Mancopter Milestones:

April 18: Make character jump

April 18: Make character move left and right

April 18: Make character stop moving upwards when jumping (be “grounded”)

April 18: Make character not move left or right when jumping

April 19: Make character jump high and quickly, and then descend slowly

April 19: lock camera to the player character

April 19: lock the player character's movement so that its base doesn't twirl

April 19: make a rotating rotor above the base, but only when descending

April 21: Make rotor blades pivot downwards when not descending

April 21: Make straight duplicate of rotor blades that replace loose blades when descending

April 21: Have mancopter’s slowed descent controlled by its gravity, not a force

April 21: Make it so that the mancopter’s descent is automatically activated by pushing left or right

April 21: Have the copter’s blades be pushed downwards with greater force when ascending upwards

April 21: Make the copter instantly fall when pressing the down key

April 21: Have the copter’s blades be pushed upwards when being forcibly pushed downwards

April 21: Make it so that the player can alternate between forcibly pushing downwards and drifting

April 21: Make the blades’ gravity be corrected once copter’s grounded, whether pushing down or not

April 21: Add double-jump mechanic

April 24: Add control input list to HUD

April 24: Specified Mancopter’s screen aspect ratio to be 16:9

April 24: Add Temporary double jumps that do not recharge

April 24: Prevent Mancopter from doing normal jumps by holding left/right, then pressing up

April 24: Change direction Mancopter’s blades are rotating depending on the direction its going

April 24: Make mancopter blades stick more closely to rotor, and transition more slowly and smoothly from other positions

April 24: Make it so that falling without jumping activated the blades’ rotation, but delayed

April 24: Tighten groundcheck so that the entirety of the base’s bottom can be jumped from

April 26: Add rapid spin attack that makes you immediately fall to the floor (without moving) after use

April 26: Make blades shake more by reducing angular drag

April 26: Add ability to throw mans from Copter:

-Make man object that moves forward while spinning,

-And returns to its original point after either hitting something or a certain amount of time

-Make it so that the rotor throws an object when k is pressed, and the object returns to it

-Make each looseblade disappear everytime an object is thrown

-Make it so that mans are thrown in this order: 1-2-3-4-1-2-3-4-1…

-Make each corresponding looseblade reappear when the object returns

-make the thrown man, upon returning, immediately disappear (don’t use lerp)

-change the direction the man is thrown based on what direction we’re facing

May 2: Changed the movement for the rapidSpin from a Lerp to a MoveTowards

May 2: Removed code that made blades point up when falling from walking off a cliff, as it was activating randomly when jumping

May 2: Lock rotor rotation during rapidSpin so the rapid spin attack does not change rotation in mid-air

May 2: Implement a system in which a button activates a moving door

May 2: Make it so that the copter’s rotation doesn’t stop when pressed against a wall, by making the player stop moving forward when pressed against a wall, so that its groundchecks don’t accidentally overlap on the wall

May 2: Make looseblades sway a little/receive pushback when returning from a throw, by activating the motor of their hingejoint component

May 2: Tried, but decided not to apply this effect when the copter is descending in the air, didn’t look good; instead made it so that the blade instantly becomes straight

May 2: Fixed issue where blades weren’t rotating after returning (had to increase time in which the motor was enabled; shorter time = motor more likely to not work)

May 2: Make a thrown man return more quickly if a certain amount of time has elapsed

May 2: Make sure objects can’t be thrown when rapidly spinning

May 9: Make mans jiggle a little to the left or right when walking

May 9: Make it so that the direction the blades receive pushback from when a projectile returns corresponds to the direction the projectile is coming back from

May 9: Make a returning thrown object return to its corresponding blade’s location, not the mast’s location

May 9: Make thrown object flash when returning

May 9: Make it so that you cannot move left or right when rapidly descending downwards

May 9: Made it so that dead copter blades fall off of the rotor when the base is hurt by an object, and be unable to touch the player character

May 10: Fixed issue where multiple mans fall off when hit by adding canLoseMan check

May 10: Make it so that a thrown man will get killed if thrown at a harmful object

May 10: Fix it so that a killed thrown man lower’s the player’s Health, and the health script checks first to see if a blade is currently rendered or not already before not rendering it, to prevent conflicts where a man killed from being thrown throws off which man the health script must kill

May 10: Make sure that the player is briefly invincible after a thrown man is killed

May 10: Make it so that rotor blades will be individually picked off if hit while in the air, by giving them all hitboxes that will only detect objects while in the air

May 10: Make it so that blades stop getting pushed backwards when the copterbase is pressed against a wall

May 10: tweak gravity on blades to be less intensive

May 10: Tweak damaging object (that will become spikes) so that other than its damaging aspect, it functions like a wall (player stops moving when against it, player can jump from it)

