



Homework Calendar

Mobile Programming

Team4_가제지킴이
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Content



01. Motivation



02. Key Feature



03. Architecture



04. Implementation



05. Demonstration Video



Motivation



- The calendar of the 'Cosmos' is uncomfortable



Difficulty
distinguishing
subjects

Users can't see
the subject they want

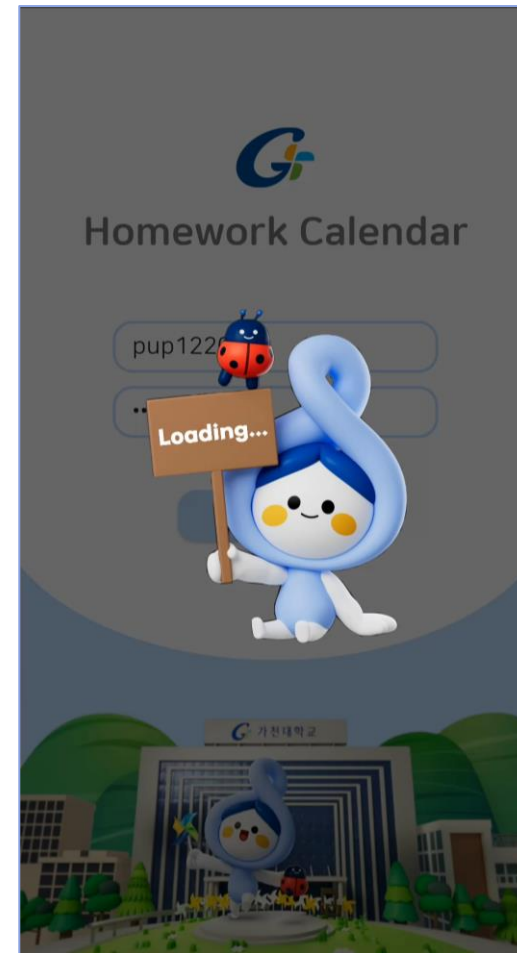
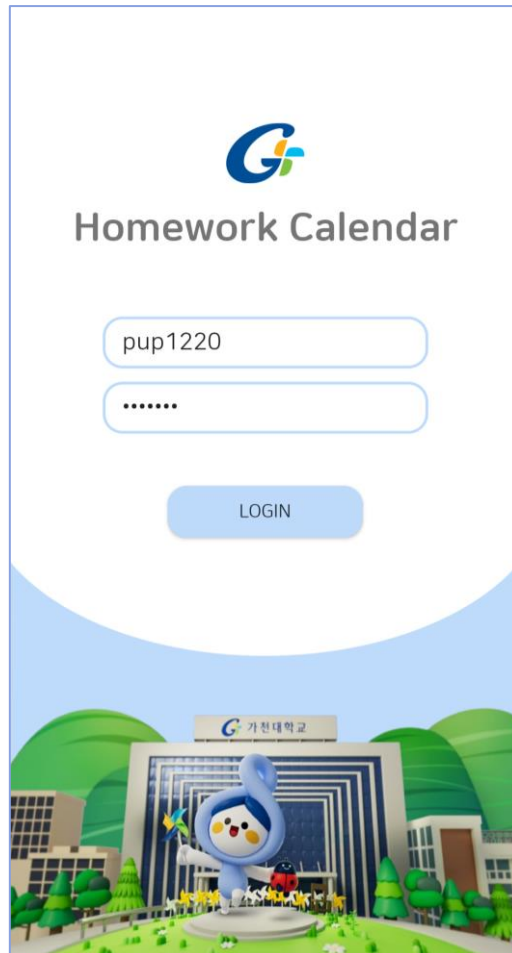




Key Feature



1. Login & Loading - Cyber Campus Crawling





Key Feature



2. Calendar

- Due Date
 - Submission deadlines listed on that date
- Check submission status
 - Displayed in different colors depending on the submission status
- Check Assignment
 - Assignments for the selected date are listed at the bottom of the screen
 - Tap a assignment to go to the link



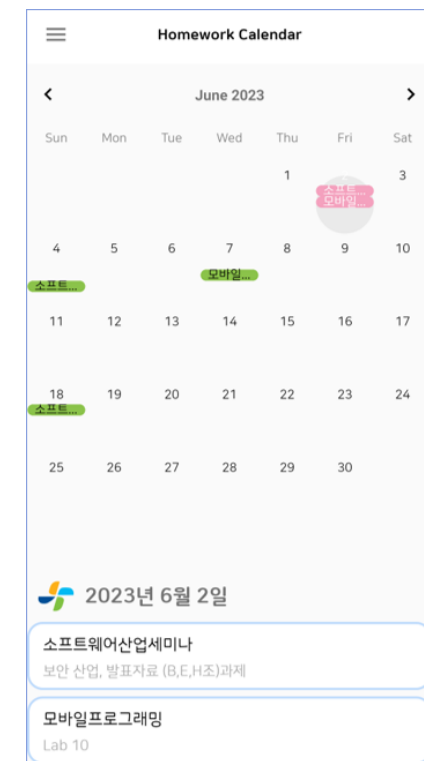
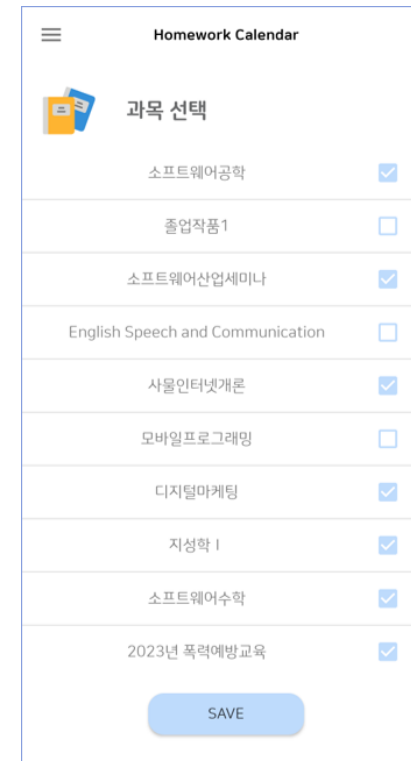
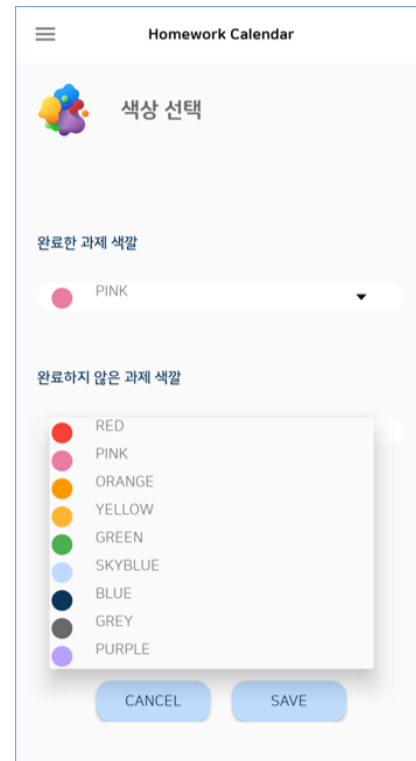
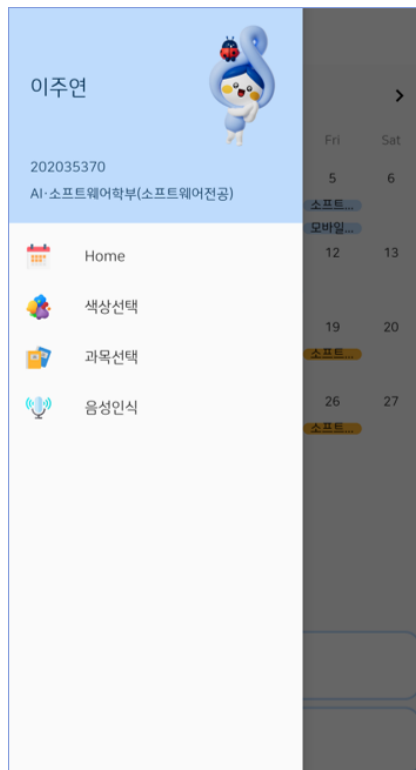


