

모바일프로그래밍[03] 프로젝트

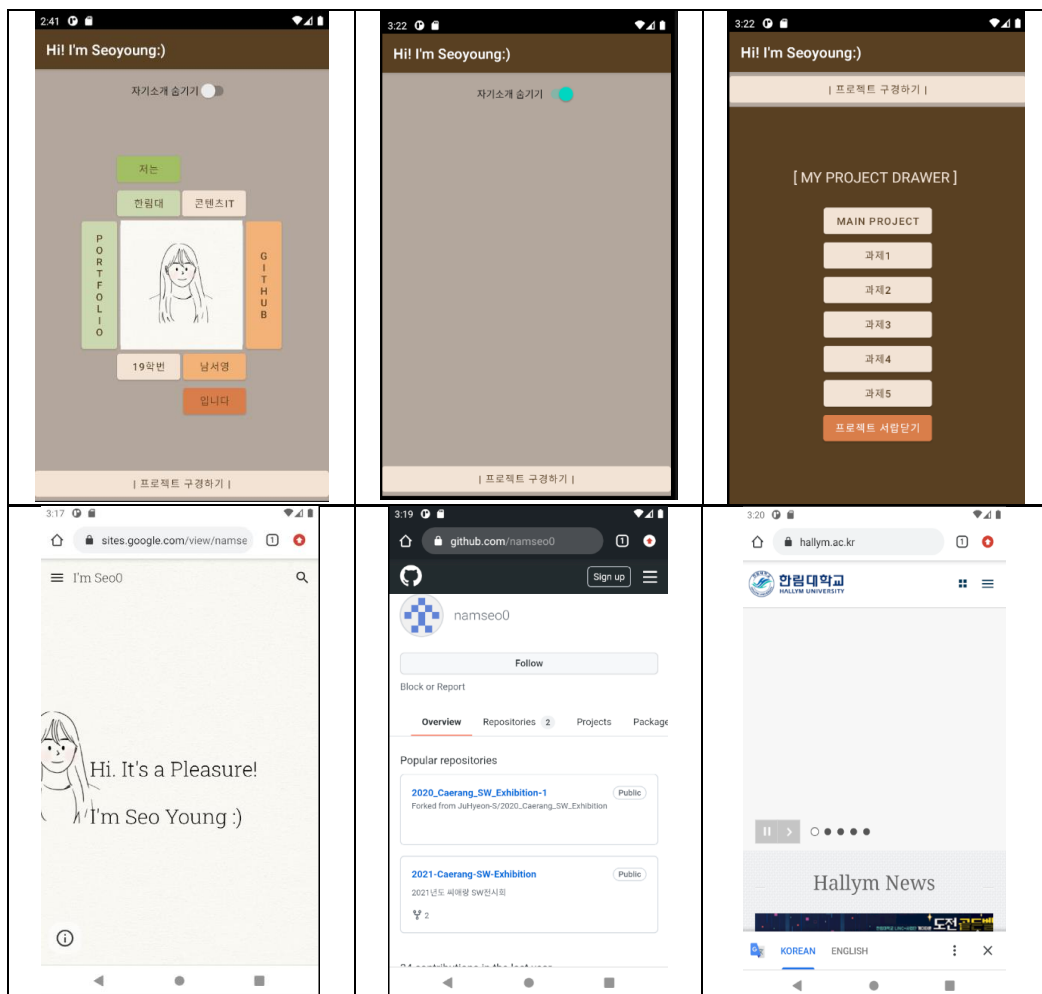
콘텐츠 IT 20195153 남서영

1. 프로젝트 소개

저는 제 포트폴리오로 사용할 수 있는 제 정보로 이어지는 버튼의 자기소개 화면과 함께 서랍의 프로젝트로는 공부할 때 유용할 기능들을 모은 스터디 어플을 만들었습니다.

2. 실행화면과 코드

(1-1) 메인화면-자기소개



(1-2) activity_main.xml

```
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:background="#B3A79D">

    <Switch
        android:id="@+id/switchbtn"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_centerHorizontal="true"
        android:layout_alignParentTop="true"
        android:padding="20dp"
        android:text="자기소개 숨기기" />

    <ImageButton
        android:id="@+id/ImgBtn"
        android:layout_width="180dp"
        android:layout_height="180dp"
        android:layout_centerHorizontal="true"
        android:layout_centerVertical="true"
        android:padding="5dp"
        android:scaleType="centerCrop"
        android:src="@drawable/me" />

    <Button
        android:id="@+id/button0"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_above="@+id/hallymbtn"
        android:layout_alignLeft="@+id/ImgBtn"
        android:backgroundTint="#A2BF63"
        android:textColor="#594022"
        android:text="저는" />

    <Button
        android:id="@+id/hallymbtn"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_above="@+id/ImgBtn"
        android:layout_alignLeft="@+id/ImgBtn"
        android:backgroundTint="#CCD9B0"
        android:textColor="#594022"
        android:text="한림대" />

    <Button
        android:id="@+id/itbtn"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_above="@+id/ImgBtn"
        android:layout_alignRight="@+id/ImgBtn"
        android:backgroundTint="#F2E3D5"
        android:textColor="#594022"
        android:text="콘텐츠 IT" />

    <Button
        android:id="@+id/button1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_alignLeft="@+id/ImgBtn"
        android:layout_below="@+id/ImgBtn"
```

```
android:backgroundTint="#F2E3D5"  
android:textColor="#594022"  
android:text="19 학번" />
```

```
<Button  
    android:id="@+id/button2"  
    android:layout_width="wrap_content"  
    android:layout_height="wrap_content"  
    android:layout_alignRight="@+id/ImgBtn"  
    android:layout_below="@+id/ImgBtn"  
    android:textColor="#594022"  
    android:backgroundTint="#F2B279"  
    android:text="남서영" />
```

```
<Button  
    android:id="@+id/button3"  
    android:layout_width="wrap_content"  
    android:layout_height="wrap_content"  
    android:layout_below="@+id/button2"  
    android:layout_alignRight="@+id/ImgBtn"  
    android:textColor="#594022"  
    android:backgroundTint="#D97E4A"  
    android:text="입니다" />
```

```
<Button  
    android:id="@+id/portfoliobtn"  
    android:layout_width="50dp"  
    android:layout_height="190dp"  
    android:layout_toLeftOf="@+id/ImgBtn"  
    android:layout_centerVertical="true"  
    android:backgroundTint="#CCD9B0"  
    android:textColor="#594022"  
    android:text="P o r t f o l i o" />
```

```
<Button  
    android:id="@+id/githubbtn"  
    android:layout_width="50dp"  
    android:layout_height="190dp"  
    android:layout_toRightOf="@+id/ImgBtn"  
    android:layout_centerVertical="true"  
    android:backgroundTint="#F2B279"  
    android:textColor="#594022"  
    android:text="G I T H U B" />
```

```
<SlidingDrawer  
    android:id="@+id/slidingDrawer"  
    android:layout_width="match_parent"  
    android:layout_height="match_parent"  
    android:content="@+id/content"  
    android:handle="@+id/handle"  
    android:backgroundTint="#F2B279"  
    android:topOffset="0dp">
```

```
<Button  
    android:id="@+id/handle"  
    android:layout_width="match_parent"  
    android:layout_height="wrap_content"  
    android:backgroundTint="#F2E3D5"  
    android:textColor="#594022"  
    android:text=" | 프로젝트 구경하기 | " />
```

```
<LinearLayout  
    android:id="@+id/content"
```

```
        android:layout_width="match_parent"
        android:layout_height="match_parent"
        android:background="#594022"
        android:gravity="center"
        android:orientation="vertical">

        <TextView
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:text="[ MY PROJECT DRAWER ]\n"
            android:textColor="#F2E3D5"
            android:textSize="20dp" />

        <Button
            android:id="@+id/btnMainProject"
            android:layout_width="150dp"
            android:layout_height="wrap_content"
            android:backgroundTint="#F2E3D5"
            android:textColor="#594022"
            android:text="MAIN PROJECT"/>

        <Button
            android:id="@+id/btnProject1"
            android:layout_width="150dp"
            android:layout_height="wrap_content"
            android:backgroundTint="#F2E3D5"
            android:textColor="#594022"
            android:text="과제 1"/>

        <Button
            android:id="@+id/btnProject2"
            android:layout_width="150dp"
            android:layout_height="wrap_content"
            android:backgroundTint="#F2E3D5"
            android:textColor="#594022"
            android:text="과제 2"/>

        <Button
            android:id="@+id/btnProject3"
            android:layout_width="150dp"
            android:layout_height="wrap_content"
            android:backgroundTint="#F2E3D5"
            android:textColor="#594022"
            android:text="과제 3"/>

        <Button
            android:id="@+id/btnProject4"
            android:layout_width="150dp"
            android:layout_height="wrap_content"
            android:backgroundTint="#F2E3D5"
            android:textColor="#594022"
            android:text="과제 4"/>

        <Button
            android:id="@+id/btnProject5"
            android:layout_width="150dp"
            android:layout_height="wrap_content"
            android:backgroundTint="#F2E3D5"
            android:textColor="#594022"
            android:text="과제 5"/>

        <Button
            android:id="@+id/btnClose"
            android:backgroundTint="#D97E4A"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:text="프로젝트 서랍닫기"/>
    </LinearLayout>
```

```
</SlidingDrawer>
</RelativeLayout>
```

