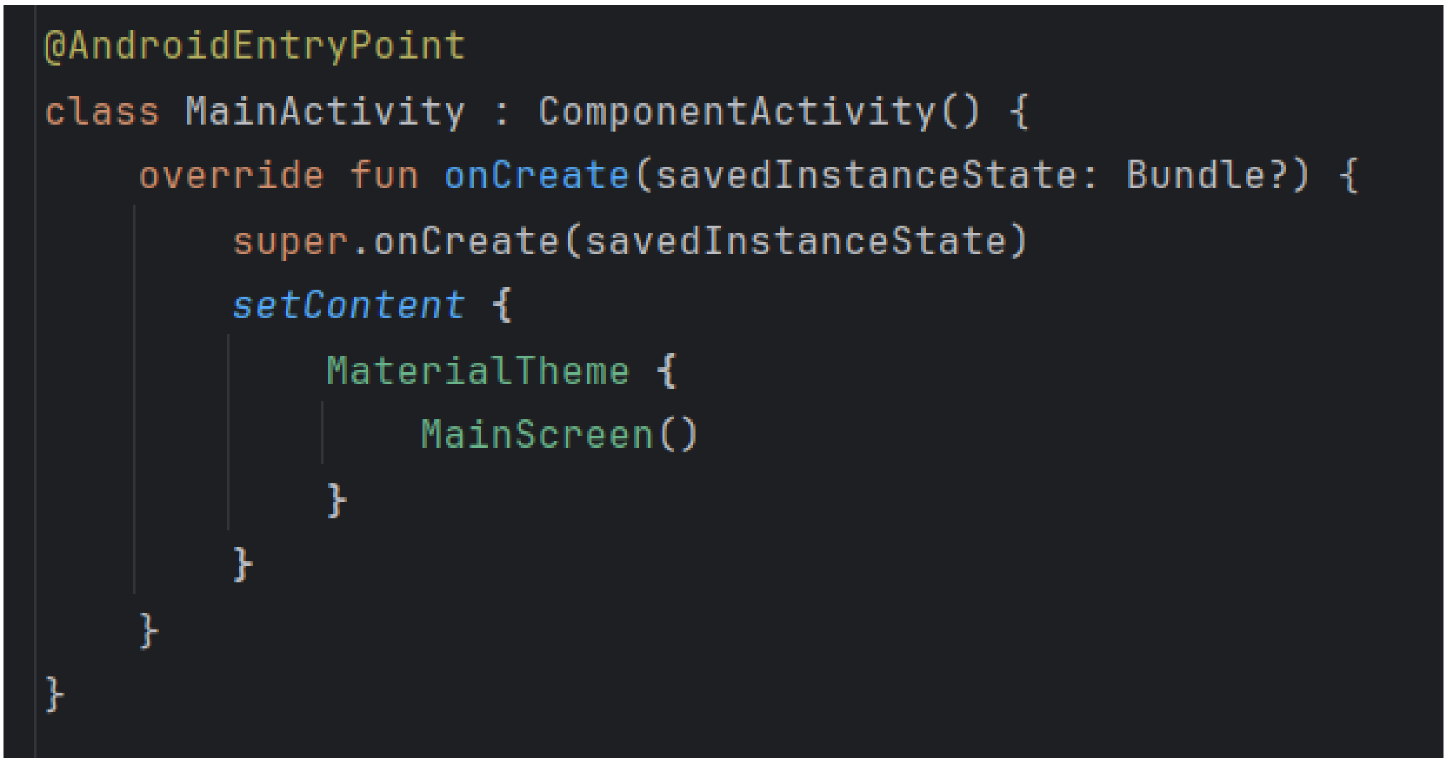
# Android Programming

Meruyert Oshayeva

## Hi, Teacher!

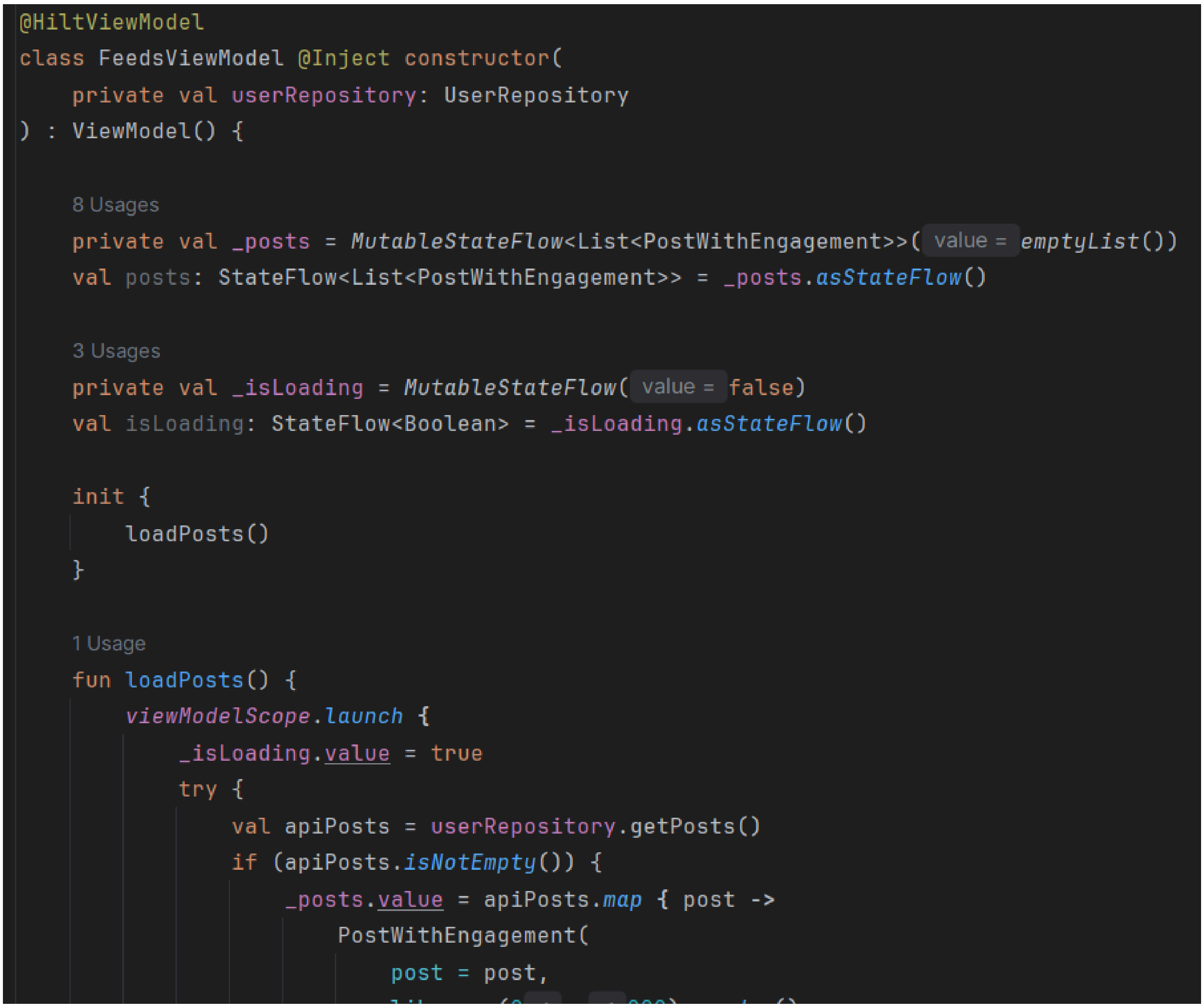
Here is my practice task 7

In this task I added Hilt to my Profile Card App to manage dependencies automatically. Then I created a Feeds tab with posts that users can like and comment on, making it interactive and engaging



