

btnLanguage.setOnClickListener((v) -> {
    AlertDialog.Builder builder = new AlertDialog.Builder(context: MainActivity.this);
    builder.setSingleChoiceItems(new String[]{"中文", "English"},
        getSharedPreferences(name: "Language", Context.MODE_PRIVATE).getInt(key: "Language", defValue: 0),
        (dialog, which) -> {
            SharedPreferences preferences = getSharedPreferences(name: "Language", Context.MODE_PRIVATE);
            SharedPreferences.Editor editor = preferences.edit();
            editor.putInt("Language", which);
            editor.apply();
            dialog.dismiss();

            Intent intent = new Intent(packageContext: MainActivity.this, MainActivity.class);
            intent.setFlags(Intent.FLAG_ACTIVITY_CLEAR_TOP);
            startActivity(intent);
        });
    AlertDialog dialog = builder.create();
    dialog.show();
});

```



```

private void setLanguage()
{
    SharedPreferences preferences = getSharedPreferences(name: "Language", Context.MODE_PRIVATE);
    int language = preferences.getInt(key: "Language", defValue: 0);

    Resources resources = getResources();
    DisplayMetrics displayMetrics = resources.getDisplayMetrics();
    Configuration configuration = resources.getConfiguration();

    switch (language)
    {
        case 0:
            configuration.setLocale(Locale.TAIWAN);
            break;
        case 1:
            configuration.setLocale(Locale.ENGLISH);
            break;
        default:
            break;
    }
    resources.updateConfiguration(configuration, displayMetrics);
}

```


FiftyTone

```
public FiftyTone()
{
    wordSound.add("-kstnhmyrw");
    wordSound.add("aiueo");
    hiragana.add("あかきたなはまやらわ");
    hiragana.add("いきしちにひみ-り-");
    hiragana.add("うくすつぬふむゆるん");
    hiragana.add("えけせてねへめ-れ-");
    hiragana.add("おこそとのほもよろを");
    katakana.add("アカサタナハマヤラワ");
    katakana.add("イキシチニヒミ-リ-");
    katakana.add("ウクスツヌフムユルン");
    katakana.add("エケセテネヘメ-レ-");
    katakana.add("オコソトノホモヨロヲ");
    addVocabulary();
    addMeaning();
}
```

```
public String getQuesAns(int mode,int type,int which)
{...}

public String getMeaning(int vowel,int index)
{...}

public String getVocabulary(int vowel,int index)
{...}

public String getWordSound(int pos)
{...}

public String getHiragana(int index)
{...}

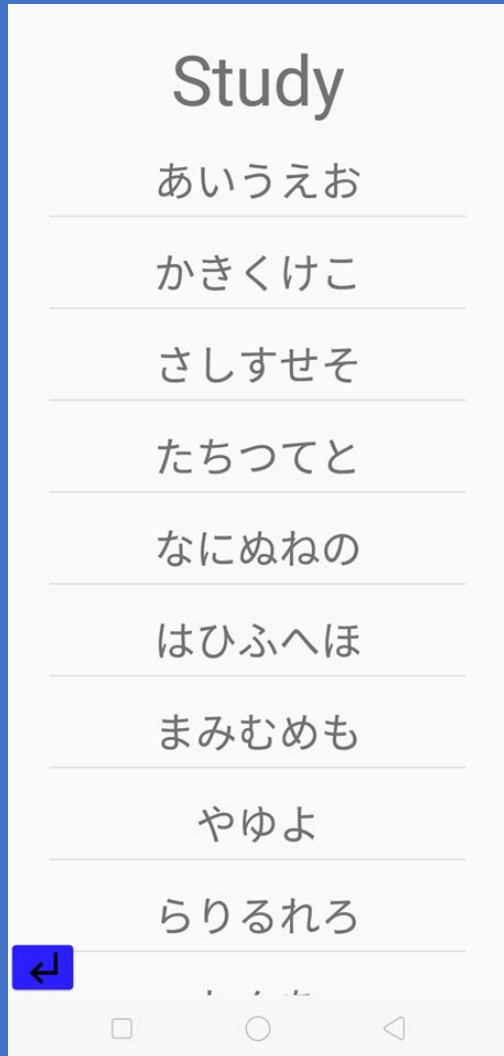
public String getKatagkana(int index)
{...}

