# 5. System Deployment & Integration

## 1. Technology Stack

Frontend:

* **Technology:** Native Android Development
* **Language:** Kotlin
* **UI Framework:** XML Layouts
* **Libraries and Tools:**
* Retrofit (for networking if required in future)
* Room Database (for local data persistence)
* LiveData & ViewModel (for MVVM architecture)
* Glide/Picasso (for image loading)
* Shared Preferences (for lightweight data storage)

Backend:

* No backend is implemented.
* The application works fully offline, using Room Database and Shared Preferences for data management and storage.

Database:

* **Room Database:** Local SQL-based database to store and manage events and user data.
* **Shared Preferences:** Used for simple data such as login state or user preferences.

## 2. Deployment Diagram (Text Representation)

+------------------------------------+  
| Mobile Device |  
|------------------------------------|  
| - Android OS |  
| - Event Countdown Application |  
| - UI Layer |  
| - Business Logic Layer |  
| - Data Layer (Room Database) |  
| - Local Storage (SharedPrefs) |  
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## 3. Component Diagram (Text Representation)

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| UI Components |  
|------------------------|  
| - MainActivity |  
| - LoginActivity |  
| - EventListFragment |  
| - AddEventFragment |  
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| ViewModel Components |  
|------------------------|  
| - LoginViewModel |  
| - EventViewModel |  
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| Repository Layer |  
|------------------------|  
| - EventRepository |  
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| Data Sources |  
|------------------------|  
| - Room Database |  
| - DAO Interfaces |  
| - Shared Preferences |  
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## 4. Activity Diagram (Text Representation)

(Start)  
 |  
Open Application  
 |  
Check if User Logged In?  
 |------------|  
 Yes No  
 | |  
Home Screen Login/Register Screen  
 | |  
View Events List  
 |  
Select Event  
 |  
View Countdown & Event Details  
 |  
(Add New Event) -----> Set Reminder  
 |  
Logout  
 |  
(End)