**UNREAL S1**

**MDA**

**Mechanics, Dynamics & Aesthetics**

Mechanics is the foundation, one CORE principle that the entire game relies on (remains the same). Multiple can be there. Ex: Choose characters in Marvel Rivals, ie 🡪 different mechanics. Different characters have different strength, powers, weapons stuff like that. Spawn rates, damage calculation (programmed algorithms), jump, shoot, etc. Ability to use Nitro.

Dynamics: Live & Emergent Behaviour resulting from players interacting with mechanics or with each other. Ex: Timing a jump to cross a gap (Skill Application), strategizing resource management, etc. STRATEGY, like planning something for what you need to do and stuff. Deciding when to use Nitro.

Aesthetics: Emotional Outcome, FEEL of the game. Ex: Sensation of joy or prostration, curiosity and discovery, climbing into a car, tension and anxiety in horror games etc. Screen blur while Nitro is used.

Progression

**Designing Gameplay Loops**

Meta

Action 🡪 Feedback 🡪 Reward 🡪 Motivation

Core

* Connecting loops to MDA Framework 🡪 Gameplay loops are the practical manifestation of the MDA framework. By controlling the loop, we design the resulting dynamics and aesthetics.
* Core loop (Second-to-second mechanics and actions) (most mechanics, gives joy),
* Meta loop (Player choices and strategic systems) (keeps players returning across multiple sessions. Steady progress and character improvement),
* Progression loop (Long term goals and rewards) (Game’s theme and story is linked here. Ultimate Achievement).

**Among Us (Activity to choose a game and break it down)**

**Mechanics** – Crewmate: Complete all the tasks. Impostor: Kill all the crewmates, Use Vents. Use chat to talk. Report bodies, call meetings. Sabotage. Ghost.

**Dynamics** – Crewmate: Figure out who the impostor is and vote him out. Communicate with each other and complete tasks before everyone is killed. Stick together with people that can be trusted. Impostor: Don’t let the crewmates figure out that you are the impostor. Use vents wisely. Blame other crewmates and outsmart them. Communicate properly. Call meetings if you have suspicion. Sabotage and then kill. Turn friends against each other.

**Aesthetics** – Killing animations, completing tasks, curiosity, suspense of who the impostor was, the scary part of being around another crewmate alone and not being able to trust anyone, made it thrilling to play. Different kind of satisfying tasks. Card Swipe, annoying task. Suspense during a sabotage. Suspense when voting out someone and satisfaction of winning.

Why original version failed (2018-2020): It was made by just a group of 3 people, it was tough for them so the marketing was a bit bad, and imperfect graphics and mechanics, not online (initial release), focused on local-only play (same room), tough concepts that were initially hard to understand. Colours were not separate (multiple could take same). Map design was basic. No new updates.

Uprise (2020-2022): Covid-19 came, people wanted to connect more, STREAMERS started playing it. among us was a fun platform to do that online and play with friends. Mechanics were fun. Multiplayer and chat features. Changing of skins was released in 2021, where you could unlock skins by playing more (it became free) and players could choose what they liked.

Downfall: Became boring, change of chat mechanics (removed for a while). Became too complex, too many roles, maps. Became confusing.

**IMP**

Use code to draw a red triangle. Then use code to make a pyramid. HW->build smth fall.

Double pointers, smart pointers, buffers, OpenGL. Today – Introduction to Unreal features and tools, post in github repo. Global and local systems/scale.

Blueprints are not forward compatible. Use C++