(1-3) MainActivity.java

```
package com.cookandroid.a21_project;

import androidx.appcompat.app.AppCompatActivity;

import android.content.Intent;
import android.net.Uri;
import android.os.Bundle;
import android.provider.ContactsContract;
import android.view.MotionEvent;
import android.view.View;
import android.view.Window;
import android.view.WindowManager;
import android.webkit.WebView;
import android.widget.Button;
import android.widget.CompoundButton;
import android.widget.ImageButton;
import android.widget.SlidingDrawer;
import android.widget.Switch;

public class MainActivity extends AppCompatActivity {
    Switch switchbtn;
    Button hallymbtn, itbtn, portfoliobtn, githubbtn, button0, button1, button2, button3,
    btnClose;
    Button btnMainProject, btnProject1, btnProject2, btnProject3, btnProject4,
    btnProject5;
    ImageButton me;
    SlidingDrawer slidingDrawer;
    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        setTitle("Hi! I'm Seoyoung:"); //상단바 문구

        me = (ImageButton)findViewById(R.id.imgBtn);
        hallymbtn = (Button)findViewById(R.id.hallymbtn);
        itbtn = (Button)findViewById(R.id.itbtn);
        portfoliobtn = (Button)findViewById(R.id.portfoliobtn);
        githubbtn = (Button)findViewById(R.id.githubbtn);
        slidingDrawer = (SlidingDrawer)findViewById(R.id.slidingDrawer);
        button0 = (Button)findViewById(R.id.button0);
        button1 = (Button)findViewById(R.id.button1);
        button2 = (Button)findViewById(R.id.button2);
        button3 = (Button)findViewById(R.id.button3);
        btnClose = (Button)findViewById(R.id.btnClose);
        btnMainProject = (Button)findViewById(R.id.btnMainProject);
        btnProject1 = (Button)findViewById(R.id.btnProject1);
        btnProject2 = (Button)findViewById(R.id.btnProject2);
        btnProject3 = (Button)findViewById(R.id.btnProject3);
        btnProject4 = (Button)findViewById(R.id.btnProject4);
        btnProject5 = (Button)findViewById(R.id.btnProject5);
        switchbtn = (Switch)findViewById(R.id.switchbtn);

        me.setOnClickListener(new View.OnClickListener() { //포트폴리오 사이트 연결
            @Override
            public void onClick(View view) {
```

```

        Intent intentSite1 = new Intent(Intent.ACTION_VIEW,
Uri.parse("https://sites.google.com/view/namseo0/home"));
        startActivity(intentSite1);
    }
});
hallymbtn.setOnClickListener(new View.OnClickListener() { //한림대학교 홈페이지 연결
    @Override
    public void onClick(View view) {
        Intent intentSite1 = new Intent(Intent.ACTION_VIEW,
Uri.parse("https://www.hallym.ac.kr/"));
        startActivity(intentSite1);
    }
});
itbtn.setOnClickListener(new View.OnClickListener() { //콘텐츠 IT 페이지 연결
    @Override
    public void onClick(View view) {
        Intent intentSite2 = new Intent(Intent.ACTION_VIEW,
Uri.parse("https://sw.hallym.ac.kr/index.php?mp=2_3"));
        startActivity(intentSite2);
    }
});
portfoliobtn.setOnClickListener(new View.OnClickListener() { //포트폴리오 사이트
연결
    @Override
    public void onClick(View view) {
        Intent intentSite3 = new Intent(Intent.ACTION_VIEW,
Uri.parse("https://sites.google.com/view/namseo0/home"));
        startActivity(intentSite3);
    }
});
githubbtn.setOnClickListener(new View.OnClickListener() { //깃허브 연결
    @Override
    public void onClick(View view) {
        Intent intentSite3 = new Intent(Intent.ACTION_VIEW,
Uri.parse("https://github.com/namseo0"));
        startActivity(intentSite3);
    }
});

btnClose.setOnClickListener(new View.OnClickListener() {
    public void onClick(View view) {
        SlidingDrawer drawer = (SlidingDrawer)findViewById(R.id.slidingDrawer);
        drawer.animateClose();//서랍 닫기

        hallymbtn.setVisibility(View.VISIBLE);
        itbtn.setVisibility(View.VISIBLE);
        portfoliobtn.setVisibility(View.VISIBLE);
        githubbtn.setVisibility(View.VISIBLE);
        me.setVisibility(View.VISIBLE);
        button0.setVisibility(View.VISIBLE);
        button1.setVisibility(View.VISIBLE);
        button2.setVisibility(View.VISIBLE);
        button3.setVisibility(View.VISIBLE);
    }
});

switchbtn.setOnCheckedChangeListener(new CompoundButton.OnCheckedChangeListener()
{
    @Override
    public void onCheckedChanged(CompoundButton compoundButton, boolean b) {
        if(switchbtn.isChecked() == true) { //스위치 체크 시 메인화면 버튼 안보이게
            hallymbtn.setVisibility(View.GONE);
            itbtn.setVisibility(View.GONE);
            portfoliobtn.setVisibility(View.GONE);

