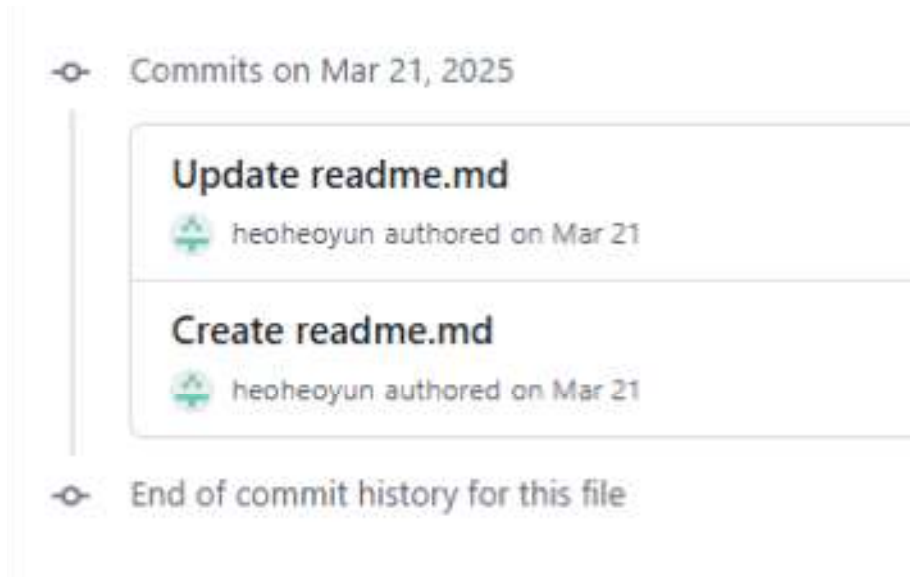


모바일 앱 개발

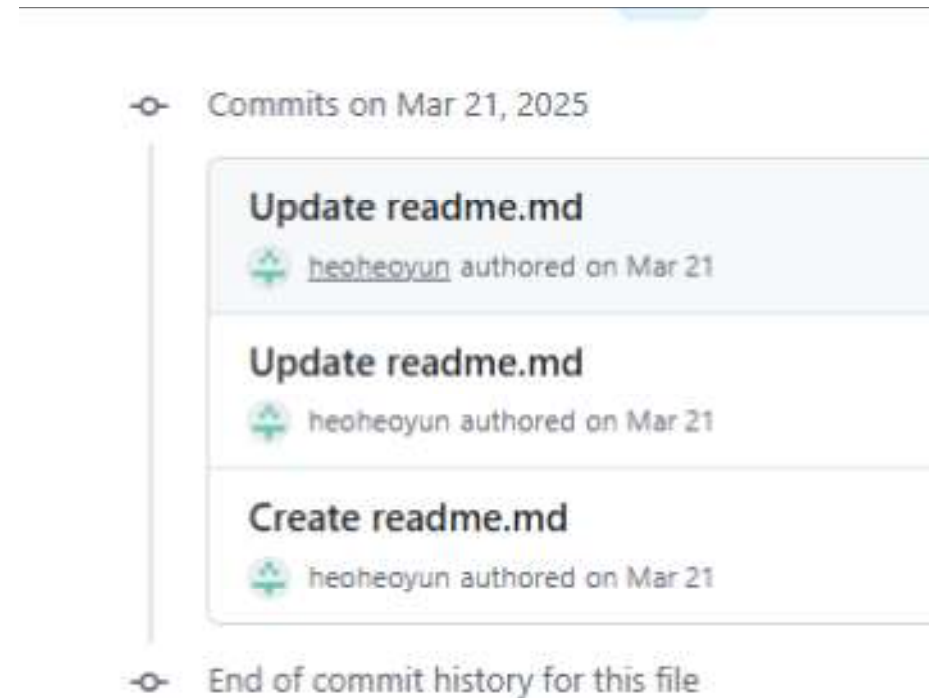
202241408 허윤

<https://github.com/heoheoyun/mobileapp.git>

0307



0314



0321

Commits on Mar 27, 2025
Add files via upload heoheoyun authored on Mar 27
Commits on Mar 21, 2025
Create readme.md heoheoyun authored on Mar 21
Add files via upload heoheoyun authored on Mar 21
Create readme.md heoheoyun authored on Mar 21
Add files via upload heoheoyun authored on Mar 21
Create readme.md heoheoyun authored on Mar 21
Add files via upload heoheoyun authored on Mar 21
Create readme.md heoheoyun authored on Mar 21
Add files via upload heoheoyun authored on Mar 21
Create readme.md heoheoyun authored on Mar 21
Update readme.md heoheoyun authored on Mar 21
Create readme.md heoheoyun authored on Mar 21
End of commit history for this file

0328

Commits on Apr 7, 2025
Update readMe.md heoheoyun authored on Apr 7
Add files via upload heoheoyun authored on Apr 7
Commits on Apr 5, 2025
Create readMe.md heoheoyun authored on Apr 5
Create ream.md heoheoyun authored on Apr 5
End of commit history for this file

0404

History for [mobileapp](#) / 0404 on [main](#)

Commits on Apr 5, 2025

Add files via upload

 heoheoyun authored on Apr 5

Update readMe.md

 heoheoyun authored on Apr 5

Create readMe.md

 heoheoyun authored on Apr 5

Commits on Apr 4, 2025

Create readMe.md

 heoheoyun authored on Apr 4


End of commit history for this file

0411

History for [mobileapp](#) / 0411 on [main](#)