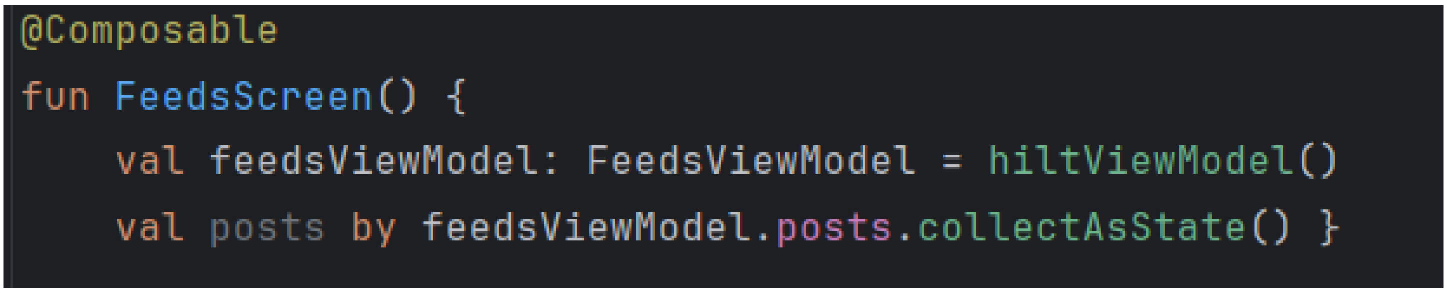
```
@AndroidEntryPoint
class MainActivity : ComponentActivity() {
    override fun onCreate(savedInstanceState: Bundle?) {
        super.onCreate(savedInstanceState)
        setContent {
            MaterialTheme {
                MainScreen()
            }
        }
    }
}
```

