Hey, welcome to the hilarious Boberman dev document.

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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).

To-do list

## Bugfixes

## Important

## Less important

* Kinda following on from that, I think it would make sense for all bullets the player shoots to inheret their effects. I think the only case of this not occurring atm is with the dagger throw, but yeah, any thing like this in the future should inheret your effects. As such, I think damage ups should work differently; instead of there being a bunch of damage mults/adds, if everything’s just a damage mult that would work better and be simpler, and in the case of dagger throw and the like, wouldn’t just make them scale ridiculously with base damage increases.
* Potential idea: In a script on each living object, should have a method specifically for calculating dice rolls. This way we don't have to infinitely have the same code for rolling on hits and the like, and stuff like applying bonus bleed stacks if the chance is high enough can be ubiquitised between items. Actually maybe what it should do is be like one of those weird return int things if ya know what I mean, where you input the parameters and it gives you a number out representing the number of procs that resulted. I think that's the way.

# Obstacles

Certain enemies should be able to fly over obstacles.

Obstacle types:

* Pits – invulnerable obstacle, can dodge over it but falling down deals damage. Enemies just pathfind around it.
* 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

I think there should be alt areas, off the main path, that are slightly smaller, more difficult but have unique rewards, kinda like the prisoners quarters in Dead Cells. They should also have unique enemies.

* 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.
* Volcano. Dark rock/orange kinda vibe, enemies in this area should be immune to lava/fire. There are various lava fissues that occasionally spew fireballs (maybe whenever something goes over them?), setting fire to everything they touch. Define fire as a DOT that has a long duration, new procs refreshing the timer (but does not stack). Standing in the lava deals a lot of damage and procs fire. Also there are little lava streams near the edges of the map, with the edges of the map just being a big lava pool that you obviously can’t cross (cos then you’d be OOB). Lava should deal a lot of armour damage.
* Energy forest. Lush reddish forest powered by electric blue soup. Some trees have eyes in em or sth, and shoot out blue lightning when they see you. This does the normal shock effect.

## Alt areas

* Factory. Alt area, very dangerous. Enemies killed there drop scrap metal, which you can then place in one of a few hoppers around the map. If enough scrap is placed in a hopper, it produces an item.
* Rave – a big, sprawling nightclub. Alt area, all the enemies perform their actions on beat. Bullets you shoot on beat can also get a 50% damage buff or something. There should be a bar there, that at some point you can choose a beverage (or drug) from, which gives you a strong buff but one downside, like the RoR2 lunar items.

# 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 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.

## 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.
* Dodges around every 5 seconds, damaging players it passes through for half of its damage. Pretty much JUST to justify enemies being able to use dodge-based items.
* Gains an item every 10 seconds.

# Statuses

* Bleed (implemented): weaker DOT that stacks, with new stacks refreshing timer.
* Poison (implemented): DOT with which each stack has its own damage and timer. New stacks do not refresh timer.
* Electric link (implemented): non-stacking, enemies with this status take 10 damage when another enemy is hit.
* Slow (implemented): non-stacking slow, timer reset when new stacks applied.
* Electric shock: stacking, stuns enemies. A large number of stacks are applied when this is dealt, and the number of stacks decays over time. When the stacks hits 100, the enemy is instantly killed.
* Freeze: non-stacking, stuns enemies, new stacks refresh timer. While frozen, victims take 1.5x damage.
* Fire: non-stacking, new stacks refresh timer, powerful DOT.
* Vunerable: stacking, gets removed after 5 seconds of a new stack not being added. Enemies take +20% more damage per stack.

# Items

**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.
* If item stacks by increasing instances value, add the following method:

void IncreaseInstances(string name)

{

if (name == this.GetType().ToString())

{

instances++;

}

}

* Add a new entry to the ITEMLIST enum.
* Add a new thing in the itemDescriptions script.
* BY THE WAY, for any items that trigger on-deaths, remember that there are the player’s item on deaths (call lastDamageSource.SendMessage("ApplyItemOnDeaths", gameObject);) but ALSO the enemy’s inherent on deaths (ApplyOwnOnDeaths()), so items that trigger on deaths should call both.

