**[Part 1: Overview]**

***[Topic]***

*[An overview of what you plan to do in your project. Concentrate on the Big Picture and outcomes.]*

*[ - Two paragraphs]*

We plan to design an immersive and fulfilling moral choice role-playing game which is based on a historical event. In choosing this theme, we hope to capture the complexity of morally grey situations where the player must make decisions which are more than ‘good’ or ‘bad’, but rather actions with intended and unintended consequences. As the non-player characters will be based on real people, we hope to add an extra layer of depth and immersion to the game, allowing the player to feel emotionally invested in the various non-player characters and weigh their decisions and actions carefully throughout the game.

We hope to establish a standard of the genre which avoids the clichés and tropes which is the cause of a lot of similar games to fail to live up to their potential. Clichés such as good-bad dichotomies, linearity disguised as choice, and obvious ‘correct’ endings which enforce the artistic vision of the game designer rather than offering multiple conclusions depending on the choices made by the player throughout the game are some examples of frequent design errors. When implementing a moral choice system which feels organic and immersive, decisions should weigh heavily on the player’s conscience. We hope that this game will stand out from others of the genre and inspire other game developers to seek depth and complexity in future games where moral choices are a core aspect of the game design.

***[Motivation]***

*[What are the motivations for this project? Why is it interesting? How does it fit in with current IT trends? What would it show to a future employer if you were able to work on this project?]*

*[- One paragraph]*

Our motivations for this project come from several sources: our desire to work professionally in game development; to push the boundaries of a genre we are all interested in; to create a hallmark title which we hope will influence other game studios to invest as heavily in story and characterisation. We believe that this project is interesting because, apart from the historical significance, relatively few games of this genre adequately (in our opinion) balance characterisation with action, with most AAA titles defaulting to action sequences and set pieces to drive dramatic events. Our vision of drama, and particularly of horror, is that jump-scares are startling, not scary: true horror is a disquieting, discomforting sensation that creeps under your skin. Horror can come from the darkest parts of the human psyche. Nothing more is needed for a true horror experience than to be a part of a group of desperate people, stuck on an island, willing to do anything to survive.

Obviously creating a game this ambitious would be equally complex. We hope it would demonstrate to future employers that we possess a great deal of drive, ambition, tenacity, and creativity to be a part of this project.

**[Landscape]**

*[What similar systems or products are available? What competitors are there? What points of difference are there about your project compared to what exist now?]*

*[- One paragraph]*

There is a variety of other games which utilise a moral choice game mechanic, even beyond the RPG genre. Where there is an opportunity for the player character and a non-player character to interact, there is the potential to bring a moral choice problem into the plot of the game. The idea of a moral choice game has almost become a genre itself, as seen in the likes of Telltale Games’ *The Walking Dead* series. Games which put moral choice as the foremost game mechanic are typically character studies which offer branching paths, multiple endings, and substantial replay value. The Walking Dead is very dialogue-focussed, playing almost like an interactive novel with occasional action set pieces. Other games which prominently feature moral choice as a gameplay mechanic can take more of an adventure game focus, such as David Cage’s *Detroit: Become Human*. In this game, the player controls multiple protagonists throughout the game and is also dialogue-heavy with action set-pieces, although it features far more logic puzzles in addition to the character studies.

Our project contains similarities to other games of this genre in that it is dialogue-heavy and focuses on characters, but there will be few action sequences. In order not to detract from the tone of the dialogue-driven gameplay, action will be strongly deterred. Instead, stealth will be strongly favoured. Stealth sequences will also be used sparingly, as the focus of the game will be in the player making decisions and being forced to confront the results of those decisions in the way they affect other characters as well as them player themselves.

**[Part 2: Detailed description]**

***[Aims]***

*[The topic description gives a general overview. However, it is usually helpful to have a specific aim for your project, as well as some smaller goals which will be helpful for achieving your aim. Describe these as best you can. Each project should have a single aim.]*

*[If things don't go as expected, this is the part of the plan that you would fall back on to answer questions such as “What are the most important parts of the project? Which parts should have priority over the others? If we have only enough time or resources for one of our goals, which one should it be?". One paragraph for the aim and one for each goal is expected. Each paragraph should include a description of the aim or goal, and a justification for it.]*

*[- Main aim (one paragraph)]*

**The main aim of the project is to produce a unique game which is engaging, exciting, difficult, thought-provoking, and memorable.** This main aim is really an amalgamation of all our individual project aims, the grand aim being to bring them all together seamlessly and effectively into the final product we envision.

