

# 04-01-Working-with-Room

Working with Room : The BookKeeper application

## Part 1 : preparation

Ajouter des plugins dans le build.gradle :

```
id 'kotlin-kapt'
```

Et dans les dependencies :

```
def lifecycle_version = "1.1.1"
implementation "android.arch.lifecycle:extensions:$lifecycle_version"
kapt "android.arch.lifecycle:compiler:$lifecycle_version"

def room_version = '1.1.1'
implementation "android.arch.persistence.room:runtime:$room_version"
kapt "android.arch.persistence.room:compiler:$room_version"
androidTestImplementation
"android.arch.persistence.room:testing:$room_version"
```

KAPT : on sait pas encore ce que c'est

test : s'y intéresser lorsque j'ai du temps

## Part 2 : Creating the components of Room

### 1 - Creating Entity and Exploring Annotations

Créer une classe Kotlin : Book :

```
@Entity(tableName = "book")
class Book (
    @PrimaryKey
    val id : String,

    @ColumnInfo(name = "author")
    val author : String,

    val book: String
```

```
)  
{}
```

## 2 - Creating DAO and Exploring Annotations

Créer une interface `BookDao` :

```
@Dao  
interface BookDao {  
  
    @Insert  
    fun insert(book : Book)  
}
```

## 3 - Creating Database Class from DAO

Créer une classe `BookRoomDatabase` :

```
@Database(entities = [Book::class], version = 1, exportSchema = false)  
abstract class BookRoomDatabase : RoomDatabase() {  
    abstract fun bookDao() : BookDao  
  
    companion object {  
        private var bookRoomInstance : BookRoomDatabase? = null  
        fun getDatabase(context: Context) : BookRoomDatabase? {  
            if (bookRoomInstance == null) {  
                synchronized(BookRoomDatabase::class.java) {  
                    if (bookRoomInstance == null) run {  
                        bookRoomInstance =  
Room.databaseBuilder<BookRoomDatabase>(  
                            context.applicationContext,  
                            BookRoomDatabase::class.java,  
                            "book_room_db.sqlite"  
                        )  
                            .build()  
                    }  
                }  
            }  
            return bookRoomInstance!!  
        }  
    }  
}
```

## Part 3 : kapt problem

Modifier le build.gradle :

```
def room_version = '2.3.0'  
implementation "androidx.room:room-runtime:$room_version"  
kapt "androidx.room:room-compiler:$room_version"  
androidTestImplementation "androidx.room:room-testing:$room_version"
```

Dans le MainActivity, ajouter :

```
val bookDB = BookRoomDatabase.getDatabase(this);
```