public char getKatakana(int vowel, int index) {...}

public char getHiragana(int vowel,int index) {...}

public int getSize() {return hiragana.get(0).length();}
```

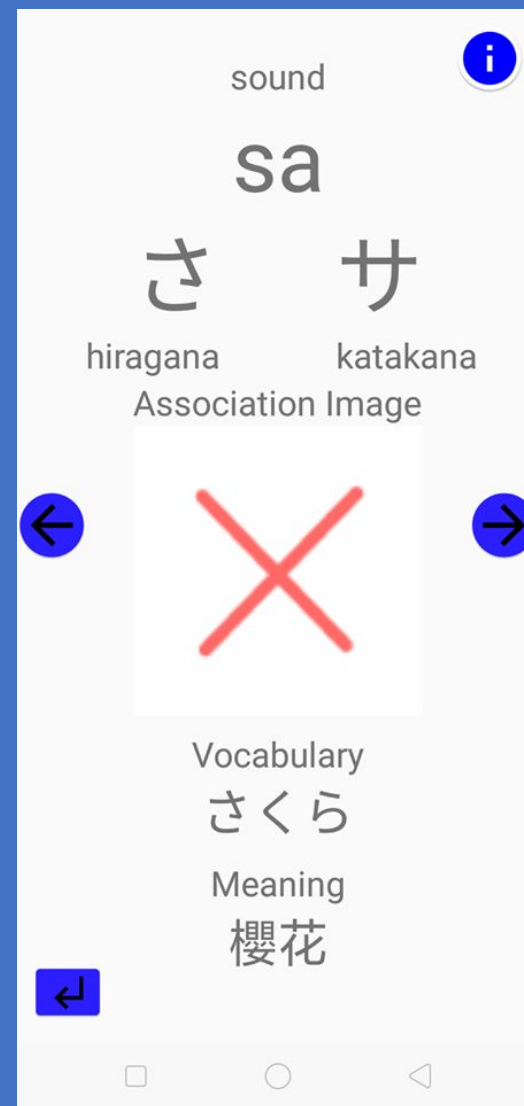
StudyActivity and WordListAdapter



```
@Override
public void onClick(View view) {
    // Get the position of the item that was clicked.
    int mPosition = getLayoutPosition();

