FigJam-XR (Design Atrium)

This project turns a familiar whiteboarding workflow into a **3D Design Atrium**. Users can **travel along design flows**, **spawn & organize wireframe panels**, and **brainstorm with spatial sticky notes**. The goal is to see if XR makes early design work more **intuitive, spatial, and collaborative**.

Testing Objective

Primary objective: Verify that first-time users can complete the three core interactions **quickly and without guidance**:

1. Travel along a predefined **flow** (rail waypoints).
2. **Create** and **organize** wireframe panels (spawn → grab → scale → snap).
3. **Add** and place a **spatial sticky note** from the wrist menu.

Hypotheses (what we're validating):

- H1: Users can discover how to **move along the flow** and reach the final waypoint **≤ 45s** without hints.
- H2: Users can **spawn a wireframe**, **scale** it, and **snap** it into a zone **≤ 90s**, with ≤ 1 prompt.
- H3: Users can **spawn a sticky note** from the wrist and place it next to a panel **≤ 45s** without hints.

Methodology

Type: Short, in-class, **think-aloud** usability test with a horizontal prototype.
Session length: ~5 minutes per participant (plus <1 minute logging).
Sample: 5–10 classmates/tutors (mixed XR familiarity).
Measures: Task success, time-on-task, number of prompts, brief Likert ratings, key observations.

> Rationale: IP1 is a **horizontal prototype** aiming for an overall impression and testable interactions rather than depth. The plan is simple enough that **another person could run it** and collect similar results.

Prototype Description / Requirements

- **Unity scene:** A minimal "Design Atrium" with:
    - **FlowPath** (3–6 waypoints) + simple rail locomotion (hold **Activate** to move).
    - **Wireframe panels** that can be spawned (right **Select**), grabbed, **scaled** (right thumbstick up/down), and **snapped** into **Circle** or **Grid** zones.
    - **Wrist menu** on **Left Controller** with a "+ Note" button to spawn a **StickyNote** (grab/move).
- **Controller-first** interactions (no hand tracking required) to ensure stability in class.

Participant Tasks

1. **Travel the flow**: "Hold the move/activate input and ride the path through the markers until you stop at the last point."
2. **Make & organize a wireframe**: "Spawn a wireframe panel, grab it, scale it a bit, and place it neatly into the circular zone."
3. **Add a sticky note**: "Use your wrist menu to add a sticky note and place it near your panel."

Success criteria (per task):

- **Success/Fail**, **time (sec)**, **prompts given (count)**, **errors** (e.g., wrong button, lost object).

Data Collection

- **Observer sheet** (one row per participant, three task blocks):
    - **Task success (Y/N)**, **Time (sec)**, **Prompts (#)**, **Notable behaviors/errors**.
- **Post-task micro-ratings** (1–5 Likert, very quick):
    - "That task was **clear**."
    - "That task was **easy**."
    - "I felt **in control**."
- **One comment**: "What felt most awkward or confusing?"

Risks & Mitigations

- **Control confusion** → On a paper card, show three controls: **Activate**, **Select**, **Right thumbstick**.
- **Motion discomfort** → Rail speed is slow; no free-roam; stop test immediately if discomfort is reported.
- **UI miss-clicks** → Ensure **XR UI Input Module** present; wrist canvas sized & facing user.

Success Criteria to Decide Next Iteration

- ≥ 80% **task success** on first attempt for each task.
- Median **time-on-task**: Flow ≤ 45s; Wireframe ≤ 90s; Sticky ≤ 45s.
- Median **ratings ≥ 4** for clarity/ease on at least two tasks.
- Top **3 friction points** identified (from comments/observations) → become next sprint fixes.