TO-DO:

* Make contact shots also increase the damage of collided bullets by 50%.
* The current familiars should be renamed to gunners or something, to make it clear that they’re distinct from the other familiars to be added later.
* Gunners have, by default, lowish bullet range.
* Make bullets actually have more reasonable range (probably like 1/3 of the camera’s width or some such)

So at the moment I kind of see it as a cross between 20 minutes till dawn (top-down shooter, item-based progression), Risk of Rain (level progression, item-based progression, items stack indefinitely), and Pizza Tower (the time limit, that once expires, summons a super dangerous enemy that can easily kill you).

Contrasting archetypes:

* High-damage, low fire rate / low-damage, high fire rate.
* Lots of random procs / few random procs.

Regarding visual artstyle, I aim for designs to all be fairly simple. Colour palette should be fairly simple and allow for vibrant colours but also not too visually disruptive. Not really low-poly as such, but obviously keep polys to a minimum as to keep performance at a reasonable level. Overall it should be models, with some sprites used just for things like the dark arts swing, status effects, etc.

Enemy designs should be cool but I feel like some kinda disturbing/weird/horror-ish designs for the aliens could go hard (and link somewhat to a sense of comedy with this dumbass caveman destroying all these horrors beyond my comprehension)

For sound design, I want things to have a kinda consistent, synthy vibe, kinda like what Spelunky does, but less of a focus on retro sorta sounds. So I reckon as many SFX as possible should be made with the hardware synths, with plugin processing as needed. This links to music since a lot of the SFX will be quite tonal, so I think picking a key signature, and then switching between modes for each track (i.e. minor for one, dorian for another, mixolodian for another) will be a cool idea that will help SFX not sound dissonant with the music.

Music should be energetic but not necessarily ‘dumb’, I’m feeling kinda somewhere between RoR2 and Little Guys.

For obstacles:

Certain enemies should be able to fly over obstacles.

Obstacle types:

* Normal rock. Is a normal rock.
* Pits – invulnerable obstacle, can dodge over it but falling down deals damage. Enemies just pathfind around it.
* TNT – explodes on destruction, destroying nearby rocks, enemies, and player.
* Item rock – drops an item when destroyed.
* Power rock – gives an all stats up when destroyed.
* XP rock – drops a number of XP orbs when destroyed.
* Supercharge rock – gives a firerate and damage up when standing near it.
* Regen rock – over time, replaces rocks that get destroyed within a radius and has a better chance of spawning alternate rock types.
* Laser spawner – essentially a segmentation plant-esque laser. Probably only hits player.
* Fan. Instakills enemies and player by choppin em to bits. Alternates between being on and off.
* Other power rock – gives a damage and shot speed up when you stand in its radius.

Areas:

* Snowy area. Has small ice lake areas that reduce your friction but break if an explosion happens on them, which should be lethal for player and enemies alike.
* Blood/bones wasteland area. Has these pustule growth things you can break that deal a strong DOT to anything in their area.
* Factory. Alt area, very dangerous, has unique enemies.

**Flowchart for adding new items:**

* Make item/all related objects/item sprite (obviously).
* Add a method (public void Undo()) within the item that undos any stat changes associated with the item. Needed for stuff like damage ups (including converter), better dodge, etc., and any item that adds a new thing to a delegate needs to have that addition removed.
* Add a new entry to the ITEMLIST enum.
* Add a new case to the itemHolder switch statement so getting multiple of the item does the correct thing (i.e. incrementing an existing script’s instances vs adding a new version of the script).
* Add a new thing in the itemDescriptions script.

Special item types:

So each item pedestal has a 1/20 chance to be a special type. Once an item has been selected to be special, it then determines which of the following it will be (randomised, with weightings for each). Special pedestals only start spawning after the 5th wave.