These individual project aims are:

1. **To design and implement a moral choice framework within the game engine as the main gameplay mechanic.** This will require a lot of C++ code in Unreal Engine 4 to produce the result we want. This framework will be a system of statistics which shape a NPC’s personality within the game, and which will be altered throughout the game based on game events, many of which will be the result of actions or inactions taken by the player. In this way, although each NPC will begin with hard-coded personality presets, as the game progresses they may change (and indeed should be expected to change) their behaviour towards the player and/or other NPCs throughout the game, although not to an unacceptable degree. Some characters are not murderers and cannot be induced to become murderers, if it stays too far from their ‘baseline’ personality configuration.
2. **To develop realistic art assets which accurately reflect the real-life and historical locations.** The game itself takes place in two distinct locations: on board a ship, and within a coral archipelago. Because of this reduced number of levels, the art assets must be detailed and accurate in order to keep the player engaged and interested in seeing the same repeated scenes throughout the game. We have many resources of the historical ship from contemporary illustrations and, most helpfully, photographs inside and outside of the full-sized replica moored in the Netherlands.
3. **To develop interesting NPCs which have unique personalities with depth and pathos.** The limited game locations are a deliberate measure to put the game’s focus on the characters. The game progresses not so much through skyboxes and chase sequences, but rather through character interactions, personality developments, creating alliances and friendships and making decisions which appeal to some while alienating others. This will be assisted by the fact that as a historical game, we can read directly into the personality of most key characters by their recorded actions, and in some cases their direct quotes from primary sources.
4. **To produce an atmospheric sound design which feels authentic and immersive.** As the game is ultimately a survival horror, the sound design is an integral part of creating the right atmosphere. The sounds of the sea and the creaking of wood will be obvious background sounds, but sound should also play a prominent role in stealth sections: the nearing and retreating sounds of footsteps on coral as the player hides among bushes and tents to escape detection will be one example where good sound design is integral to produce the right sensation of helplessness and fear in the player.

*[- Goals (one paragraph per goal)]*

**[Part 3: Plans and Progress]**

*[Here you should give as much detail as you can about what your project will do, and how you will do it. This should also include how far you have got with developing any features or outcomes from your project. Tell us about the “story" of your project – how it began, how it has progressed, and what stage of the plan you are up to. Include any dead-ends you may have followed, decisions made, and changes that have been made to the project plan. This will need to include a significant amount of detail, so that it is easily seen what precisely you have done and are planning to do. If it helps, imagine the information that would be required if you were to hand this project over at the end of the semester to a new team to complete the job. What would you want to know, if you were one of the people taking over?]*

*[ 3 to 4 pages]*

**The Batavia Mutiny**

The 1629 mutiny of the VOC vessel Batavia has been overshadowed by numerous other extraordinary events of the Age of Sail: while it lacks to familiarity of the 1789 mutiny of HMS Bounty, it lacks none of the drama and intrigue and in fact dwarfs it in many terms of historical significance, and in bloodiness.

Batavia was built in the Dutch Republic, in 1628. A *retourschip*, she was designed and built to make multiple return trips to the far side of the world hauling cargoes of gold, precious metals, and building materials, and returning with spices. She was the pinnacle of Dutch maritime technology, and the pride of the VOC so much so that she was given the honour of being named after the capital city of the Dutch trading empire in the Dutch East Indies.

The senior officers appointed for Batavia's maiden voyage included the *Overmerchant* Francois Pelsaert, the Company's overseer and lead bureaucrat for the voyage, and the man with ultimate authority onboard surpassing that of even the Captain. The Captain, Ariaen Jacobsz, was a rough, no-nonsense career sailor who had previously worked with Pelsaert on a trading mission to India. These two men, the fastidious bureaucrat and the salt-of-the-earth sailor, were miles apart in ideology and personality, and had already developed a disliking for each other based on their previous collaboration.