Key Feature



3. Selections

- Course - Select a subject to display in the calendar
- Color - Select a color to indicate whether to submit or not







Key Feature





4. Speech Recognition - Check the assignment

 제안


- 오늘까지인 과제 알려 줘
- 내일까지인 과제 알려 줘
- 제출 안 한 과제 알려 줘


 무엇이 궁금한가요?



 제안

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내일까지인 과제 알려 줘 

 [내일까지인 과제들입니다]


과목 - 소프트웨어공학
과제명 - Evaluation Sheet for June 1
제출여부 - No attempt


과목 - 지성학 I
과제명 - [1분 수업리뷰 2차] 이현희 강연자
영상제출방
제출여부 - 제출 안 함

과목 - 지성학 I
과제명 - [1분 수업리뷰 2차] 신상진 강연자
영상제출방
제출여부 - 제출 안 함


과목 - 지성학 I
과제명 - [1분 수업리뷰 2차] 최재림 강연자
영상제출방
제출여부 - 제출 완료


과목 - 지성학 I
과제명 - [1분 수업리뷰 2차] 이현희 강연자
영상제출방
제출여부 - 제출 안 함



 제안

- 오늘까지인 과제 알려 줘
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제출 안 한 과제 알려 줘 

 [제출하지 않은 과제들입니다]

과목 - 소프트웨어공학
과제명 - Evaluation sheet for June 6

과목 - 소프트웨어공학
과제명 - Term Project Proposal


과목 - 소프트웨어공학
과제명 - Requirement documents for
Term Project

과목 - 소프트웨어공학
과제명 - Architectural Patterns
Exercises

과목 - 소프트웨어공학
과제명 - Active Learning

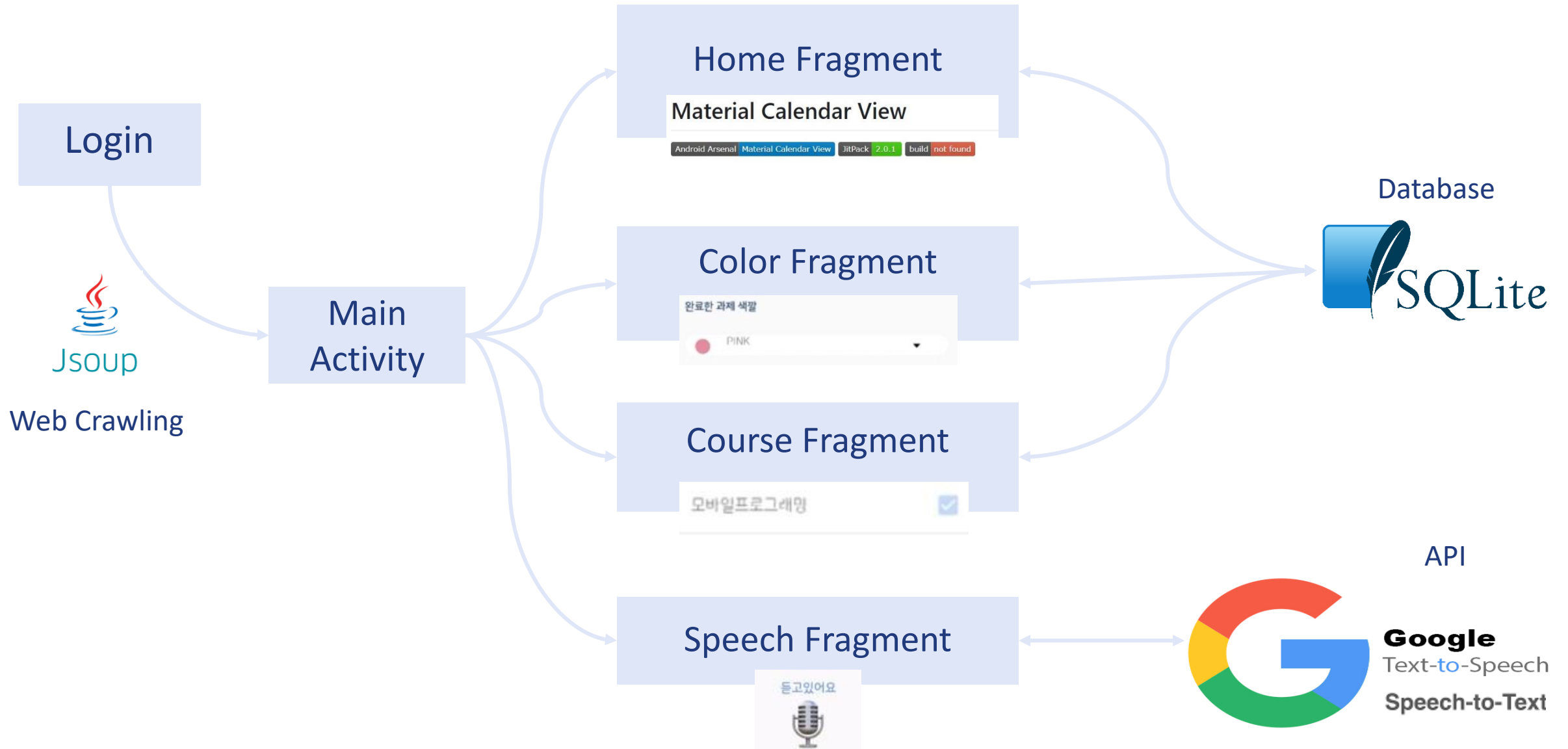
과목 - 소프트웨어공학
과제명 - Final Presentation for Term
Project

과목 - 소프트웨어공학
과제명 - Evaluation sheet for June 6





Architecture





Implementation - Web Crawling



```
// #1. Form data to be transferred
Map<String, String> data = new HashMap<>();
data.put(k: "userid", loginId);
data.put(k: "password", loginPw);
data.put(k: "redirect", v: "/");

// #2. Login(POST)
Connection.Response response = Jsoup.connect(url)
    .data(...keyvals: "username", loginId, "password", loginPw)
    .method(Connection.Method.POST)
    .execute();
```