Commits on Apr 17, 2025


Update readMe.md

 heoheoyun authored on Apr 17

Update readMe.md

 heoheoyun authored on Apr 17


Update readMe.md

 heoheoyun authored on Apr 17

Rename 오늘 할 일 앱 구상.png to applmage.png

 heoheoyun authored on Apr 17

Update readMe.md

 heoheoyun authored on Apr 17

Update readMe.md

 heoheoyun authored on Apr 17


Update readMe.md

 heoheoyun authored on Apr 17


Update readMe.md

 heoheoyun authored on Apr 17


Update readMe.md

 heoheoyun authored on Apr 17


Add files via upload

 heoheoyun authored on Apr 17

Create readMe.md

 heoheoyun authored on Apr 17

Update readMe.md

 heoheoyun authored on Apr 17

Create readMe.md

 heoheoyun authored on Apr 17

Commits on Apr 11, 2025


Add files via upload

 heoheoyun authored on Apr 11

Create readMe.md

 heoheoyun authored on Apr 11


Add files via upload

 heoheoyun authored on Apr 11

Create readMe.md

 heoheoyun authored on Apr 11

Add files via upload

 heoheoyun authored on Apr 11

Add files via upload

 heoheoyun authored on Apr 11

Create readMe.md

 heoheoyun authored on Apr 11


Delete 0411/ChangeBG

 heoheoyun authored on Apr 11

Create ChangeBG

 heoheoyun authored on Apr 11

Add files via upload

 heoheoyun authored on Apr 11

Create readMe.md

 heoheoyun authored on Apr 11

Create readMe.md

 heoheoyun authored on Apr 11

End of commit history for this file

0418

History for `mobileapp` / 0418 on `main`

Commits on Apr 18, 2025

- Add files via upload**
heoheoyun authored on Apr 18
- Create readMe.md**
heoheoyun authored on Apr 18
- Update readMe.md**
heoheoyun authored on Apr 18
- Add files via upload**
heoheoyun authored on Apr 18
- Create readMe.md**
heoheoyun authored on Apr 18
- Add files via upload**
heoheoyun authored on Apr 18
- Create readMd.md**
heoheoyun authored on Apr 18
- Add files via upload**
heoheoyun authored on Apr 18
- Create readMe.,md**
heoheoyun authored on Apr 18
- Create readMe.md**
heoheoyun authored on Apr 18

End of commit history for this file

0502

History for `mobileapp` / 0502 on `main`

Commits on May 8, 2025

- Add files via upload**
heoheoyun authored on May 8
- Create readMe.md**
heoheoyun authored on May 8

Commits on May 2, 2025

- Add files via upload**
heoheoyun authored on May 2
- Create readMe.md**
heoheoyun authored on May 2
- Update readMe.md**
heoheoyun authored on May 2
- Create readMe.md**
heoheoyun authored on May 2

End of commit history for this file

0509

History for `mobileapp` / 0509 on `main`

Commits on May 9, 2025

- Add files via upload**
heoheoyun authored on May 9
- Update readMd.md**
heoheoyun authored on May 9
- Add files via upload**
heoheoyun authored on May 9
- Update readMe.md**
heoheoyun authored on May 9
- Create readMd.md**
heoheoyun authored on May 9
- Create readMe.md**
heoheoyun authored on May 9
- Create readMd.md**
heoheoyun authored on May 9

End of commit history for this file

0516

History for mobileapp / 0516 on main

Commits on May 16, 2025

Add files via upload

heoheoyun authored last month

Create readMe.md

heoheoyun authored last month

Add files via upload

heoheoyun authored last month

Create readMe.md

heoheoyun authored last month

Create readMe.md

heoheoyun authored last month

End of commit history for this file

0523

History for mobileapp / 0523 on main

Commits on May 23, 2025

Update readMe.md

heoheoyun authored 3 weeks ago

Update readMe.md

heoheoyun authored 3 weeks ago

Add files via upload

heoheoyun authored 3 weeks ago

Create readMe.md

heoheoyun authored 3 weeks ago

Delete 0523/ToDoListApp(Alarm)

heoheoyun authored 3 weeks ago

Create ToDoListApp(Alarm)

heoheoyun authored 3 weeks ago

Create readMe.md

heoheoyun authored 3 weeks ago

End of commit history for this file

0530

Commits

History for mobileapp / 0530 on main

Commits on May 30, 2025

Add files via upload

heoheoyun authored 2 weeks ago

Delete 0530/모바일앱개발_기말과제.pdf

heoheoyun authored 2 weeks ago

Add files via upload

heoheoyun authored 2 weeks ago

Update readMe.md

heoheoyun authored 2 weeks ago

Create readMe.md

heoheoyun authored 2 weeks ago

End of commit history for this file


Final_report

Commits


History for [mobileapp](#) / [Final_report](#) on [main](#)

Commits on Jun 12, 2025


Update readMe.md

 heoheoyun authored 27 minutes ago


Add files via upload

 heoheoyun authored 28 minutes ago


Update readMe.md

 heoheoyun authored 30 minutes ago


Update readMe.md

 heoheoyun authored 31 minutes ago


Update readMe.md

 heoheoyun authored 32 minutes ago


Update readMe.md

 heoheoyun authored 33 minutes ago

Update readMe.md

 heoheoyun authored 34 minutes ago

Create readMe.md

 heoheoyun authored 38 minutes ago

앱 개요



간단한 학습

학습을 돕는 안드로이드 앱입니다.



주요 기능

퀴즈, 즐겨찾기, 학습 통계를 포함합니다.



학습 정리

용어, 예제, 자신만의 정리 등을 입력할 수 있습니다.

사용 기술 및 저장 방식



SQLite

데이터 저장에 활용됩니다.



Android Studio

안드로이드 스튜디오에서 개발됩니다.

파일구조

```
LearningApp/
├─ app/
│   └─ src/
│       └─ main/
│           └─ java/
│               └─ com/example/learningapp/
│                   ├─ MainActivity.java           # 메인 메뉴
│                   ├─ AddLearningActivity.java    # 학습 항목 추가
│                   ├─ LearningListActivity.java   # 전체 학습 항목 목록
│                   ├─ FavoriteActivity.java        # 즐겨찾기 목록
│                   ├─ QuizActivity.java           # 퀴즈 기능
│                   ├─ StatsActivity.java          # 통계 화면
│                   ├─ LearningAdapter.java        # RecyclerView 어댑터
│                   ├─ DBHelper.java              # SQLite 데이터베이스 관리
│                   └─ model/
│                       └─ LearningItem.java       # 데이터 모델 클래스
│               └─ res/
│                   ├─ layout/
│                       ├─ activity_main.xml
│                       ├─ activity_add_learning.xml
│                       ├─ activity_learning_list.xml
│                       ├─ activity_favorite.xml
│                       ├─ activity_quiz.xml
│                       ├─ activity_stats.xml
│                       └─ item_learning.xml        # RecyclerView 항목 레이아웃
│                   └─ values/
│                       ├─ strings.xml             # 다국어 문자열
│                       ├─ colors.xml             # 색상 리소스
│                       ├─ dimens.xml             # 크기 리소스
│                       └─ themes.xml             # 테마 스타일
│                   └─ drawable/
│                       └─ (아이콘, 버튼 이미지 등)
│               └─ AndroidManifest.xml
│   └─ build.gradle (모듈 단위)
├─ build.gradle (프로젝트 단위)
└─ README.md
```