So I used @HiltViewModel for both ProfileViewModel and FeedsViewModel, allowing Hilt to inject the UserRepository dependency.
I implemented dependency injection modules with @Provides to supply ApiService and Room database instances throughout the app

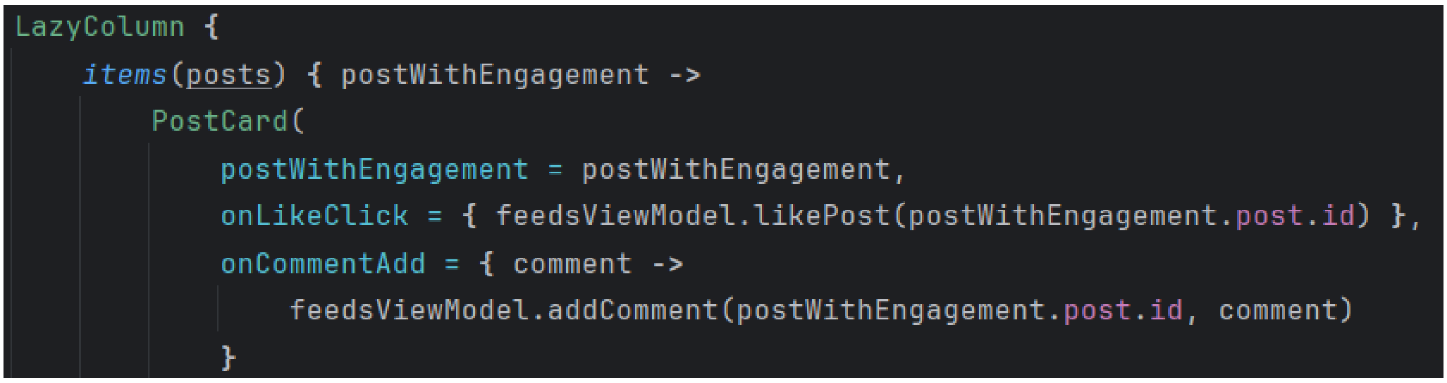


```
@HiltViewModel
class FeedsViewModel @Inject constructor(
    private val userRepository: UserRepository
) : ViewModel() {

    8 Usages
    private val _posts = MutableStateFlow<List<PostWithEngagement>>( value = emptyList())
    val posts: StateFlow<List<PostWithEngagement>> = _posts.asStateFlow()

    3 Usages
    private val _isLoading = MutableStateFlow( value = false)
    val isLoading: StateFlow<Boolean> = _isLoading.asStateFlow()

    init {
        loadPosts()
    }

    1 Usage
    fun loadPosts() {
        viewModelScope.launch {
            _isLoading.value = true
            try {
                val apiPosts = userRepository.getPosts()
                if (apiPosts.isNotEmpty()) {
                    _posts.value = apiPosts.map { post ->
                        PostWithEngagement(
                            post = post,
```

And I connected the Feeds tab to a ViewModel that handles post engagement like likes and comments



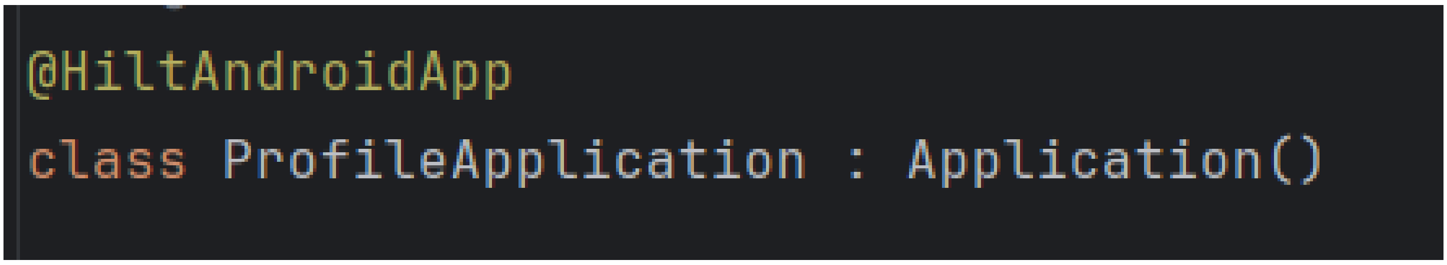
```
@Composable
fun FeedsScreen() {
    val feedsViewModel: FeedsViewModel = hiltViewModel()
    val posts by feedsViewModel.posts.collectAsState() }
```



```
LazyColumn {
    items(posts) { postWithEngagement ->
        PostCard(
            postWithEngagement = postWithEngagement,
            onLikeClick = { feedsViewModel.likePost(postWithEngagement.post.id) },
            onCommentAdd = { comment ->
                feedsViewModel.addComment(postWithEngagement.post.id, comment)
            }
```