```

```

        githubbtn.setVisibility(View.GONE);
        me.setVisibility(View.GONE);
        button0.setVisibility(View.GONE);
        button1.setVisibility(View.GONE);
        button2.setVisibility(View.GONE);
        button3.setVisibility(View.GONE);
    }
    else {
        hallymbtn.setVisibility(View.VISIBLE);
        itbtn.setVisibility(View.VISIBLE);
        portfoliobtn.setVisibility(View.VISIBLE);
        githubbtn.setVisibility(View.VISIBLE);
        me.setVisibility(View.VISIBLE);
        button0.setVisibility(View.VISIBLE);
        button1.setVisibility(View.VISIBLE);
        button2.setVisibility(View.VISIBLE);
        button3.setVisibility(View.VISIBLE);
    }
}
});

//메인 프로젝트로 이동
btnMainProject.setOnClickListener(new View.OnClickListener() {
    public void onClick(View v) {
        Intent intent = new Intent(getApplicationContext(), Project_Main.class);
        startActivity(intent);
    }
});

//과제 1 로 이동
btnProject1.setOnClickListener(new View.OnClickListener() {
    public void onClick(View v) {
        Intent intent1 = new Intent(getApplicationContext(), Project1.class);
        startActivity(intent1);
    }
});

//과제 2 로 이동
btnProject2.setOnClickListener(new View.OnClickListener() {
    public void onClick(View v) {
        Intent intent2 = new Intent(getApplicationContext(), Project2.class);
        startActivity(intent2);
    }
});

//과제 3 으로 이동
btnProject3.setOnClickListener(new View.OnClickListener() {
    public void onClick(View v) {
        Intent intent3 = new Intent(getApplicationContext(), Project3.class);
        startActivity(intent3);
    }
});

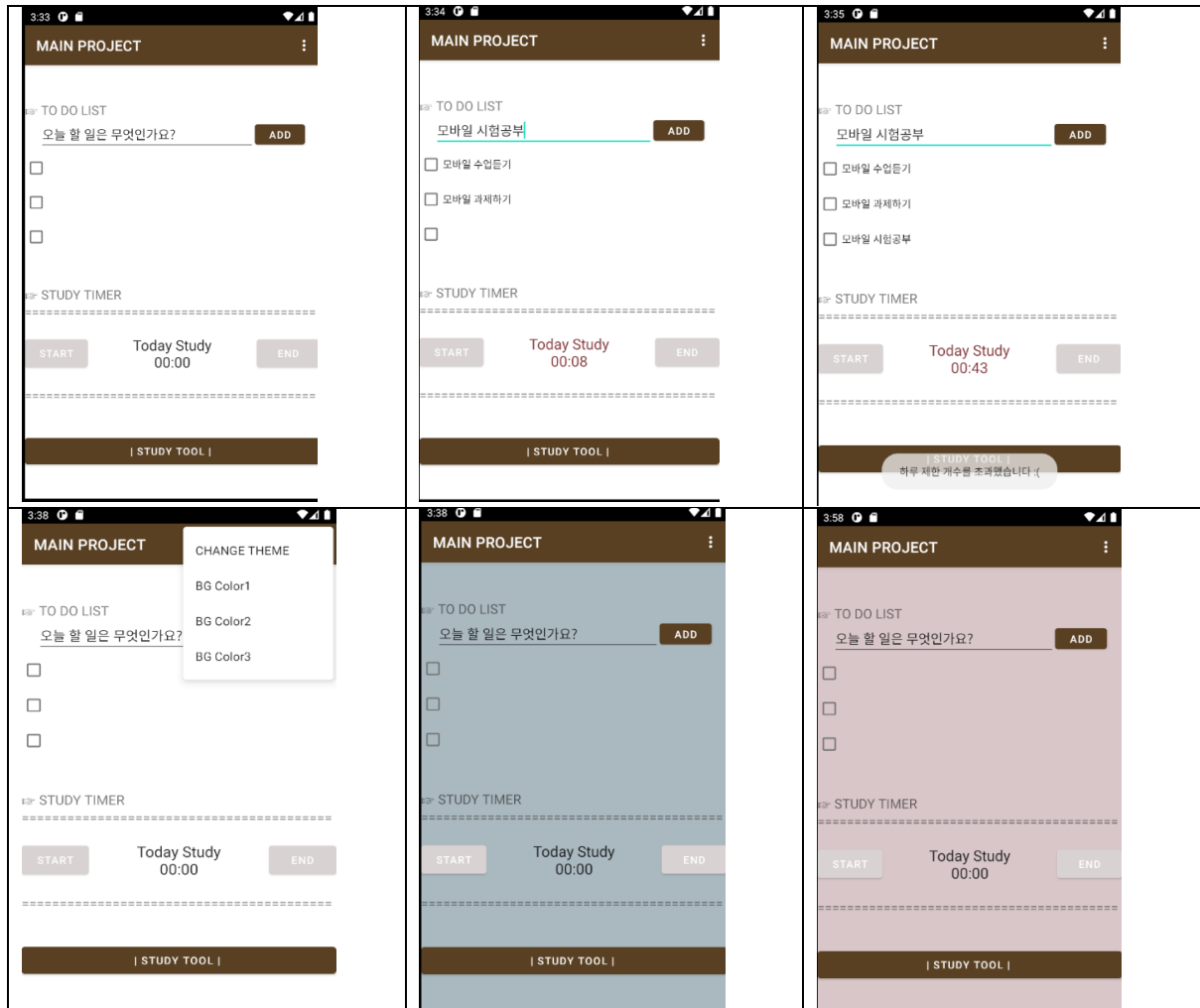
//과제 4 로 이동
btnProject4.setOnClickListener(new View.OnClickListener() {
    public void onClick(View v) {
        Intent intent4 = new Intent(getApplicationContext(), Project4.class);
        startActivity(intent4);
    }
});

//과제 5 로 이동
btnProject5.setOnClickListener(new View.OnClickListener() {
    public void onClick(View v) {
        Intent intent5 = new Intent(getApplicationContext(), Project5.class);
        startActivity(intent5);
    }
});
});

```

```
}
}
```

(2-1) 메인프로젝트-메인화면



(2-2) project_main.xml

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:id="@+id/mainLayout"
    android:orientation="vertical">