The last-minute addition to the senior officers was Jeronimus Cornelisz. Cornelisz, an apothecary from Flanders, was escaping controversy and looked to the VOC navy in order to lie low. Having never set foot on a ship previously, but nevertheless valuable for his level of education, Jeronimus’s natural charm and gift of speech won him a commission for *Undermerchant*, technically third in command after the *Overmerchant* and Captain.

Collectively, these three were responsible for around 300 crew and passengers for the duration of the trip, which could be expected to last anywhere from between one to two years.

As could be expected, tensions rose repeatedly between the *Overmerchant* and the Captain during the journey. After a public humiliation at the Cape of Good Hope, the Captain, encouraged by the silver-tongued and opportunistic Jeronimus, began to plot a mutiny to take control of the ship, throw the Pelsaert and loyal crew overboard, and to begin a career pirating other merchant ships in the Indian Ocean.

Jeronimus Cornelisz was more than a simple apothecary. Born into a Flemish Anabaptist family, his religious views were heretical to the conservative Calvinistic Dutch mainstream. He was well-educated, highly-intelligent, and a gifted speaker. His philosophical musings came to conclude that no thought or deed could be truly sinful to a creation made in the image of the Divine. A psychopath with a messiah complex, he was extremely dangerous.

Weeks were spent plotting, planning and recruiting sailors and soldiers to the team of mutineers. However, mere days before the mutiny was to be put into effect, Batavia ran aground on the Houtman Abrolhos. A coral archipelago, the Houtman Abrolhos is 80 kilometres off the coast of Geraldton and was, at that time, known but completely unexplored. The Batavia survivors were stranded in one what is still today one of the most isolated parts of the world.

After unsuccessfully searching the archipelago for food and water, Pelsaert together with Captain Jacobsz and a small crew set out for Batavia, 3000 kilometres away across open sea, in an uncovered single-masted longboat. Their story alone deserves to be remembered as one of the most incredible feats of survival in maritime history.

But this story is not concerned with those who left, but rather with those who remained.

Back in the Abrolhos, Jeronimus Cornelisz had inherited total dominion over a flock of around 200 survivors. Determined to continue with the mutiny, he quickly assembled a council of his lead mutineers together with a new plan: to murder over a hundred men, women, and children, until there could be no resistance to seizing the rescue ship when it arrived.

**The Game**

The story of the Batavia mutiny will be told over two Acts, with many stages in between. Each stage will provide numerous opportunities for the player to explore branching paths, and it is our intention that each decision will influence the game at some point.

The first Act will take play on Batavia, during the initial journal from Texel, in the Dutch Republic, to the Canary Islands, Senegal, Cape Town, and ending with the ship running aground on Morning Reef in the Houtman Abrolhos. The player will be involved in many key events during the journey, including:

* Directly associating with the main characters, interacting with and possibly befriending many common NPCs who turn out to hold various critical roles in the second Act;
* Investigating the rumours of mutiny, either for the benefit of the Overmerchant Pelsaert, or secretly for the Undermerchant Cornelisz, either with significant consequences;
* Assisting in the mutiny, and potentially engaging in acts of sabotage such as misdirecting the course of the ship, or participating in an assault on a member of the crew;
* Opposing the mutiny, and assisting the Overmerchant and loyal crew against acts of sabotage.

The second Act will take place entirely in the Houtman Abrolhos, beginning with transferring to Beacon Island (historically dubbed ‘Batavia’s Graveyard’ by the survivors) but also, depending on player decisions and outcomes, around the Abrolhos on other islands such as Long Island, Traitor’s Island, and East & West Wallabi Islands.

Batavia left the Dutch Republic with 341 souls on board. After the inevitable ravages of diseases at sea such as scurvy, and drownings during and after the running aground, the total number of survivors of the shipwreck was 322. Stages of the second Act will include:

* Investigating the area for a suitable landing site for survivors;
* Transferring people and supplies to an island, or alternatively, remaining on board the wrecked Batavia with 70 or so other stranded survivors;
* Assisting survivors with establishing camps;
* Performing routine tasks for different factions, based on how much influence the player has gained towards NPCs during the game, and altering this influence further;
* Allying with the Undermerchant Cornelisz, or with other factions such as MPCs the player has bonded with in the first Act, or with soldiers, or with the family of the *Predikant* (priest);
* Performing tasks with more and more sinister intentions on behalf of Cornelisz and the mutineers, or alternatively, trying to diplomatically avoid drawing attention to oneself;
* Stealth/survival horror sequences of avoiding mutineers hunting for the player, or alternatively participating in murders and massacres to varying degrees of complicity;
* Making a final decision of which faction to remain with into the final phase of the game: mutineers, soldiers (transferred to another island), or remain unaffiliated;
* Battle sequences for or against mutineers and soldiers; two minor skirmishes, and one climactic final battle;
* A final race to the rescue ship to either inform the crew of the mutiny, or attempt to seize the ship.