    // Change the word in the mWordList.
    Intent intent=new Intent(mContext,StudyCard.class);
    intent.putExtra( name: "position",mPosition);
    mContext.startActivity(intent);
}
```

StudyCard



How to test

1. word choose sound あ -> a
2. sound choose word え -> え
3. choose same sound お -> オ

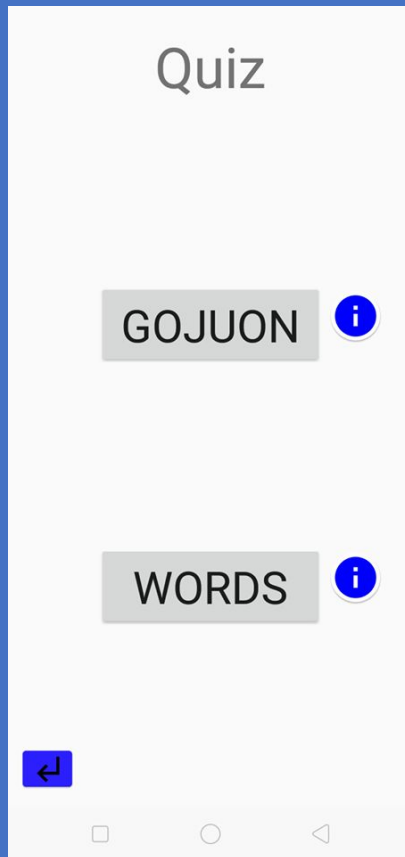
OK

QuizActivity

How to test

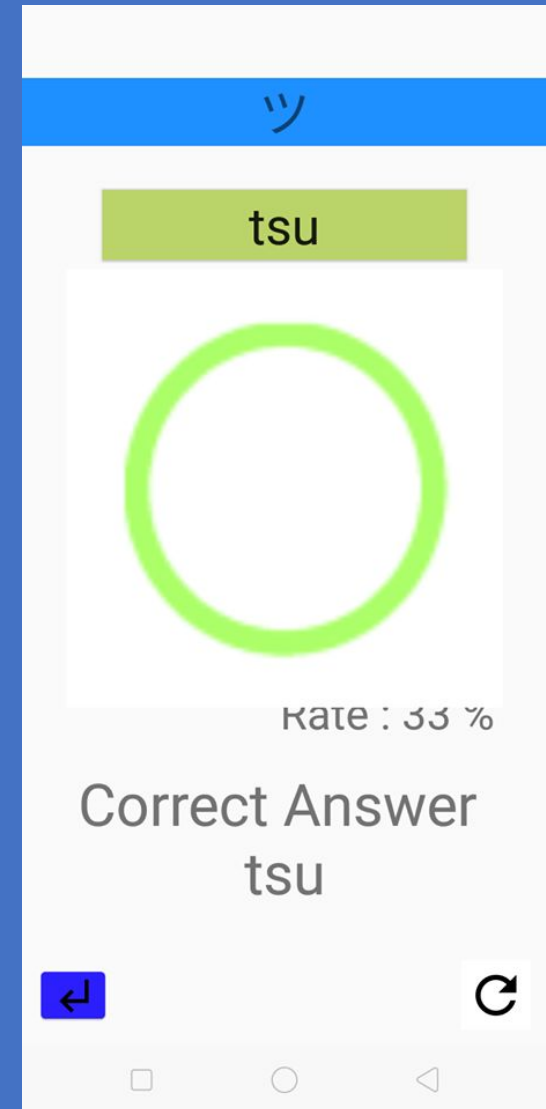
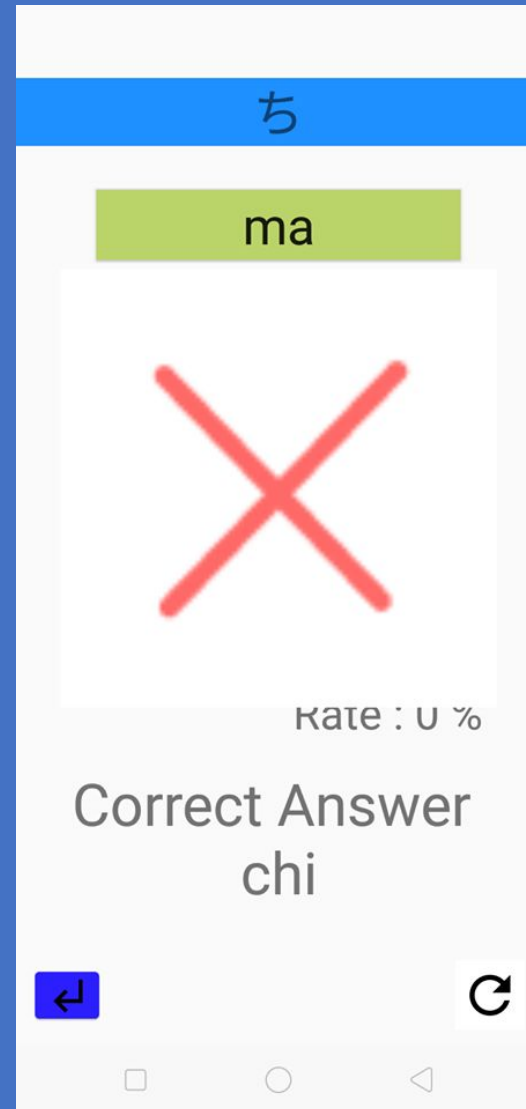
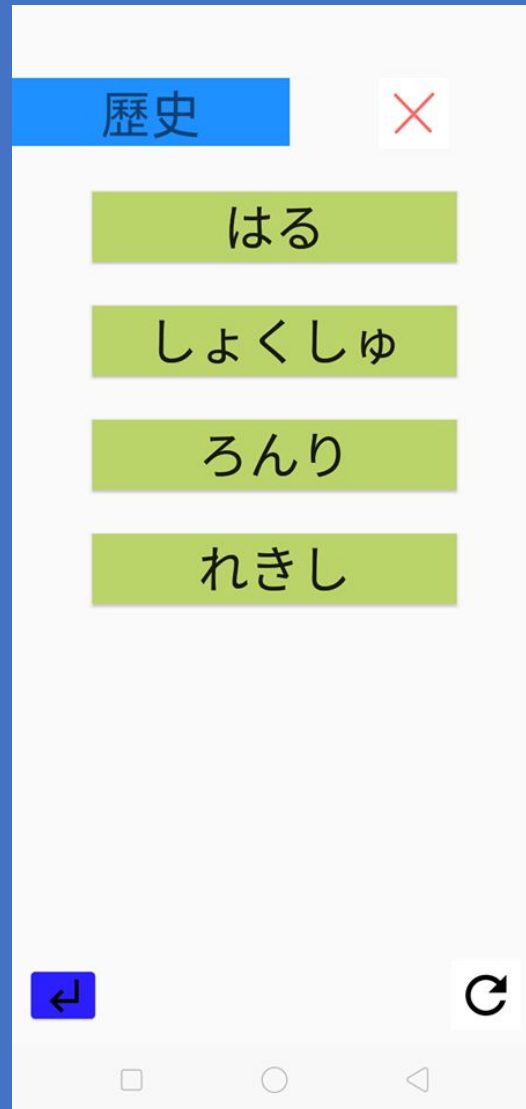
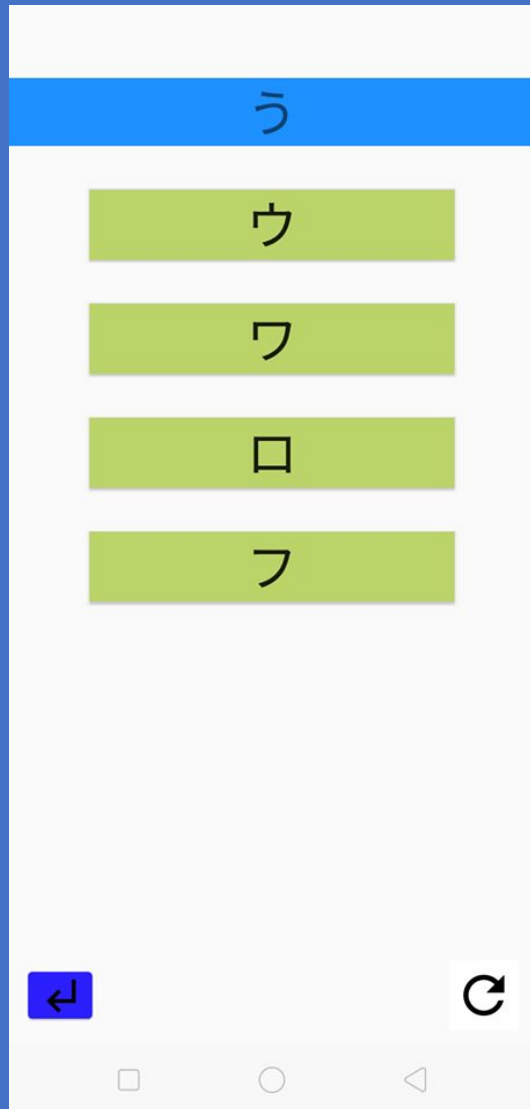
1. words choose meaning
2. meaning choose words

OK