    <!--투두리스트-->
    <LinearLayout
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:orientation="vertical"
        android:id="@+id/todoLayout">
        <TextView
            android:layout_width="match_parent"
            android:layout_height="50dp"
```



```

        android:gravity="center">
    </TextView>

    <TextView
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:textSize="18dp"
        android:text="☞ TO DO LIST">
    </TextView>

    <LinearLayout
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:gravity="center"
        android:orientation="horizontal">
        <EditText
            android:id="@+id/todoEdit"
            android:layout_width="300dp"
            android:layout_height="wrap_content"
            android:layout_gravity="center"
            android:text="오늘 할 일은 무엇인가요?">
        </EditText>
        <Button
            android:layout_width="70dp"
            android:layout_height="40dp"
            android:id="@+id/todoAdd"
            android:text="ADD">
        </Button>
    </LinearLayout>
    <CheckBox
        android:id="@+id/todoList1"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:text="">
    </CheckBox>
    <CheckBox
        android:id="@+id/todoList2"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:text="">
    </CheckBox>
    <CheckBox
        android:id="@+id/todoList3"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:text="">
    </CheckBox>

</LinearLayout>
<TextView
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:textSize="18dp"
    android:text="\n\n☞ STUDY TIMER">
</TextView>
<TextView
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:layout_gravity="center"
    android:textSize="18dp"
    android:text="=====\n">
</TextView>
<!-- 공부타이머 -->
<RelativeLayout

```

```

        android:layout_width="match_parent"
        android:layout_height="wrap_content">
        <Button
            android:id="@+id/btnTimerStart"
            android:layout_width="wrap_content"
            android:layout_height="50dp"
            android:gravity="center"
            android:layout_alignParentLeft="true"
            android:backgroundTint="#D9D2D2"
            android:text="START" />
        <Chronometer
            android:id="@+id/chronometer1"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_centerHorizontal="true"
            android:format="Today Study\n %s "
            android:gravity="center"
            android:textSize="20dp" />
        <Button
            android:id="@+id/btnTimerEnd"
            android:layout_width="wrap_content"
            android:layout_height="50dp"
            android:layout_alignParentRight="true"
            android:backgroundTint="#D9D2D2"
            android:text="End" />
    </RelativeLayout>
    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_gravity="center"
        android:textSize="18dp"
        android:text="\n===== \n\n">
    </TextView>

    <Button
        android:id="@+id/btnStudyTool"
        android:layout_width="match_parent"
        android:layout_height="wrap_content"
        android:text="| Study TOOL | ">
    </Button>
</LinearLayout>

```

(2-3) Project_Main.java

```

package com.cookandroid.a21_project;

import android.content.Intent;
import android.graphics.Color;
import android.net.Uri;
import android.os.Bundle;
import android.os.SystemClock;
import android.view.Menu;
import android.view.MenuItem;
import android.view.SubMenu;
import android.view.View;
import android.widget.Button;
import android.widget.CheckBox;
import android.widget.Chronometer;
import android.widget.EditText;
import android.widget.LinearLayout;
import android.widget.Toast;

import androidx.annotation.NonNull;

```

```

import androidx.appcompat.app.AppCompatActivity;

public class Project_Main extends AppCompatActivity{
    LinearLayout MainLayout;
    EditText todoEdit;
    Button todoAdd; //투두리스트 추가 버튼
    Button btnTimerStart, btnTimerEnd; //타이머 시작, 종료 버튼
    Button btnStudyTool; //스터디도구 모음 이동 버튼
    Chronometer chrono;
    int[] checkBoxID = {R.id.todoList1, R.id.todoList2, R.id.todoList3}; //투두체크박스
    아이디 배열
    CheckBox todoList; //투두리스트
    public int i; //투두리스트 개수 누적
    String listText;

    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.project_main);
        setTitle("MAIN PROJECT");
        MainLayout = (LinearLayout) findViewById(R.id.mainLayout); //배경 레이아웃
        chrono = (Chronometer) findViewById(R.id.chronometer1);

        // 투두리스트
        todoAdd = findViewById(R.id.todoAdd);
        todoEdit = findViewById(R.id.todoEdit); //투두 입력받는 에디트텍스트
        todoAdd.setOnClickListener(new View.OnClickListener() { //추가버튼 클릭
            public void onClick(View view) {
                if(i >= 3) { //최대 개수 제한
                    Toast.makeText(getApplicationContext(), "하루 제한 개수를
초과했습니다 :", Toast.LENGTH_SHORT).show();
                }
                else {
                    listText = todoEdit.getText().toString();
                    todoList = findViewById(checkBoxID[i]);
                    todoList.setText(listText);
                    i++;
                }
            }
        });

        // 타이머
        btnTimerStart = findViewById(R.id.btnTimerStart);
        btnTimerEnd = findViewById(R.id.btnTimerEnd);
        btnTimerStart.setOnClickListener(new View.OnClickListener() { //타이머 시작
            public void onClick(View view) {
                chrono.setBase(SystemClock.elapsedRealtime());
                chrono.start();
                chrono.setTextColor(Color.parseColor("#812F33"));
            }
        });
        btnTimerEnd.setOnClickListener(new View.OnClickListener() { //타이머 종료
            public void onClick(View view) {
                chrono.stop();
                chrono.setTextColor(Color.BLUE);
                Intent intentend = new Intent(getApplicationContext(),
Project_Main_End.class);
                startActivity(intentend); //종료화면으로 이동
            }
        });

        // 스터디도구 화면 이동
        btnStudyTool = (Button)findViewById(R.id.btnStudyTool);

```

```

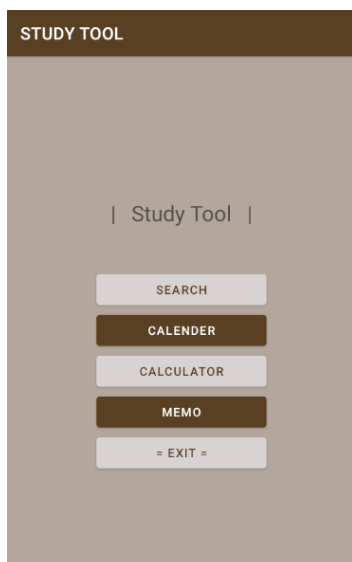
        btnStudyTool.setOnClickListener(new View.OnClickListener() {
            public void onClick(View view) {
                Intent intent5 = new Intent(getApplicationContext(),
Project_Main_Tool.class);
                startActivity(intent5);
            }
        });
    }

    //배경색 변경(옵션 메뉴)
    public boolean onCreateOptionsMenu(Menu menu) {
        super.onCreateOptionsMenu(menu);
        menu.add(0,0,0,"CHANGE THEME");
        menu.add(0, 1, 0, "BG Color1");
        menu.add(0, 2, 0, "BG Color2");
        menu.add(0, 3, 0, "BG Color3");

        return true;
    }
    public boolean onOptionsItemSelected(@NonNull MenuItem item) {
        switch (item.getItemId()) {
            case 1:
                MainLayout.setBackgroundColor(Color.parseColor("#D8C6C8"));
                return true;
            case 2:
                MainLayout.setBackgroundColor(Color.parseColor("#AAB9BF"));
                return true;
            case 3:
                MainLayout.setBackgroundColor(Color.parseColor("#F2EDD0"));
                return true;
        }
        return false;
    }
}

```

(3-1) 메인프로젝트-STUDY TOOL



(3-2) project_main_tool.xml

