

Kotlin Flow Interview Coding Cheat Sheet

1. Basic Flow Creation & Collection

```
fun numberFlow(): Flow<Int> = flow {
    for (i in 1..5) {
        emit(i)
        delay(500)
    }
}

runBlocking {
    numberFlow().collect {
        println("Received: $it")
    }
}
```

2. Flow Operators: map, filter, collectLatest

```
numberFlow()
    .map { it * 2 }
    .filter { it % 4 == 0 }
    .collectLatest { println("Filtered: $it") }
```

3. Combining Flows

```
val flow1 = flowOf(1, 2, 3)
val flow2 = flowOf("A", "B", "C")

flow1.combine(flow2) { a, b -> "$a$b" }
    .collect { println(it) }
```

4. Error Handling with catch

```
val errorFlow = flow {
    emit(1)
    throw Exception("Error!")
}

errorFlow.catch { e -> println("Caught: ${e.message}") }
    .collect { println("Got: $it") }
```

5. callbackFlow Example (e.g., Location)

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```
fun locationFlow(): Flow<Location> = callbackFlow {  
    val listener = LocationListener { location -> trySend(location) }  
    locationManager.requestLocationUpdates(..., listener)  
    awaitClose { locationManager.removeUpdates(listener) }  
}
```

6. ViewModel + StateFlow

```
val timerFlow = flow {  
    var time = 0  
    while (true) {  
        emit(time++)  
        delay(1000)  
    }  
}  
  
val stateFlow = timerFlow  
    .stateIn(viewModelScope, SharingStarted.WhileSubscribed(), 0)
```

7. Flow Test Example

```
@Test  
fun testFlowEmission() = runTest {  
    val flow = flowOf(1, 2, 3)  
    val result = flow.toList()  
    assertEquals(listOf(1, 2, 3), result)  
}
```