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# PERFUME BOTTLE WITH WATER FLOW ANIMATIO

WEB 3D

## 1. INTRODUCTION

This project applies the basics of 3D modeling and simple physical animation using Blender. The scene features a perfume bottle with a water stream flowing behind it, which stops after a short motion. The objective is to practice modeling, materials, lighting, animation, and rendering.

## 2. MODELING

The perfume bottle was built from basic mesh shapes and refined using extrusion, scaling, beveling, and smoothing.
Its components (glass body, liquid, cap) were organized into one Collection.
A water mesh was created behind the bottle and shaped to resemble flowing water.

## 3. MATERIALS

Glass: Principled BSDF, Transmission 1, Roughness 0, IOR 1.45
Liquid: Slightly colored transparent material
Cap: Metallic material
Water: Transparent shader, IOR 1.33, light noise for variation.

## 4. LIGHTING & CAMERA

HDRI lighting was used for natural reflections.
Additional area lights enhanced glass highlights.
The camera was positioned to clearly frame the bottle and the water background.

## 5. ANIMATION

The water movement was animated using keyframes instead of fluid simulation.
It flows at the start and then stops, creating a controlled freeze-motion effect behind the bottle.

## 6. RENDERING & RESULTS

Rendered with Cycles at 1920×1080 and 128–256 samples.
The final result shows realistic refraction in glass and water, accurate lighting, and smooth motion.
Future improvements could include real fluid simulation, higher sample count, better textures, and depth-of-field.