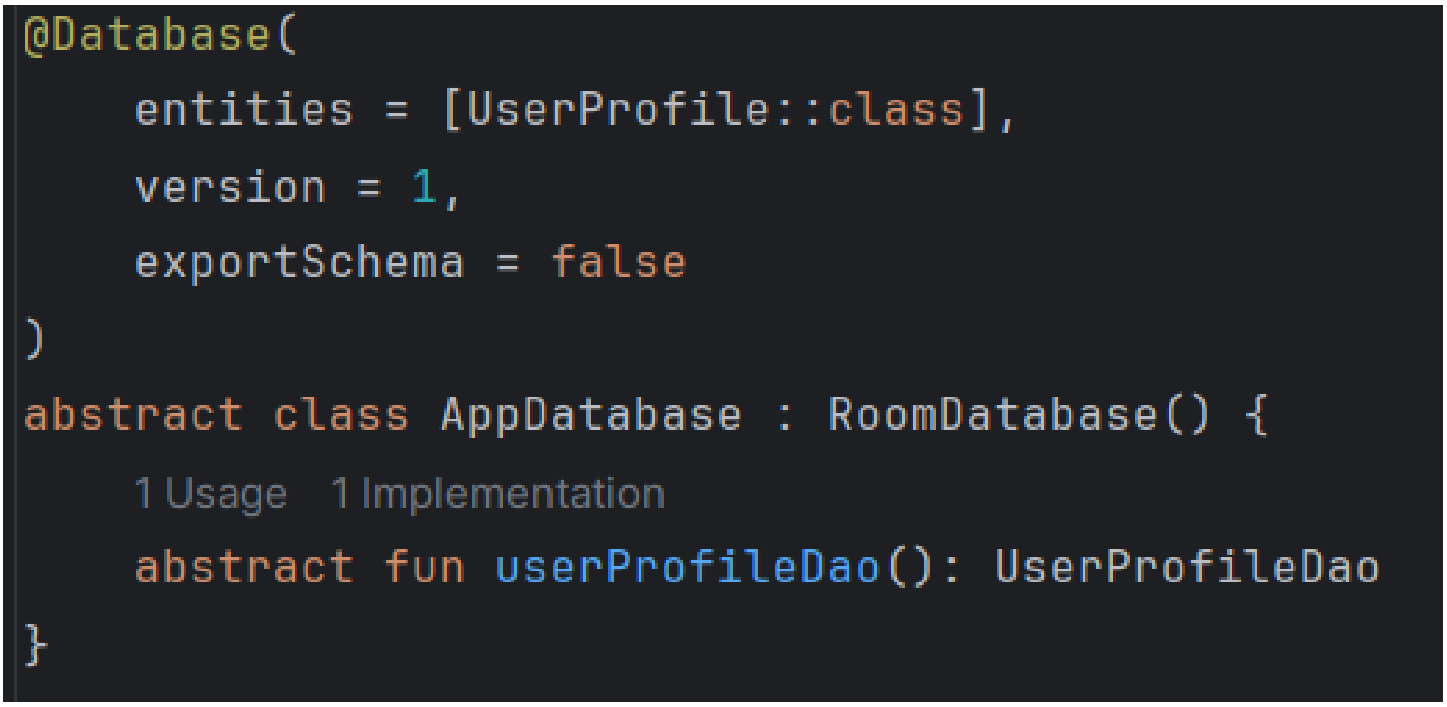
And here are some things that I added to the other files

Application:



