

Game Design Document for COMP3000 Project

Brainstorm Page

Feedback and backlogged changes

Introduction and game premise

This game aims to be a first person, stealth focused tactical shooter with game systems that make the player feel cool by earning it. Skill is rewarded with style and efficiency, but is expected to be learned gradually through repeat playthroughs. One scenario can be played out in many ways, and it's up to you to find your answer. Use teammates, clever strategies and creative thinking to achieve your objectives.

Inspirations, personal preferences and initial ideas

I want this game to be one that rewards players who are curious, who wish to master systems not to optimise playtime but to seek enjoyment in something. I am the type of player who will experiment with game systems to understand how they work from the ground up, to better play out scenarios in a way that feels like I chose my own way to solve it, a method that feels cool, looks cool and demonstrates an understanding of game knowledge alongside tight execution. I love stealth and movement choreographies in games, a form of video where the creator plans an elaborate sequence of actions like stealth kills or parkour sequences with the goal of creating a video that looks cool and demonstrates knowledge and skill. Whenever I play games I seek enjoyment by peering into the depths of that game's systems, aiming to understand it and use it to feel cool and give the game more worth.

A large inspiration when it comes to this feel is Assassin's Creed. While every game in the franchise varies dramatically, they all follow a similar sort of feel that has them aligning with my preferences almost perfectly - freedom, complex systems, player expression and fantasy. Assassin's Creed 1 is a tightly focused game where skill in each of its core pillars are rewarding. Your approach can vary wildly to another player, it's mechanics are designed to reward pushing yourself and learning it's intricacies, and by delving into those systems you achieve a narrative symbiosis with your character and the setting. I won't go into too much detail but I do break down AC1 and how it achieves this in my analysis doc for it.

Dishonored is another example. Players tend to play the low chaos, non lethal route to start with to stay narratively 'canon', so they use the opportunity to explore and learn the game's systems. But after some hours playing, those who choose to delve into those underlying systems and push the boundaries may end up like GrayMischief or Fighter Tree on Youtube, pulling off stunts that the regular play may not even know were possible. That feeling of constructing your own solution that looks and feels cool is the experience I want to capture.

However I also wanted to take an element from the ghost recon games and Doorkickers 2. Most stealth games revolve around balancing clarity of information, often providing you with safe spaces to plan and then operate in. Ghost Recon's random enemy placement and lack of information means a vital skill comes in the form of pre planning. The old rainbow six games and doorkickers 2 excell at this, as well as modern tac shooters. You need to create a playstyle that lets you succeed in any situation - managing exposure to enemies, checking corners and moving while considering possibilities rather than acting with intentionality. I love how that manages to inject decisionmaking into areas where enemies may not be, and I want to capture that idea too.

Presentation

The game will use a low poly aesthetic similar to Swat 4, Splinter Cell Chaos Theory and the original Ghost Recon, mostly because it would allow for faster asset creation and therefore more time to spend on more important features, but also because I personally prefer that art style. Games like Thief and Gloomwood have such good visual language through atmosphere, environmental world building, thematics and tone that I feel it is most definitely possible to create a game that looks good through composition and colour over pure visual fidelity. Valheim, Chaos Theory, Swat 4 and Gloomwood are all

examples of games that use their low fidelity aesthetic to astounding lengths to create visuals and atmosphere that rivals modern games.

<https://drive.google.com/drive/folders/1UKSFCTcfrYpjASKJpOwO2PhHEA3s7vLZ?usp=sharing>

It will have a fairly dark tone akin to the modern warfare or splinter cell campaigns, with teammates who behave seriously but have some characteristic charm.

Desired game feel and design

Taking a note from Zubek's Mechanics, Dynamics, Aesthetics approach, I want to ensure the whole experience adheres to a specific fantasy, tightly woven with game systems in a similar way as Assassins Creed 1 handled it.

In this game you work as a team of 4 military mercenaries who are sent out to do jobs for various contractors. The world is this dark, semi post apocalyptic setting that blends the dreariness of AC1 and Armoured Core 6 with the dark magic of Dishonored. Certain individuals are given magic powers that specialise in a certain area, as well as a plethora of gadgets.

The game will be mission based with open levels, as if playing Ghost Recon Wildlands but outposts are individual missions. You scout out the map using various gadgets and tools

Aesthetics and narrative feel first

In order for the game to feel both extrinsically and intrinsically satisfying, i want to take a lesson out of AC1's book and find ways to blend the game's core pillars with the narrative, to ensure that every part of the game loop makes narrative sense and the player's personal development in improving their understanding and skillset has them feeling more and more immersed within that aesthetic.