```

<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout
    xmlns:android="http://schemas.android.com/apk/res/android"

```

```

        android:layout_width="match_parent"
        android:layout_height="match_parent"
        android:background="#B3A79D">

        <TextView
            android:id="@+id/text"
            android:layout_width="wrap_content"
            android:layout_height="250dp"
            android:layout_centerHorizontal="true"
            android:gravity="center"
            android:textSize="25dp"
            android:text="\n\n\n\n|   Study Tool   |">
        </TextView>

        <Button
            android:id="@+id/btn1"
            android:layout_width="200dp"
            android:layout_height="wrap_content"
            android:layout_centerHorizontal="true"
            android:backgroundTint="#D9D2D2"
            android:textColor="#594022"
            android:layout_below="@+id/text"
            android:text="SEARCH">
        </Button>
        <Button
            android:id="@+id/btn2"
            android:layout_width="200dp"
            android:layout_height="wrap_content"
            android:layout_centerHorizontal="true"
            android:layout_below="@+id/btn1"
            android:text="Calender">
        </Button>
        <Button
            android:id="@+id/btn3"
            android:layout_width="200dp"
            android:layout_height="wrap_content"
            android:layout_centerHorizontal="true"
            android:backgroundTint="#D9D2D2"
            android:textColor="#594022"
            android:layout_below="@+id/btn2"
            android:text="Calculator">
        </Button>
        <Button
            android:id="@+id/btn4"
            android:layout_width="200dp"
            android:layout_height="wrap_content"
            android:layout_centerHorizontal="true"
            android:layout_below="@+id/btn3"
            android:text="MEMO">
        </Button>
        <Button
            android:id="@+id/btnExit"
            android:layout_width="200dp"
            android:layout_height="wrap_content"
            android:layout_centerHorizontal="true"
            android:backgroundTint="#D9D2D2"
            android:textColor="#594022"
            android:layout_below="@+id/btn4"
            android:text="= EXIT =">
        </Button>
    </RelativeLayout>

```

```

package com.cookandroid.a21_project;

import android.content.Intent;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;

import androidx.appcompat.app.AppCompatActivity;

public class Project_Main_Tool extends AppCompatActivity {
    Button btn1, btn2, btn3, btn4, btn5, btnexit;
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.project_main_tool);
        setTitle("STUDY TOOL");

        btnexit = (Button)findViewById(R.id.btnExit); //이전 창으로 돌아가기
        btnexit.setOnClickListener(new View.OnClickListener() {
            public void onClick(View view) {
                Intent intentE = new Intent(getApplicationContext(), Project_Main.class);
                startActivity(intentE);
            }
        });

        //각 프로젝트로 이동
        btn1 = (Button)findViewById(R.id.btn1);
        btn1.setOnClickListener(new View.OnClickListener() {
            public void onClick(View view) {
                Intent intent01 = new Intent(getApplicationContext(), Project1.class);
                startActivity(intent01);
            }
        });

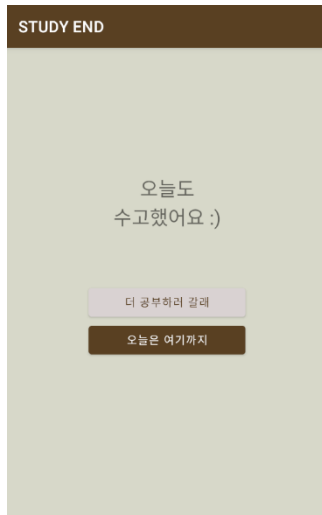
        btn2 = (Button)findViewById(R.id.btn2);
        btn2.setOnClickListener(new View.OnClickListener() {
            public void onClick(View view) {
                Intent intent02 = new Intent(getApplicationContext(), Project2.class);
                startActivity(intent02);
            }
        });

        btn3 = (Button)findViewById(R.id.btn3);
        btn3.setOnClickListener(new View.OnClickListener() {
            public void onClick(View view) {
                Intent intent03 = new Intent(getApplicationContext(), Project3.class);
                startActivity(intent03);
            }
        });

        btn4 = (Button)findViewById(R.id.btn4);
        btn4.setOnClickListener(new View.OnClickListener() {
            public void onClick(View view) {
                Intent intent04 = new Intent(getApplicationContext(), Project4.class);
                startActivity(intent04);
            }
        });
    }
}

```

(4-1) 메인프로젝트-END



(4-2) project_main_end.xml

```
<?xml version="1.0" encoding="utf-8"?>
<RelativeLayout
    xmlns:android="http://schemas.android.com/apk/res/android"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:background="#D7D8C9">

    <TextView
        android:id="@+id/text"
        android:layout_width="wrap_content"
        android:layout_height="300dp"
        android:layout_centerHorizontal="true"
        android:gravity="center"
        android:textSize="25dp"
        android:text="\n\n\n 오늘도\n 수고했어요 :)">
    </TextView>

    <Button
        android:id="@+id/btnBack"
        android:layout_width="200dp"
        android:layout_height="wrap_content"
        android:layout_centerHorizontal="true"
        android:backgroundTint="#D9D2D2"
        android:textColor="#594022"
        android:layout_below="@+id/text"
        android:text="더 공부하러 갈래">
    </Button>
    <Button
        android:id="@+id/btnEnd"
        android:layout_width="200dp"
        android:layout_height="wrap_content"
        android:layout_centerHorizontal="true"
        android:layout_below="@+id/btnBack"
        android:text="오늘은 여기까지">
    </Button>

</RelativeLayout>
```

(4-3) Project_Main_End.java

```

package com.cookandroid.a21_project;

import android.content.Intent;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;

import androidx.appcompat.app.AppCompatActivity;

public class Project_Main_End extends AppCompatActivity {
    Button btnEnd, btnBack;
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.project_main_end);
        setTitle("STUDY END");

        btnBack = (Button)findViewById(R.id.btnBack);
        btnEnd = (Button)findViewById(R.id.btnEnd);

        btnBack.setOnClickListener(new View.OnClickListener() { //프로젝트
화면으로 이동
            public void onClick(View view) {
                Intent intentback = new Intent(getApplicationContext(),
Project_Main.class);
                startActivity(intentback);
            }
        });

        btnEnd.setOnClickListener(new View.OnClickListener() { //메인화면으로 이동
            public void onClick(View view) {
                Intent intentEnd = new Intent(getApplicationContext(),
MainActivity.class);
                startActivity(intentEnd);
            }
        });
    }
}

```

(5-1) 과제 1 (SEARCH)



(5-2) project1.xml

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="fill_parent"
    android:layout_height="fill_parent"
    android:orientation="vertical" >

    <RelativeLayout
        android:layout_width="match_parent"
        android:layout_height="wrap_content">
        <TextView
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_centerVertical="true"
            android:textSize="18dp"
            android:text="🔍 SEARCH">
        </TextView>
        <Button
            android:id="@+id/btnBack"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_alignParentRight="true"
            android:text="Back" />

        <Button
            android:id="@+id/btnNaver"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_toLeftOf="@+id/btnBack"
            android:text="Naver" />

        <Button
            android:id="@+id/btnGoogle"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content"
            android:layout_toLeftOf="@+id/btnNaver"
            android:text="GOOGLE" />
    </RelativeLayout>
    <WebView
        android:id="@+id/webView1"
        android:layout_width="match_parent"
        android:layout_height="match_parent"
```

```
        android:clickable="true" />

</LinearLayout>
```

