*Grapple Game!*

*Starring: Grapple Guy!*

A 3D speedrun platforming parkour game where you swing with a grapple beam

A game by Alec Pike

*A mannequin with no shirt

AI-generated content may be incorrect.Overview*

In *Grapple Game!* players take on the role of Grapple Guy and must leap and swing their way through a city to reach the goal in the fastest time possible. This primarily done using their Grapple Beam, which lets them latch onto the edges and corners of roofs and swing around the city like Spider-man on the PS4. Players are encouraged to replay the game and find better routes to improve their time!

*This guy!*

*Gameplay*

The objective of *Grapple Game!* is to get from the start to the goal in the shortest time possible. The player must run across rooftops, jump between buildings, and swing over the streets to reach it. If they fall to the ground at any point, they die and must restart (think “the floor is lava,” but on a citywide scale). When they reach the goal, the game is over, and they are told how much time it took them to complete it. There is only one level in this game, but players are encouraged to replay it and try to improve their time.

*Mechanics*

*Grapple Game!* includes the standard 3D platforming fare of running and jumping. This will be physics-based. Additionally, Grapple Guy is no ordinary human, so he can run faster and jump higher and further than a normal human can (specific speeds and distances TBD).

The camera is permanently offset to the player’s right (think *The Witcher*, *Skyrim*,or *Ghost of Tsushima* when not in combat; see mockup screenshot in HUD section). Movement input is relative to the camera, so pushing the “up” input will always move the player away from the camera, “down” will always move them towards it, etc.

The main mechanic of *Grapple Game!* is your Grapple Beam, a string of bluish electrical energy that you can swing around with. When you press the Grapple button (left click on a mouse, right trigger on a controller), you will fire your beam to the grapple point visually closest to the center of the screen. Once the beam attaches to the grapple point, the player effectively becomes a pendulum swinging around that point. They can still use movement inputs to adjust their trajectory. When the player releases the Grapple button, the Grapple Beam will dissipate, and the player will be left flying through the air with whatever momentum they had.

Some caveats: there must be a grapple point within a 60-degree arc in front of you (this may be narrowed), and the Grapple Beam can only extend up to 10 meters (about 33 feet). If these conditions are not met when the beam is fired, nothing will happen. Additionally, grapple points cannot be found everywhere, only on the edges of roofs (see below).

A diagram of a building roof

AI-generated content may be incorrect.

The closest grappleable point will always be highlighted onscreen with a green triangle, so you will always know which point you will attach to when you fire the beam (see the mockup screenshot in the HUD section).

You can fire the Grapple Beam in midair, in addition to on foot.

If needed, you can hold the other trigger/mouse button to zoom in and display crosshairs to aim better.

A mannequin walking on a tile floor

AI-generated content may be incorrect.*Characters*

The only character in the game is Grapple Guy, the player character, a faceless, somewhat comedic mannequin superhero who has Grapple Beam powers for some reason. He has the following animations:

* Running (see photo at bottom center)
* A mannequin in the air

  AI-generated content may be incorrect.Jumping up (see photo at top center)
* Falling
* Dying (going splat on the ground)
* A mannequin running with arms and legs

  AI-generated content may be incorrect.Shooting his Grapple Beam (will likely be a repurposed punching animation; see photo on far right)
* A mannequin with a mask

  AI-generated content may be incorrect.Swinging
* Dancing (see photo at bottom left)
* Idle (see photo on first page and mockup screenshot in HUD section)

*Levels*

Grapple Game! takes place in a generic city with a long straight-line route through it that the player races down. This path will sometimes have you running on rooftops, sometimes swinging between two rows of buildings, but always moving forward. The path will include forks, elevation changes, and enough options and choices to make finding the optimal route challenging. The reason the route is a straight line is because I want the player to see where the goal is at the beginning of the game, and then that will direct their movement, in a sense, making level design easier. This game will only have one level. Further level design details TBD.

*Menus*

The title screen has four options: “Play Game,” “Controls,” “Records,” and “Credits.” The “Controls” submenu lets you view the controls and make some adjustments (see Controls section). “Records” shows you your previous completion times, fastest first.

If you select “Play Game,” you will go to the main level screen, and after a short countdown, you can control Grapple Guy and start heading towards the goal. If you fall to the street at any point, you will die and the Game Over menu will appear with options to retry or go back to the title screen. If you make it to the goal, Grapple Guy will start dancing and the Victory menu will appear showing your time (plus a special message if this is your new personal best) and options to play again, view records, or go back to the title screen.

*HUD*

There are only three elements to the HUD:

* A timer showing how long you have been playing (because this is a speedrun game)
* A green triangle showing where you will attach if you fire your Grapple Beam (not present if there is nowhere to grapple to)
* A “GOAL ↓” indicator over the goal (may only show up at the beginning and end of the level; details TBD)

The first two of these elements can be seen in the mockup screenshot below:

A screenshot of a video game

AI-generated content may be incorrect.

*Controls*

|  |  |  |
| --- | --- | --- |
| Action | Keyboard | Controller |
| move | WASD keys | Left control stick |
| control camera | Mouse | Right control stick |
| grapple | Left mouse button | Right trigger |
| zoom in | Right mouse button | Left trigger |
| jump | Spacebar | Any face button |

There will be a few options for changing the controls:

* Invert camera vertical (on by default)
* Invert camera horizontal (off by default)
* Adjust camera vertical sensitivity/speed
* Adjust camera horizontal sensitivity/speed
* Swap aim/grapple (off by default)

*Audio*

There will definitely be sound effects for jumping and for firing the Grapple Beam. There may also be sound effects for swinging through the air, dying, the countdown at the beginning, and making menu selections.

The main BGM will be this: [Retro Groove by The\_Creative on Pixabay](https://pixabay.com/music/upbeat-retro-groove-352168/). I may use a jazz drum jam session for the title screen.

*Technical*

The target platform is Windows PCs, although, if possible, I might build Mac and Linux ports.

*Grapple Game!* will be developed using Unity 6.0 (6000.0.53f1), which is the most recent LTS version of Unity as of this writing.

This game does not require any network connection. There will not be an online leaderboard of the fastest times. The only completion times you can see are your own.

*A city skyline with many tall buildings

AI-generated content may be incorrect.Art*

The font used for the game’s logo and menus will be like the headings in this document.

The in-game city will be made up of lots of brick buildings. The game’s skybox is a nice orange twilight/dusk. A sample of what this might look like can be seen in the concept art at right (made using Grok).

For a preview of the actual assets I plan on using, click these links:

[(HDRP) NYC-like City Buildings Set (PBR)](https://assetstore.unity.com/packages/3d/environments/urban/hdrp-nyc-like-city-buildings-set-pbr-239452)

[Free HDR Skyboxes Pack](https://assetstore.unity.com/packages/2d/textures-materials/sky/free-hdr-skyboxes-pack-175525)

You may also be wondering why Grapple Guy has a Grapple Beam, a string of bluish electrical energy, instead of a physical grappling hook. The answer: because it’s easier to animate. :)

*Other Notes*

I would strongly recommend playing this game with an actual mouse, rather than a touchpad.

I will likely remove bump mapping/normal mapping and include draw distance fog to improve performance.

Elements of this game may or may not have been subconsciously inspired by Pepsiman.

This game is meant as a tech demo for a mechanic I want to include in a much larger game project down the road.