## Passive items

* Gain (20 + 20 / instances) energy resist and bonus fire rate (half that of the fire rate up per stack).
* Gain (15 + 15 / instances) physical resist and bonus HP (probably +15 per stack).
* Gain 100 chemical resist (i.e. creep and the like), and bonus status effect buff (+100% more powerful, per stack).
* Gain 100 explosion resist, makes all explosions +100% larger per stack.
* Get 2 random gunners.
* Gunner that has infinite sight range (as long as there’s no obstruction blocking its view of an enemy, and the enemy is actually onscreen) 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).
* 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.
* 20% chance when an enemy dies to spawn a landmine. The mine deals 100 max damage (+50 per stack) and the range increases with stacks.
* 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 increased 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.
* 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.
* 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 and inhere your effects. Damage is multiplied with stacks.
* 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 like bleed. When your bullets do a random proc event (or after a couple of seconds of not being hit), 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. Maybe the status also activates on death?
* Shots that don’t proc a random effect heal you for 1 HP, +1 HP per stack.
* Enemies you touch take 2x your damage.
* 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.
* 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.
* 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.
* Familiar 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.
* Upon killing an enemy, 1/round number chance to summon a familiar with 50 HP that runs around and shoots at enemies, applying enemy on-kills. This inherets all familiar bonuses.
* Killing an enemy summons a ghost of it. Ghosts deal 50% of the damage they used to, and they die after 10 seconds, applying enemy on-kills. Inherets all familiar bonuses.
* 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. (Could maybe make it deal more damage/explosive damage the more times you kick it within a certain timeframe to encourage you to always be chasing after the ball, and if you manage to kick it off enemies enough times quickly it just causes a big nuclear explosion) <- mesh idea that goes hard
* Funny epic random item:
  + When you pick it up, it selects a trigger and effect. Each trigger and effect has a certain cost associated with it. If the cost of the trigger is below 50, it rolls to either add a new trigger or add a new effect, this process repeats until the cost gets to 50. For trigger/effect combos that have a cost of above 40, it sets the chance of occurring to (100 – 2 \* (cost – 40)), clamped to a max of 100% and a minimum of 2%. If an effect hurts current enemies, the item is guaranteed not to roll ‘on round end’ cos that would be fuckin shit wouldn’t it?
  + Effects:
    - Hurt all enemies for 50 damage after a short delay. (25)
    - Give enough XP to level you up. (50)
    - Adds 3 seconds to the timer. (30)
    - Heals 20 HP. (30)
    - Increases your fire rate by 0.2f if you haven’t been hit for 20 seconds. (20)
    - Spawns 3 XP orbs nearby. (5)
    - Rerolls all nearby rocks. (10)
    - Marcelageloo effect. (40)
    - Summons a familiar that has the ATG’s movement, but rather than exploding on hit, deals 50% of your damage upon passing through an enemy. (25)
    - Increase a random stat by 5-10%. (40)
    - Applies a random status effect to all enemies after a short delay. (10)
    - Get invincibility equal to 20% of your damage stat (i.e. with 50 damage you get 10 seconds). (40)
  + Triggers:
    - On hitting an enemy. (50)
    - Every 30 seconds. (20)
    - On round end. (10)
    - On picking up an item. (10)
    - On taking damage. (5)
    - At the end of a dodge during combat (during combat to stop the player from spamming the effect when there are no enemies around). (35)
  + Selects a funny name for itself, consisting of adjective, noun, and occasionally a suffix
    - i.e. “Ferromagnetic Globule V3” or “Wacky guy” or “Thinglike thing VII” or “Boberman’s Boberman”
* Receive two copies of the next item you pick up.
* Cursed items are +100% more likely to spawn.
* Increases the weight of rarer items (+100% higher weight per stack).
* Receive +200% XP from pickups when you have a curse active, stacks linearly.
* Proc events have a 10% chance to repeat themselves.
* On-death effects also trigger when an enemy gets below (or equal to) half health. Stacks increase number of times this occurs – for example, 2 stacks mean it occurs when at 66.7% and 33.3% health, 3 stacks means 75%, 50%, 25%, etc.
* On-death effects have a 20% chance to repeat. What this should do, is when this procs, it spawns a GameObject where they died that repeats the effects after a slight delay, maybe 1/3 of a second. Stacks cause the effects to occur again – i.e. 2 stacks means it happens 2 times, 3 stacks 3 times, and so on.
* 5% chance on death to instakill all enemies in a given radius. Radius should be moderate size. Radius increases with stacks.
* 20% chance for, when enemies take damage, all enemies in a radius take 50% of this damage. Stacks make it repeat, i.e. 2 stacks makes it occur a second time after a delay.
* Some kinda item whose efficacy is based on the largest number of stacks of one item you have (i.e. if the item you’ve stacked the most is bleed, its effectiveness is based on the number of bleed item stacks you have).
* Chance upon hitting an enemy to throw a poisonous vial at the enemy that leaves creep on the ground that applies poison. The poison does 10% of your base damage, and the vial has a 0.5 proc coefficient.

## Alt dodges

* 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.
* Whip: Decent range, lower damage, higher fire rate. Destroys bullets.
* Spectral cat shooter: higher fire rate, low damage, each hit applies one stack of vulnerable (cats swipe at enemies they hit)

## 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.

# Music

Would be fun to have some cool old-school liquid, like this <https://discord.com/channels/709264126240620591/755139710589993111/1094996703058341988>

# Art

# Longer-term ideas

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 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.