

User story:

1. As a healthy food consumer, I want to use my phone to scan the barcode of a food product and see a graphic of all its ingredients. The graphic will rank how healthy the ingredients are for my body, illustrated in categories of red (unhealthy), yellow (neutral), and green (healthy), so that I can make healthy shopping decisions for my family.

App Name: “NutriScan360”

“See beyond the barcode”

Why this name works:

- "Nutri" implies nutrition
- "Scan" references the barcode interaction
- "360" suggests complete insight (ingredients + health ranking)

Recommended Android Project Setup

Setting	Recommendation
Minimum SDK	API 24 (Android 7.0, Nougat) — broad device support
Target SDK	API 34 (Android 14) — latest features
Compile SDK	API 34
Build Tools Version	34.0.0

Language Java (*as per your earlier context*)

Gradle Plugin 8.3+

Dependencies

- ML Kit Barcode Scanning
 - OkHttp or Retrofit
 - Gson or org.json
 - Material Components for UI
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App Wireframe Design (Core Flow)

1. Splash Screen






UI:

- App logo
 - Tagline: “*See beyond the barcode*”
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2. Home Screen

Purpose: Central hub for barcode scan or image upload

UI Elements:





-  Top App Bar: Logo + hamburger menu
-  Button: “ Scan Barcode” (*opens camera*)
-  Button: “ Upload Image” (*loads image from device*)

-  Optional: “ View Scan History”
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3. Scanning or Image Result Screen

Purpose: Show product info + ingredient health ranking

UI Elements:

-  Product Name (bold)
 -  Product Image (if available)
 -  Horizontal Bar Graphic:
 - Green (healthy)
 - Yellow (neutral)
 - Red (unhealthy)
 -  Ingredient List:
 - Ingredient name + badge color (e.g.,  Olive Oil,  High Fructose Corn Syrup)
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4. Nutrition Details Screen

Purpose: Full breakdown

UI:

- Table of macronutrients per 100g or serving
 - Pie chart or visual
 - “Add to Daily Log” (optional future feature)
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5. Settings / Preferences

Options:

- Health sensitivity (e.g., strict, moderate, relaxed)
 - Dark mode
 - Clear history
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Design Principles Used

- **Color-coded visualizations** for immediate health insight
- **Large touch targets** (Android Material spec)
- **Typography hierarchy**: Product name > summary > ingredients
- **Accessibility**: Color + text for colorblind users
- **Offline fallback**: Save scans, retry lookup