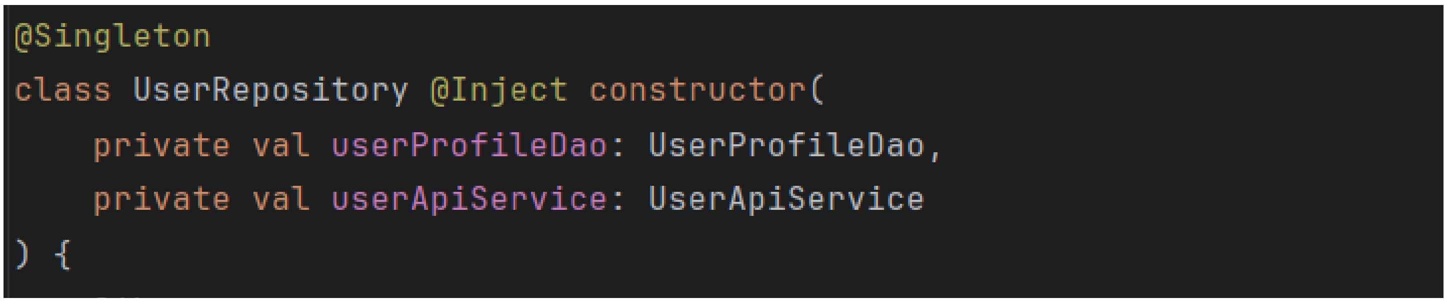
```
@HiltAndroidApp
class ProfileApplication : Application()
```

Database:

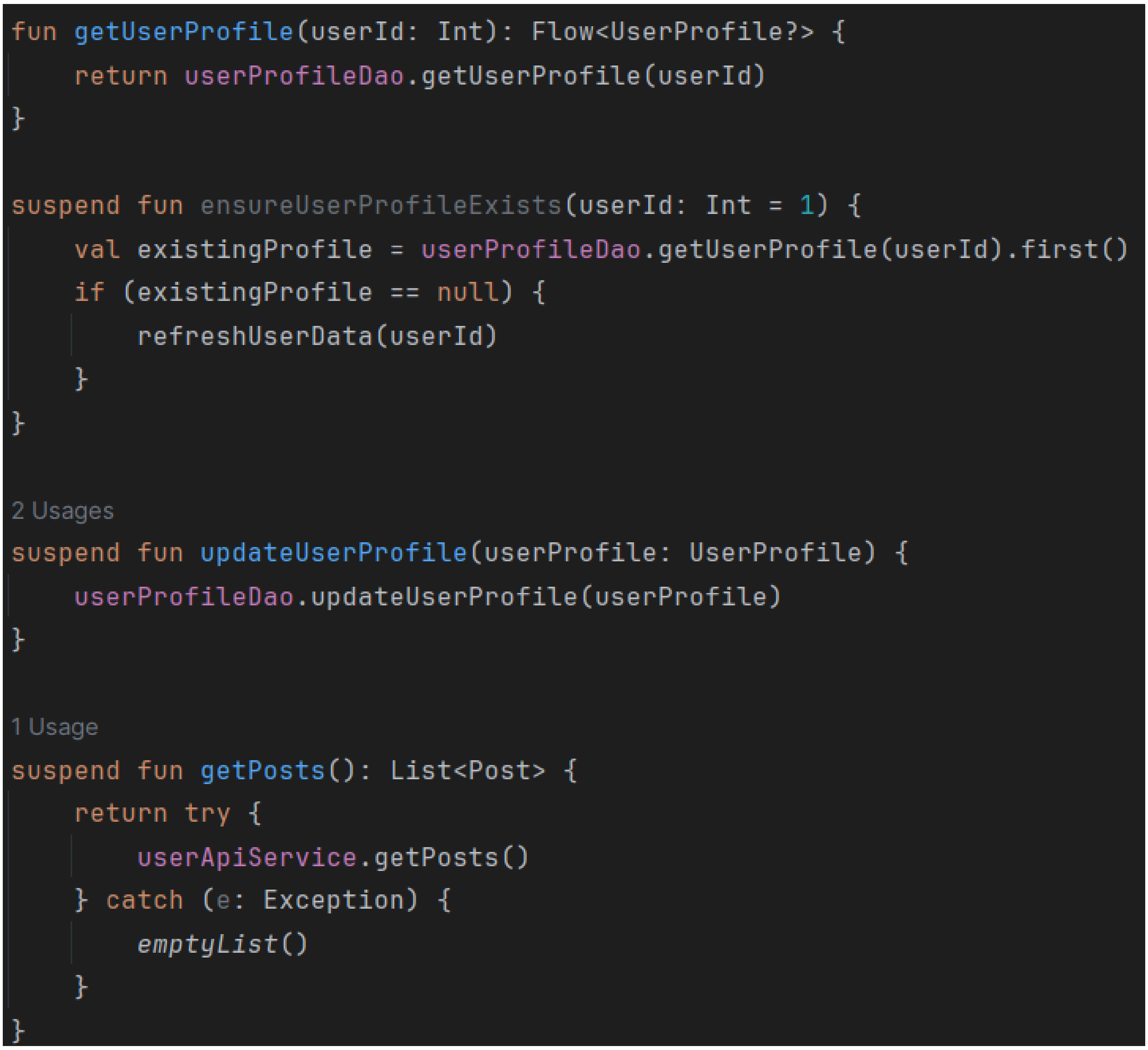


```
@Database(
    entities = [UserProfile::class],
    version = 1,
    exportSchema = false
)
abstract class AppDatabase : RoomDatabase() {
    1 Usage   1 Implementation
    abstract fun userProfileDao(): UserProfileDao
}
```