Ariese, C. (2012). *Databases of the people aboard the VOC ships Batavia (1629) & Zeewijk (1725)*. Fremantle, W.A.: Australian National Centre of Excellence for Maritime Archaeology.

**Characters**

The Player Character (PC) will be a youth called Gerrit Jansz. This is a generic name and not based on a specific historical figure, but there were many unnamed young men and boys on board. The PC’s age will give him the opportunity to be employed on the ship as a cabin servant, ultimately giving him access to all parts of the ship, the officers, and crew, whereas a common sailor would be restricted in ship’s access and society.

The importance of NPCs will change between Acts I and II, as at the beginning of Act II, some characters will leave the story until the conclusion, if at all. Accordingly, the important characters for each Act are listed as follows:

**Act I:**

Name: Francois Pelsaert

Position: Over Merchant/Commander

Origin: Antwerp

Biography: A career bureaucrat, Pelsaert is the Company’s man through and through. From the southern city Antwerp in Spanish Netherlands, he is conservative, serious, meticulous, and uncompromising.

Name: Saloman des Champs

Position: Under merchant, secretary to Pelsaert

Origin: Amsterdam

Biography: The young personal assistant and secretary to Pelsaert, des Champs tries to be a Company man in the Commander’s image, but he is still young and inexperienced. He doesn’t possess the same natural authority, and although he thinks of himself as a moral person he can find himself being influenced by others.

Name: Jeronimus Cornelisz

Position: Apothecary, Under Merchant (Third Officer)

Origin: Leeuwarden

Biography: From the far northern city Leeuwarden in Friesland, Cornelisz is in many ways to polar opposite of Pelsaert. Raised in an Anabaptist family, educated in free-thought schools, and formaly trained as an apothecary, Cornelisz is highly intelligent and possesses a gift of charm and speech which is almost supernatural. His heretical beliefs and associations in his adopted town Haarlem lead him to abandoning his wife and joining the VOC to escape almost certain arrest. He is a natural cult leader, and is the main antagonist of the game.

Name: Ariaen Jacobsz

Position: Captain

Origin: Durgerdam

Biography: A rough, no-nonsense career sailor, Jacobsz is also in many ways a polar opposite of Pelsart. Jacobs has worked with Pelsart in the past and finds it difficult to hide his dislike for the Company man. After a raucous, drunken evening in Cape Town (a key event in the game), Jacobsz receives a humiliation from Pelsaert: a public dressing-down. Jacobsz’s hatred becomes unrestrained, and the opportunistic, silver-tongued Cornelisz steers his thoughts towards mutiny.

Name: Jan Evertsz

Position: High Boatswain

Origin: Monnickendam

Biography: Another career sailor, like the Captain. As High Boatswain, Jan is the highest non-commissioned authority over the deck crew. Stern, highly-disciplined, and capable of severe cruelty, he is loyal to Captain Jacobsz and no-one else. His influence over the crew will be key to finding and selecting the most suitable, and trustworthy, men to join the mutiny.

Name: Jacob Pietersz Steenhouwer

Position: Petty Officer

Origin: Amsterdam

Biography: Petty Officer Pietersz Steenhouwer (“stone-mason/stone-cutter”) has equal influence over the soldiers and military personnel on board Batavia as Boatswain Evertsz has over the general seamen. He is harsh, uncompromising, and highly-respected. He will be key to selecting and organising potential mutineers from among the soldiers on board, many of whom are already battle-hardened veterans of the Thirty Years’ War.

Name: Guijsbert Bastiansz

Position: Predicant/Clergyman

Origin: [Unknown]

Biography: Guijbert Bastiansz is travelling to Batavia in the Dutch East Indies with his large family, consisting of his wife, Maria Schepens, and his seven children: Judith, Agnete, Bastian, Johannes, Pieter, Roelant, and Willemyntgien. As the conservative Calvinist, he is the philosophical antithesis of Cornelisz.