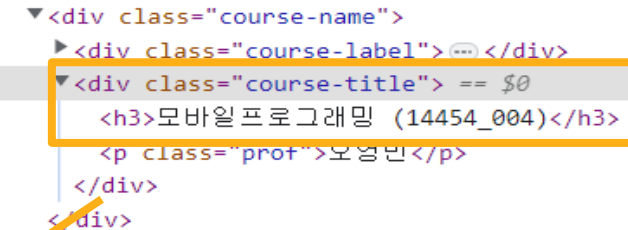
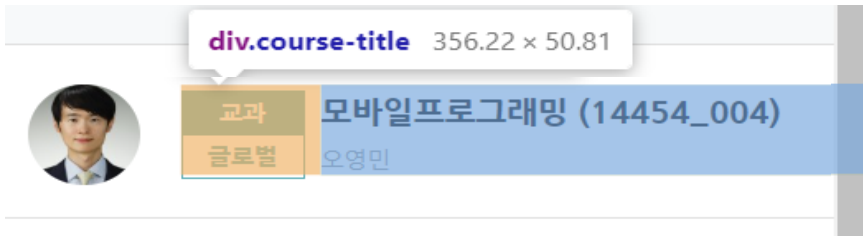
```
loginId = name.getText().toString();
loginPw = password.getText().toString();
```

```
// Get Cookie Value
Map<String, String> loginCookie = response.cookies();
```

```
// #3. Use cookies to log in and get the information you need
Document doc = (Document) Jsoup.connect(url: "https://cyber.gachon.ac.kr/")
    .timeout(millis: 30000000)
    .cookies(loginCookie)
    .method(Connection.Method.POST)
    .get();
```



Implementation - Web Crawling



```
// #3-1 Lecture name & professor
Elements Data = doc.select( cssQuery: ".course-title");
boolean isEmpty = Data.isEmpty(); //Check null
```

```
if (isEmpty==true){
    JUYEON LEE
    Login.this.runOnUiThread(new Runnable() {
        JUYEON LEE
        @Override
        public void run() {
            Toast.makeText( context: Login.this, text: "아이디 또는 패스워드가 잘못 입력되었습니다.", Toast.LENGTH_SHORT).show();
        }
    });
}
```



Implementation - Loading Dialog



```
<?xml version="1.0" encoding="utf-8"?>
<animation-list xmlns:android="http://schemas.android.com/apk/res/android"
    android:oneshot="false">
    <item android:drawable="@drawable/loading_1" android:duration="180"/>
    <item android:drawable="@drawable/loading_2" android:duration="180"/>
    <item android:drawable="@drawable/loading_3" android:duration="180"/>
    <item android:drawable="@drawable/loading_4" android:duration="180"/>
    <item android:drawable="@drawable/loading_5" android:duration="180"/>
    <item android:drawable="@drawable/loading_6" android:duration="180"/>
    <item android:drawable="@drawable/loading_5" android:duration="180"/>
    <item android:drawable="@drawable/loading_4" android:duration="180"/>
    <item android:drawable="@drawable/loading_3" android:duration="180"/>
    <item android:drawable="@drawable/loading_2" android:duration="180"/>
</animation-list>
```



```
public Loading(Context context) {
    dialog = new Dialog(context);
    dialog.requestWindowFeature(Window.FEATURE_NO_TITLE);
    dialog.setCancelable(false);
    dialog setContentView(R.layout.loading);
    dialog.getWindow().setBackgroundDrawable(new ColorDrawable(android.graphics.Color.TRANSPARENT));
}
```



Implementation - Loading Dialog



```
public void show() {  
    ImageView imageView = dialog.findViewById(R.id.loadingImageView);  
    AnimationDrawable animationDrawable = (AnimationDrawable) imageView.getDrawable();  
    animationDrawable.start();  
    dialog.show();  
}  
  
public void dismiss() { dialog.dismiss(); }
```

Login Class

```
runOnUiThread(new Runnable() {  
    @Override  
    public void run() { loading.show(); }  
});
```

```
runOnUiThread(new Runnable() {  
    @Override  
    public void run() { loading.dismiss(); }  
});
```



Implementation - Database



- Database



SQLite

User

_id
name
major
num

Course

_id
course_name
professor
checked

Assignment

_id
course_name
title
due_date
submission
link

Color

_id
color1
color2



Implementation - Database



1. Set Database

```
public void setDatabase(){  
    //course db  
    courseHelper = new CourseDBHelper( context: this);  
    courseDb = courseHelper.getWritableDatabase();  
    courseDb.execSQL("DROP TABLE IF EXISTS Course"); //delete existing table  
    courseHelper.onCreate(courseDb);  
  
    //assignment db  
    asgHelper = new AsgDBHelper( context: this);  
    asgDb = AsgHelper.getWritableDatabase();  
    asgDb.execSQL("DROP TABLE IF EXISTS Assignment"); //delete existing table  
    AsgHelper.onCreate(asgDb);  
  
    //user db  
    userHelper = new UserDBHelper( context: Login.this);  
    userDb = userHelper.getWritableDatabase();  
    userDb.execSQL("DROP TABLE IF EXISTS User");  
    userHelper.onCreate(userDb);  
  
    //color db  
    colorHelper = new ColorDBHelper( context: this);  
    colorDb = colorHelper.getWritableDatabase();  
    colorHelper.onCreate(colorDb);  
}
```

Course

Assignment

User

Color



Implementation - Database



2. Store data

Course

User

Color

1

2

```
//Check Duplicate Assignment
public void updateColor (String color1, String color2){
    db = this.getWritableDatabase();
    ContentValues values = new ContentValues();

    String name = InfoDocument.select( cssQuery: "h2").text();
    String[] numMation = InfoDocument.getElementsByClass( className: "element-fetatic").text().split( regex: "\\s");
    public boolean checkDuplicateAsg(String asgHref) {
        SQLiteDatabase db = getReadableDatabase();
        String[] projection = { "link" };
        String selection = "link = ?";
        String[] selectionArgs = { asgHref };
        Cursor cursor = db.query( table: "Assignment", projection, selection, selectionArgs, groupBy: null, having: null, orderBy: null);
        boolean isDuplicate = cursor.getCount() > 0;
        cursor.close();
        return isDuplicate;
    }

    db = this.getWritableDatabase();
    ContentValues values = new ContentValues();

    values.put(KEY_COLOR1, color1);
    values.put(KEY_COLOR2, color2);

    long result = db.insert(TABLE_NAME, nullColumnHack: null, values);
    if (result == -1) {
        Log.d( tag: "database", msg: "color data insert fail");
    } else {
        Log.d( tag: "database", msg: "color data insert success");
    }
}
```



Implementation - Database

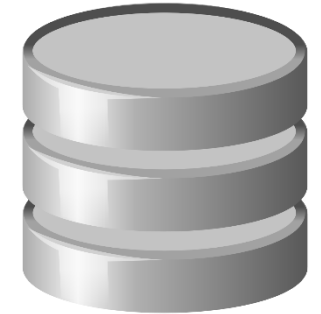


Course

_id	course_name	professor
...	필터	필터
1	소프트웨어공학	정옥란
2	소프트웨어산업세미나	최재영 / 조정찬 / 민홍
3	모바일프로그래밍	오영민
4	데이터과학	노웅기
5	디지털마케팅	김현구
6	졸업작품1	안종현 / 최재혁 / 오영민
7	2023년 폭력예방교육	이윤우