(5-3) Project1

```
package com.cookandroid.a21_project;

import android.os.Bundle;
import android.view.View;
import android.webkit.WebSettings;
import android.webkit.WebView;
import android.webkit.WebViewClient;
import android.widget.Button;

import androidx.appcompat.app.AppCompatActivity;

public class Project1 extends AppCompatActivity { //SEARCH 검색 - 웹브라우저 연결
    Button btnBack, btnGoogle, btnNaver;
    WebView web;
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.project1);
        setTitle("SEARCH");
        getSupportActionBar().setDisplayHomeAsUpEnabled(true);

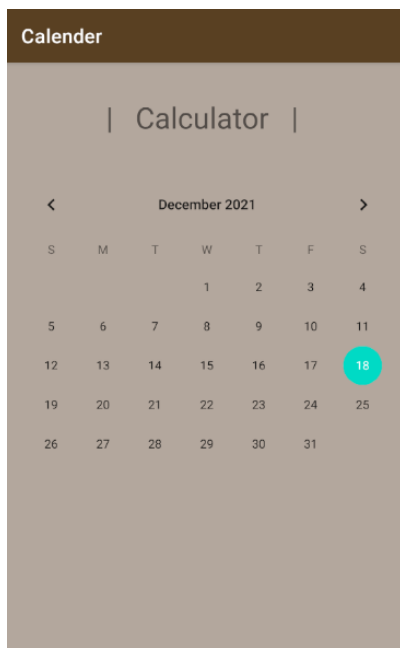
        btnNaver = (Button) findViewById(R.id.btnNaver);
        btnGoogle = (Button) findViewById(R.id.btnGoogle);
        btnBack = (Button) findViewById(R.id.btnBack);
        web = (WebView) findViewById(R.id.webView1);

        web.setWebViewClient(new CookWebViewClient()); // CookWebViewClient()를 생성하여
        웹뷰에 대입
        WebSettings webSet = web.getSettings(); // WebSettings 클래스를 이용하여
        webSet.setBuiltInZoomControls(true); // 줌 버튼 컨트롤 화면이 보이게 함
        webSet.setJavaScriptEnabled(true);

        btnNaver.setOnClickListener(new View.OnClickListener() {
            public void onClick(View v) {
                web.loadUrl("https://www.naver.com/");
            }
        });
        btnGoogle.setOnClickListener(new View.OnClickListener() {
            public void onClick(View v) {
                web.loadUrl("https://www.google.com/");
            }
        });
        btnBack.setOnClickListener(new View.OnClickListener() {
            public void onClick(View v) {
                web.goBack();
            }
        });
    }

    class CookWebViewClient extends WebViewClient {
        @Override
        public boolean shouldOverrideUrlLoading(WebView view, String url) {
            return super.shouldOverrideUrlLoading(view, url);
        }
    }
}
```

(6-1) 과제 2 (Calender)



(6-2) project2.xml

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="fill_parent"
    android:layout_height="fill_parent"
    android:baselineAligned="false"
    android:orientation="vertical"
    android:background="#B3A79D">

    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_centerVertical="true"
        android:layout_gravity="center"
        android:textSize="30dp"
        android:text="\n|  Calender  |\n">
    </TextView>

    <CalendarView
        android:id="@+id/calendarView1"
        android:layout_width="match_parent"
        android:layout_height="match_parent"
        android:showWeekNumber="false" />
</LinearLayout>
```

(6-3) Project2.java

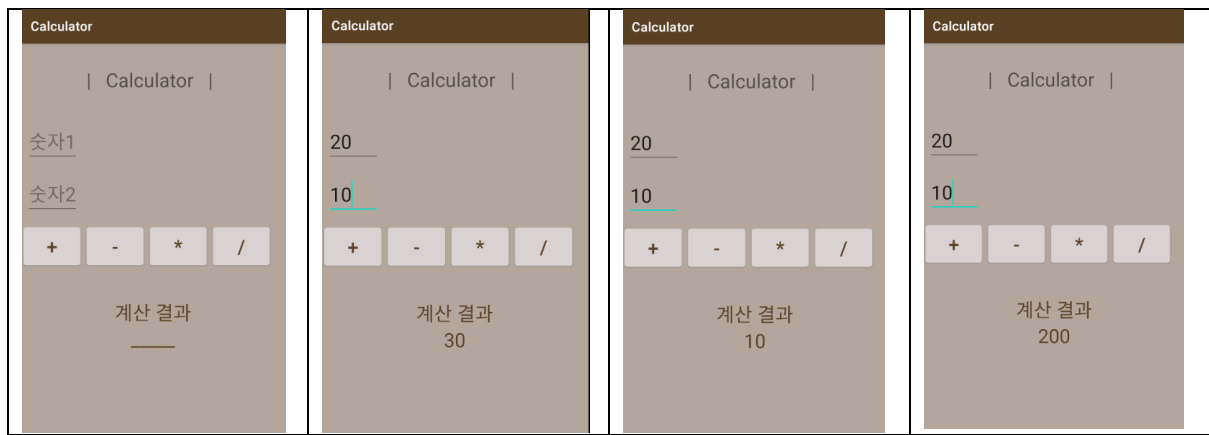
```
package com.cookandroid.a21_project;
```

```
import android.os.Bundle;

import androidx.appcompat.app.AppCompatActivity;

public class Project2 extends AppCompatActivity {
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.project2);
        setTitle("Calender");
    }
}
```

(7-1) 과제 3 (계산기)



(7-2) project3.xml

```
<?xml version="1.0" encoding="utf-8"?>
<LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
    xmlns:tools="http://schemas.android.com/tools"
    android:layout_width="match_parent"
    android:layout_height="match_parent"
    android:orientation="vertical"
    android:background="#B3A79D">

    <TextView
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_centerVertical="true"
        android:layout_gravity="center"
        android:textSize="30dp"
        android:text="\n|   Calculator   |\n">
    </TextView>