Name: Lucretia Jans

Position: Passenger

Origin: [Unknown]

Biography: Lucretia (Creesje) travelling alone to Batavia to be reunited with her husband. As one of only a few women on board, and the only one without a male guardian, she attracts more than her share of unwanted attention. In particular, she attracts a lot of attention from the shamelessly uncouth Captain Jacobsz. When his advances fail to win her over, he instead succeeds in seducing her maid, Zwaantie, and the two delight in humiliating Creesje with this public scandal. Creesje becomes a pawn the mutineers’ plan when, on the Captain’s orders, she is attacked and molested by a group of masked crewmen in an attempted to provoke ship-wide punishments, in order to precipitate a mutiny.

**Act II**:

*Jeronimus Cornelisz, Lucretia Jans, Guijbert Bastiansz, Saloman des Champs, and Jan Pietersz Steenhouwer all retain importance in Act II. Pelsaert, Evertsz, and Jacobsz all leave in the early part of Act II (as crew of the longboat sending for help) and only Pelsaert returns at the finale.*

Name: Wiebbe Haijs

Position: Corporal

Origin: Winschouten

Biography: A Frisian like Cornelisz, Haijs is a soldier travelling to Batavia for garrison duty. After the ship runs aground, Cornelisz distributes groups of survivors around the archipelago under the pretence of searching for food and water, but in reality this is a strategy to remove Company loyalists from the main group. Haijs is sent with a group of fellow loyal soldiers to the “High Island” (East Wallabi Island) and instructed by Cornelisz to light a fire signal if they find food, but in reality they were expected to be left to die. This plan backfires spectacularly when Haijs and his men do discover a large supply of food (native wallabies) and natural freshwater wells on the island. When their fire signals are ignored, their suspicions are aroused, and when survivors of the later massacres begin to arrive with stories (and scars) of the murderers they build fortifications and wait for a decisive confrontation. Haijs is the leader of the Defenders of the High Island, the chief rival faction to Cornelisz’s Mutineers.

**Mutineers and Murderers:**

The following men are the principle murderers (although many others participate):

Jan Hendricxsz - soldier

Coenraat van Huijssen – soldier, cadet officer

Davidt Seevanck - assistant

Leenert Michielsz - soldier

Lucas Gillisz – midshipman, VOC cadet officer

Rutger Fredericxsz – locksmith

Mattijs Beer – soldier, cadet officer

Allert Jansz – gunner (cannon operator)

Guijsbert van Welderen – soldier, cadet officer

*They are all in their early to mid 20s, and many are veterans of the Thirty Years’ War and no doubt have already killed in their lifetime.*

*Van Huijssen, Seevanck, Pietersz, and van Welderen are killed at the climax of the second phase (of three phases) of Act II, in the course of first attack on the Defenders on Wiebbe Haijs’s island. During this attack, Jeronimus Cornelisz is also captured.*

Name: Wouter Loos

Age: 20s

Origin: Maastricht

Biography: Wouter Loos is elected leader of the Mutineers after Cornelisz’s capture. He is responsible for at least two murders but is considerably different in temperament from the other mutineers, showing definite signs of empathy and reluctance to murder. He initiates (likely under duress) a final attack on the Defenders, however under his leadership the murders of the other innocent survivors cease.

Name: Jan Pelgrom de Bye

Age: 18

Origin: Bemmel

Biography: Jan is the youngest murderer and possibly the most deranged. He genuinely enjoys murder and begs for opportunities to kill. Even the other seasoned murderers find his enthusiasm for death disturbingly unusual. He is capricious, psychopathic, and unpredictable.

**Scenes:**

**Act I**

**Chapter 1**

*Stage i*

Goal: Tutorial: basic movement, object handling

Synopsis: Gerrit (Player Character) begins in front of VOC main office to enlist.

*Stage ii*

Goal: Tutorial: ship movement (going aloft; complex and coordinated actions such as furling/reefing sails), limited ship tour

Synopsis: Player arrives by cart in Texel, on the northern Dutch coast, to board Batavia. Encounters miscellaneous named sailors, including Boatswain Jan Evertsz. Player is given limited ship tour of fo’c’sle and other sailors’ areas, and instructed in ship duties: going aloft to lookout, operating sails.