LearningItem.java

```
1  package com.example.learningapp.model;
2
3  21 usages
4  public class LearningItem {
5      2 usages
6      private final int id;
7      2 usages
8      private final String title;
9      2 usages
10     private final String description;
11     2 usages
12     private final boolean isFavorite;
13
14     3 usages
15     public LearningItem(int id, String title, String description, boolean isFavorite) {
16         this.id = id;
17         this.title = title;
18         this.description = description;
19         this.isFavorite = isFavorite;
20     }
21
22     4 usages
23     public int getId() { return id; }
24
25     2 usages
26     public String getTitle() { return title; }
27
28     no usages
29     public String getDescription() { return description; }
30
31     no usages
32     public boolean isFavorite() { return isFavorite; }
33 }
```

AddLearningActivity.java

```
1 package com.example.learningapp;
2
3 import android.os.Bundle;
4 import android.widget.Button;
5 import android.widget.CheckBox;
6 import android.widget.EditText;
7 import android.widget.Toast;
8 import androidx.appcompat.app.AppCompatActivity;
9
10 public class AddLearningActivity extends AppCompatActivity {
11     EditText etTitle, etDesc;
12     CheckBox cbFavorite;
13     Button btnSave;
14     DBHelper db;
```

```
16 @Override
17 protected void onCreate(Bundle savedInstanceState) {
18     super.onCreate(savedInstanceState);
19     setContentView(R.layout.activity_add_learning);
20
21     etTitle = findViewById(R.id.et_title);
22     etDesc = findViewById(R.id.et_description);
23     cbFavorite = findViewById(R.id.cb_favorite);
24     btnSave = findViewById(R.id.btn_save);
25     db = new DBHelper(context);
26
27     btnSave.setOnClickListener(new View.OnClickListener() {
28         String title = etTitle.getText().toString().trim();
29         String desc = etDesc.getText().toString().trim();
30         int isFavorite = cbFavorite.isChecked() ? 1 : 0;
31
32         if (title.isEmpty() || desc.isEmpty()) {
33             Toast.makeText(context, "모든 항목을 입력해주세요.", Toast.LENGTH_SHORT).show();
34             return;
35         }
36
37         boolean inserted = db.insertLearning(title, desc, isFavorite);
38         if (inserted) {
39             Toast.makeText(context, "학습 내용이 저장되었습니다.", Toast.LENGTH_SHORT).show();
40             finish();
41         } else {
42             Toast.makeText(context, "저장 실패", Toast.LENGTH_SHORT).show();
43         }
44     });
45 }
46 }
```

DBHelper.java

```
1 package com.example.learningapp;
2
3 import android.content.ContentValues;
4 import android.content.Context;
5 import android.database.Cursor;
6 import android.database.sqlite.*;
7
8 10 usages
9 public class DBHelper extends SQLiteOpenHelper {
10     1 usage
11     private static final String DB_NAME = "LearningApp.db";
12     1 usage
13     private static final int DB_VERSION = 1;
14
15     5 usages
16     public DBHelper(Context context) {
17         super(context, DB_NAME, factory: null, DB_VERSION);
18     }
19
20     @Override
21     public void onCreate(SQLiteDatabase db) {
22         String createTable = "CREATE TABLE learning (" +
23             "id INTEGER PRIMARY KEY AUTOINCREMENT," +
24             "title TEXT NOT NULL," +
25             "description TEXT NOT NULL," +
26             "is_favorite INTEGER DEFAULT 0," +
27             "timestamp DATETIME DEFAULT CURRENT_TIMESTAMP)";
28         db.execSQL(createTable);
29     }
30 }
```

```
16
17 @Override
18 public void onCreate(SQLiteDatabase db) {
19     String createTable = "CREATE TABLE learning (" +
20         "id INTEGER PRIMARY KEY AUTOINCREMENT," +
21         "title TEXT NOT NULL," +
22         "description TEXT NOT NULL," +
23         "is_favorite INTEGER DEFAULT 0," +
24         "timestamp DATETIME DEFAULT CURRENT_TIMESTAMP)";
25     db.execSQL(createTable);
26 }
27
28 10 usages
29 @Override
30 public void onUpgrade(SQLiteDatabase db, int oldVer, int newVer) {
31     db.execSQL("DROP TABLE IF EXISTS learning");
32     onCreate(db);
33 }
34
35 1 usage
36 public boolean insertLearning(String title, String desc, int isFavorite) {
37     SQLiteDatabase db = getWritableDatabase();
38     ContentValues cv = new ContentValues();
39     cv.put("title", title);
40     cv.put("description", desc);
41     cv.put("is_favorite", isFavorite);
42     long result = db.insert(table: "learning", nullColumnHack: null, cv);
43     return result != -1;
44 }
```

2 usages

```
47 public Cursor getFavorites() {  
48     return getReadableDatabase().rawQuery( sql: "SELECT * FROM learning WHERE is_favorite = 1 ORDER BY timestamp DESC", selectionArgs: null);  
49 }
```

2 usages

```
50 public void updateFavorite(int id, int isFavorite) {  
51     SQLiteDatabase db = getWritableDatabase();  
52     ContentValues cv = new ContentValues();  
53     cv.put("is_favorite", isFavorite);  
54     db.update( table: "learning", cv, whereClause: "id = ?", new String[]{String.valueOf(id)});  
55 }
```

