

Hopper

Gameplay:

Hopper is a game much like the classic Frogger. Players must weave through traffic and cross bodies of water using moving logs. Each player starts the game with five lives, lives are lost by falling into water or being hit by a vehicle. A player loses the game when they lose all of their lives or if their opponent manages to score the "Golden Fly" into their goal three times, a lily pad, giving the game a one-flag CTF kind of feel. Players can drop web traps which keep their opponent locked in the position they're in and the opponent can either wait for the web to disappear or "struggle" by moving a lot to break free. Both players start the game with 3 web each and can pick up more by standing on the "Spider" power ups which gives the player 3 more web traps. Each player can only have six traps on the ground at once (this is both a gameplay and a performance-based decision), and they do slowly decay so players must find clever places to drop them. Players can also use a projectile attack, which is their respective frog's tongue, to knockback their opponents, aggressive players can use this attack to push their opponent into traffic or into water. A player who is shooting their tongue cannot move though, so players must be smart about when they use it. Unlike web, the tongue has unlimited uses, with only a short cooldown period in between. Players can use their tongue attack to do major damage to enemy web traps that they are not currently stuck in.

Decisions:

For Hopper I had to find creative ways to distance it from the game that it was inspired from, Frogger. I think that by pitting two players against each other and giving them different attacks adds a lot of new experiences. Originally I had the players only able to win by outliving their opponent, but this felt a bit mundane and so I decided to spice it up with a one-flag CTF style objective. The tongue's reach was one of the biggest challenges in terms of balance, at first I gave it a short range, but this felt too restrictive with how fast the players can move, so I increased the length a bit more and then froze the player in place while their tongue was out to balance out the longer range. Originally the highways on both sides were only two lanes wide each. The vehicles felt significantly more dense and it made crossing the road much harder than I wanted. I eventually fixed this by expanding each highway to three lanes each and then of those three lanes one had a low vehicle spawn rate, one had a medium vehicle spawn rate, and one had a high vehicle spawn rate. Mixing up the spawn rates and adding an extra lane really gave life to the weaving in and out of traffic gameplay I was hoping for.

Feature Wishlist:

I was hoping to add more power ups than just the web traps. I would have liked to have a power up which stopped traffic in a specific lane (chosen by the player) which would cause a build-up of vehicles. Players could have used this to create choke points on the road or to just make crossing the road a bit easier. I also would have liked to add more types of water platforms (like the logs) to both mix the area up visually and to also make crossing the river a bit more interesting. If I had more time I also would have liked to get the UI to scale properly for resolutions other than 720p. Playing at other resolutions breaks the UI layout and so for the demo in class I have it restricted to 720p only.

Lessons Learned:

I've been working in Unity for close to six years now with probably 30 different projects across multiple computers. The problem is most of these projects aren't finished because I went in with too big of a scope for just one person. I would spend too much time prototyping new ideas than actually working on making a game. For this game I did my best to keep my goals realistic and, while I constantly was coming up with new things to add to the game I had to just focus on getting the basic form of the game done before I started adding these extra, non-essential ideas. Keeping my scope realistic and keeping myself restricted to the minimum features first before I went on and added more creative and time consuming elements is a lesson that I definitely needed and I'm excited to use it on my future projects.