User

_id	name	major	num
...	필터	필터	필터
1	김선정	시·소프트웨어학부(소프트웨어전공)	202035317



DB browser
for SQLite

Color

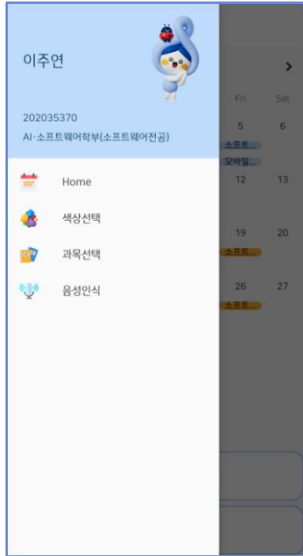
_id	color1	color2
...	필터	필터
1	#BEDBFC	#FFB531

Assignment

_id	course_name	title	due_date	submission	link
...	필터	필터	필터	필터	필터
1	소프트웨어공학	Summary for chapter 1 & 2	2023-03-20	Submitted for grading	https://cyber.gachon.ac.kr/mod/assignment/view.php?id=1
2	소프트웨어공학	UML Exercises	2023-03-27	Submitted for grading	https://cyber.gachon.ac.kr/mod/assignment/view.php?id=2
3	소프트웨어공학	Term Project Proposal	2023-04-05	No attempt	https://cyber.gachon.ac.kr/mod/assignment/view.php?id=3
4	소프트웨어공학	Requirement documents for Term Project	2023-04-12	No attempt	https://cyber.gachon.ac.kr/mod/assignment/view.php?id=4
5	소프트웨어공학	Architectural Patterns Exercises	2023-04-28	Submitted for grading	https://cyber.gachon.ac.kr/mod/assignment/view.php?id=5
6	소프트웨어공학	Active Learning	2023-05-08	Submitted for grading	https://cyber.gachon.ac.kr/mod/assignment/view.php?id=6
7	소프트웨어공학	Final Presentation for Term Project	2023-05-29	No attempt	https://cyber.gachon.ac.kr/mod/assignment/view.php?id=7
8	소프트웨어산업세미나	보안 산업, 개별레포트과제	2023-06-02	제출 안 함	https://cyber.gachon.ac.kr/mod/assignment/view.php?id=8
9	소프트웨어산업세미나	보안 산업, 우수레포트과제	2023-06-02	미제출	https://cyber.gachon.ac.kr/mod/assignment/view.php?id=9
10	소프트웨어산업세미나	보안 산업, 발표자료 (C,F,I,L조)과제	2023-06-02	미제출	https://cyber.gachon.ac.kr/mod/assignment/view.php?id=10
11	소프트웨어산업세미나	IT 서비스 산업, 개별레포트 제출과제	2023-03-10	제출 완료	https://cyber.gachon.ac.kr/mod/assignment/view.php?id=11
12	소프트웨어산업세미나	IT 서비스 산업, 우수레포트 제출과제	2023-03-10	제출 완료	https://cyber.gachon.ac.kr/mod/assignment/view.php?id=12
13	소프트웨어산업세미나	IT 서비스 산업, 발표자료 제출 ...	2023-03-10	미제출	https://cyber.gachon.ac.kr/mod/assignment/view.php?id=13
14	소프트웨어산업세미나	순수 Software 산업, 개별레포트과제	2023-03-17	제출 완료	https://cyber.gachon.ac.kr/mod/assignment/view.php?id=14

