

## **Game Working Method**

by Michael Inglis

#### Game Design Studio

#### Game Working Method

In this report I will discuss my motivations for making what I did. I have included a "Games Content List" which outlines all the assets, characters, quests and environments in detail. I'd urge reference to it to fully understand how my motivations for creating this game - which I want to spend this report focusing solely on - tie into the game itself.

My inspiration with this submission has remained the same from the onset; to create an open world quest based 3D point and click adventure with a non-linear branching narrative. I believe this is what I have created. Utilising Calvino's "Invisible Cities", I feel I have crafted an experience of creating a city which is different when you leave from when you entered in both physical and metaphysical form through a deep storyline with characters. In developing this game, I have made an effort to adhere as closely as possible to the course brief. I will thus construct my report as such, focusing on each of the points given within the context of the course brief.

#### **Multiplicity**

Significant more assets have been created since the last submission to provide a rich world which can be explored. Although large quantities of assets are repeated, there is enough variation for everything to feel new but enough similarity for unique, quest based items to stand out (see Figure 1.3). I wanted there to be several motivations to play this game. The least subtle of which is the money system. This provides motivation to complete quests in a certain way (more money for doing the less noble, "bad" ending for example). The money system was also provided as an incentive to explore and find hidden treasure chests (see Figure 1.2) throughout the map. This provided variety in completing guests. Quest 1 for example requires the player to find 200 gold to buy a room (see Figure 1.2). This amount can be completed by A) finding enough treasure chests or B) completing a side quest.



Figure 1.1. Treasure Chest



Figure 1.2. Quest One



Figure 1.3. "General's Prize"

#### **Articulating Spaces**

The whole city was designed with each area in mind, all slotting into one base to give a varied, unified city. The environments which compose the city are "The Square" (See Figure 2, blue), "The Castle" (See Figure 2, red), "The Garden" (See Figure 2, green) and "The Town" (See Figure 2, yellow). The Castle and Town are host to several micro environments, featuring interiors for each of their respective buildings. I wanted to concentrate on scale here, providing a realistic interpretation of a city, being able to have the user look at any part and know that can eventually go there. This is why the detail ranges from a giant castle to a candle flame in a lamppost. The city was inspired by the city Dorothea in Calvino's Invisible Cities. The castle formed the basis of "aluminium towers rise from its walls" and I used the idea of the "moat whose water feeds four green canals" to create the castles moat and the small river seen in The Garden. The most astute thing drawn from Calvino's Cities however is the line "which cross the city, dividing it into nine guarters, each with three hundred houses and seven hundred chimneys." The idea of diving up the city into what ended up being 4 quarters, The Castle, The Garden, The Town and The Square ended up forming the basis of my gameplay. It allowed me to structure my game in a way that different areas could be opened up at different points, providing a challenge to the player and an enticement to explore new areas without overwhelming them in the early stages.



Figure 2. Castletown Plan

#### **Non-Linearity**

What we see within the quests given to the player is a linear quest (it has a starting and finishing task), but given in a non-linear environment where they can choose to go and do whatever they want in that moment. Both the main story quests and the side quests can be completed in different orders or at different times and the player is never handheld through the game along a certain path. Once I had built the system for allocating quests, it was simply a case of adding new classes for quests referencing the the items and character dialogue. This is what allowed me to add as much quests as I did once the groundwork was done.

Environments such as the "Thieves Hideout" (see Figure 3.1) could be interpreted as linear given that a certain path has been constructed for the player to follow at a certain time, but the variation in the maze and the alternate outcomes at the end of Quest 3 give the player a decision between two outcomes (see figure 3.2).



Figure 3.1 - Thieves Hideout



Figure 3.2 - Quest Ending decision

#### **Repeatable but Different**

This was the core idea of the game before assets were even planned. I wanted to produce a game which had outcomes based on the players actions. It was from here I developed the "Karma" system. Looking at every main story quest (2A, 2B, 3) after the first, we see they have a "good" and a "bad" ending. Experiencing a "good" ending of a quest adds to the players Karma, making it more likely they will experience the best of the three endings. Doing a "bad" outcome in a quest results in the player more likely to receive the "bad" or "deserted" ending. A main aspect I wanted to make sure of was the game selected the ending itself based on previous actions, the player wasn't able to directly pick their ending. A tree of the game's paths based on the ordering of quests 2A and 2B and the endings selected is represented in Figure 4.

One thing I strived to do is keep them interesting. I didn't necessarily want the "good" ending of marrying the Princess to be the most entertaining as it's quite often fun to play as "The Bad Guy". This is why the bad ending is arguably the most unique. The line at the start of Invisible Cities, "this empire, which had seemed to us the sum of all wonders, is an endless, formless ruin, that corruption's gangrene has spread too far to be healed by our sceptre" resonated very well with me and formed the inspiration for it. The words "corruption's gangrene" formed the basis by which by which the town would end up infested with zombies a result of the corrupt actions by the Thieves Guild. The "deserted" ending involved a deserted city with an explanation as to what happened. These varied endings provide incentives to replay the game in an effort to experience more of what it has to offer.