Game structure and core loops

The game will feature these main stages:

- Mission briefing
- Deployment and preparation
- Information gathering
- Setup
- Plan
- Execute
- Adapt
- Recover
- Exfil

Before playing you will be given the rundown of the reason for being there. Where you are, what the target is, and what loadout you will be bringing.

After being dropped into the map you are tasked with exploring. You start off with little info and need to move around the map to find your objectives. Random buildings on outskirts may contain useful information, patrol reinforcement routes or base camps can be scouted. In this first phase you gather information to consolidate a plan.

Move your teammates into a position to prepare for an assault.

Use the planning systems to figure out a plan to stealth past or clear out an upcoming region.

Execute said plan, taking part in it as one of your teammates.

Adapt to the situation by performing on the spot planning in response to changes.

Recover and regroup.

Achieve your objectives, then exfil.

Teammate control and planning design

The most important system that drives this game is the ai teammate control mechanisms. I wanted to learn from systems used in other games and create something that solves a lot of the problems i personally faced while playing other games with teammates to control.

Some games like Swat 4 have you giving a command, and the teammates execute it perfectly. If you die, you lose, if a teammate dies it isn't the end of the world. That dynamic means more often than not the extent of your interaction is giving them a single order and then watching them execute it. Doorkickers 2 is the complete opposite. Ai still perform the actions you give them, but you place every move marker, every action, every change in aim position. Failure is down to your inability to plan, and success is down to your knowledge and skill. However, since it is purely top down, it lacks the tactile feel of being in the moment actually playing the game. I have done a lengthy analysis of other teammate control systems in games, present in my design document here <ADD LINK>.

As such, I have some guidelines that I want to adhere to when it comes to how the ai are controlled and how teammates affect the gameplay:

1. Every major action or decision an ai makes should be created and directed by the player
2. it should be clear exactly what an ai will do when given an instruction, and conveyed beforehand
3. The success and failure of a teammates actions should be the result of a mistake in planning and awareness by the player
4. it should be simple and straightforward to create tasks while planning, but with complexity in its potential
5. The player should be able to involve themselves in the actions of the ai without feeling like an observer, the only meaningful contributor or a detriment.

To achieve these design guidelines I want to implement the following:

- Switch from a first person perspective to a top down view at will
- Command ai to move using a map drawing system
- Provide specific action instructions both contextually and non contextually.

Teammate control specifics

I want to mix ideas from all these games into one that fits the desired pacing.

To start with, you have 3 teammates excluding yourself. You can select them with the different F keys.

Contextual actions

Some actions that would otherwise take time to accomplish on the map which I don't feel is worth the time will be quick contextual actions. In something like Swat 4 these will be commands like 'move there' or 'stack up here'. Complicated actions require user input in order to adhere to my rule of being engaging, but these ones can get by being simple.

These actions could be:

- Move to location
- Stack up here
- Cover here (aims at selected location)
- Take out this guard (choke, knife, gunshot)

for the most part they are actions that would take 4 presses to do with the map, more easily accessible to improve pacing without sacrificing the goals of this teammate system.

State changing orders

Move, aim and ability orders all come under 'actions'. State changing orders are those that alter a soldier's movement speed, stance, behaviour etc - something that alters how they behave from that point onwards. I would like this to be done through a quick menu like the contextual actions, set up like how Arma 3 tackles it.

To start with will be the movement and stance orders:

- Slow walk - super slow and quiet
- Tactical - not slow, not fast. Good speed to round corners and check spots
- Breaching - move as fast as possible while allowing for aiming still
- Sprint - as fast as possible, but with the slowest aim speed

Next will be the stance behaviours:

- Low profile - Defaults move speed to slowest and stance to lowest. An emergency stop and drop
- Crouch
- Prone
- Copy stance - replicates your stance
- Automatic - changes stance based on selected move speed

after this will be engagement rules:

- Stealth - only fire when actively engaged
- Fire at will - fire when a shot is available on any visible target
- Confirm target - requests a shot confirmation before firing (see section on topic)
- Fire if safe - Perform a witnesses scan on the enemy, if it comes back saying the kill is secure then take it

Shot confirmation

In the specified engagement state, enemies will be seen by the ai and reported to the player. There will be a voice line and a pop up on the side of the screen with two options. Pressing the 'view camera' button will show a PIP image of what they see, letting you see yourself what enemy they are aiming at. You can then confirm or deny with a button press.

Contextual order queuing

Multiple of these quick actions can be queued where it makes sense, for instance multiple move commands can be chained in sequence. Holding shift and placing the order will chain it. Can then press any of the number keys and it will tie the start of that sequence to a go code.

Teammate switching

In order to allow you feel like part of the team, you will be able to switch teammates. This will be done by holding ALT and pressing the number key for that teammate.