1 usage

```
56 public void deleteLearning(int id) {  
57     SQLiteDatabase db = getWritableDatabase();  
58     db.delete( table: "learning", whereClause: "id = ?", new String[]{String.valueOf(id)});  
59 }
```

```
60  
61  
62 }  
63
```


FavoriteActivity.java

```
1 package com.example.learningapp;
2
3 import android.database.Cursor;
4 import android.os.Bundle;
5 import android.widget.Toast;
6
7 import androidx.appcompat.app.AppCompatActivity;
8 import androidx.recyclerview.widget.LinearLayoutManager;
9 import androidx.recyclerview.widget.RecyclerView;
10
11 import com.example.learningapp.model.LearningItem;
12 import java.util.ArrayList;
13 import java.util.List;
14
15 public class FavoriteActivity extends AppCompatActivity {
16     RecyclerView recyclerView;
17     DBHelper db;
18     List<LearningItem> favoritelist;
19     LearningAdapter adapter;
20
21     @Override
22     protected void onCreate(Bundle savedInstanceState) {
23         super.onCreate(savedInstanceState);
24         setContentView(R.layout.activity_favorite);
25     }
26 }
```

```
21 @Override
22 protected void onCreate(Bundle savedInstanceState) {
23     super.onCreate(savedInstanceState);
24     setContentView(R.layout.activity_favorite);
25
26     recyclerView = findViewById(R.id.recycler_favorite);
27     recyclerView.setLayoutManager(new LinearLayoutManager(this));
28     db = new DBHelper(this);
29     favoritelist = new ArrayList<>();
30
31     loadFavorites();
32 }
33
34 private void loadFavorites() {
35     Cursor cursor = db.getFavorites();
36     while (cursor.moveToNext()) {
37         int id = cursor.getInt(cursor.getColumnIndexOrThrow("id"));
38         String title = cursor.getString(cursor.getColumnIndexOrThrow("title"));
39         String desc = cursor.getString(cursor.getColumnIndexOrThrow("description"));
40         int isFav = cursor.getInt(cursor.getColumnIndexOrThrow("is_favorite"));
41         favoritelist.add(new LearningItem(id, title, desc, isFavorite: isFav == 1));
42     }
43
44     adapter = new LearningAdapter(this, favoritelist, new LearningAdapter.OnItemClickListener() {
45         @Override
46         public void onItemClick(LearningItem item) {
47             // Handle regular click (you can add functionality here if needed)
48         }
49
50         @Override
51         public void onItemLongClick(LearningItem item) {
52             // Handle long click - remove from favorites
53             db.updateFavorite(item.getId(), isFavorite: 0);
54             Toast.makeText(this, "즐거웠기 해제됨", Toast.LENGTH_SHORT).show();
55             recreate();
56         }
57     });
58
59     recyclerView.setAdapter(adapter);
60 }
61 }
```

LearningAdapter.java

```
1 package com.example.learningapp;
2
3 > import ...
4
5 7 usages
6
7
8 public class LearningAdapter extends RecyclerView.Adapter<LearningAdapter.ViewHolder> {
9     2 usages
10     private final Context context;
11     3 usages
12     private final List<LearningItem> items;
13     2 usages
14     private final OnItemClickListener listener;
15
16     5 usages 2 implementations
17     public interface OnItemClickListener {
18         1 usage 2 implementations
19         void onItemClick(LearningItem item);
20         1 usage 2 implementations
21         void onItemLongClick(LearningItem item); // ✅ 삭제용 롱클릭 이벤트
22     }
23
24     2 usages
25     public LearningAdapter(Context context, List<LearningItem> items, OnItemClickListener listener) {
26         this.context = context;
27         this.items = items;
28         this.listener = listener;
29     }
30
31     4 usages
32     public static class ViewHolder extends RecyclerView.ViewHolder {
33         2 usages
34         TextView tvTitle, tvDescription;
35     }
36 }
```

```
32 public ViewHolder(View v) {
33     super(v);
34     tvTitle = v.findViewById(R.id.tv_title);
35     tvDescription = v.findViewById(R.id.tv_description);
36 }
37 }
```

```
38 public void bind(LearningItem item, OnItemClickListener listener) {
39     itemView.setOnClickListener( View v -> listener.onItemClick(item));
40     itemView.setOnLongClickListener( View v -> {
41         listener.onItemLongClick(item);
42         return true;
43     });
44 }
45
46 @NonNull
47 @Override
48 public ViewHolder onCreateViewHolder(@NonNull ViewGroup parent, int viewType) {
49     View view = LayoutInflater.from(context).inflate(R.layout.item_learning, parent, attachToRoot: false);
50     return new ViewHolder(view);
51 }
52
53 @Override
54 public void onBindViewHolder(@NonNull ViewHolder holder, int position) {
55     LearningItem item = items.get(position);
56     holder.tvTitle.setText(item.getTitle());
57     holder.tvDescription.setText(item.getDescription());
58     holder.bind(item, listener);
59 }
60
61 @Override
62 public int getItemCount() { return items.size(); }
63 }
```


LearningItem.java

```
1 package com.example.learningapp.model;
2
3 21 usages
4 public class LearningItem {
5     2 usages
6     private final int id;
7     2 usages
8     private final String title;
9     2 usages
10    private final String description;
11    2 usages
12    private final boolean isFavorite;
13
14    3 usages
15    public LearningItem(int id, String title, String description, boolean isFavorite) {
16        this.id = id;
17        this.title = title;
18        this.description = description;
19        this.isFavorite = isFavorite;
20    }
21
22    4 usages
23    public int getId() { return id; }
24
25    2 usages
26    public String getTitle() { return title; }
27
28    no usages
29    public String getDescription() { return description; }
30
31    no usages
32    public boolean isFavorite() { return isFavorite; }
33 }
```