* 0. The normal cursed items that are in the game. Weight = 200
* 1. Receive 1 of this item every time you pick up an item in future, but you lose 2 random items every time you take damage. Weight = 200
* 2. Receive 3 of the item, but if you take damage within the next 2 rounds you lose 5 random items. Weight = 200
* 3. Gives enemies 1 of the item, but every time an enemy dies within the next 2 rounds there’s a 5% chance they drop one of the item. After 2 rounds the enemies lose this item. Weight = 100
* 4. Receive 5 of the item, but you cannot heal ever again. Weight = 100
* 5. Receive 5 of the item, but if you take damage within the next 3 rounds you die instantly. Weight = 100
* 6. Receive 3 of the item. Weight = 40
* 7. Receive 10 of the item. Weight = 10

Enemies:

* Summons a big vertical wall that moves across the screen can’t be dodged through. Gaps in the wall open and close on a timer (i.e. with consistent timing) and you have to get through via them. They only summon the walls once every 15 seconds or so but can do so repeatedly when they’re alive.
* Fires a lazer, but only does so in the cardinal (up/down/left/right) directions and when you could get hit by it.
* Fires lightning at you. Just like an infinite range, infinitely piercing shot.
* Fires curving lazer, kinda like what the Colossus final bosses from Towerclimb do.
* Spawns a circle on your position and one second or so later, deals damage to that area.
* Runs towards you very quickly, and drains your HP whenever it’s close to you, but gives this HP back upon death.
* Enemy that doesn’t attack or deal damage (but still walks towards you). Anything (i.e. you AND enemies) get a fire rate and damage up when standing in a certain radius of it.

Bosses:

* Multitooth tiger. Like a sabretooth (boberman’s natural enemy) but can switch between weapons. Weapons are sabres (wow), a gun, and some other weapon. After 2 attacks, it cycles to another weapon, does 2 attacks, etc. each weapon should have 3 or so different moves associated with it.
* Placeholder boss – just moves around slowly and cycles through attacks:
  + Stops moving and shoots a lazer with 5x bouncing. This shot is repeated thrice, retargeting each time.
  + Shoots 12 bullets around it, repeating 5 times in quick succession. This is either done, changing the angle at which it shoots by ½ of the gap between bullets (i.e. in the spaces that were free in the last shot, the bullets get shot directly in the middle of these spaces) or by slightly altering the angle by 2/5 of the aforementioned angle each shot.
  + Shoots an arc of bullets, starting at being 180 degrees apart, but then the shotanglecoeff decreases until it’s 0. The main angle it’s firing at does not change during this time.
  + Charges towards you (not changing direction while doing this, just targeting you at the start) while holding a saw in front of it. Deals a lot of damage and inflicts bleeding.

Elite types:

* Hmm. That’s a tough one. Hmmm. Picks up and throws other enemies at you.
* Can absorb your items temporarily, gives them back when it dies.
* Buffs up nearby enemies.
* Places sentry turrets as it moves.
* Telefrags you (replaces current telefrag enemy).
* Has 3 random items.
* Explodes on death, dealing damage to everything around it.

Shit to do:

* Add armour, essentially damage reduction for various damage sources. This includes physical (damage from bullets), blast (damage from explosions), status (damage from status effects). There’s damage subtraction and damage division for each kind.

Passive items:

* Get 2 random gunners.
* Gunner that has infinite sight range (as long as there’s no obstruction blocking its view of an enemy) and lowish fire rate. Fires a fast-moving shot with infinite range that pierces enemies and applies the knockback script. All familiars have higher bullet range and higher shot speed.
* 5% chance on hit to disable a random script from an enemy for 5 seconds.
* On death, enemies split into 4 (+2 per stack) bullets that deal 25% (+25% per stack) of your bullet damage and have all your bullet effects.
* Picking up XP damages every enemy for 5HP per stack.
* 50% chance to be gifted enough XP for the next level when you level. i.e. if you’re at level 3 and level up to level 4, there’s then a 25% chance you’re given enough XP to be taken up to level 5, and then there’s another 25% you’ll be taken up to level 6. Stacks increase the proc chance logarithmically (i.e. the chance increases by a decreasing rate). The proc can repeat up to 3 times off a ‘natural level up’ (+3 times per stack).
* Upon killing an enemy, 1/round number chance to summon a familiar with 50 HP that runs around and shoots at enemies.
* 25% chance to freeze enemies on hit. Frozen enemies can’t move for 1.5 seconds and take 1.5x damage. Stacks increase duration and damage increase.
* Status effects (bleed, fire, freeze) are 33% weaker, but they have a 50% chance to spread to nearby enemies when effected enemies die. Stacks increase radius and chance to spread.
* Once per second, enemies in a certain radius around you experience your bullet effects (i.e. it rolls to proc bleed, fire, freeze and ATGs once per second, but does no damage.) Stacks increase radius and decrease cooldown timer.
* Shot speed, range, and movement speed up.
* Hitting an enemy in close range gives you 0.5 seconds of invincibility. Range increases with stacks.
* Temporarily increase firerate upon critting. Bonus increases with stacks.
* Crits spawn an XP orb. More orbs spawn with stacks.
* Crits heal 5 HP. Heals more with stacks.
* Increase natural crit chance by 10%. Stacks as you’d expect.
* Crits inflict a random status effect on enemies.
* Every frame you're not firing, get a temporary damage and firerate up. Stacks increase duration of effect.
* Increase firerate and range by 50% below 50 HP. Stacks increase bonus.
* Pain probability - Taking damage permanently increases proc coefficient of all sources by 0.05x of the damage you took. Increase increases by 0.05x per stack.
* Upon being taken to below 50 HP, enter a 3-second phase where you take half damage, and hitting an enemy within a close enough range heals you for 15 HP. Stacks increase the length of the period and damage reduction.
* Bigger bullets (also increases melee weapon size)
* Killing an enemy deals damage to all enemies in a radius. Radius increases with stacks.
* Chance upon killing an enemy to spawn an axe that flies around for a few seconds, homing in on and dealing damage to enemies. Stacks increase time it’s active.
* An extra life. Yay.
* Every lethal hit, don’t die, but reduce max HP by 30 and get set to 1 HP. After each trigger, halves the max length of iFrames and decreases proc coefficient. Stacks decrease the HP, iframe and proc coefficient reduction debuff (each one makes the effect 2/3 as significant).
* After taking lethal damage, you don’t die, but enter a ghostly state where you have 1HP. Return to your normal state after picking up an item. Only works one time per stack.
* If you have under 100 max HP, each kill gives you +1 max HP.
* After taking what would be a lethal hit, the next item you pick up gets applied 4 times per stack.
* Double your health but remove the first item you picked up.
* Locks your max HP to what it currently is. Fire rate decreased by 3, shot speed increased by 3, and base damage increased by 10.
* Damage you take is divided by 4, but occurs 3 times over the course of the next few seconds.
* Every 5th shot leaves a trail of short-lasting wapant creep on the floor. Size of creep increases with stacks.
* 10% chance for bullets to leave a trail of bullets behind them. These bullets have high range, slow movespeed and random movement direction AND can collide with each other (but don’t die on hit). They deal 0.5x damage (+0.5x per stack) of your normal bullet damage and copy all bullet effects.
* Fire delay -8, bullets move in a zigzag pattern.
* Shoots an additional bullet behind you.
* Chance for bullets to deal heavy knockback to enemies. Enemies effected by this deal damage to enemies they hit based on how fast they’re moving. CHANGES BULLET TO A FIST
* After killing 5 enemies in a certain window of time, gain 1.5x movement speed and 2x damage for 5 seconds.
* After taking damage, deal damage to enemies to regain health (like Dead Cells rally). Speed at which rally decays decreases with stacks.
* Your bullets leave creep on the ground.
* Bullets get a random bullet effect. Will have to make tags for bullet effect items. Stacks give extra effects.
* An orbital that, upon getting hit, fires a missile at the responsible enemy.
* Obstacles have a 50% chance to drop a goody when they are destroyed. Goodies include heals (40% chance), XP (5 – 10 orbs, 40% chance), or an item (20% chance). Stacks shift the weight towards dropping items.
* Your bullets deal +4x damage to obstacles.
* When obstacles are destroyed, they shoot out 10 bullets that deal your damage stat. Damage is multiplied with stacks.
* You are immune to explosions, makes all explosions +100% larger per stack.
* 20% chance for shooting a rock causes it to be activated; the next bullet you shoot that lands far enough away causes activated rocks to be launched towards the location, dealing 150 (+150 per stack) damage to enemies.
