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data class Contact(
    val name: String,
    val phone: String?,
    val email: String?,
    val favorite: Boolean
)

fun formatContact(c: Contact): String {
    val phoneDisplay = c.phone ?: "N/A"
    val emailDisplay = c.email ?: "N/A"
    val star = if (c.favorite) "*" else ""
    return "${c.name} | Phone: $phoneDisplay | Email: $emailDisplay | $star"
}

fun filterContacts(
    contacts: List<Contact>,
    predicate: (Contact) -> Boolean
): List<Contact> {
    return contacts.filter(predicate)
}

fun printContacts(title: String, contacts: List<Contact>) {
    println(title)
    contacts.forEachIndexed { index, contact ->
        println("${index + 1}. ${formatContact(contact)}")
    }
    println()
}

```

```
}  
  
fun main() {  
    val allContacts = listOf(  
        Contact("Maya Patel", "+91-90000-11111", "maya@example.com", true),  
        Contact("Raj Sharma", null, "raj@sample.com", false),  
        Contact("Li Wei", "+86-13800000000", null, false),  
        Contact("Sara Ali", null, null, false),  
        Contact("Tom O'Brien", "+1-555-1234", "tom@example.org", true)  
    )  
  
    printContacts("--- All Contacts ---", allContacts)  
  
    val favorites = filterContacts(allContacts) { it.favorite }  
  
    printContacts("--- Favorite Contacts ---", favorites)  
  
    val withEmail = filterContacts(allContacts) { it.email != null }  
  
    printContacts("--- Contacts with Email ---", withEmail)  
}
```