    <EditText
        android:id="@+id/Edit1"
        android:layout_width="wrap_content"
        android:layout_height="wrap_content"
        android:layout_margin="10dp"
        android:textSize="30dp"
        android:hint="숫자 1"/>

    <EditText
        android:id="@+id/Edit2"
        android:layout_width="wrap_content"
```

```

        android:layout_height="wrap_content"
        android:layout_margin="10dp"
        android:textSize="30dp"
        android:hint="숫자 2"/>

<LinearLayout
    android:layout_width="wrap_content"
    android:layout_height="wrap_content"
    android:orientation="horizontal">
    <Button
        android:id="@+id/button"
        android:layout_width="wrap_content"
        android:layout_height="70dp"
        android:backgroundTint="#D9D2D2"
        android:textColor="#594022"
        android:textSize="30dp"
        android:layout_margin="5dp"
        android:text="+"/>
    <Button
        android:id="@+id/button2"
        android:layout_width="wrap_content"
        android:layout_height="70dp"
        android:backgroundTint="#D9D2D2"
        android:textColor="#594022"
        android:textSize="30dp"
        android:layout_margin="5dp"
        android:text="-"/>

    <Button
        android:id="@+id/button3"
        android:layout_width="wrap_content"
        android:layout_height="70dp"
        android:layout_margin="5dp"
        android:backgroundTint="#D9D2D2"
        android:textColor="#594022"
        android:textSize="30dp"
        android:text="*"/>

    <Button
        android:id="@+id/button4"
        android:layout_width="wrap_content"
        android:layout_height="70dp"
        android:backgroundTint="#D9D2D2"
        android:layout_margin="5dp"
        android:textColor="#594022"
        android:textSize="30dp"
        android:text="/" />
</LinearLayout>

<TextView
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:layout_gravity="center"
    android:gravity="center"
    android:text="\n 계산 결과"
    android:textSize="30dp"
    android:textColor="#594022"/>
<TextView
    android:id="@+id/textview"
    android:layout_width="match_parent"
    android:layout_height="wrap_content"
    android:layout_gravity="center"
    android:gravity="center"
    android:text="_____"/>

```

```
        android:textSize="30dp"
        android:textColor="#594022"/>
</LinearLayout>
```

(7-3) Project3.java

```
package com.cookandroid.a21_project;

import android.content.Intent;
import android.os.Bundle;
import android.view.View;
import android.widget.Button;
import android.widget.EditText;
import android.widget.TextView;

import androidx.annotation.Nullable;
import androidx.appcompat.app.AppCompatActivity;

public class Project3 extends AppCompatActivity {
    Button button,button2,button3,button4;
    TextView textView;
    EditText edit1,edit2;
    String num1,num2;
    Integer result;
    Button btnReturn3;

    protected void onCreate(@Nullable Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.project3);

        setTitle("Calculator");

        button = (Button) findViewById(R.id.button);
        button2 = (Button) findViewById(R.id.button2);
        button3 = (Button) findViewById(R.id.button3);
        button4 = (Button) findViewById(R.id.button4);
        textView = (TextView) findViewById(R.id.textview);
        edit1 = (EditText) findViewById(R.id.Edit1);
        edit2 = (EditText) findViewById(R.id.Edit2);

        button.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                num1 = edit1.getText().toString();
                num2 = edit2.getText().toString();
                result = Integer.parseInt(num1) + Integer.parseInt(num2);
                textView.setText(result.toString());
            }
        });

        button2.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                num1 = edit1.getText().toString();
                num2 = edit2.getText().toString();
                result = Integer.parseInt(num1) - Integer.parseInt(num2);
                textView.setText(result.toString());
            }
        });

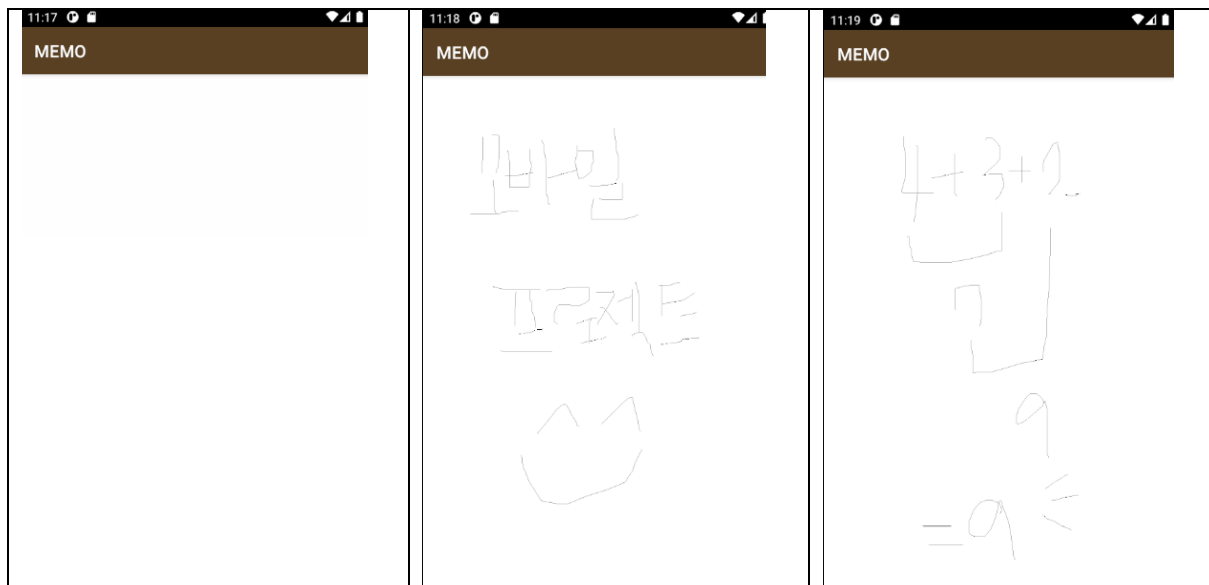
        button3.setOnClickListener(new View.OnClickListener() {
            @Override
            public void onClick(View view) {
                num1 = edit1.getText().toString();
```

```

        num2 = edit2.getText().toString();
        result = Integer.parseInt(num1) * Integer.parseInt(num2);
        textView.setText(result.toString());
    }
});
button4.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View view) {
        num1 = edit1.getText().toString();
        num2 = edit2.getText().toString();
        result = Integer.parseInt(num1) / Integer.parseInt(num2);
        textView.setText(result.toString());
    }
});
}
}

```

(8-1) 과제 4 (MEMO 그림판)



(8-2) Project4.java

```

package com.cookandroid.a21_project;

import android.os.Bundle;
import androidx.appcompat.app.AppCompatActivity;

public class Project4 extends AppCompatActivity {
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.project4);
        setTitle("MEMO");

        PaintBoard view = new PaintBoard(this);
        setContentView(view);
    }
}

```

(8-3) PaintBoard.java