Top down map view and orders

The bulk of teammate ordering is done in the top down map. This gives you a greater field of view and allows you to plan in more detail.

Time freeze

In order to give yourself time to plan and not feel rushed, time can be frozen on command as you enter the map view. Once a shot is fired or an enemy does this freeze time period enters a cooldown, so you can't just use it mid combat for instance to get a quick win.

Movement in top view

In order to offer the best possible control over teammates and feel like you are properly controlling them, movement orders can be given by drawing on the map. Simply pressing will create a movement marker to that position which they will pathfind to. Drawing a line creates a path that follows the cursor, indicating the exact path your teammate will take, with animated lines showing the speed of movement.

Aim orders

Covering angles and clearing effectively is vital in the planning phase. So the aim orders need to cover plenty of bases.

- Hard cover - aim in the designated direction, keep aiming in that direction relative to their position even while moving
- Pie - select a location to aim at, will continuously point at that location while moving
- Soft cover - aim at in a direction. Keep aiming for a few seconds and then return to the forward position while moving

Information gathering design

The amount of information available to the player has a drastic effect on their playstyle. In Assassin's Creed for instance you are given the ability to see enemies through walls at a distance and close up. That information gives you the room to plan ahead. The risk of being seen is low since pairing that with the third person camera gives you ample time to reposition before someone turns a corner, and you can plot out your next steps while up high or waiting by said corner. Swat 4 or Thief 1 in contrast gives you no such information, so players will instead behave more cautiously. The lack of information - specifically enemy locations and behaviours - shifts your playstyle to one where you peek corners carefully, checking every possible spot and planning for all eventualities. You often get caught out and have to react accordingly, so maintaining stealth becomes harder, with a greater element of risk.

In this game, I want to lie somewhere in the middle of that spectrum. You should be able to gain information about the world, guard placements and behaviours, but said information should be a little harder to gain, with elements of intended 'opaqueness' where you will have to implement precautionary approaches to clearing.

Each of my characters has a dedicated information gathering tool available, each one with strengths and weaknesses. The sniper has a projectile fired camera, gunslinger has a ground based mobile drone, the breacher has a pulse detector and the assassin can possess enemies. Each of these are meant to compliment the playstyle of the class but also adhere to a set of rules regarding information transparency:

1. Information gathering tools should have 'blind spots', or weaknesses that mean precautionary tactics must be employed
2. Complete observation of a game scenario requires the use of all characters

Stealth design

Given the more precautionary and pre-emptive style of gameplay, one where you use information and act in a sequence of events to move through or clear an area, stealth will primarily be used as a way to set up plays and change positions to execute certain plans. There will however be specific situations where pure stealth is utilised. Players can choose to go pure stealth and the game will allow for and help promote it.

Safe spaces will be used as areas of comfort, granting players a chance to plan, hide and observe. Enemies will sometimes contest these safe spaces but since player skill should come from execution and planning, I don't want it's stealth to be more reactionary like Thief, Filcher or Gloomwood. Lack of information should introduce the reactionary and dynamic encounters as you round a guard you weren't expecting.

Camera perspective

The player perspective as a surprising influence over how a game is played. In Ghost Recon Breakpoint, the third person perspective means you can aim at a corner and see the exact location and movement of an enemy, pre aim them and walk out to shoot them before they can react. It puts power in your hands, letting you act with more information. Meanwhile

something like Thief purposefully hides information. Peeking around a corner can have a guard noticing your head, sound being the only form of safe intel gathering which is itself unclear and inaccurate.

Balancing between combat and stealth

One thing i dispipe in games is when the fail state of stealth, combat or escape, lacks any meaningful challenge or satisfaction. I will cover the specifics of how these fail states are designed later, but i want to go over how I will balance the choice between combat and stealth. In many stealth games you do have the option to move with speed through an area, eliminating threats efficiently with little pushback. Ghost Recon succumbs to this. Enemy reaction time, damage values, weapon accuracy and information transparency means you have ample ability to skip stealth and fight through them with relative ease.

In this game i want the player to be strong when they can maintain stealth, but weak when detected and engaged. Detection can be leveraged as a stealth tool, but you should be punished for detection since the game gives you more tools to plan an encounter. Games like ghost recon or swat make it easier to fight back since they intentionally reduce information clarity, so easy combat and recovery is a balancing act to reduce punishment, but given the lengths of planning and information tools available, I want to make this an important difference.

To achieve this I will balance weapon mechanics, resources, enemy reaction time and combat dynamics.

