

Designers

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Base Game

FPS

Mechanics Log

- Mechanic 1: Aim Down Sights (ADS)
 - The player has the ability to aim the current weapon partially in to better visualize shooting the zombies. By holding the right mouse click.
 - When the player is holding an SMG, Pistol, AR, or Shotgun and the player presses the Aim input, the weapons transform lerps to the respected ADS Transform for each weapon. The FOV is also lerped from 120 to 70.
 - When the player is holding a sniper and they press the aim input, the hud will disappear while aimed and a scoping hud will appear. As well as increasing the FOV to 30 degrees
- Mechanic 2: Sprint/Dash skill
 - Sprint is set to increase players max speed to 900 as long as the button is pressed down. If released the player's max walk speed is set to 500. The key press for sprinting is the Left Shift key.
Dash Skill launches the player along the direction they are traveling (Z Axis Exempt) the launch velocity is the player's movement speed multiplied by 10. The Key press for Dash is CAP Lock. The players only get two dashes before it needs to cool down which is set to 2 seconds.
- Mechanic 3: Zombie Enemies
 - There are zombies trying to kill the player. The base zombie is a normal zombie that is slow and attacks the player. The agile zombie which looks like the base zombie but is smaller and less wide, but can move 4 times as fast. Lastly, the buff zombie is a giant zombie with increased health and

damage with a little movement speed increase compared to the base zombie.

- Mechanic 4: Weapon System

- The weapon system allows players to select a weapon loadout on a weapon loadout screen, then once the player has selected their weapon 1 and weapon 2 they can press continue and it triggers an event to initialize the weapon array in the player character.
- The player can choose between a Sniper, Assault Rifle, Shotgun, and SMG for their weapons and the player automatically gets a pistol as their 3rd weapon.
- Each weapon is a child of the base weapon blueprint where their basic functions and variables are set (Fire, Reload, Change Fire Rate, Aim, etc.)
- Players can change the fire rate of the AR and SMG between Full-Auto, Semi-Auto, and Burst. The shotgun, pistol, and sniper are all semi-auto.
- The guns do not auto reload, players need to press 'R' to initiate reloading when they run out of ammo.
- Each weapon has their own respected ammo projectile that they spawn when fired. Each of the ammo projectiles house the damage variables for each weapon.

- Mechanic 5: Power Drops

- Zombies drop power for the player to pick up at a low chance. The explosive drop explodes all the currently alive zombies. The ammunition drop maxes out the ammo for each of the player's weapons. The medkit drop adds health to the player character.

- Mechanic 6: Zombie Horde/Waves Spawner

- The player must survive countless zombies in waves. Clearing all zombies in a wave wins the round and starts the next wave. Waves that are greater than 10 are considered bonus survivor waves with increased difficulty to test the player's skill.

- Mechanic 7: Health and Death System

- The player has a certain amount of health to survive against the zombies, once out of health, the player dies and must either restart from the beginning or quit to the main menu.

Values Adjusted

- Character Movement Speed (600 → 500): To make sprinting feel like a greater increase in speed.
- Ammo Pickup Drop Rate (10% → 12%): Wasn't dropping enough and players were running out of ammo.
- Ammo Pickup Amount (60): Default value we first used and didn't feel needed to change.
- Medkit Drop Rate (10%): Default value we first used and didn't feel needed to change.
- Medkit Health Rate (10 → 20): Increased the amount of health given to help with game balancing.
- Explosive Grenade Drop Rate(5%): Default value we first used and didn't feel needed to change.
- Stun Grenade Drop Rate(5%): Default value we first used and didn't feel needed to change.
- Rifle Bullet Damage (7 → 20): Rifle felt way underpowered against the zombies when compared with the other weapons.
- Rifle Fire Rate (0.5 Seconds → 0.3): Faster fire rate since it's an automatic rifle.
- Pistol Bullet Damage (15 → 12): Felt strong for a weapon that shouldn't be.
- Pistol Fire Rate (0.5 Seconds → 0.7): Slower fire rate since it's a single shot pistol.
- SMG Fire Rate (0.5 Seconds → 0.16): Higher fire rate since it's an automatic SMG.
- Shotgun Pellet Damage (10 → 15): Needed to pack a bigger punch for a shotgun up close.
- Shotgun Fire Rate (0.5 Seconds → 1.2): Slower fire rate as it's a shotgun with high damage output per shot.
- Sniper Bullet Damage (150): Default value we first used and didn't feel needed to change.
- Sniper Fire Rate (0.5 Seconds → 2.0):
- Base Zombie Health (100): Default value we first used and didn't feel needed to change.
- Base Zombie Damage (10): Default value we first used and didn't feel needed to change.
- Base Zombie Speed (100): Default value we first used and didn't feel needed to change.
- Agile Zombie Health (75): Default value we first used and didn't feel needed to change.

- Agile Zombie Damage (5): Default value we first used and didn't feel needed to change.
- Agile Zombie Speed (400): Default value we first used and didn't feel needed to change.
- Buff Zombie Health (250): Default value we first used and didn't feel needed to change.
- Buff Zombie Damage (40): Default value we first used and didn't feel needed to change.
- Buff Zombie Speed (250): Default value we first used and didn't feel needed to change.

Which Was Better? Why?

The week 2 FPS project definitely was the better project all-around as it felt we had more time to work on the project compared to the week 1 platformer. The bugs in the FPS were a lot easier to fix and deal with compared to the platformer. We also had no problems with creating a build compared to the platformer project where some mechanics didn't work properly in the created build. Another reason why the FPS project in our opinion was better is due to the team cohesiveness. The first week most of us didn't know each other and had different styles of work ethics. This was different for week 2 because we worked together as a unit more effectively. Each of us brought a different skill or way to work to the table to create something each of us are proud of.