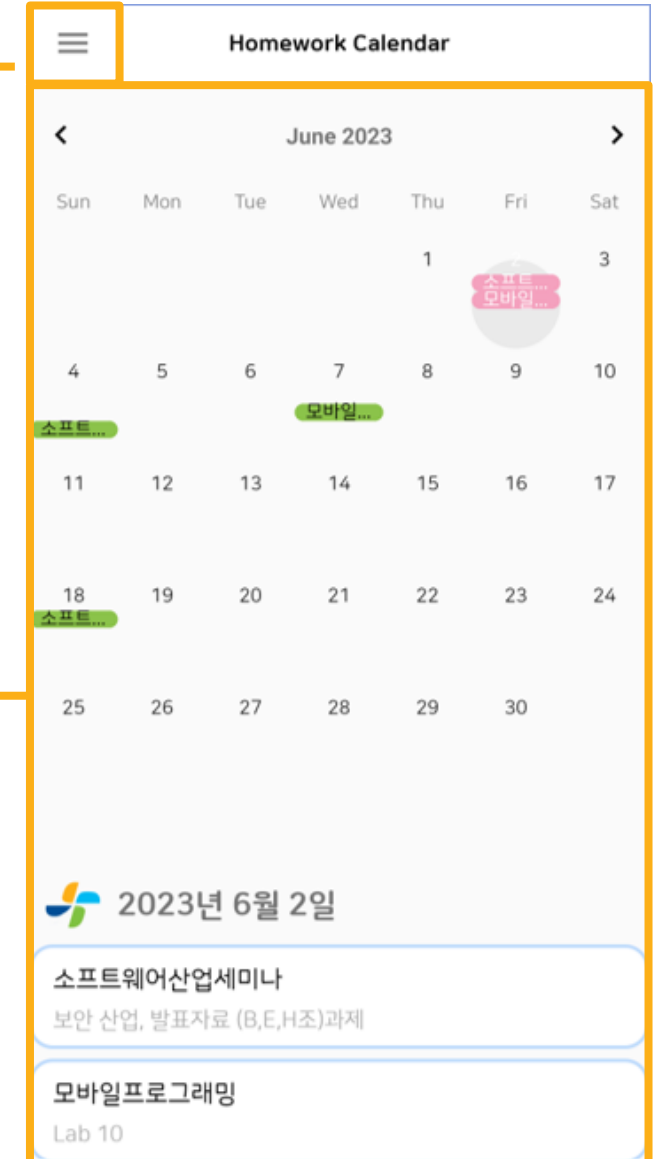


Implementation – Main Fragment



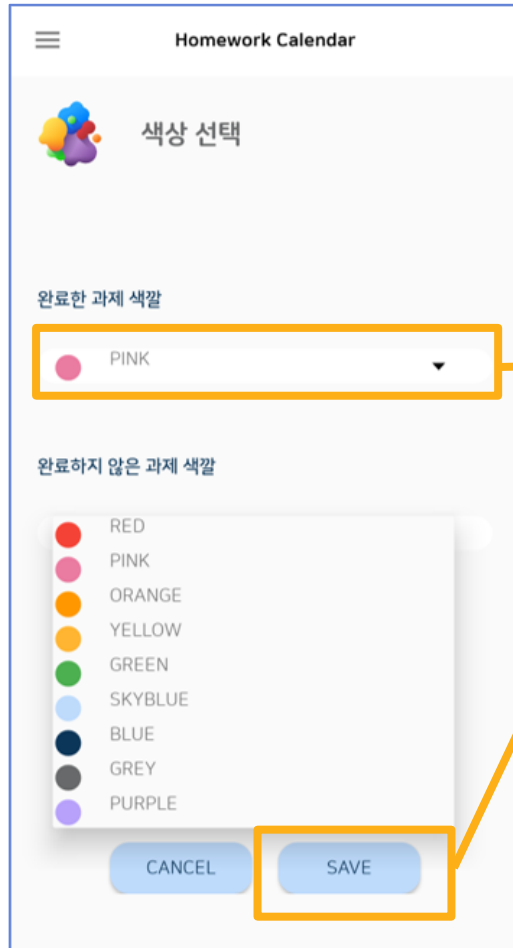
```
<com.google.android.material.navigation.NavigationView
    android:layout_width="wrap_content"
    android:layout_height="match_parent"
    android:id="@+id/navigation_view"
    app:menu="@menu/navigation_menu"
    app:headerLayout="@layout/navi_header"
    android:layout_gravity="start"/>
```

```
<androidx.fragment.app.FragmentContainerView
    android:id="@+id/fragment_container_view"
    android:layout_width="match_parent"
    android:layout_height="0dp"
    android:layout_weight="1"
    android:layout_marginTop="50dp"
/>
```





Implementation – Color Fragment




```
spinner_done.setOnItemClickListener(new AdapterView.OnItemClickListener() {  
    @Override  
    public void onItemClick(AdapterView<?> parent, View view, int position, long id) {  
  
        String doneColor = colorList.get(position).getColor();  
        String colorName = doneColor.toLowerCase();  
        Resources resources = ct.getResources();  
  
        btn_save.setOnClickListener(new View.OnClickListener() {  
            @Override  
            public void onClick(View v) {  
  
                Log.d( tag: "color_list", String.valueOf(color_list.size()));  
                colorHelper.updateColor(color_list.get(2), color_list.get(3));  
                FragmentTransaction transaction = getActivity().getSupportFragmentManager().beginTransaction();  
                HomeFragment homeFragment = new HomeFragment();  
                transaction.replace(R.id.fragment_container_view, homeFragment);  
                transaction.commit();  
            }  
        });  
    }  
});
```


```
public void updateColor (String color1, String color2){  
    db = this.getWritableDatabase();  
    ContentValues values = new ContentValues();  
  
    deleteAllColor(db); //delete value  
    insertColor(color1, color2);    //insert value  
}
```



Implementation – Course Fragment



 Homework Calendar

 과목 선택

소프트웨어공학	<input checked="" type="checkbox"/>
졸업작품1	<input type="checkbox"/>
소프트웨어산업세미나	<input checked="" type="checkbox"/>
English Speech and Communication	<input type="checkbox"/>
사물인터넷개론	<input checked="" type="checkbox"/>
모바일프로그래밍	<input type="checkbox"/>
디지털마케팅	<input checked="" type="checkbox"/>
지성학 I	<input checked="" type="checkbox"/>
소프트웨어수학	<input checked="" type="checkbox"/>
2023년 폭력예방교육	<input checked="" type="checkbox"/>

SAVE

```
holder.check.setOnClickListener(new View.OnClickListener() {  
    @Override  
    public void onClick(View v) {  
        CheckBox cb = (CheckBox) v;  
        CourseCheck course = (CourseCheck) cb.getTag();  
  
        holder.check.setSelected(cb.isChecked());  
        courseList.get(position).setSelected(cb.isChecked());  
    }  
});  
  
public void updateChecked (int position, String state){  
    SQLiteDatabase db = this.getWritableDatabase();  
  
    String query = "UPDATE " + TABLE_NAME +  
        " SET " + KEY_CHECKED + " = " + state + " " +  
        "WHERE " + KEY_INFOID + " = " + (position+1);  
    db.execSQL(query);  
}
```



Implementation



← Dynamic Setters Test

< June 2023 >

Sun Mon Tue Wed Thu Fri Sat

1 2 3

4 5 6 7 8 9 10

11 12 13 14 15 16 17

18 19 20 21 22 23 24

25 26 27 28 29 30

OTHER DATES ☐ Use Large Text

MONTH MODE WEEK MODE

SELECTION MODE TOGGLE TOPBAR

CHANGE ANIMATION ORIENTATION

PREVIOUS NEXT

← Programmatic Customization E...

< **April 2016** >

W Th F Sa Su M Tu

20 21 22 23 24 25 26

← Custom tile width/height

CUSTOM WIDTH MATCH PARENT WIDTH CUSTOM HEIGHT MATCH PARENT HEIGHT

MATCH HEIGHT AND WIDTH

< June 2023 >

Sun Mon Tue Wed Thu Fri Sat

1 2 3

4 5 6 7 8 9 10

11 12 13 14 15 16 17

18 19 20 21 22 23 24

25 26 27 28 29 30

<https://github.com/prolificinteractive/material-calendarview>



Implementation



1. Specify library file path with File Dependencies

2. Add as Library

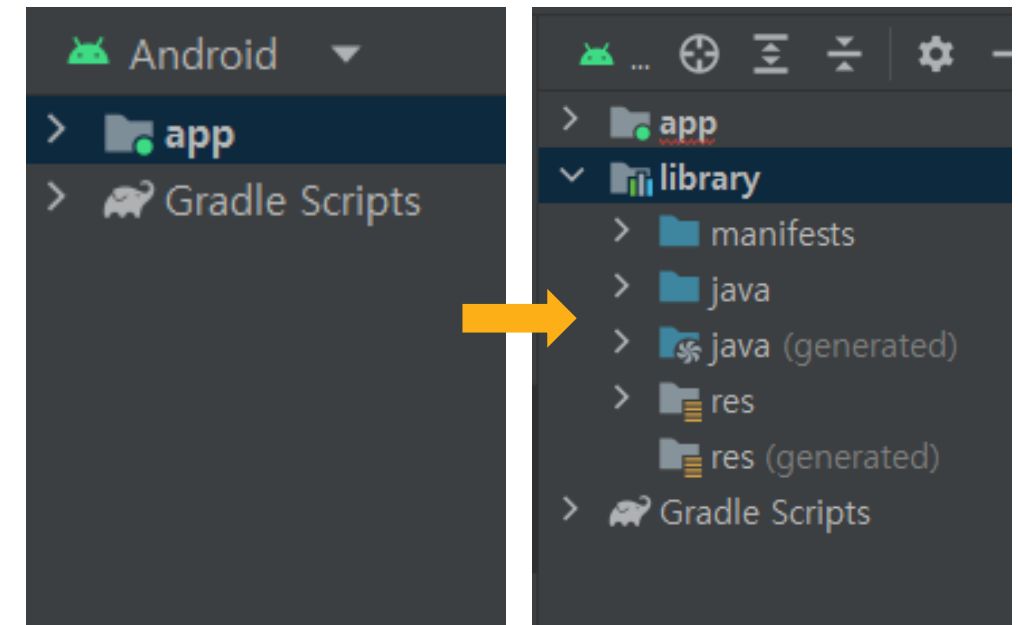
Installation

Step 1. Add the JitPack repository to your build file

```
allprojects {  
    repositories {  
        ...  
        maven { url 'https://jitpack.io' }  
    }  
}
```