- Teammates and the player will experience suppression when under fire
- Ammo is scarce and enemies take more than one shot to kill
- The player should use ai for multikills, or clever environmental and skill usage. Weapons should be designed such that fast flicks aren't as viable and you shouldn't be able to take out many enemies solo, but short ones can work. Cover a small sector.
- Enemies react quickly to gunshots, and will fire relentlessly

Player weapon mechanics

In tactical shooters, especially doorkickers 2, the foundational rule that determines your success or failure is your ability to have your gun up, aimed such that any enemy that can shoot you is within a cone of vision that lets you shoot them with minimal adjustment. The idea is that exposing your sides to an enemy should be fatal. To avoid fast flicks, the weapon will lag behind a bit during turns, similar to Stalker 2. The sight misalignment will mean that when making a sharp flick it takes a second for the sight to stabilise and be usable. Which can lead to to decisions - either fire while looking in the rough direction of the enemy and hope for a hit, or wait for it to align. That time wasted would be enough for the enemy to fire on you.

Shooting while on the move will be disincentivised. The goal should be to use utility to aid in clearing a corner, using multiple characters to aid in that task. So while moving to the side and aiming, weapon sights will sway to introduce some inaccuracy. You can risk shooting while moving or stand still and wait for it to stabilise.

When under fire the weapon will buck, moving its sight off centre, making it unviable to aim with. With the aim of getting players to reposition instead of peeking and shooting them there and then.

Ammo economy and enemy armour

As mercenaries, you are given few resources and expected to perform well. Playable characters have only 1 mag to use. For instance a pistol may only have 7 bullets. This will get the player to think more about their ammo usage as shots matter more. In the previous scenario, spraying will waste precious resources for little gain, but waiting to stabilise will take too long, so there is incentive to retreat and hide. Enemies also have a form of armour. Chest shots will deal little damage. They may have helmets which require one shot to break / fling off, and another to kill. Some helmets can have exposed spots at the back or sides which can be used to grant one shot kills if positioning is good. Similar to how Dishonored gives helmets to Overseers, bullets can be more about stunning the enemy. If they cannot be oneshotted, you can shoot their leg, or gun arm, or helmet and itll stun them, potentially exposing weaker parts and giving you a chance to run up and melee kill them.

Gaining ammo is to be handled in a unique way too. Doom eternal has an ammo economy built around fighting with weapons, then melee killing a demon to replenish your stock and continue. A somewhat similar approach is taken here. Enemies have magazines attached to their belts, bio-locked magazines that if it detects that the owner is dead, will lock up. However if the player can utilise stealth, distractions and the environment to get behind them, you can pickpocket their ammo. This replenishes your supply, but also lowers the enemy's supply. This means ammo won't be gained as easily by expending it to grant kills, and will get you using stealth and the utility of other characters to get behind, pickpocket and choke out guards to build up that offensive force.

One issue I considered while brainstorming this idea is that stealthing will replenish your bullet supply, a loud offensive resource used for killing. The player who chooses to play stealthily won't benefit from this as much. So some enemies will also carry parts used to make stealth tools, or the bullets themselves also act as a source of 'mana' to let characters perform their abilities.

Tool, gadget and ability design

When it comes to gadgets and abilities, I have some set rules I wish to abide by:

1. Gadgets should be useful in isolation, powerful in conjunction
2. Have usages outside of their immediate use case to promote experimentation
3. Not supplant player skill or knowledge, but aid it and act as an extension of it

Dishonored's abilities are all exceptionally designed. Each one has its own use cases in isolation but can all either bounce off of each other or be used in unexpected ways. That level of freedom, creativity and internal satisfaction for using these systems in ways that don't *feel* intentional is what I want to capture.

I also want to refrain from abilities or gadgets that give you only positive buffs that offer no real changes to gameplay, or hand you things without much player involvement. For instance, abilities that once activated simply make you harder to detect, or a 360 degree wallhack scanning tool, or a large AOE instant kill ability. Should all have certain use cases and their benefits can be seen through clever usage, not a simple button press.

Player satisfaction and game loops

With all that defined, the aspects that make up the core game loop are more clear. I want the player to start off in this semi-big map with characters that need to be given instructions, a goal to complete and ways to go about it in their own way. Using stealth to position teammates, tools to gather information, then figure out a way to take out enemies with style and finesse, combining player skill and game systems to act as a form of self expression. You will need to use multiple teammates to cover angles, peek precisely and manage what you will do if you encounter an enemy. It's all about planning and pacing, with systems in place to reward mastery.

When first playing the game, the player will probably use a single character and use the others as backup, or maybe not use them much. But as the moment to moment gameplay becomes more intuitive, should see how using them is beneficial. I want them to replay levels and try different tactics, playstyles and approaches. Get them to experiment and seek out mastery for their own enjoyment. Then put together a fantastic performance using teammates and themselves to clear areas and complete objectives like watching a cutscene from cod modern warfare.