May 10: Make copter spin faster the lower the copter’s health

May 10: Make a dead man spin when it falls

May 10: Create platforms that crumble

May 12: Make bomb-chucking cat

-Make it move back and forth on a platform, but never fall off an edge

-Make it recognize the player’s presence when he draws near, and stop moving

-Make it so that the player is hurt by touching the chucker

-Make it so that the chucker does not push a deadMan

-Make it so that the chucker faces the player when in range

-Make it so that the player can damage it by throwing mans at the chucker

-Make it so that the player stops vibrating when pushing against the chucker

-Make Copter stop rotating when on top of enemy, by adding groundcheck on it

-Fix issues with chucker randomly stopping

-Added rigibody to the chucker so that OnCollisionStay would work!

-Freeze the chucker’s rigidbody, so that it can’t be moved by the player

-Make it so that the chucker is destroyed by the player descending rapidly

May 12: Make it so that the copter blades’ colliders do not affect the collider of the thrown man

May 12: Make the player throw mans a little lower (so that it can more easily hit lower enemies)

May 12: Make the dead mans not pile on top of each other

May 12: Make it so that the player cannot press up and left at the same time to do a horizontal jump

May 16: Continue working on bomb chucker:

-Create bomb that instantiates next to the chucker depending on the player’s location

-Make the chucker start chucking bombs in a parabolic form

-Make the chucker chuck bombs upwards if the player is above it

-Make bombs explode and damage the player on contact

-Make an alternate version of the chucker that does not move (but randomly looks left and right before the player approaches it)

May 16: Make it so that the player can break through crumbling blocks by descending rapidly

-Make it so that the player does not get briefly stopped when going through a block or enemy

May 16: Create Checkpoint System, where the entire level reloads, but the player is at the last checkpoint they passed

May 16: Create blades that move back and forth

-Create circular object that spins and hurts the player when touched

-Create customizable child objects that the parent blade moveTowards between constantly

May 16: Create blade that pursues the player

-Make blade stay in place

-Create isTrigger box collider in front of blade that makes it move forward if the player enters

-Create child object of where blade must moveTowards (and in this case, stop)

May 16: Make player jump a little higher!

May 16: Springs that shoot the player way up

-make object with ground layer and “spring” tag

-Attach a spring object so that it descends slightly when the player lands on it

-Make the player “stick” to the spring when it touches it

-make the player’s jump strength significantly increase when it is touching it (800 instead of 440?)

May 18: Create pufferfish enemy

-create version that floats on a set path (functions like sawblade)

-Create playercheck on top of the pufferfish

-Make the player become a child of the pufferfish upon going on top, so that it moves with it

-Make the player stop trying to move/vibrating when it gets pushed in front of the pufferfish

-Create version that stays in place

May 18: Create enemies that create hazardous terrain with their attacks:

-Make a base enemy that stays in one place (based off of stationary bomb chucker

-Make it so that the enemy can be killed

-Make them chuck a bomb that instantiates a very flat harmful object upon touching the ground, or that hurts the player if touched

-Make the very flat object disappear after about 10 seconds

-Make it so that the thrower doesn’t throw another bomb until the original is gone

-Make a version that shoots them straight (using an empty object to influence the direction that the bomb is throw

-Make it so that you can’t move the terrain corrupters (remove rigidbody)

May 18: Look into the differences between Update and FixedUpdate

-Alter all scripts so that any code that uses Time.deltatime or influences the movement of a rigidbody (addForce, Movetowards, etc.) is done within the FixedUpdate function.

May 18: Tweak mancopter speeds so that it moves faster to accommodate for FixedUpdate slowness

-fix stiffness on pressing jump when on the ground

-fix stiffness on pressing jump when in the air

-fix stiffness on pressing left or right when in the air

May 19: Tweak mancopter speeds so that it works better to accommodate for FixedUpdate slowness:

-Make rapid spin respond a little faster

-Make moving left and right faster

-Make the copter blades move into place a little quicker when descending

-Make the sawblades move a little faster (proportional to the player’s movement)

-make the blades when descending rotate a little faster

-faster rapid descent downwards (use transform.position, not gravity)

-make a thrown man move a little faster

-make a thrown man return a little faster

-Make the bomb chucker chuck bombs a little faster

May 19: make the enemy that shoots its corruptor bomb straight instantiate its terrain more correctly

May 19: Make the spring shoot the copter up even higher if the player rapidly descends downwards on it

May 19: Make the spring’s gravity increase if the player rapidly descends on the spring

May 19: Make the player’s jumpForce be altered in the CopterBasicMovements script when jumping from a spring (not the spring’s Script)