LearningList.java

```
1 package com.example.learningapp;
2
3 > import ...
13
14 public class LearningListActivity extends AppCompatActivity {
15     RecyclerView recyclerView;
16     DBHelper db;
17     List<LearningItem> itemList;
18     LearningAdapter adapter;
19
20     @Override
21     protected void onCreate(Bundle savedInstanceState) {
22         super.onCreate(savedInstanceState);
23         setContentView(R.layout.activity_learning_list);
24
25         recyclerView = findViewById(R.id.recycler_learning);
26         recyclerView.setLayoutManager(new LinearLayoutManager(context, this));
27         db = new DBHelper(context, this);
28         itemList = new ArrayList<>();
29
30         loadData();
31     }
32
33     private void loadData() {
34         Cursor cursor = db.getAllLearnings();
35         while (cursor.moveToNext()) {
```

```
36         int id = cursor.getInt(cursor.getColumnIndexOrThrow(columnName: "id"));
37         String title = cursor.getString(cursor.getColumnIndexOrThrow(columnName: "title"));
38         String desc = cursor.getString(cursor.getColumnIndexOrThrow(columnName: "description"));
39         int isFav = cursor.getInt(cursor.getColumnIndexOrThrow(columnName: "is_favorite"));
40         itemList.add(new LearningItem(id, title, desc, isFavorite: isFav == 1));
41     }
42
43     adapter = new LearningAdapter(context, this, itemList, new LearningAdapter.OnItemClickListener() {
44         1 usage
45         @Override
46         public void onItemClick(LearningItem item) {
47             int newFav = item.isFavorite() ? 0 : 1;
48
49             db.updateFavorite(item.getId(), newFav);
50             Toast.makeText(context, LearningListActivity.this, newFav == 1 ? "즐거찾기 추가됨" : "즐거찾기 해제됨", Toast.LENGTH_SHORT).show();
51             recreate();
52         }
53     });
54
55     1 usage
56     @Override
57     public void onItemLongClick(LearningItem item) {
58         new AlertDialog.Builder(context, LearningListActivity.this)
59             .setTitle("삭제 확인")
60             .setMessage("이 항목을 삭제하시겠습니까?")
61             .setPositiveButton(text: "삭제", (DialogInterface dialog, int which) -> {
62                 db.deleteLearning(item.getId());
63                 Toast.makeText(context, LearningListActivity.this, text: "삭제됨", Toast.LENGTH_SHORT).show();
64                 recreate();
65             })
66             .setNegativeButton(text: "취소", listener: null)
67             .show();
68     }
69
70     recyclerView.setAdapter(adapter);
71 }
```

MainActivity.java

```
1 package com.example.learningapp;
2
3 > import ...
4
5
6
7
8
9 public class MainActivity extends AppCompatActivity {
10     1 usage
11     TextView tvGoal;
12     2 usages
13     Button btnAdd, btnList, btnQuiz, btnFavorite, btnStats;
14
15     @Override
16     protected void onCreate(Bundle savedInstanceState) {
17         super.onCreate(savedInstanceState);
18         setContentView(R.layout.activity_main);
19
20         tvGoal = findViewById(R.id.tv_today_goal);
21         btnAdd = findViewById(R.id.btn_add_learning);
22         btnList = findViewById(R.id.btn_learning_list);
23         btnQuiz = findViewById(R.id.btn_quiz);
24         btnFavorite = findViewById(R.id.btn_favorite);
25         btnStats = findViewById(R.id.btn_stats);
26
27         // 버튼 클릭 시 각 Activity로 이동
28         btnAdd.setOnClickListener( View v -> startActivity(new Intent( packageContext: this, AddLearningActivity.class)));
29         btnList.setOnClickListener( View v -> startActivity(new Intent( packageContext: this, LearningListActivity.class)));
30         btnQuiz.setOnClickListener( View v -> startActivity(new Intent( packageContext: this, QuizActivity.class)));
31         btnFavorite.setOnClickListener( View v -> startActivity(new Intent( packageContext: this, FavoriteActivity.class)));
32         btnStats.setOnClickListener( View v -> startActivity(new Intent( packageContext: this, StatsActivity.class)));
33     }
34 }
```

QuizActivity.java

```
1 package com.example.learningapp;
2
3 > import ...
4
12
13 </> public class QuizActivity extends AppCompatActivity {
14
15     1 usage
16     private static final String TAG = "QuizActivity";
17
18     5 usages
19     private TextView tvQuestion, tvResult;
20     3 usages
21     private Button btnTrue, btnFalse, btnNext;
22     7 usages
23     private List<LearningItem> quizItems;
24     3 usages
25     private final Random random = new Random();
26
27     @Override
28     protected void onCreate(Bundle savedInstanceState) {
29         super.onCreate(savedInstanceState);
30         setContentView(R.layout.activity_quiz);
31
32         tvQuestion = findViewById(R.id.tv_quiz_question);
33         tvResult = findViewById(R.id.tv_result);
34         btnTrue = findViewById(R.id.btn_answer_true);
35         btnFalse = findViewById(R.id.btn_answer_false);
36         btnNext = findViewById(R.id.btn_next);
37
38         loadQuizData();
39
40         btnTrue.setOnClickListener( View v -> checkAnswer( userAnswer, true));
41         btnFalse.setOnClickListener( View v -> checkAnswer( userAnswer, false));
42         btnNext.setOnClickListener( View v -> showNextQuestion());
43     }
44 }
```

```
40 private void loadQuizData() {
41     quizItems = new ArrayList<>();
42
43     try (DBHelper db = new DBHelper( context, this);
44          Cursor cursor = db.getAllLearnings()) {
45
46         while (cursor.moveToNext()) {
47             int id = cursor.getInt(cursor.getColumnIndexOrThrow( columnName: "id"));
48             String title = cursor.getString(cursor.getColumnIndexOrThrow( columnName: "title"));
49             String desc = cursor.getString(cursor.getColumnIndexOrThrow( columnName: "description"));
50             boolean fav = cursor.getInt(cursor.getColumnIndexOrThrow( columnName: "is_favorite")) == 1;
51
52             // ✅ 수정된 부분: 4개의 인자 전달
53             quizItems.add(new LearningItem(id, title, desc, fav));
54         }
55     } catch (Exception e) {
56         Log.e(TAG, msg: "퀴즈 데이터 로드 중 오류 발생", e);
57     }
58
59     if (quizItems.isEmpty()) {
60         tvQuestion.setText("등록된 학습 항목이 없습니다.");
61         btnTrue.setEnabled(false);
62         btnFalse.setEnabled(false);
63     } else {
64         showNextQuestion();
65     }
66 }
67 }
```

```

69 private void showNextQuestion() {
70     tvResult.setText("");
71     btnNext.setVisibility(View.GONE);
72
73     int currentIndex = random.nextInt(quizItems.size());
74     LearningItem currentQuestion = quizItems.get(currentIndex);
75
76     boolean makeFalse = random.nextBoolean();
77     String shownTitle = makeFalse ? getRandomWrongTitle(currentQuestion.getTitle()) : currentQuestion.getTitle();
78
79     String questionText = currentQuestion.getDescription() +
80         "\n\n" +
81         getString(makeFalse ? "오답 (아니오)" : "정답 (예)") +
82         ": \"" + shownTitle + "\"";
83
84     tvQuestion.setText(questionText);
85     tvQuestion.setTag(!makeFalse);
86 }