Characters and classes

Each teammate will be a distinct character, with unique abilities and weapons. They will push each into a certain playstyle with both strengths and weaknesses, with the intent being that the player uses the teammate planning systems to get them working together, bouncing off of each other.

Trickster Cowboy

Name	Sundance / Dante / Loki / Coyote / Gambit
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Archetype	Trickster Cowboy - Distraction, diversion and style
Weapon	Barrel loaded revolver. Good stun potential and armour shredding. Long reload. Low ammo pool. Can be charged up to fan the hammer in a slow mo state.
Gadgets	Coin toss - Throw a gold coin. Shooting it triggers Metal Rebound, and bouncing it up in the air again. Must be picked up or caught in mid air. Pickpocketing enemies recharges it as you steal their coin. If it hits the ground, nearby enemies will move to it to investigate. If attuned, only that enemy will investigate, otherwise only the nearest enemy. Grappling Wire - Can be used to snatch items at range, collecting or grabbing them. Can pickpocket guards at range, or choke them and pull them towards you, even steal their ammo or weapons. Can throw enemies left or right based on mouse movement.
Information Gathering	Drone - Ground based drone that can be driven. Able to jump. Limited field of view as it is on the ground but is persistent.
Abilities	Sonic attunement - Can point at a spotted guard and attune your gadgets and abilities to them. Subterfuge - Disguise yourself as an alive or incapacitated enemy. If that enemy dies or wakes up you change back. Decoy - Create a duplicate that starts invisible. Activate to make it visible and taunt enemies, or swap positions with it
Passives	Metal Rebound - Shooting a metal object causes the bullet to ricochet to the nearest enemy, or currently attuned enemy or object.
Playstyle	

The cowboy is all about not playing fair, manipulating enemies and setting up chain kills through disruption and style.

This character has no movement besides the base movement available to all characters. He makes up for this with plenty of gadgets to turn the gaze of enemies and enter restricted spaces.

Coin toss is a regular noise distraction device. You can throw it and guards in hearing radius will investigate, look down then pick it up. This turns their gaze, but when picking up the coin are oblivious to those around.

Sonic attunement is a passive / active ability that lets you target a specific guard, flicking the coin and tuning it's oscillation frequencies to the headset of the targetted guard. Throwing the coin will then only distract that guard. Them picking it up will make them deafened for a short while.

Subterfuge lets you mimic the appearance of an alive or knocked out guard for a while. Granting you access to restricted areas while remaining hidden. Lets you sneak past unseen and set up other actions.

Decoy creates a clone of yourself that is at first invisible. reactivating it makes it visible and taunts guards. They will look at the clone and raise their weapons, and move in to arrest you. If they get close the clone will dissapate and leave the guards confused. At any point you can reactivate the ability to swap positions with the clone.

Their grappling wire lets you grab objects from range, including items on the waists of guards. Can also grab a guard themselves, pulling them towards you, allowing for a stealth take down.

To make up for the lack of mobility, this character gets a mobile drone. The drone is placed on the floor and controlled in first person. It drives on the floor but can jump about chest height. Can be seen by guards but only if you drive close to them.

Their revolver also has a unique ability. After charging up, you get into a fan the hammer position and slow down time. You have control over the next six shots and can aim freely, firing shots in quick succession.

Metal rebound is a unique passive that adds some utility to the coin and other throwable objects. Anything made of metal can be shot, and it will ricochet the bullet to the nearest enemy's weakpoint. This means you can throw the coin and fire at it to shoot around corners, or throw a metal object and shoot it.

The trickster is all about setting up enemies with distraction and manipulation. You could bait a guard amongst a group with a coin toss, place a clone which distracts the others. Then while they are attempting to arrest the clone, swap positions and charge up your fan the hammer move, fire at all the guards then melee the one still distracted by the coin.

Sentinel Sniper

Name	Strongarm / Longbow / Gridlock / Checkmate / Stillwater / Warden
Archetype	Sentinel Sniper - Flank watching, angle holding, defensive
Weapon	Sniper rifle. Designed for long range targeting, with high penetration and damage. Can fire a special ammo type that pierces through buildings, enemy armour and knocks them back, impaling them. Secondary: Suppressed pistol. Weaker with less ammo.
Gadgets	Proximity sensor - Reveals and alerts you of enemies that enter its area. Teleport Anchor - A thrown translocator that you can teleport to by holding the button and pressing the number. Can teleport to anywhere on the map. Can teleport back to where you teleported from.
Information Gathering	Projectile camera - Fire a camera to a surface you are aiming at. Can enter it's view and launch the camera to another surface. Reveals enemies it sees. (alternate) can fire towards a light source to disable it, destroying the camera.
Abilities	Dimensional Rift - Create a portal in front of you anywhere in the level. Can link to another portal that you make. Can make it person sized or a small hole. Able to shoot through or move through. Hidden veil - Creates a zone that when crouching or prone, makes you invisible.
Passives	Steady hand - Can enter a mode while sniping where you will flick towards anyone who enters your field of view, but cannot rotate while in this mode.
Playstyle	

