Project: Zurvival

Game Design Document

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*Index*

## Index

1. [Game Design](#_Summary)
   1. [Summary](#_Summary)
   2. [Gameplay](#kix.q89snwy3vllo)
   3. [Mindset](#kix.3j0sjjj4v19l)
2. [Technical](#kix.nw2pvrargt85)
   1. [Screens](#kix.5baplgyo85eh)
   2. [Controls](#kix.4u55u65bonjw)
   3. [Mechanics](#kix.vrkne3rhovuh)
3. [Development](#kix.k64sfnylstdx)
   1. [Abstract Classes](#kix.fwz93u72nlt2)
   2. [Derived Classes](#kix.9mr6xhrqo7o4)

*Game Design*

## Summary

You are the only survivor in a post-apocalyptic city filled with zombies in which every night they attempt to attack your safe house. Defend yourself with weapons, supplies, and even recruits you may find when you search safely during the day time.

## Gameplay

During the day, the player will be able to scavenge or search for weapons, consumables (food and water), ammo, crafting supplies, and even recruit other survivors. Food and water will be a resource to determine how many survivors one can maintain, but survivors will also be able to help with scavenging and repair defenses. Once a player runs out of actions points during the day or is ready for the night, they are able to set up their defenses with barricades, traps, automatic turrets, and even assign survivors to defend. At night time, the player must defend the safe house against waves of zombies similar to Plants vs. Zombies game, but the player himself/herself will be able to shoot their own guns that they had found during the day.

## Mindset

The player should feel as if they are fighting an uphill battle with no end in sight. They should constantly managing resources: food, water, crafting materials, and other survivors.

*Technical*

## Screens

1. Title Screen
   1. Options
2. Game
   1. Day
   2. Setup Defense
   3. Night
   4. Stats / Next Day

## Controls

Player will touch the screen accordingly. During the battle, the player can press buttons to switch lanes or switch weapons and tapping or holding the screen will fire their current weapon.

## Mechanics

Detachable zombie limbs and items dropping (fancy physics).

## Game Flow

1. Player starts in safe house.
2. First game gets basic tutorial (Search for food/water and gets first gun).
3. Returns to safe house and fights first zombie, end tutorial.
4. Day gameplay
5. Setup defense time
6. Night gameplay
7. Return to Day gameplay (#4).

*Development*

## Abstract Classes / Components

1. GameObject
   1. Player
   2. Zombie
   3. Turret
   4. Trap
   5. Barricade
2. Projectile
   1. Bullet
   2. Arrow
3. Weapon
   1. Pistol
   2. Assault Rifle
   3. Shotgun
   4. Sniper
   5. Bow/Crossbow
4. Survivor

**Derived Classes Explained**

1. Zombie
   1. Walker
   2. Police (High chance to drop pistol and pistol ammo)
   3. SWAT (High chance to drop weapons and ammo, difficult to kill)
   4. Riot Shield (Resistant to all weapons but sniper to shield hits, slow, small window for headshots, zombies that spawn after this cannot past him)
   5. Trader (A trader survivor that has been turned, High chance to drop supplies, rare)
   6. Runners (Faster than walkers, but legs easier to break)
   7. Mutated: Berserker(High HP, Resistant to limbs breaking, slightly faster than walker, High Dmg to Barricades, weak to headshots)
   8. Mutated: Lobber (Carries (and pick up?) undead limbs and lobs them to hit from afar, does not move unless lane is empty, stays at rightmost column)
   9. Mutated: Bomber (Explodes at first contact and does damage in a 3x3 area of death)
   10. Mutated: Winged (Same stats as normal, but extra “limb” with wings, flies over traps and barricades and attacks first turret/survivor)
2. Weapon
   1. Pistol (Perks: Reload Speed, Pistol Scavenge Up, Firing Speed. Ult: 1-2 Seconds to tap every zombie (paused), instant headshot to those selected)
   2. Assault Rifle (Perks: Clip Size Up, Damage Up, Ult Charge Spd Up. Ult: 6 Seconds, No reload time.)
   3. Shotgun (Perks: Range Up, Damage Up, Clip Size Up. Ult: Double damage to the whole column + range upgrade and push back by 2 columns)
   4. Sniper (Perks: Pierce Up (20% default 30/50/70% pierce per hit), Pierce Damage Up (25% default, 50%/75%/100%), Firing Speed Up. Ult: Next 3 shots instant kill in whole line)
   5. Bow/Crossbow (Perks: Arrow Recover Up (30/50/70% arrow used recovered, Damage Up, Charge Speed Up) Ult: Select 3x3 area, rain up to 20 arrows over 2 seconds randomly.)
3. Survivor (Post-Apocalyptic Abilities, given grades)
   1. Scavenger (Proficient at finding supplies)
   2. Builder (Proficient at building/repairing (reduce costs/repair faster during battle))
   3. Weapons (Proficient at wielding and firing weapons types, consumes less ammo?)
   4. Survivor (Reduces food/water intake, better chances surviving scavenges)