* Higher chance for special rocks to spawn.
* Obstacles have a 50% chance to regenerate into a special obstacle type upon being destroyed. Chance increases logarithmically.
* Your first hit (+ 1 extra hit per stack) on an enemy is a guaranteed crit. Crit damage multiplier -50%.
* Every time an enemy takes damage they take +5 damage per stack from damage sources, i.e. if a bullet hits them and deals 50 damage, next hit will be 55, then 60, etc., works for DOTs and the like. Caps at +25 damage per stack.
* Every 2 seconds when firing, you shoot a lazer out that copies all your bullet effects and deals 3x damage. Stacks give you extra lazers that fire out around you.
* Every shot you shoot that DOESN’T proc a random effect gives you +10% damage, up to a maximum of +100%. Random procs reset this. Stacks increase the buff received and increase the bonus limit. Decreases your bullets’ proc coefficient by 0.5.
* On hit, your bullets inflict a status effect that stacks (does not decay over time). When your bullets do a random proc event, a black hole is created that sucks in enemies and deals damage to them. The damage, size and duration of this black hole increases exponentially with the number of stacks the enemy had. Decreases proc coefficient by 0.5. Stacks add an extra stack of the status on hit.
* Shots that don’t proc a random effect heal you for 1 HP, +1 HP per stack.
* Enemies you touch take 2x your damage.
* 20% chance to inflict a random status effect on an enemy.
* Receive an increase to your fire rate and move speed over time, resets at the start of each level. Fire rate doubles every 3 minutes, and move speed increases by 50% every 3 minutes.
* Receive an increase to your proc chance over time, resets at the start of each level. Proc chance quadruples every 3 minutes.
* Crits add 0.5 seconds to the timer.
* Defeating a wave adds 5 seconds to the timer.
* After the timer runs out, your attacks heal 5 HP.
* After the timer runs out, receive 4x HP.
* Items collected after the timer runs out give you 4 of the item you picked.
* If caught by Pizza Face, you get locked to 1 max HP for the rest of the run, but receive 4x items.
* Receive a huge damage and firerate buff if close to Pizza Face – the closer you are to him, the higher the buff. Maximum of 3x fire rate and damage when near him.
* 50% of any temporary damage, fire rate, shot speed and whatever other buffs get added to your actual stats at the end of each level.
* You are 1/3 smaller, and get +something move speed.
* Pizza Face takes damage, and has something like 1000 health. If you defeat him you are teleported to the next level, get 2x items for the rest of the run, but shortens the level timer by 25%. Works 1 time per stack.
* Receive +1 permanent damage and HP up for every 5 seconds you stick around when the timer runs out.
* The time you had left over from the last level gets carried over to the next level. Note that this means if the timer runs out, you have less time on the next stage.
* Familiar that walks around randomly and eats any enemy that it touches. After eating 3 enemies, it spits an arc of poison gas that lingers for 5 (+10 per stack) seconds, poisoning enemies every second that they stand in it.
* Familiar that bounces around like the DVD logo. Every enemy bullet that hits it causes it to shoot 8 bullets around it that deal 25 damage. Deals 10 damage per tick. Stacks summon extra ones.
* Familiar that targets an enemy, picks it up, and throws it at enemies when it detects there’s a cluster, applying the knockback script we all know and love.
* Enemy holding an electric pylon thing that zaps enemies (and itself) in a radius every 15 seconds, for 5 seconds. This deals no damage but stuns enemies and increases the damage they take by 50%. It only does the zap when you’re out of range, but you can walk into the range and get yourself zapped. Stacks increase the zap duration.
* Familiar that follows you closely, doing a knockback that recharges after 30 seconds when enemies or bullets get too close. Stacks add extra charges (i.e. can block twice two seconds apart, both charges then take 30 seconds to recharge).
* Big bus familiar. Like the charging enemy, but does not stop charging when it hits an enemy, and the knockback amount is enough to instakill most enemies. It hits you, but only targets enemies when they’re not in the vector such that the bus would hit you, and it brakes when you’re in front of it (such that it would deal less damage on impact, and When it hits a wall it breaks down. Gets fixed after 10 seconds or so. Stacks increase the number of times it goes before it breaks down.
* Familiars move faster and have 25% shorter cooldown times.
* Familiars heal you for 1 HP per second when they’re close to you.
* Familiars do an effect similar to that charged cord in Isaac.
* Familiars aim towards your mouse pointer. Increases familiars’ range.
* Familiars have a 25% chance to spawn a clone of themselves upon killing an enemy. The clone lives for 30 seconds. This ability has a 45 second cooldown for each familiar, but clones can clone themselves. Stacks increase the chance it happens.
* Spawns a soccer ball on the map. When close to the ball your fire button causes you to kick the ball in the direction vector from you to the ball (shows this vector when you’re near it). The ball flies forward, giving enemies it hits the knock script and bouncing off walls and the like. Using your dodge ability, at least 10 seconds after you last kicked it, teleports it back to you. Stacks increase the velocity at which you kick it.
* Increase your proc coefficient by 0.2 (+0.2 per stack) every round.
* Receive two copies of the next item you pick up.

