

Mobile Application Development Assignment

Project Title: Study Notes & Quiz Tracker Android Application

Deliverable 1: Functional Requirements

1. User Profile Management
2. Create Study Notes
3. Edit & Delete Notes
4. Subject-wise Notes Organization
5. Quiz Creation Module
6. Attempt Quiz Feature
7. Quiz Progress Tracking
8. State Preservation on Rotation
9. Background & Foreground Handling
10. Low-Memory Process Recovery

Deliverable 2: Feasibility Study

Requirement	APIs / Libraries
Notes Management	EditText, RecyclerView, Room
Quiz Feature	RadioButton, ViewModel
State Handling	ViewModel, onSaveInstanceState
Persistent Storage	Room Database

Deliverable 3: Technical Developer Guide (Java)

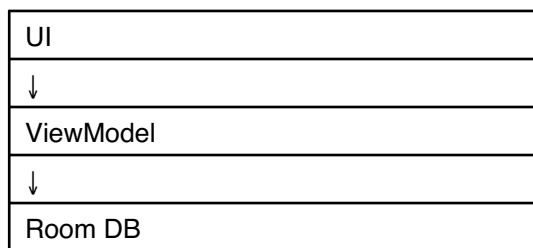
Feature 1: Create & Save Study Notes

Java Entity Class using Room:

```
@Entity(tableName = "notes")
public class Note {

    @PrimaryKey(autoGenerate = true)
    public int id;

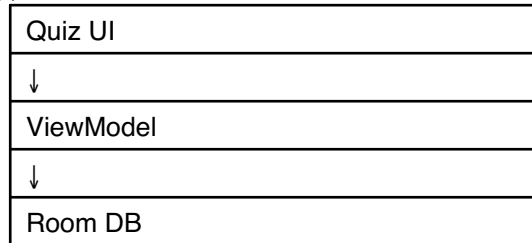
    public String title;
    public String content;
    public String subject;
}
```



Feature 2: Attempt Quiz & Track Progress

Java code for saving quiz score:

```
int score = 8;  
QuizResult result = new QuizResult("OOP Quiz", score, 10);  
quizDao.insert(result);
```



Feature 3: Android OS State Preservation

Java code for saving state on rotation:

```
@Override
protected void onSaveInstanceState(Bundle outState) {
    outState.putString("draft", editText.getText().toString());
    super.onSaveInstanceState(outState);
}
```

Rotation
ViewModel
SavedStateHandle
Room

Conclusion: This assignment demonstrates Android development using Java with proper lifecycle handling.