```

```

88 @
89
90 private String getRandomWrongTitle(String correctTitle) {
91     for (int i = 0; i < 10; i++) {
92         int idx = random.nextInt(quizItems.size());
93         String title = quizItems.get(idx).getTitle();
94         if (!title.equals(correctTitle)) return title;
95     }
96     return "???";
97 }

```

2 usages

```

97 private void checkAnswer(boolean userAnswer) {
98     boolean correctAnswer = (boolean) tvQuestion.getTag();
99
100     if (userAnswer == correctAnswer) {
101         tvResult.setText("정답입니다!");
102     } else {
103         tvResult.setText("오답입니다!");
104     }
105
106     btnNext.setVisibility(View.VISIBLE);
107 }
108 }

```


StatsActivity.java

```
1 package com.example.learningapp;
2
3 > import ...
4
5
6
7
8 ▶ </> public class StatsActivity extends AppCompatActivity {
9     2 usages
10     TextView tvTotal, tvFavorite, tvLast;
11     3 usages
12     DBHelper db;
13
14     @Override
15     protected void onCreate(Bundle savedInstanceState) {
16         super.onCreate(savedInstanceState);
17         setContentView(R.layout.activity_stats);
18
19         tvTotal = findViewById(R.id.tv_total);
20         tvFavorite = findViewById(R.id.tv_favorite);
21         tvLast = findViewById(R.id.tv_last);
22         db = new DBHelper(context, this);
23
24         loadStats();
25     }
26
27     1 usage
28     private void loadStats() {
29         int total = 0;
30         int favorite = 0;
31         String lastDate = "없음";
32
33         Cursor allCursor = db.getAllLearnings();
34         Cursor favCursor = db.getFavorites();
35     }
```

```
33     if (allCursor != null) {
34         total = allCursor.getCount();
35         if (allCursor.moveToFirst()) {
36             lastDate = allCursor.getString(allCursor.getColumnIndexOrThrow(columnName: "timestamp"));
37         }
38     }
39
40     if (favCursor != null) {
41         favorite = favCursor.getCount();
42     }
43
44     tvTotal.setText("총 등록된 학습 항목: {total}개");
45     tvFavorite.setText("즐겨찾기 항목: {favorite}개");
46     tvLast.setText("가장 최근 등록일: {lastDate}");
47 }
48
49 }
```

activity_add_learning.xml

```
1 <ScrollView xmlns:android="http://schemas.android.com/apk/res/android"
2     android:layout_width="match_parent"
3     android:layout_height="match_parent">
4
5     <LinearLayout
6         android:orientation="vertical"
7         android:padding="24dp"
8         android:layout_width="match_parent"
9         android:layout_height="wrap_content">
10
11         <EditText
12             android:id="@+id/et_title"
13             android:hint="학습 제목"
14             android:inputType="textCapSentences"
15             android:autofillHints="username"
16             android:layout_width="match_parent"
17             android:layout_height="wrap_content" />
18
19         <EditText
20             android:id="@+id/et_description"
21             android:hint="학습 내용"
22             android:inputType="textMultiLine"
23             android:autofillHints="text"
24             android:layout_width="match_parent"
25             android:layout_height="100dp"
26             android:gravity="top" />
27
28         <CheckBox
29             android:id="@+id/cb_favorite"
30             android:text="즐거웠기 추가"
31             android:layout_marginTop="12dp"
32             android:layout_width="wrap_content"
33             android:layout_height="wrap_content" />
```

```
34
35     <Button
36         android:id="@+id/btn_save"
37         android:text="저장"
38         android:layout_width="match_parent"
39         android:layout_height="wrap_content"
40         android:layout_marginTop="16dp" />
41 </LinearLayout>
42 </ScrollView>
43
```

activity_favorite.xml

```
1 <LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
2     android:orientation="vertical"
3     android:padding="24dp"
4     android:layout_width="match_parent"
5     android:layout_height="match_parent">
6
7     <androidx.recyclerview.widget.RecyclerView
8         android:id="@+id/recycler_favorite"
9         android:layout_width="match_parent"
10        android:layout_height="match_parent"/>
11 </LinearLayout>
12
```


activity_learning_list.xml

```
1 <LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
2     android:orientation="vertical"
3     android:padding="24dp"
4     android:layout_width="match_parent"
5     android:layout_height="match_parent">
6
7     <androidx.recyclerview.widget.RecyclerView
8         android:id="@+id/recycler_learning"
9         android:layout_width="match_parent"
10        android:layout_height="match_parent"/>
11 </LinearLayout>
12
```