*Stage iii*

Goal: Tutorial: emergency situations, fast movement

Synopsis: During a storm, Batavia nearly runs around on a notoriously treacherous Walcheren sank banks, foreshadowing later events.

*Stage iv*

Goal:

Synopsis:

**[Part 4: Technicalities]**

***[Roles]***

*[It is sometimes useful to define roles for particular participants, such as Lead Developer, or Technical Designer, or User Interface Designer. It is also possible that roles are changed from week to week, depending on what needs to be done next. Have you defined any specific roles for your project? If so, describe and justify these. If not, describe your process and justify why there are no specific roles.]*

*[ - Define roles for the projects (one paragraph - no minimum length)]*

***[Scope and Limits]***

*[One of the more difficult parts of project planning and execution is to define the scope and limits of the project. As mentioned above, you never really complete project like these; all you can ever do is your best in the time available. Part of that involves setting priorities and accepting that there will be features that will take too long to develop. This means that it is important to set a scope for your project, as a means of ensuring that you make the most of the time available.* ***For example, if you are developing a game, you might consider only producing one level and two or three characters, in order to show a proof-of-concept, rather than develop three levels and ten characters.]***

*[The scope is probably the most crucial part of your plan, and also the most difficult to define. One way to define the scope is to think of the deliverables for your project, i.e. what outcomes would you be able to show to someone who asks you to see the results of your work. This will also include several statements about what will not be part of the project. For example, if you are using Open Street Maps to show the location of all your favourite shops, the deliverables would include the updated map, but not the Open Street Maps technology itself. It would also not include many other features of Open Street Maps, or other interesting location -- just those which show your favourite shops.]*

*[Also, be aware of the phenomenon of `scope creep', which is the tendency for projects to incorporate more and more features. There is nothing wrong with being ambitious, but you only have a certain amount of time. At least one paragraph is expected]*

*[ - One paragraph]*

***[Tools and Technologies]***

*[*What software or other tools are required by the project? Are there any software licenses needed? Is there any hardware needed (beyond a standard laptop or something similar)? This needs to be precise (e.g. Windows Movie Maker Version 45.3) but needn't be long. You should also include a brief description of any prior experience any group members have had with the tools and technologies you list.*]*

*[ - One paragraph (no minimum but be concise)]*

***[Testing]***

*[How will your test your project? How will you know when you have succeeded? Testing is not something that you should leave until the very end; often it is far more useful to have a quick and dirty “mock up" of a project and then do some (limited) testing, to find out whether you are building the right product. If your project involves user testing, you should describe in your plan how you will find the test users, approximately what number of people you will need, and what background (if any) is required.]*

*[ - One paragraph]*

**[Part 5: Timeframe]**

***[Timeframe]***

*[Another difficult aspect of project planning is knowing how much time to allow. You will have something like 36 hours per person for this assignment. In order to develop a plan for further work beyond the end of this course, let us assume that you will have an extra 10 hours per week per person for 10 weeks in addition to this time in order to develop your project. This means that you will have six weeks (Weeks 7 to 12) of the semester to work on your assignment, with a further 10 weeks after that. This means that your plan will be for a total of 15 weeks, with the first 6 being on this assignment.]*

*[You will clearly not have the extra 10 weeks to work on the project; this is intended to give you a feeling for how much you would be able to achieve in that time. This means that the first 6 weeks of your timeline will end up being your actually progress on this project, with the remaining 10 weeks being your plan for the next stages.]*

[**This should be presented in the form of a table, with one row for each week, specifying as best you can the work for each person for each week**. *This means that the first six rows of the table will describe your progress so far, and the remaining 10 your best guess at how the remaining time would work.]*

*[This will no doubt change as you work on your assignment, as it will give you a more precise idea about how long it will take to get things done. This is not an unchangeable contract for exactly how things will work; that is unrealistic for just about any project. The idea is to get you thinking about how exactly your time should be allocated to the various tasks involved. It is a good idea to have a milestone (i.e. a specific outcome) for each week of the project. This may include getting familiar with tools, or reading up on a particular technique or technology. You should also include time for writing up the final report and any other documentation. Writing reports always takes longer than you think, especially as you should expect to re-write any piece of writing that you do at least three or four times.]*