```
public void quiz_setInfo(View v)    //gojuon
{
    AlertDialog.Builder alertDialog = new AlertDialog.Builder(context: QuizActivity.this);
    alertDialog.setTitle("How to test");
    if(v.getId() == R.id.quiz_gojuonInfo)
    {
        alertDialog.setMessage(getText(R.string.quiz_infoGojuonMsg1) + "\n"
                                + getText(R.string.quiz_infoGojuonMsg2) + "\n"
                                + getText(R.string.quiz_infoGojuonMsg3));
    }
    else if(v.getId() == R.id.quiz_wordInfo)
    {
        alertDialog.setTitle(getText(R.string.quiz_infoTitle));
        alertDialog.setMessage(getText(R.string.quiz_infoWordMsg1) + "\n"
                                + getText(R.string.quiz_infoWordMsg2));
    }
    alertDialog.setPositiveButton(text: "OK", listener: null);
    alertDialog.setCancelable(false);
    alertDialog.show();
}
```

QuizCard



ツ

tsu

te

re

ma

1 / 3

Correct
Rate : 33 %

Correct Answer
tsu

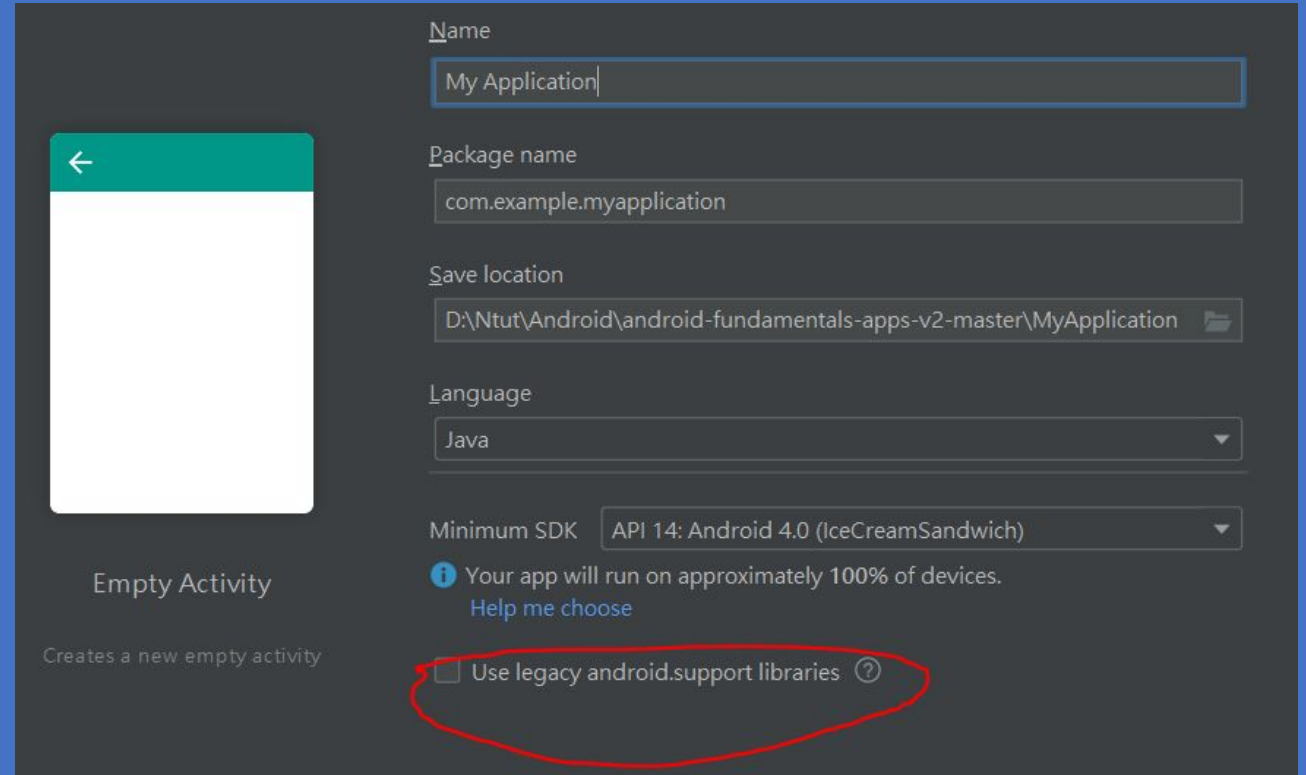