Alt RMBs:

* Parry – spawns a hitbox directly in front of the player, and if any bullets or enemies are in the hitbox, deals 75 damage to nearby enemies and deletes all nearby enemy projectiles. Successful parries make you invincible and get guaranteed crits for 1 second.

Weapons:

* Big ball thing: Low fire rate, low shot speed, but 3x damage. Infinitely pierces enemies. Bounces once by default.
* Baseball bat: Decent fire rate (probably a bit faster than the normie pistol), normal damage, and intrinsically knocks bullets back like how contact shots do (but without the damage bonus).
* Whip: Decent range, lower damage, higher fire rate. Destroys bullets as all melee does.

Active items:

* 10 second cooldown, charms enemy nearest to your mouse cursor.
* 20 second cooldown, deal +50% damage but take +30% damage.
* 60 second cooldown, summon a Trin familiar for 20 seconds that runs around, shooting and stabbing enemies. During this time, if you walk into him you pick him up and can throw him at enemies.

Ideas that are longer-term:

I like the idea of enemies having a tiny chance to drop a card (tarot card, maybe?), and from then on every game you play it draws 3 of the cards you’ve collected and you can choose one that adds a little spice to the run. If a card drops during a run you can choose to activate it then and there as well. I think they should be net positive but give some interesting downside. Cards should also have a weight assigned to them so some are less likely to spawn than others, which could make for some fun when you’re offered a very rare card. A wild card that has a randomised effect would also be fun.

At the end of each run, the total xp you got can be spent in a little store to unlock permanent upgrades, like more HP drops and 20 minute till dawn-esque rune upgrades. Every 5 upgrades you unlock gets you a new weapon (should be in a set order, i.e. you start with the pistol, after 5 upgrades you get a shotgun, a further 5 gets you another thing, etc.). Having a little skill tree could also be fun and lead to some pog moments when you unlock the ‘omega upgrades’.

The structure of the game should be kinda RoR-esque, i.e. you start in one area, then go to another, then to another, with the last thing you do in each area be fighting a miniboss. Maybe 5-10 waves per area would be funny. Possibly a lil slay the spire-esque route progression could be fun. Areas don’t need to be unique, but could be kinda randomly generated, like it generates a list of 5 enemy types to use, a particular sprite sheet to use, a particular palette swap setting thing, and chooses between one of the maps.

I love that sense that I used to get from the old Star Wars DS games of there being secret doors and the like I could see were there but didn’t know how to access – this could be very fun to recreate, with very rare locked red doors in maps that can only be unlocked with a certain, very lategame key item meta unlock, that are, until that point, very mysterious. Obviously there would need to be something to go behind them in order for that to not be a scam – they could be stuff like unique cards, a new item added to the pool, etc.