*[ - Table format]*

**[Part 6]**

***[Risks]***

*[What risks can you identify for your project? There will always be some generic risks (such as computers breaking down the night before a deadline, health and family issues, and institutional changes). Do not include generic risks such as these. The idea is to be as specific as you can to your project. For example, if your topic is to develop a game, there may be a risk that the software you choose to work with may be very difficult to learn, poorly documented, or not turn out to have the features that it claims it has. These properties are often only discovered once you have started working with the software, and so unless you have had lots of experience with the particular tool, there is always a risk that it may not work as well as you believe it should, no matter how much prior research you do. Similar comments apply to hardware.]*

*[ - One paragraph]*

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Risk analysis for works entailing completion of Project-MCS are numerous in nature as this is a somewhat ambiguous task at the time of project planning. Risks as follow are identified in order of urgency.

1- Complacency; The MCS project is a sizeable undertaking which is expected to evolve over the duration of design. Understanding this the number one risk is failing to identify future risks as they arise further into the project. Measures to be taken should include regular management meetings involving the senior design staff and purposeful effort to identify any new risks having arisen with implementation of new strategies, staff and or technologies.

2- Intellectual Property; All members operating under the banner of groupFOURTEEN and having access to creative content pertaining to Project-MCS will be required to sign the officiated legal documentation regarding Intellectual Property. All Members of Project-MCS are to understand any content or related works commissioned as per the project brief are property of groupFOURTEEN for the contractual timeframe signed upon.

3- Private Information; Extreme care is to be taken throughout the duration of the project to ensure any sensitive information regarding it's creation is not leaked. Furthermore to this, members of the project are encouraged to avoid sharing information with other project members where unnecessary. Diligence is to be taken keeping the project scope up to date and ensuring members only work on components stipulated within the documentation.

4- Project Dissolution; Project-MCS as previously mentioned, is an elaborate undertaking. As observed in the industry, many Indie games fail to see completion due to many factors, most notably differing artistic vision. Planning is to be done entailing various stages throughout the design incorporating benchmarks of completion. These benchmarks will be stages at which Project-MCS can be either repurposed or scaled back to retain efforts in a worst case scenario.

5- Poor Product; While many potential risks could be highlighted, a fundamental risk often ignored is bad overall product quality. Many Indie and even triple A titles fail to meet the quality of product as depicted in planning. Measures are to be taken to ensure Project-MCS does not fail at meeting desired quality by implementing KPI benchmarks and conducting regular peer reviews.

***[Group processes and communications]***

*[Communication between group members is arguably the most important aspect of your project. Past experience has shown that communication breakdowns between group members is the most common cause of project failures, so it is vital that you specify at the outset the means and expected frequency of communication between group members. How will your group communicate? How often will meetings take place? Will these be face-to-face, or using technologies such as Skype? Or Facebook? Or email? Or text? Or ... ?? What will you do if you have a group member who does not respond to communications? You should expect contact between group members at least twice a week. You can always make contact more often if you wish, but you do need to know what minimum  
frequency is expected from all members of your group.]*

*[ - One paragraph]*

As a group we used GitHub as a shared workspace for files and Discord as our communication platform for Assignment 2. This will be the same for Assignment 3 in terms of which platforms we will use. As the conclusion of assignment 2 a lot of the functionality of GitHub was better understood, which should reflect in a more accurate commit history for this assignment. With the assignment 2 project we split up the tasks evenly and each person worked on their sections more or less individually, with discord being the go between when minor questions cropped up. However the requirements of Assignment 3 require a more collaborative approach. We decided to have a weekly meeting via Discord (either voice chat or text chat), where we discuss the overall aims of where we can get to, what each person is able to work on, and where we are at with things. This still allows us the level of autonomy during the week to work on our task/s, but the ideas and decision making is shared towards out aims and expectations for the final project. We have all agreed that the beauty of Discord is leaving a question at any time will be answered the next time someone is online, and as a group we are all on regularly enough for this to be a comfortable solution. The meetings are minuted and shared on the GitHub repository so anyone unable to attend can quickly catch up on the discussion. Task allocations are clarified and agreed upon before the conclusion of the meetings, and these are also tracked on a separate tracking doc, as well as being a part of the timeframe allocation.