activity_main.xml

```
1 <?xml version="1.0" encoding="utf-8"?>
2 <LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
3     android:orientation="vertical"
4     android:padding="24dp"
5     android:gravity="center"
6     android:background="@color/white"
7     android:layout_width="match_parent"
8     android:layout_height="match_parent">
9
10    <TextView
11        android:text="오늘의 학습 목표"
12        android:textSize="20sp"
13        android:textStyle="bold"
14        android:textColor="@color/black"
15        android:layout_marginBottom="16dp"
16        android:layout_width="wrap_content"
17        android:layout_height="wrap_content" />
18
19    <TextView
20        android:id="@+id/tv_today_goal"
21        android:text="오늘 목표를 입력해보세요!"
22        android:textSize="16sp"
23        android:textColor="@color/black"
24        android:layout_marginBottom="16dp"
25        android:layout_width="wrap_content"
26        android:layout_height="wrap_content" />
27
28    <Button
29        android:id="@+id/btn_add_learning"
30        android:text="학습 등록"
31        android:layout_width="match_parent"
32        android:layout_height="wrap_content" />
```

```
34 <Button
35     android:id="@+id/btn_learning_list"
36     android:text="학습 목록"
37     android:layout_width="match_parent"
38     android:layout_height="wrap_content" />
39
40 <Button
41     android:id="@+id/btn_quiz"
42     android:text="퀴즈"
43     android:layout_width="match_parent"
44     android:layout_height="wrap_content" />
45
46 <Button
47     android:id="@+id/btn_favorite"
48     android:text="즐거찾기"
49     android:layout_width="match_parent"
50     android:layout_height="wrap_content" />
51
52 <Button
53     android:id="@+id/btn_stats"
54     android:text="학습 통계"
55     android:layout_width="match_parent"
56     android:layout_height="wrap_content" />
57 </LinearLayout>
58
```

activity_quiz.xml

```
1 <LinearLayout xmlns:android="http://schemas.android.com/apk/res/android"
2     android:orientation="vertical"
3     android:padding="24dp"
4     android:gravity="center"
5     android:layout_width="match_parent"
6     android:layout_height="match_parent">
7
8     <TextView
9         android:id="@+id/tv_quiz_question"
10        android:textSize="16sp"
11        android:textColor="@color/black"
12        android:textAlignment="center"
13        android:layout_marginBottom="16dp"
14        android:layout_width="match_parent"
15        android:layout_height="wrap_content" />
16
17     <Button
18         android:id="@+id/btn_answer_true"
19         android:text="정답 (예)"
20         android:layout_width="match_parent"
21         android:layout_height="wrap_content"
22         android:layout_marginBottom="8dp" />
23
24     <Button
25         android:id="@+id/btn_answer_false"
26         android:text="오답 (아니오)"
27         android:layout_width="match_parent"
28         android:layout_height="wrap_content"
29         android:layout_marginBottom="16dp" />
```

```
30
31     <TextView
32         android:id="@+id/tv_result"
33         android:textSize="16sp"
34         android:textColor="@color/black"
35         android:layout_marginTop="12dp"
36         android:layout_width="wrap_content"
37         android:layout_height="wrap_content" />
38
39     <Button
40         android:id="@+id/btn_next"
41         android:text="다음 문제"
42         android:layout_width="wrap_content"
43         android:layout_height="wrap_content"
44         android:visibility="gone" />
45 </LinearLayout>
46
```

activity_stats.xml

```
1 <ScrollView xmlns:android="http://schemas.android.com/apk/res/android"
2     android:layout_width="match_parent"
3     android:layout_height="match_parent">
4
5     <LinearLayout
6         android:orientation="vertical"
7         android:padding="24dp"
8         android:layout_width="match_parent"
9         android:layout_height="wrap_content">
10
11         <TextView
12             android:text="학습 통계"
13             android:textSize="24sp"
14             android:textStyle="bold"
15             android:textColor="@color/black"
16             android:layout_marginBottom="16dp"
17             android:layout_width="wrap_content"
18             android:layout_height="wrap_content" />
19
20         <TextView
21             android:id="@+id/tv_total"
22             android:textSize="16sp"
23             android:textColor="@color/black"
24             android:layout_width="wrap_content"
25             android:layout_height="wrap_content" />
26
```

```
        <TextView
            android:id="@+id/tv_favorite"
            android:textSize="16sp"
            android:textColor="@color/black"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content" />
        <TextView
            android:id="@+id/tv_last"
            android:textSize="16sp"
            android:textColor="@color/black"
            android:layout_width="wrap_content"
            android:layout_height="wrap_content" />
    </LinearLayout>
</ScrollView>
```

Item_learning.xml

```
1  <androidx.cardview.widget.CardView xmlns:android="http://schemas.android.com/apk/res/android"
2      android:layout_marginBottom="16dp"
3      android:layout_width="match_parent"
4      android:layout_height="wrap_content"
5      android:elevation="4dp">
6
7      <LinearLayout
8          android:orientation="vertical"
9          android:padding="24dp"
10         android:layout_width="match_parent"
11         android:layout_height="wrap_content">
12
13         <TextView
14             android:id="@+id/tv_title"
15             android:textSize="20sp"
16             android:textStyle="bold"
17             android:textColor="@color/black"
18             android:layout_width="wrap_content"
19             android:layout_height="wrap_content"/>
20
21         <TextView
22             android:id="@+id/tv_description"
23             android:textSize="16sp"
24             android:layout_marginTop="4dp"
25             android:textColor="@color/black"
26             android:layout_width="wrap_content"
27             android:layout_height="wrap_content" />
28     </LinearLayout>
29 </androidx.cardview.widget.CardView>
30
```


colors.xml

```
1 <resources>
2   <color name="purple_500">#6200EE</color>
3   <color name="purple_700">#3700B3</color>
4   <color name="teal_200">#03DAC5</color>
5   <color name="white">#FFFFFF</color>
6   <color name="black">#000000</color>
7 </resources>
```

dimens.xml

```
1 <resources>
2   <dimen name="padding_screen">24dp</dimen>
3   <dimen name="margin_element">16dp</dimen>
4   <dimen name="text_large">20sp</dimen>
5   <dimen name="text_medium">16sp</dimen>
6 </resources>
```