May 19: Make the camera shake when I hit it after using downwards push

May 19: investigate odd activity when in a triggerable sawblade’s trigger area (because it is “ground”)

May 23: Create NPC Mancopters that jump up and down, don’t float

-Create Mancopter base without code, rigidbody on blades and several unnecessary components

-Make the mancopter jump up and down, with customizeable jump strength and wait time

-Make it so that the player can stand on top of the mancopter without issue

-Make the player’s velocity be reset before a jump, so that it can jump off of the NPC

-Make the player a child of the NPC on collision, to stop it from weighing down the NPC

-Affect the blades’ gravity so the blades sway correctly when jumping up and down

-prevent player from continuing to push against the NPC when next to it (discrete)

-Make it unable to jump when the player is next to it

-Separate the block the player rests on from the copter base

-Make it not digger deeper into the ground with each jump by recording its original position

May 25: Make the terrainCorruptors be of the ground layer, so that the player can land on them

May 25: Create version of NPC Mancopter that jumps up and down, BUT floats on descent

-Create copy of previous model

-keep scripts that don’t need to be altered

-in the base script, when descending, manipulate gravityscale

-attach reference blades

-In the looseblade script, have them move into reference blades’ place when descending

-and then “release” when not descending

-in the rotor script, have the rotor rotate when descending

-Make sure the groundcheck for the player is still straight and stable

May 25: Make the previous two objects not immediately jump off the ground if their descent is interrupted by the player (have the timer until their next jump begin the moment they touch the ground

May 25: Make the original jumping training mancopter’s blades have less angular drag, and make them droop downwards when the player is underneath it

July 8:

-Alter the bombs thrown by the parabolic terrain corrupter so that they instantiate a corrupted terrain closer to the ground

-Make the explosions of the bomb chuckers disappear more quickly

-Create a new video documenting the changes to Mancopter since the last video

-Make it so that the terrain corrupters don’t immediately start chucking another bomb after hitting the player with one

-comment out the rapid spin mechanic

-Fix issue where the terrain corruptors’ terrain doesn’t spawn in the right area

(possible fix: make it so that a terrain checks to see if it is touching a ground object, and if so, it automatically relocates its Y value to become the ground’s Y value + half the ground’s height (so that it is automatically relocated on top of the ground, no matter the ground’s size)

(need to make the ground a constrained rigidbody for this to work)

July 21:

-Make it so that the player always has a double jump ability

-Make camera fixed in one position, rather than following the player

-adjust how much the player makes the world shake by ground pounding

-Determine room size (by adjusting camera size)

-and number of blocks in a room (22)

-Create lava that hurts the player upon being touched

-Code blocks so that they all emerge from the lava in intervals (every 5 seconds, and blocks remain for about 6)

-Modify the random number generator so that blocks are more likely to be further away from a previous selection

July 22:

-Code points that player gets from touching the ground

-Code items that appear in the air that permanently boost the player’s score by 10% when collected, that appear every 30 seconds

-Create timer script that serves to let all other time-based objects in the game know when they should begin

-make it so that the player earns plus +1 pps every time they survive one minute

-Make the points earned appear at the top of the screen

-shorten points so that it only displays whole numbers

-Create a fire spout that damages the player if they touch it, that appears in the center of the room (and on the left and right sides

-fix issue where copter blades aren’t being hurt by harmful objects

-Must attach rigidbody to pufferfish

-Must attach rigidbody to fire spouts

-Make time.time reset when the player dies – use “time.timesincelevelload”

-issue where the blades can’t pick up powerups

-Make pufferfish that can move quickly across the screen

-shrink pufferfish

-create new code that makes it only go from one side to the other

-create 10 different variations

-Make it ignore the colliders of the wall

-Create control object that randomly chooses between each of the 8 pufferfish

-create objects outside of playing field that instantly teleport player back in

July 23:

-Code stationary terrain corruptors to instantiate in the corner or top middle of the room, and create “cloud-like” layer of poison that rests on top of where blocks might appear

-create 3 variations

-alter poison to stop when it’s above where the blocks rise up from

-fatten up poison

-create array that controls their spawnings

-make them disappear after 25 seconds

-Code stationary terrain corruptors to require 3 hits to kill

-Code bomb chuckers to instantiate on top of rising platforms, and begin chucking bombs at the player the moment the platform rises to the top

-shrink bombchucker

-add piece in block code that makes the bombchucker instantiate on top of it

-alter the range at which bombs are chucked

-make it so that touching the bomb chucker no longer hurts you

-make the bomb it shoots upwards less fast, and capable of harming itself

-make the bomb chucker disappear when the block it’s on lowers

-make bombs explode higher up

-make the player a child of it when it lands on it

-Code the bomb chuckers to require 2 hits to kill

-Code the bomb chuckers to produce a “spring” like effect when ground-pounded, so that the player must repeatedly do so to kill them