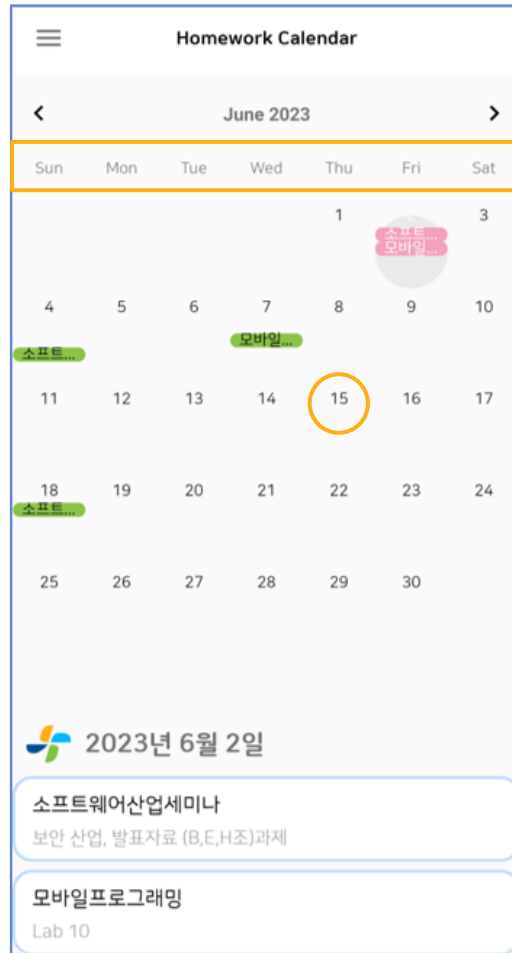
Step 2. Add the dependency

```
dependencies {  
    implementation 'com.github.prolificinteractive:material-calendarview:${version}'  
}
```





Implementation – Custom Calendar



```
<com.prolificinteractive.materialcalendarview.MaterialCalendarView
    android:id="@+id/materialCalendarView"
    android:layout_width="match_parent"

protected void onMeasure(int widthMeasureSpec, int heightMeasureSpec) {
    int widthSize = MeasureSpec.getSize(widthMeasureSpec);
    int heightSize = MeasureSpec.getSize(heightMeasureSpec);

    // 원하는 가로 크기와 세로 크기를 설정합니다.
    int desiredWidth = widthSize - getPaddingLeft() - getPaddingRight();
    int desiredHeight = heightSize - getPaddingTop() - getPaddingBottom();

    public DayView(Context context, CalendarDay day) {
        super(context);

        fadeTime = getResources().getInteger(android.R.integer.config_shortAnimTime);

        setSelectionColor(this.selectionColor);

        setGravity(Gravity.TOP);

        if (Build.VERSION.SDK_INT >= Build.VERSION_CODES.JELLY_BEAN_MR1) {
            setTextAlignment(TEXT_ALIGNMENT_CENTER);
        }

        setDay(day);
    }
}
```



Implementation – Draw Bar



```
Cursor courseCursor = courseHelper.readAllData();
int courseOrder = 1;
int isPlusOrder = 0;
while(courseCursor.moveToNext()){
    isPlusOrder = 0;
    if(courseCursor.getString(i: 3).equals("check")){
        //괄호 안에 원하는 과목명을 입력하면 해당 과목의 과제 index(과제 수)를 return 해준다
        ArrayList<Integer> index = AsgHelper.selectAssignment(courseCursor.getString(i: 1));
        SQLiteDatabase db = AsgHelper.getReadableDatabase();
        Cursor c = db.query(table: "Assignment", columns: null, selection: null, selectionArgs: null,
            orderBy: null);

        if(index.size()>0){...}
    }
}
```

```
if(isPlusOrder==1){
    courseOrder+=1;
}
```

```
//과제 제출 여부에 따라 색 달라짐
if(c.getString(i: 4).equals("제출 완료") || c.getString(i: 4).equals("Submitted for grading")){
    TextDecorator deco = new TextDecorator(ct, dueDate,c.getString(i: 1), doneColor, courseOrder);
    materialCalendarView.addDecorator(deco);
}
else{
    TextDecorator deco = new TextDecorator(ct, dueDate,c.getString(i: 1), undoneColor, courseOrder);
    materialCalendarView.addDecorator(deco);
}
```




Implementation - Draw Bar



1

```
//과제 제출 여부에 따라 색 달라짐
if(c.getString(i: 4).equals("제출 완료") || c.getString(i: 4).equals("Submitted for grading")){
    TextDecorator deco = new TextDecorator(ct, dueDate, c.getString(i: 1), doneColor, courseOrder);
    materialCalendarView.addDecorator(deco);
}
else{
    TextDecorator deco = new TextDecorator(ct, dueDate, c.getString(i: 1), undoneColor, courseOrder);
    materialCalendarView.addDecorator(deco);
}
```

HomeFragment

2

```
@Override
public void decorate(DayViewFacade view) {
    view.addSpan(new AddTextToDates(text, color, order));
    //view.setDaysDisabled(true);
}
```

TextDecorator

3

```
for(int i=1; i<=10; i++){
    if(order==i){
        Log.i( tag: "coordinate", msg: "top : "+top+" bottom : "+bottom);
        canvas.drawRoundRect(left, startTop, right, startBottom, rx: 20, ry: 20, rectPaint);
        canvas.drawText(dayPrice, ((left + right) / 8), startBottom2, paint);
    }
    startTop +=30;
    startBottom +=30;
    startBottom2 +=30;
}
```

AddTextToDates

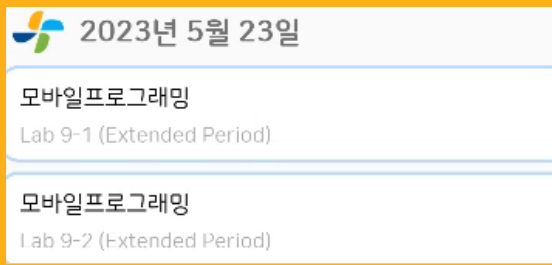
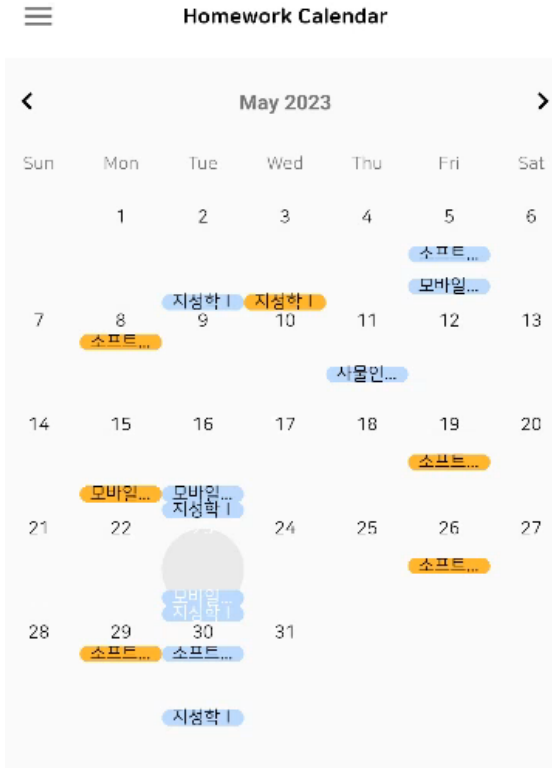
1

소프트...

