# Unity Technical Assessment – Submission Summary

Candidate: Linto Vattoly

Position: Unity Mobile Developer

Project: Egg Reveal Fitness App (Unity Android Build)

## ✅ Task 1: Animated Egg Cracking & 3D Character Reveal

Taps Required:  
- Total: 4 taps  
 - Tap 1 → Stage 1 crack  
 - Tap 2 → Stage 2 crack  
 - Tap 3 → Final crack  
 - Tap 4 → Character revealed

Approach to Egg Cracking Animation:  
- Used 3 separate 3D egg models to represent cracking stages.  
- Crack stage progression handled via `tapCount` variable.  
- Tap input triggers `SetActive` to switch visibility of the egg models.  
- Crack sound (`AudioClip`) is played using `AudioSource.PlayOneShot()` on each tap.

3D Character Reveal:  
- After the final crack stage, the character GameObject is activated.  
- A reveal sound plays on the final tap.  
- Animation support was prepared but skipped due to FBX import constraints.

Visual Feedback:  
- Each tap gives immediate audio feedback.  
- Egg stages visibly change on screen.  
- A Reset button is included to restart the experience (resets tap count, character visibility, and egg stages).

## ✅ Task 2: Fitness Data Display

Approach:  
- Used simulated data due to device constraints (Health Connect requires eligible Android device + permissions).  
- Fitness data (steps, heart rate, calories) is generated using a C# script.  
- Data is updated every 2 seconds using `InvokeRepeating()`.

UI Display:  
- Data shown using TextMeshPro elements.  
- Example UI data:  
 - Heart Rate: 85 bpm  
 - Steps Today: 4200  
 - Calories: 240 kcal

## ✅ Reset / Replay System

Implemented `ResetExperience()` method in `EggCrackController.cs`  
- On clicking Reset:  
 - All egg stages are hidden  
 - Stage 1 is shown again  
 - The character is hidden  
 - Tap count is reset  
 - Fitness data optionally resets (extendable)

## ✅ Build Details

Platform: Android  
Output: .apk (not .aab)  
Built with: Unity 2022.3.x  
SDKs: JDK, Android SDK, NDK, Gradle (Unity-internal)

## ✅ Instructions to Run

1. Transfer the APK to an Android phone.  
2. Ensure “Install from Unknown Sources” is enabled.  
3. Tap to install and run the app.  
4. Tap the egg multiple times to reveal the character.  
5. Watch live fitness data update.  
6. Tap Reset to replay the interaction.

## 🧠 Final Notes

Project is fully modular and extendable.  
Designed for mobile interaction (touch input) but also works on desktop via mouse click.  
Prioritized clarity, responsiveness, and code readability.