-Make it so that you automatically fall through the bomb chucker on the ground-pound hit that defeats it (similar to the crumbling ground) (had to make it deactivate its ground layer element)

-Make its own bombs capable of harming itself

-Make sure pufferfish isn’t impeded by terrain corruptors

-Make the pufferfish able to be destroyed by harmfulobjects too

-Give terrain corruptors spring-like powers (same as bomb chucker)

-The bomb chucker and terrain corruptor earn the player 100 points when killed

-make thrownman able to touch harmless Enemies and the point multiplier

-Remove rigidbody from bomb chuckers

-add rigidbodies to bombs and corrupted terrains and explosions (to hurt the other enemies)

-make thrown mans spin a little faster in mid-air

-Code certain blocks to emerge with spikes

-Code buttons to randomly appear on the wall when a spiked block appears

-make spikes smaller

-write code that makes them randomly appear

-make the spikes summon a button somewhere around the pit (create button array)

-make the buttons isTrigger

-make sure that there can only be one spike at a time

-make player a child of the spike

-remove spike’s rigidbody

-code it so that the player will receive more points when stepping on this block

-make spikes disappear after descending into the lava

-Code 8 lasers on all 4 parts of the room that will randomly charge, then shoot a laser, and will increase in speed as the game progresses

-create laser array controlling everything

-create “foreshadowing laser” (without harmfulobject tag)

-create “real laser” (with harmfulobject tag)

-Optimize code so that the decision between the three different perils on the blocks is chosen equally, and previous weirdness is streamlined

August 20:

-Code red blocks that will explode upon being landed on

-create column of harmful fire

-create blank object that appears on the block at the beginning, that the fire instantiates from

-Come up with Company Name - Melancophony

-Design the basic sprite for the Man in the cockpit

-make basic sprite

-enlarge eyes

-color in parts

-make eyes looking upward (jumping) sprite

-make eyes looking downward (descending down rapidly) sprite

-make eyes hurt (man gets killed) sprite

-Design Title/splash screen (must create 16:9 aspect resolution)

Remaining Tasks:

-Completely design stage in which all of these mechanics are introduced slowly – begins like a normal stage, but:

-the fire spurt is introduced after 30 seconds, remains for 30 seconds, and has a 50% chance of returning every 30 seconds thereafter

-The pufferfish is introduced after 50 seconds, and has a 15% chance of appearing every 10 seconds thereafter, and after 200 seconds they have a 20% chance of appearing every 10 seconds

-the terrain corruptor is introduced after 70 seconds, and has a 45% chance of appearing every 30 seconds thereafter, and a 60% chance of appearing after 280 seconds

-the bomb chucker is introduced after 90 seconds, and has a 15% chance of returning every time a new block is summoned, and after 360 seconds has a 20% chance of returning (cannot appear at the same time as the spike blocks or exploding block)

-the spike blocks + buttons is introduced after 110 seconds, and has a 15% chance of returning every time a new block is summoned, and after 440 seconds has a 20% chance of returning (cannot appear at the same time as the bomb chucker or exploding block). These blocks give the player 2x as much pps when stepped on.

-the lasers appear after 160 seconds, and have a 15% chance of appearing every 10 seconds thereafter, and 20% chance of appearing after 500 seconds

-the exploding block is introduced after 180 seconds, and has a 15% chance of returning every time a new block is summoned thereafter, and after 330 seconds has a 20% chance of returning (cannot appear at the same time as the spike blocks or bomb chucker)

-Items? (bonus if you land on pufferfish) (blades protected while in mid-air) (ninja stars) (gas mask) (bullet-proof vest) (bonus if you destroy a terrain corruptor with a ground pound) (you gain points from gas, but slightly less points from touching the ground) (platforms stay for slightly longer

(should add dev tools that allow you to see all items you currently have, and unlock them) (bonus if you destroy a bomb chucker with it’s own bomb) (explosions are bigger, but something else is bigger) (“pacifist” = gain points every time one enemy type destroys another) (automatically summon a pufferfish) (orbital nuke: summon a laser)

-Create everything’s sprites

-Add in background music

-Add in sound effects

-Design ending screen in which the player’s score it displayed

-Design Title/splash screen

-Design controls screen

-Design personal leaderboards screen

-Design credits screen (viewable from death screen)

-Create default icon (so it isn’t just the unity game icon)

-create pause screen

-IF I HAVE TIME: See if I can code it so that the game has an online leaderboard

Trauma team