지성학 I



Implementation – Assignment List



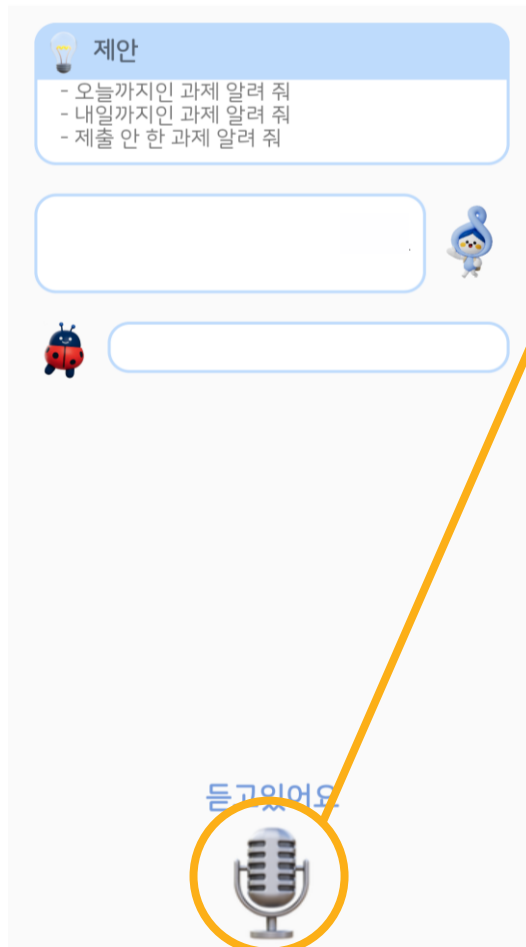
```
public void onDateSelected(@NonNull MaterialCalendarView widget, @NonNull CalendarDay date, boolean selected) {  
    int Year = date.getYear();  
    ArrayList<Assignment> list = new ArrayList<>();  
    for(int i : index){  
        ArrayAdapter<Assignment> asgAdapter = new ArrayAdapter<~>(ct, android.R.layout.simple_list_item_1, list){  
            @JUYEON LEE *  
            @NonNull  
            @Override  
            public View getView(int position, @Nullable View convertView, @NonNull ViewGroup parent) {  
                View view = convertView;  
                if (view == null) {  
                    LayoutInflater inflater = LayoutInflater.from(ct);  
                    view = inflater.inflate(R.layout.simple_list_item_1, parent, false);  
                }  
                Assignment asg = list.get(position);  
                TextView title = (TextView) view.findViewById(R.id.title);  
                title.setText(asg.getTitle());  
                TextView link = (TextView) view.findViewById(R.id.link);  
                link.setText(asg.getLink());  
            }  
        };  
        //listview 항목 클릭하면 과제 페이지로 연결  
        @JUYEON LEE  
        listView.setOnItemClickListener(new AdapterView.OnItemClickListener() {  
            @JUYEON LEE  
            @Override  
            public void onItemClick(AdapterView<?> adapterView, View view, int position, long l) {  
                Assignment asg = (Assignment) adapterView.getItemAtPosition(position);  
                String link = asg.getLink();  
  
                Intent intent = new Intent(Intent.ACTION_VIEW, Uri.parse(link));  
                startActivity(intent);  
            }  
        });  
    }  
}
```



Implementation – Speech Recognition



- Speech Recognition



```
sttStart = (ImageButton) rootView.findViewById(R.id.mike);
sttStart.setOnClickListener(new View.OnClickListener() {
    @Override
    public void onClick(View view) {
        if (!recording) { //Start recording
            Log.d( tag: "record", msg: "녹음시작");
            CheckPermission();
            StartRecord();
        }
        else { //Stop recording if you are already recording
            StopRecord();
            CheckPermission();
            StartRecord();
        }
    }
});
```

```
public void StopRecord() {
    recording = false;
    sttState.setText(" ");
    speechRecognizer.stopListening(); //Stop
}
```

```
public void StartRecord(){
    recording = true;
    speechRecognizer = SpeechRecognizer.createSpeechRecognizer(context.getApplicationContext());
    speechRecognizer.setRecognitionListener(listener);
    speechRecognizer.startListening(sttIntent);
}
```

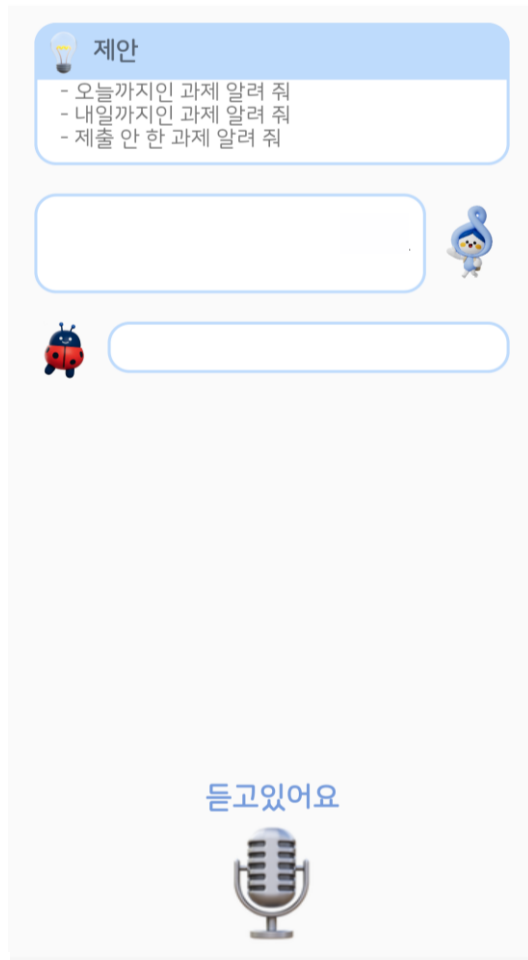
2



Implementation – Speech Recognition



- Speech Recognition



RecognitionListener

1

```
@Override // call when user ready to start talking
public void onReadyForSpeech(Bundle bundle) {
    txtSystem.setText(" ");
    sttState.setText("듣고있어요");
}
```

2

```
@Override // include recognized words in buffer
public void onBufferReceived(byte[] bytes) { Log.d(LogTag, msg: "버퍼에 입력 단어 저장"); }
```