A core part of tactical shooter methodology is holding angles and maintaining security, that is - making sure someone is watching areas of the map that people can flank you from. I wanted the sniper to fulfil this role while not being boring, as holding rear security isn't particularly fun.

The sniper is a long range scout, setting up strong defenses, controlling flanks but also allowing for clever plays that can be aggressive. The first step to achieve this is the teleport anchor. Sniping is all about finding angles to hold, with the teleport anchor you will roam the edges of the map or even within a compound and set up these anchors. You can place them at spots on hills surrounding the compound to be granted vision inside, taking a while to set up but allowing for quick moving between locations. You could set them up close range to bait enemies into your shots. Or set them up in corridors.

To aid in this purpose the sniper has two information gathering tools: the proximity sensor and the camera. Both can be placed by hand on a close surface, or fired by the rifle long range, which is silent but consumes a shot. The proximity sensor creates a ui element above it that flashes when an enemy is near, potentially highlighting them too. The camera has no proximity functionality but can instead be switched to with a key, letting you rotate and view everything the camera sees while being invisible to the enemy. When in the camera however, you can fire a silent projectile at enemies which marks them.

Dimensional rift is one ability. You hold the button and a sort of hologram of a dimensional doorway appears in front of you, holding it makes it travel forward, press again to place. You can then press again to create a closed doorway in front of you. Press a key to activate it, opening up a small hole through space and time, letting you look through one portal and out of the other, allowing for shots through said portal. Another key can make the portal bigger, allowing for movement between both ends, but will break the portal after a time.

Hidden veil creates a zone that makes anyone inside invisible.

The idea here is that you roam the edge of the map, firing proximity sensors into the base on areas that you can gain line of sight on from the perimeter. Or roam in the base and place proximity sensors by hand. Teleport anchors will be placed in

locations that have eyes on where those sensors are placed. Then when an enemy passes said sensor, you can teleport to the anchor that can see that spot and snipe them. This can be used close up, far away, it's up to the player.

Darkmage Assassin

Name	Shade / Paradox / Silas / Cairn / Quill
Archetype	Darkmage Assassin - Mobility, speed, violence
Weapon	Primary: Blade Melee weapon. Can kill quicker than other characters. Charged attacks stun enemies and break armour. Secondary: Throwing knives Click for quick through, charge for a longer distance throw. Can freeze in time, maintaining it's momentum.
Gadgets	
Information Gathering	
Abilities	Dagger blink - Teleport to the last thrown dagger. If stuck to a wall, you stick to the surface. In all cases you retrieve the dagger. If stuck to an enemy, performs and attack based on where it lands. Blind - Target a light to sap its energy and disable it. Target an enemy to stun them and nearby enemies, making them blind. Link - Connects the fate of two entities. Stunning one stuns the other, knocking back one knocks the other, killing one kills the other etc. Freeze time (maybe alternative to just freezing daggers) Whisper - Target an enemy than target a position. Reactivating creates a sound only that guard will hear, prompting an investigation.
Passives	Primordial Rage - Kills raise a meter. After a certain number of kills you enter a raged state, where you must return to a personal prison realm to calm down before returning. But when you return you create a zone that fears and stuns enemies. Eternal fear - Kills in swift succession cause nearby enemies to tremble in fear, potentially stunning them. Assassin mobility - Can double jump and climb up ledges easier. Able to jab a dagger in the wall to cling to it.F
Playstyle	

The darkmage assassin taps into the dishonored sort of character feel - zipping around with fast movement, watching your enemies from the shadows or a high up place and then striking, weaving together abilities with clever timing and positioning to clear areas.

They will primarily use a close range dagger, meaning primarily melee kills will be used. They do have ranged weapons in the form of a throwing dagger, but they will have a slow fire rate but heavy damage, making them not efficient at taking out large groups quickly.