```
private void showResult(boolean isEqual)
{
    if(isEqual)
    {
        correctQuest+=1;
        imgResult.setImageResource(R.mipmap.ans_correct);
    }
    else
    {
        imgResult.setImageResource(R.mipmap.ans_wrong);
    }
    textshowCorrectAns.setText(getText(R.string.quizCard_correctAns)
        + fiftyTone.getQuesAns(mode,remainType,remainWhich));
    int d =(int)(correctQuest * 1.0 /totalQuest * 100);
    imgResult.setVisibility(View.VISIBLE);
    textResult.setText(String.format("%d / %d",correctQuest,totalQuest));
    textResultRate.setText(String.format("%s : %d %%",
        ,getText(R.string.quizCard_correctRate),d));
    state = 0;    //寫題結束
}
```

遇到的問題與解決方法

Q1. 使用到AndroidX函式庫，導致無法使用support library

A1. 重開一個新的專案，
並且這次選擇使用
support library



Q2. 狀態列和標題列的隱藏.

A2.

```
<style name="AppTheme.NoActionBar" parent="AppTheme">  
    <item name="windowNoTitle">true</item>  
    <item name="windowActionBar">false</item>  
    <item name="android:windowFullscreen">true</item>  
</style>
```


Q3.顯示結果的图片會遮蔽到後面的物件.

A3.將 ImageView 的 BackGroundColor 設置成 Transparent

Q4.語言的切換希望能夠直接在APP內做切換,且下次開啟保持上次切換成的語言。

A4. 利用SharedPreferences來
記下當前APP的語言,並且在每
次oncreate的開頭重新
setLanguage,把語言轉換成
之前設定的。

```
protected void onCreate(Bundle savedInstanceState) {  
    super.onCreate(savedInstanceState);  
    setLanguage();  
    setContentView(R.layout.activity_main);  
}
```

未來展望

1. 希望能增加客製化功能，讓使用者自行增加單字
2. 優化使用介面
3. 新增語音套件，讓使用者可以聽到單字以練習發音

報告結束