Repository:

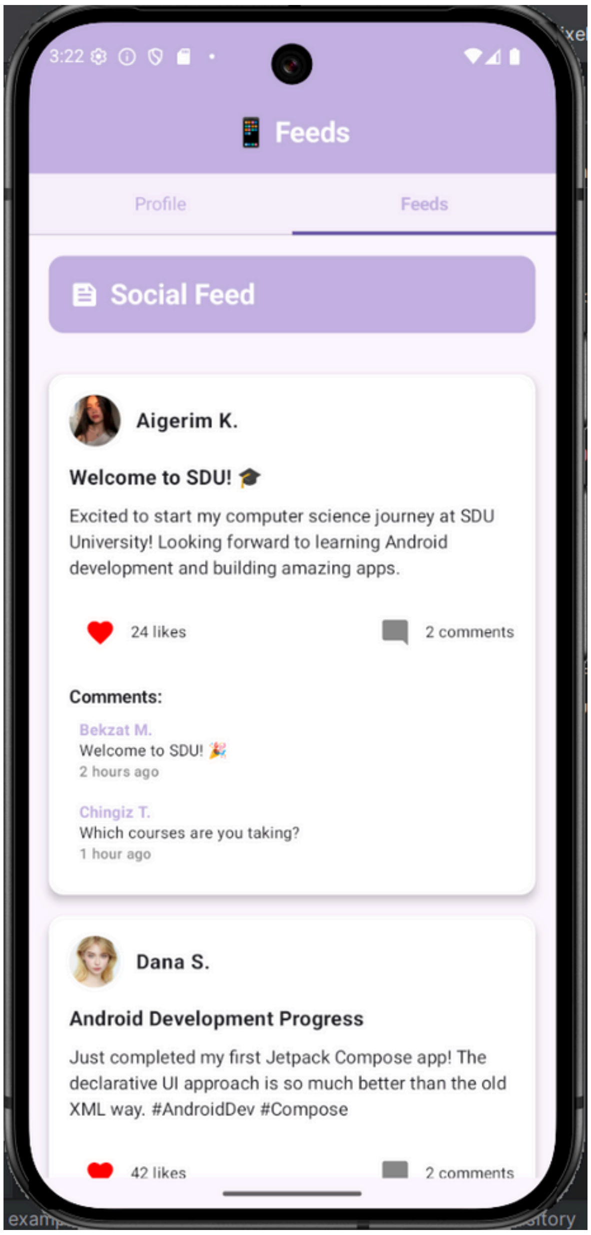


```
@Singleton
class UserRepository @Inject constructor(
    private val userProfileDao: UserProfileDao,
    private val userApiService: UserApiService
) {
```



```kotlin
fun getUserProfile(userId: Int): Flow<UserProfile?> {
    return userProfileDao.getUserProfile(userId)
}

suspend fun ensureUserProfileExists(userId: Int = 1) {
    val existingProfile = userProfileDao.getUserProfile(userId).first()
    if (existingProfile == null) {
        refreshUserData(userId)
    }
}

2 Usages
suspend fun updateUserProfile(userProfile: UserProfile) {
    userProfileDao.updateUserProfile(userProfile)
}

1 Usage
suspend fun getPosts(): List<Post> {
    return try {
        userApiService.getPosts()
    } catch (e: Exception) {
        emptyList()
    }
}
```

And here is how it looks like, as you can see I implemented a complete social feed. Now the Feeds tab shows posts from different users with their actual names and avatars. You can like posts and see the like count update immediately



📱 Feeds

Profile | Feeds

Social Feed

Aigerim K.