The assassin has the best movement of the bunch. Their dagger blink ability will fire a dagger out and allow you to teleport to it, refreshing it's cooldown - allowing you to quickly move around the map with ease. From the outset this is very powerful, as being able to teleport between enemies and insta-melee kill them is immensely strong. Thus I've considered a balancing passive. Primordial rage acts as a limiter of sorts. Kills will raise the rage meter. It will diminish over time but fills at approximately 3 kills. Reaching that limit causes you to enter a raged state, creating a bubble of fear around you for a second before dissipating you to a prison dimension to cool off. Each kill will cause enemies nearby to enter a fear state too. So you can choose to go in for a triple kill to fear enemies and let your team rush in, or stay around to use your abilities as further utility.

Therefore, the assassin should be used as a scouting and preparation character. I want them to move ahead and scout the map with ease, using abilities and potential gadgets to set up the team. To aid in this, all abilities will have delayed initiation - meaning when you place an ability you can activate them by looking at them and pressing a key.

Dagger blink is the primary movement tool, getting you from A to B and scouting from above. Link is a utility tool that can be used to perform easier multikills, or set up kills in more creative ways. Blind will stun enemies when activated, or be used on a light to disable it and nearby light sources.

Room clearer / breacher

Name	Breacher / Gale / Vault
Archetype	Assault Breacher - Entry fragging, frontal force
Weapon	Primary: Shotgun Short range shotgun. Able to stun and shred armour, slow fire rate. Secondary fire: Big bullet Fires a high calibre rifle round from another barrel on the shotgun, able to deal precision damage at range or disable lights.
Gadgets	Flashbang - A flashbang with timer adjusting and bounce limit control. Stuns anyone who looks at it. EMP Grenade - Sends out an EMP pulse that disables lights and electronics like communications.
Information Gathering	Pulse Detection - Send out a pulse that reveals enemies in its radius over long range, but for a short time. Shows footsteps as they collide with the floor.
Abilities	Silence - Creates an area where sound cannot be emitted, from enemies or yourself, so everything is silent. Rush - Stun proof, able to run through doors and other objects. Raises movement speed.
Passives	High intensity Training - Can punch enemies, sending them back several meters into other enemies or objects.
Playstyle	

The breacher is all about entering rooms with brute force. Equipped with the most powerful weapon, the shotgun, they can eliminate guards easily with a single shot, but long reload times and low ammo counts make it difficult against groups.

To aid with room clearing, the breacher has several area denial and utility gadgets. The flashbang will stun enemies in its radius, allowing for a brief moment where you have an advantage. An EMP grenade will disable enemy equipment, nearby lights and other electricals. Covering the place in shadow, aiding in your advance.

Rush is an ability which grants you greater strength and speed. With it active, you can barge through doors, run into and knockdown enemies and reload / fire faster.

In order to help maintain stealth, the silence ability can be used. When cast it will create a region wherein any sound is muffled. So you can use silence outside the door of a room, barge into it, flashbang, punch, shotgun and kill without anyone outside the bubble hearing it. This allows the breacher to maintain their aggressive playstyle without breaching stealth, but the reliance on silence to do so means these aggressive moves will be few and far between.

As a close range clearer, their information gathering is best used when up and close. Casting a radius around the character which briefly highlights and snapshots enemies. Those enemies are then marked, and footsteps made appear is visible silhouettes. This means those standing still cannot be seen through walls however, so you still need to clear rooms with proper clearing tactics and not assume the information is 100% reliable.

Narrative

Unsure about the specifics of the narrative. But the characters all team up as mercenaries. They don't like or trust each other, but end up working together near the end

Map Design

(ADD TO LATER)

Semi open world. It's mission based but each location will be big. Like old ghost recon.

Immsim world design.

Mission objectives

Technical Section

Covering technical side of how this will be developed

First development milestone

In order to avoid immediate feature creep I want to come up with a first milestone and stick to it. I want to get something in my hands to then playtest and make changes to after trying it rather than trying to figure out the design before actually playing it.

The core systems should be in place to act as a proof of concept. Meaning the following:

A weapons system with no art or nuance. Weapon presets for:

- Sniper
- Revolver
- Pistol
- Thrown Daggers
- Shotgun

Simple to implement abilities with less advanced functionality to allow for testing. I want to show how each character feels unique, and showcase the design approach of abilities and gadgets but not delve too far into it where change is difficult.

Will add (in their simple forms):

- Teleport anchor
- Subterfuge
- Coin toss
- Dagger blink
- Hidden veil
- Decoy
- Grapple grab

For ai Control I want to have:

- Teammate selection with F keys
- Targetted move command (contextual and map)
- Directional aim command (contextual and map)
- Pie aim command (contextual and map)

- No aim command (contextual and map)
- Top down map order assigning

For action queuing I will use a simpler system, as after testing I will try and find a system that I feel will work well.

- Hold shift to queue actions
- Press a key while selecting a teammate to execute all tasks.

