Mechanics I know I want

Player does some fast paced short range skirmishing, but also longer ranged encounters

Level design

* Encounters revolving around short ranged skirmishes should feature mazelike environments with lots of walls and corners. This will allow lots of cover to avoid gunfire while also allowing the player to move around proactively rather than sitting behind a wall.
* Encounters requiring fast paced movement need uncluttered environments. Wolfenstein TNC was aggravating because many levels required frantic movement and action but the rooms were very tight and filled with clutter, so I kept running into walls and getting caught on scenery. Whereas the Doom reboots have relatively clean rooms without many props in them.

AI

If an enemy is one that would realistically be cautious and take cover, they would want to prioritise shooting positions closer to cover, since it’s more reliable for protection than dodging.

I could have a ‘Stay Close To Cover' bool that causes the enemy to prioritise areas next to spots that block the attacker’s sightline, and change position when that cover point is no longer safe from the attacker.

I need ways for the enemy to avoid attacks in either cautious or aggressive ways.

In Half-Life 2, at the start of Route Kanal, there isn’t much of a way to avoid attacks. You have lots of health and taking damage is inevitable, so you need to rely on minimising the amount of total exposure, mainly by killing enemies as quickly as possible so they stop damaging you.

The level is mainly a single twisting route. Some bits are narrow corridors and some bits are spread out with some room to make more tactical movements and use cover. Some enemies drop into the same area you’re currently in, and you can directly engage with them. Others will spawn in on perches and ledges you can’t reach, so you need to shoot them from a distance with accurate marksmanship or flush them out with explosives.

Player can occasionally act aggressively, but is sometimes forced to be cautious and defensive

Make sure that with both weak and strong enemies, some demand aggressive behaviour while others force the player to retreat

Defensive behaviour should not always mean retreating. A player may be faced with a powerful but entrenched enemy and must cautiously advance forwards.

Can aggressive behaviour involve retreating?

How can I prevent the player from moving? Suppressive fire?

How do I code enemy AI to provide a suppressing fire effect?

How do I jolt a player who is being too defensive and refusing to move?

Grenades to flush out player

How do I code enemies to detect that the player is being defensive in a way they can’t reach, and toss a grenade appropriately to flush them out of cover?

Should the player be able to use suppressing fire against enemies? How do I code that?

Should I have morphing colliders representing attack zones? I think I should, since the collider can be consistent and register as obstacles to enemy movement

If an enemy is aiming at a faraway target, it will be easier for them to shift their aim dramatically to account for a moving target, but take longer to line up a precise shot

States for stealth

* Enemy is completely idle and unaware of a threat
* Enemy suspects there might be a threat but has not confirmed it
* Enemy knows there’s a threat but doesn’t know where they are
* Enemy is fully alerted to a threat