**Welcome to SDU! 🎓**

Excited to start my computer science journey at SDU University! Looking forward to learning Android development and building amazing apps.

24 likes 2 comments

**Comments:**

Bekzat M.
Welcome to SDU! 🎉
2 hours ago

Chingiz T.
Which courses are you taking?
1 hour ago

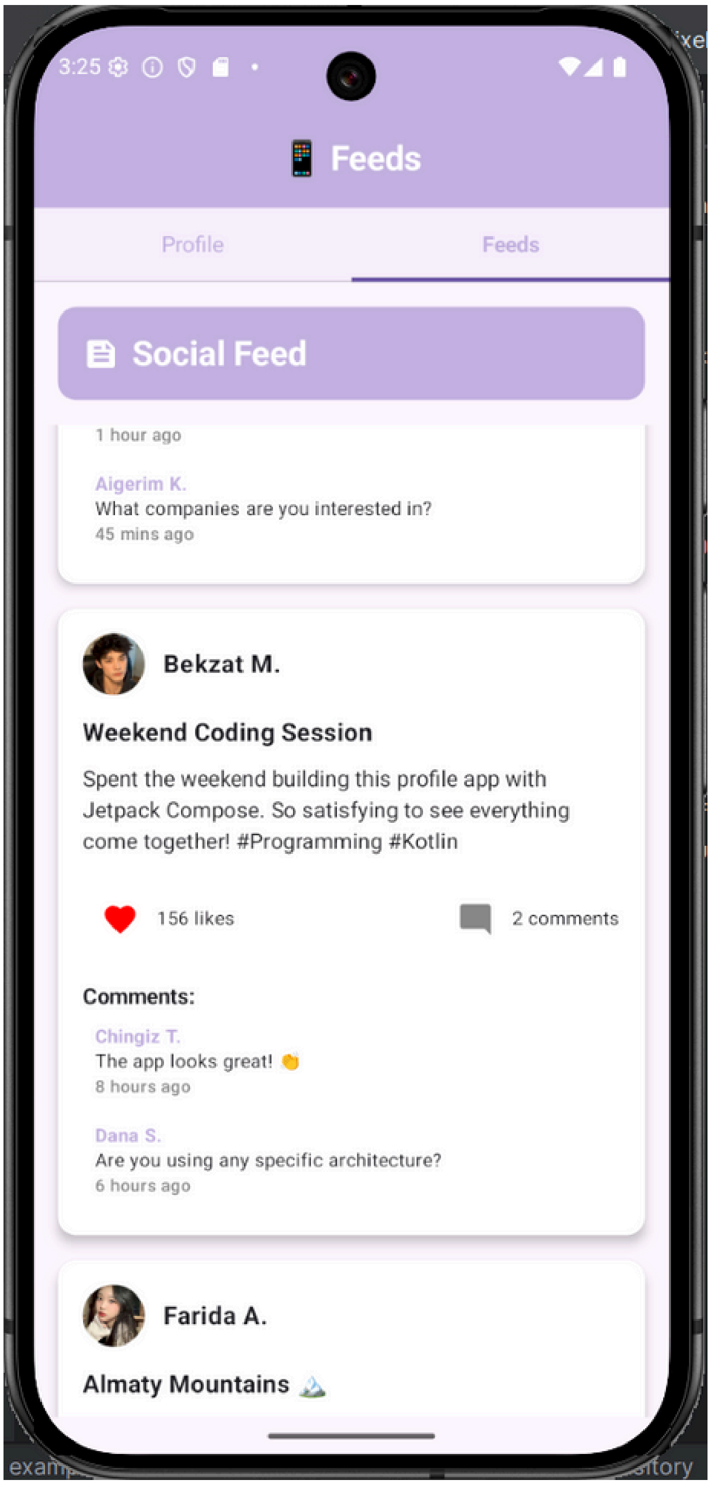
Dana S.

**Android Development Progress**

Just completed my first Jetpack Compose app! The declarative UI approach is so much better than the old XML way. #AndroidDev #Compose

42 likes 2 comments

Here is the comment functionality where you can add comments to any post. I also made sure the engagement data is managed by the ViewModel for proper state handling. And the tab navigation works smoothly between Profile and Feeds sections



3:25

📱 Feeds

Profile Feeds

Social Feed

1 hour ago

Aigerim K.
What companies are you interested in?
45 mins ago

Bekzat M.