3

```
@Override
public void onResults(Bundle results) {
    // Array List with recognition results
    ArrayList<String> matches = results.getStringArrayList(SpeechRecognizer.RESULTS_RECOGNITION);
    String resultText = " ";

    if (matches != null && !matches.isEmpty()) {
        // Recognition results (User Speech Sentences)
        for (int i = 0; i < matches.size() ; i++) {
            resultText += matches.get(i);
        }
        txtInput.setText(resultText);
    } else {
        txtInput.setText("No results found");
    }

    // processing results
    handleRecognitionResult(resultText);
    recording = false;
}
```

```
@Override // error occurred
public void onError(int error) {
    String message;
    switch (error) {
        case SpeechRecognizer.ERROR_AUDIO:
            message = "오디오 에러";
            break;
        case SpeechRecognizer.ERROR_INSUFFICIENT_PERMISSIONS:
            message = "퍼미션 없음";
            break;
        case SpeechRecognizer.ERROR_NETWORK:
            message = "네트워크 에러";
            break;
        case SpeechRecognizer.ERROR_NETWORK_TIMEOUT:
            message = "네트워크 타임아웃";
            break;
        case SpeechRecognizer.ERROR_NO_MATCH:
            message = "인식된 단어가 없습니다";
            break;
        case SpeechRecognizer.ERROR_RECOGNIZER_BUSY:
            message = "인식기가 바빠서 다시 시도해주세요";
            break;
        case SpeechRecognizer.ERROR_SERVER:
            message = "서버 에러";
            break;
        case SpeechRecognizer.ERROR_SPEECH_TIMEOUT:
            message = "말씀하신 내용이 없습니다";
            break;
    }
    Log.e(LogTag, "오류 발생: " + message);
}
```

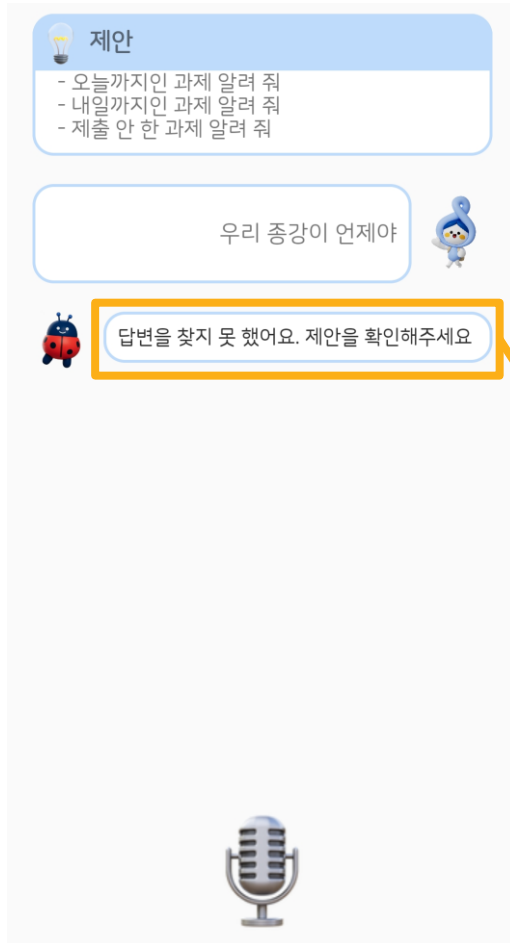


Implementation – Speech Recognition



- Speech Recognition

HandleRecognitionResult



```
boolean containsKeyword = result.contains(text[i]);
if (containsKeyword) {
    switch (i){
        case 0 :// assignment due today
            txtSystem.setText("[ 오늘까지인 과제를알립니다 ]\n\n");
            date = today.toString();
            assignmentList = asgHelper.getAssignmentByDate(date);

            for(String data : assignmentList){
                txtSystem.append(data + "\n");
            }
            break;

        case 1: // assignment due tomorrow
            txtSystem.setText("[ 내일까지인 과제를알립니다 ]\n\n");
            date = tomorrow.toString();
            assignmentList = asgHelper.getAssignmentByDate(date);

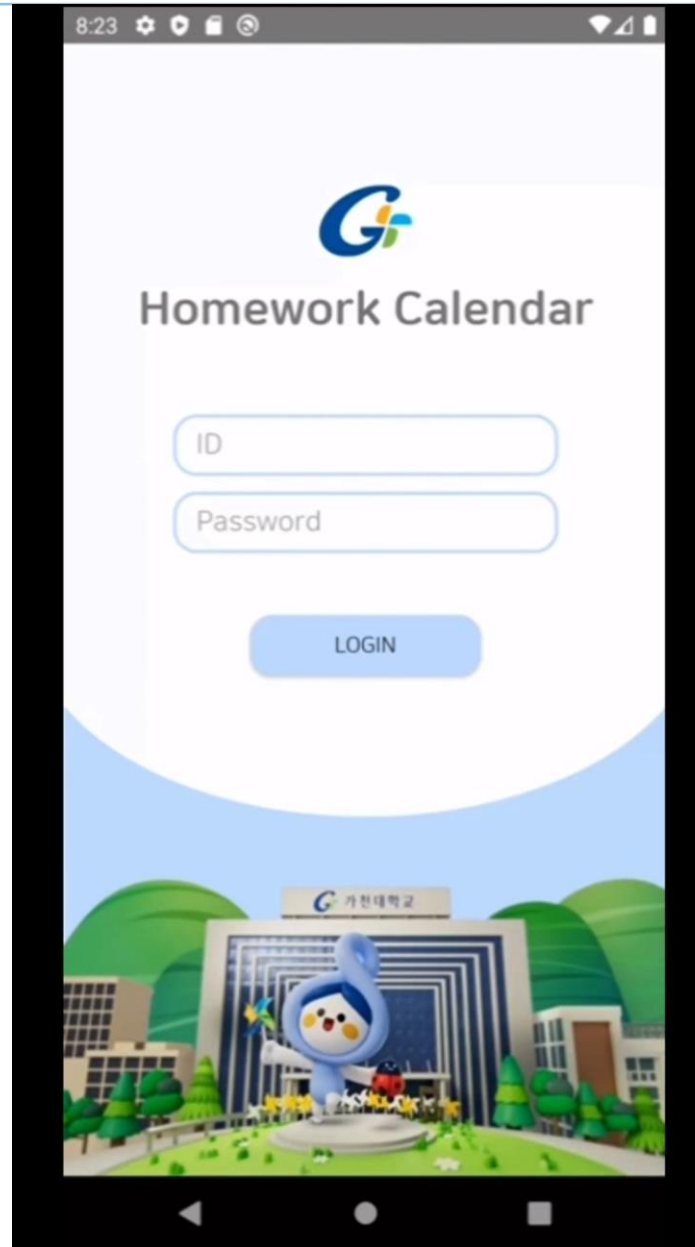
            for(String data : assignmentList){
                txtSystem.append(data + "\n");
            }
            break;

        case 2: // not submitted assignment
            txtSystem.setText("[ 제출하지 않은 과제를알립니다 ]\n\n");
            assignmentList = asgHelper.getAssignmentsBySubmission();
            for(String data : assignmentList){
                txtSystem.append(data + "\n");
            }
            break;

        default:
            txtSystem.setText("답변을 찾지 못 했어요. 다시 질문해주세요.");
    }
} else {
    txtSystem.setText("답변을 찾지 못 했어요. 제안을 확인해주세요.");
}
```



Demonstration Video





Role



201935094
이라연

Calendar Part
Menu Part



202035317
김선정

Login Part
Speech Recognition



202035331
박가현

Login Part
Crawling Part



202035370
이주연

Calendar Part
UI Design

The image features a solid blue background with a white rectangular frame. The frame is slightly offset from the edges of the image. The word "Question" is centered within the frame in a white, sans-serif font.

Question