Links

Github Repository - <https://github.com/TheBulletKin/COMP3000-Project>

Trello board -

<https://trello.com/invite/b/671a5ca24230e67bbb8b0897/ATTI65f5451d0f93e6b88abdf832905eb68479840ACB/comp3000-computing-project>

Maps / Missions

The game will follow a mission based structure similar to rainbow six and splinter cell. For the purposes of this project I will aim to implement one map with level design, aesthetic feel, narrative background and art to provide a microcosm for what the game should ultimately play out like, and then 2 other levels with narrative, objectives and gameplay styles planned out to demonstrate the feel I am going for with this project.

There will be no voice acting, cutscenes or any major narrative. Story and backdrop will be delivered through in-world environmental storytelling like laptops, notes and audio logs. Objectives will be revealed before the mission in a text based briefing format.

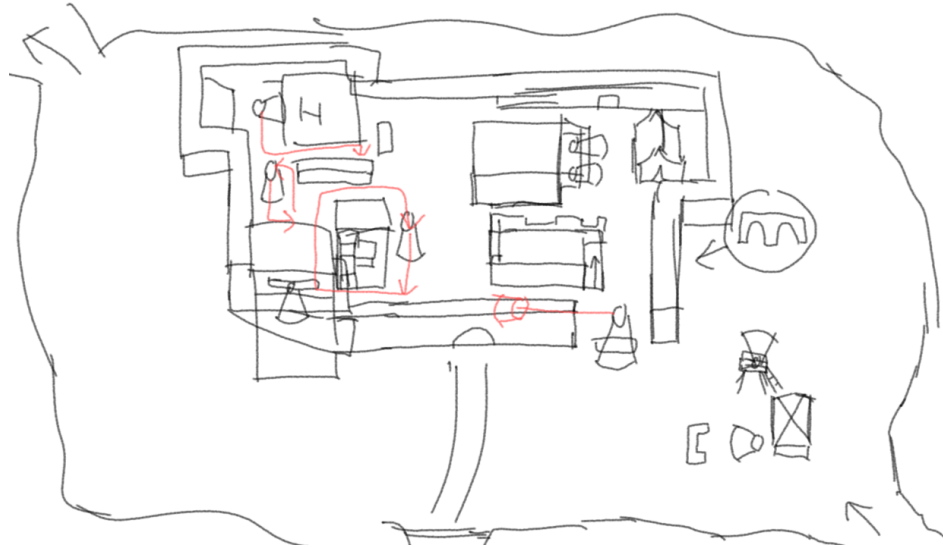
Missions

First mission will be a fairly easy tutorial mission. Designed to make stealth forgiving, combat easy but also teach the importance of team management.

Need to steal some data from the hands of the enemy.

You and two other teammates to start with.

A facility with a fairly open space outside it.



Level narrative:

- Start in the bottom right
- Must take out the sniper tower to move forward. Teaches about long range enemies and taking out sightlines to allow for movement.
- Take out the guard below him, an easy kill that acts as fodder.
- Can see the next guard out of his perhiperal vision. Shooting him then will alert one behind, so they need to move forward and sweep the corner to take them out and anyone behind.
- Then has the option to split off. One teammate goes up the ramp and observes the two guards overlooking the tent. The high up teammate takes out the guards on the balcony, and anyone who flanks behind the tent. Player enters the tent and takes one piece of intel. Can send the high up teammate down to look over the rest of the base.

10. Development Processes

10.1 Risk Plan

Likelihood ratings:

High - 50%+ chance of happening

Significant - 30-50% chance of happening

Moderate - 10 - 29% chance of happening

Low - Less than 10% chance of happening

Event	Impact	Likelihood	Mitigation
Loss of laptop or home computer	Unable to proceed with any development	Low	Keep hardware in good condition and safe.
Loss of internet	Unable to proceed with development that requires online tools	Low	Make sure phone is available to utilise mobile data if necessary

Extended research required to complete task	Sprint goals may be delayed or restructured to allow for research to be done in implementing a feature.		Such events can't necessarily be mitigated, but organising tasks such that one that I can implement with my current knowledge first can mitigate some of the impact.
Testing demonstrates deficiencies or errors in design	Reconsideration of project design will need to be performed, followed by a restructuring of past code that may take significant time	High	Evaluate design before implementing. Test frequently so design changes and refactoring workloads are smaller.
Sickness or other health problems	Less effective development performance	Moderate	
Testing demonstrates poor performance	In order to reach performance goals the code base would need to be analysed, with solutions researched and implemented.	High	Research performance enhancing solutions prior to implementation and make regular performance tests.
Loss of project data	Unable to proceed with development until recovered	Low	Use version control software to back up code for easy cloning if lost. Back up assets onto cloud storage to be downloaded if lost.