```
package com.cookandroid.a21_project;

import android.content.Context;
import android.graphics.Bitmap;
import android.graphics.Canvas;
import android.graphics.Color;
import android.graphics.Paint;
import android.util.AttributeSet;
import android.view.MotionEvent;
import android.view.View;

public class PaintBoard extends View {
    Canvas mCanvas;
    Bitmap mBitmap;
    Paint mPaint;

    int lastX;
    int lastY;

    public PaintBoard(Context context) {
        super(context);
        init(context);
    }

    public PaintBoard(Context context, AttributeSet attrs) {
        super(context, attrs);
    }

    private void init(Context context) {
        this.mPaint = new Paint();
        this.mPaint.setColor(Color.BLACK);

        this.lastX = -1; // 최소 lastX 값을 -1로 설정
        this.lastY = -1; // 최소 lastY 값을 -1로 설정
    }

    protected void onSizeChanged(int w, int h, int oldw, int oldh) {
        Bitmap img = Bitmap.createBitmap(w, h, Bitmap.Config.ARGB_8888);
        Canvas canvas = new Canvas();
        canvas.setBitmap(img);
        canvas.drawColor(Color.WHITE);
        mBitmap = img;
        mCanvas = canvas;
    }

    protected void onDraw(Canvas canvas) {
        if (mBitmap != null) {
            canvas.drawBitmap(mBitmap, 0, 0, null);
        }
    }

    public boolean onTouchEvent(MotionEvent event) {
        int action = event.getAction();

        int X = (int) event.getX(); // 현재 마우스가 있는 위치의 X 값 가져오기
        int Y = (int) event.getY(); // 현재 마우스가 있는 위치의 Y 값 가져오기

        switch (action) {

            case MotionEvent.ACTION_UP:
                lastX = -1; // 마우스를 UP 하면 lastX에 -1과 lastY에 -1으로 설정하여
```



```

마지막 점임을 알수 있음
        lastY = -1;
        break;

    case MotionEvent.ACTION_DOWN:
        if (lastX != -1) {
            if (X != lastX || Y != lastY) { // X와 lastX가 다르거나 Y와 lastY가
다른 경우 두점을 선으로 그린다.
                mCanvas.drawLine(lastX, lastY, X, Y, mPaint);
            }
        }

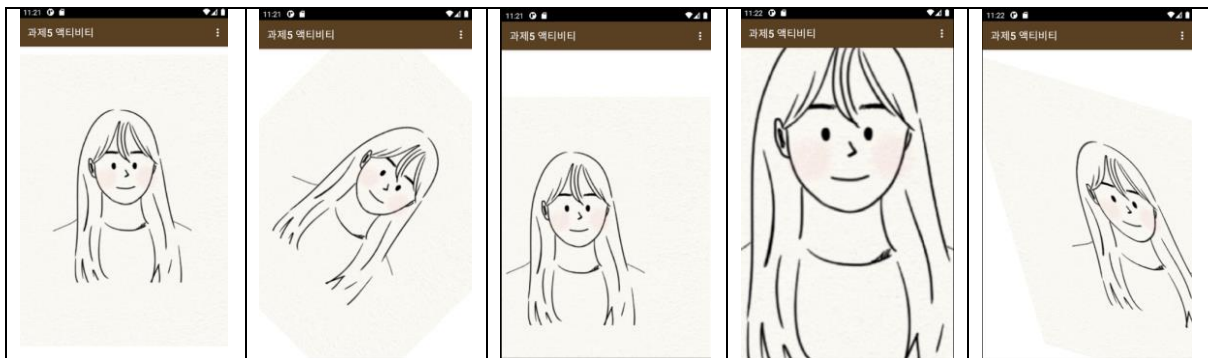
        lastX = X; // 현재 값 X를 마지막 값 lastX 으로 설정
        lastY = Y; // 현재 값 Y를 마지막 값 lastY 으로 설정
        break;

    case MotionEvent.ACTION_MOVE:
        if (lastX != -1) { // 마우스가 UP 되지 않으면 계속해서 두 점을 선으로 그림
            mCanvas.drawLine(lastX, lastY, X, Y, mPaint);
        }
        lastX = X;
        lastY = Y;
        break;

    }
    invalidate(); // 화면이 무효화되고 onDraw() 메소드를 자동으로 실행한다.
    return true;
}
}

```

(9-1) 과제 5 (이미지 기하학적 변형)



(9-2) Project5.java

```

package com.cookandroid.a21_project;

import android.os.Bundle;

import androidx.annotation.NonNull;
import androidx.appcompat.app.AppCompatActivity;
import android.content.Context;
import android.graphics.Bitmap;
import android.graphics.BitmapFactory;
import android.graphics.Canvas;
import android.view.Menu;
import android.view.MenuItem;

```

```

import android.view.View;

public class Project5 extends AppCompatActivity {
    final static int ZERO = 0, ROTATE = 1, TRANSFORM = 2, SCALE = 3, SKEW = 4;
    static int NUM = 0;

    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(new MyGraphicView(this));
    }

    public boolean onCreateOptionsMenu(Menu menu) {
        super.onCreateOptionsMenu(menu);
        menu.add(0, 1, 0, "이미지 회전");
        menu.add(0, 2, 0, "이미지 이동");
        menu.add(0, 3, 0, "이미지 크기 변경");
        menu.add(0, 4, 0, "이미지 기울이기");
        return true;
    }

    public boolean onOptionsItemSelected(@NonNull MenuItem item) {
        switch (item.getItemId()) {
            case 1:
                NUM = ROTATE;
                return true;
            case 2:
                NUM = TRANSFORM;
                return true;
            case 3:
                NUM = SCALE;
                return true;
            case 4:
                NUM = SKEW;
                return true;
        }
        return false;
    }

    private static class MyGraphicView extends View {
        public MyGraphicView(Context context) {
            super(context);
        }

        protected void onDraw(Canvas canvas) {
            super.onDraw(canvas);
            Bitmap picture = BitmapFactory.decodeResource(getResources(), R.drawable.me);
            int cenX = this.getWidth() / 2;
            int cenY = this.getHeight() / 2;
            int picX = (this.getWidth() - picture.getWidth()) / 2;
            int picY = (this.getHeight() - picture.getHeight()) / 2;
            switch (NUM) {
                case ZERO:
                    canvas.drawBitmap(picture, picX, picY, null);
                    break;
                case ROTATE:
                    canvas.rotate(45, cenX, cenY);
                    canvas.drawBitmap(picture, picX, picY, null);
                    break;
                case TRANSFORM:
                    canvas.translate(-150, 200);
                    canvas.drawBitmap(picture, picX, picY, null);
                    break;
                case SCALE:
                    canvas.scale(2, 2, cenX, cenY);
            }
        }
    }
}

```

```
        canvas.drawBitmap(picture, picX, picY, null);
        break;
    case SKEW:
        canvas.skew(0.3f, 0.3f);
        canvas.drawBitmap(picture, picX, picY, null);
        break;
    }
    invalidate();
    picture.recycle(); // 비트맵 리소스 해제
}
}
```