Weekend Coding Session

Spent the weekend building this profile app with Jetpack Compose. So satisfying to see everything come together! #Programming #Kotlin

156 likes 2 comments

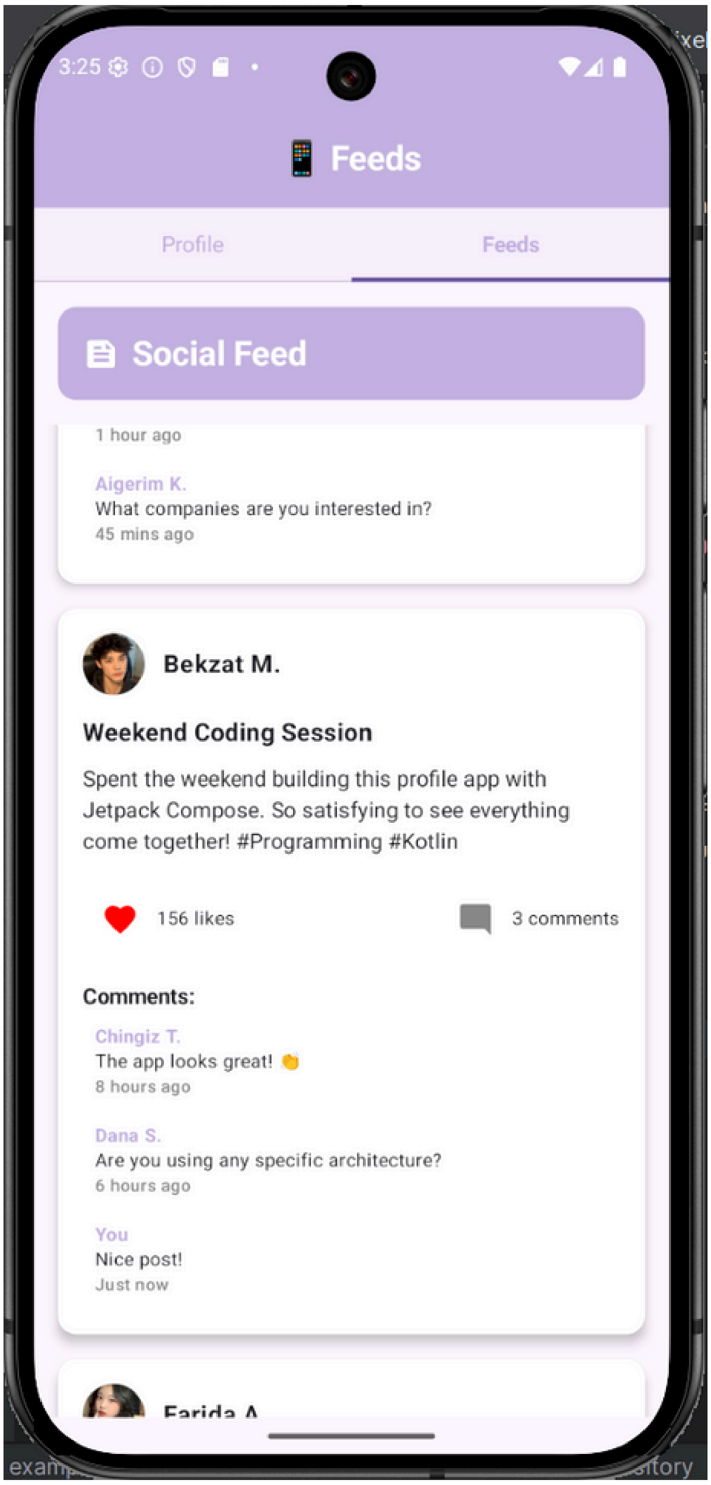
Comments:

Chingiz T.
The app looks great! 👏
8 hours ago

Dana S.
Are you using any specific architecture?
6 hours ago

Farida A.

Almaty Mountains 🏔️



3:25

📱 Feeds

Profile Feeds

Social Feed

1 hour ago

Aigerim K.
What companies are you interested in?
45 mins ago

Bekzat M.

Weekend Coding Session

Spent the weekend building this profile app with Jetpack Compose. So satisfying to see everything come together! #Programming #Kotlin

156 likes 3 comments

Comments:

Chingiz T.
The app looks great! 👏
8 hours ago

Dana S.
Are you using any specific architecture?
6 hours ago

You
Nice post!
Just now

Thank You!