strings.xml

```
1 <resources>
2   <string name="app_name">LearningApp</string>
3   <string name="today_goal">오늘의 학습 목표</string>
4   <string name="input_goal">오늘 목표를 입력해보세요!</string>
5   <string name="add_learning">학습 등록</string>
6   <string name="learning_list">학습 목록</string>
7   <string name="quiz">퀴즈</string>
8   <string name="favorite">즐거찾기</string>
9   <string name="stats">학습 통계</string>
10  <string name="save">저장</string>
11  <string name="title_hint">학습 제목</string>
12  <string name="description_hint">학습 내용</string>
13  <string name="favorite_check">즐거찾기 추가</string>
14  <string name="true_answer">정답 (예)</string>
15  <string name="false_answer">오답 (아니오)</string>
16  <string name="next_question">다음 문제</string>
17  <string name="quiz_result_correct">정답입니다!</string>
18  <string name="quiz_result_wrong">오답입니다!</string>
19  <string name="no_data">등록된 학습 항목이 없습니다.</string>
20  <string name="learning_stats">학습 통계</string>
21  <string name="total_items">총 등록된 학습 항목: %1$d개</string>
22  <string name="favorite_items">즐거찾기 항목: %1$d개</string>
23  <string name="last_registered">가장 최근 등록일: %1$s</string>
24
25 </resources>
```

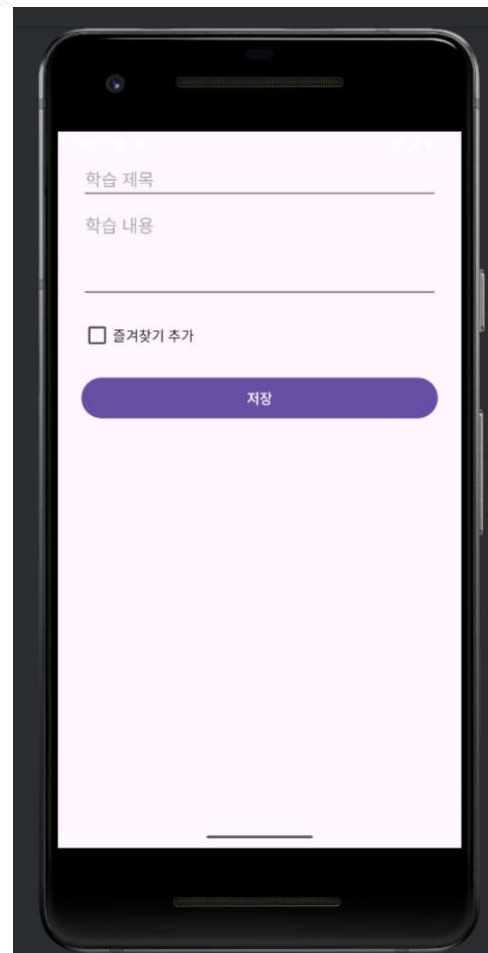
MainActivity

전체 메뉴 진입 화면입니다.



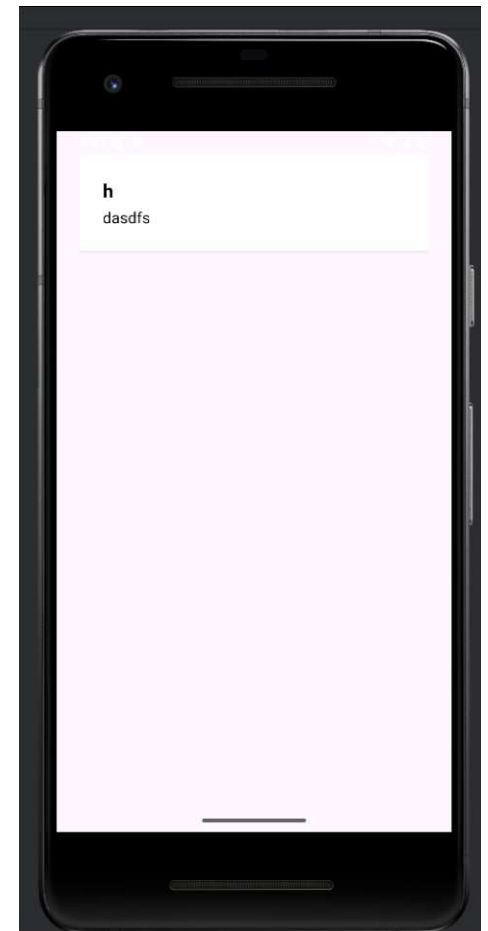
AddLearningActivity

학습 등록 입력 폼입니다.



LearningListActivity

등록된 학습 목록을 보여줍니다.



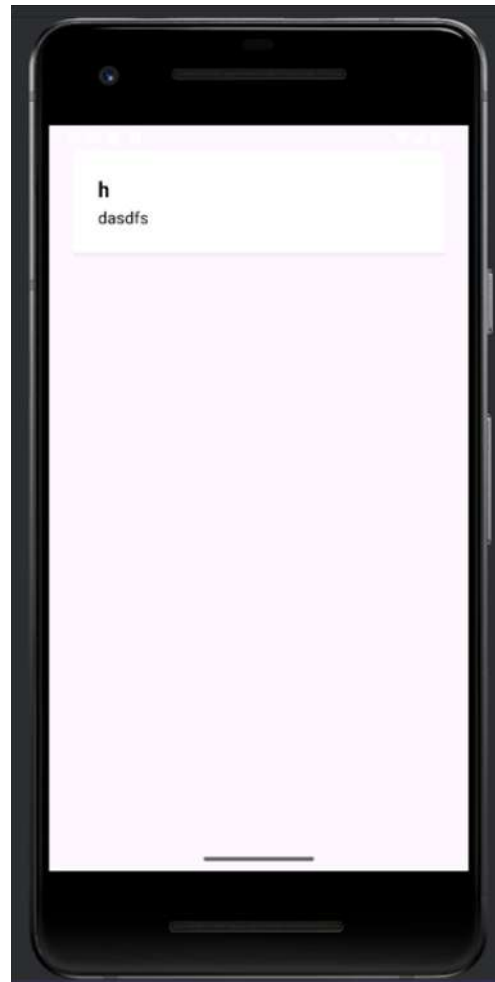
QuizActivity

자신이 등록한 예제를 통해 퀴즈를 제공합니다.



FavoriteActivity

즐거찾기 학습을 볼 수 있습니다.



StatsActivity

학습 통계를 시각화하여 보여줍니다.