Figure 4 - Tree of all possible main quest outcomes.

#### **Communicating Narrative**

The narrative of this game was communicated through a dialogue system I set up within Unity. This allowed characters to be interacted with and spoken to. Any object or person which can be interacted with has a dialogue box pop up on screen with the action which may be performed. Upon left clicking, the action can be carried out. This includes doing actions such as opening doors, the treasure disappearing and the player's money increasing when it's interacted with or picking up an item, but also includes taking to characters. This system formed the bases of the Quest game structure and storyline. A story was communicated through a series of actions required to be carried out by the player. These were motivated by enticing questions such as "Who did the murder?" (see Figure 5.1), "What does this key open?" (see Figure 5.2) or "How do I get in the castle?" which hopefully motivate the player to finish the quest to provide resolution.



Figure 5.1 - Quest 2A



Figure 5.2 - Quest 2B

#### **Open Form and Configurable Experiences**

As I have mentioned previously, exploration to explore an interesting environment was one of the main aspects I wished to convey. It was the reason I spent so long developing assets. It was thus quite a challenge in crafting an experience for the player which wasn't frustrating in figuring out what to do next as regards to finding and carrying out quests. This is why every environment and microenvironment is contains a person or object associated with a certain quest (see Figure 6.2).

Elements to help the player such as the signs on the buildings and the first City Guard the player comes across were added. The first City Guard acts as a hint system, giving the player randomised clues as to what to do next depending on the game's state (see Figure 6.1).

With the main quests (Quests 1, 2A, 2B, 3, 4), I wished to maintain some degree of structure, but have them open to whatever the player's current motivation is. This is why 2A and 2B can be completed in a different order, but both have to be completed before 3 is made available to start. Adding the three side quests also certainly added to the game's open form. These can be completed at any time (assuming the garden is opened for two). Another aspect I wanted to make sure is that after whatever ending the player has experienced in Quest 4, they are able to return to the game and finish any of the side quests that they may have not finished or started.



Figure 6.1 - Advice Guard



Figure 6.2 - Flower Quest Start in Flower Lady's house

#### Collaboration

I have gone into detail with this on the supplied Game Content List.

Hazel Turnbull composed the background music heard throughout the game world.

Youliang Qian created all the sound effects for my game. This included a fire crackling loop, and multiple variations of door noises, money clinking and water splashes.

I used two textures and the script for the Zombie's wondering AI from the internet. Everything else asset wise and concept wise is my own creation.

#### References

Calvino, I (1972, trans. 1974) Invisible Cities. New York: Harcourt Brace & Company



## **Game Content List**

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## **Section 1 - 3D Model Parts**



Game Design Studio Game Content List Michael Inglis castleTurretsInner castleTurretsOuter castleWindow chair chimney chest crate crown doorA doorB doorBroken cup doorC doorD doorFrame doorJail fireplace firewood flower dress

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Game Content List

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Game Design Studio	Game Co	Michael Inglis	
			~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
shopDesk	signA	signB	spear
squareArch squareArchDc		squareArchPillar	squareFloor
squareFountian	squareGarden	squareInnerRamp	squareOuterRamp
squareOuterWall	squarePillar	squareWall	stairs
statueBase	mysteriousTwig	swordA	swordB Page 6 of 33
			-





figure

## Section 2 - 3D Model Assembly





Assembly 1





Assembly 3



Assembly 4

## **Section 3 - Character Textures**



**Character Texture** 



Character Texture - Female



Character Texture - witch



Character Texture - thug



Character Texture - mingles



Character Texture - zombies



Character Texture - guard



Character Texture - minister



Character Texture - banker

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Character Texture - headmaster



Character Texture - swordsmith



Character Texture - dead

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# Section 4 - Sign Textures



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## **Section 5 - Script Overview**

Folder/File	Description			
QuestController.cs	This is the main "Brain" of the game. It stores all the states of gameplay and is passed into every object in the game, letting it respond based on the unique game state.			
Quest1 Folder	This file contains the controllers related to Quest 1. The file QuestOneController.cs controls the individual Quest state, allocating text to questOneSam.cs and managing the state on a more local level than the overarching QuestController. The state given by this quest finishing opens up the garden. The File questOneDeed.cs controls the Residency Deed, adding it to the inventory and causing it to disappear when required.			
Quest2A Folder	The File QuestTwoAController.cs acts the same as QuestOneController and the files within it act to control the characters and objects as seen before.			
Quest2B Folder	The files in this folder correspond exactly the same as above with respect to Quest 2B			
Quest3 Folder	The files in this folder correspond exactly the same as above with respect to Quest 3. Several objects such as individual doors had to have custom scripts written to suit their unique functionality in this quest.			
Quest4 Folder	The files in this folder correspond exactly the same as above with respect to Quest 4. The Cauldron however is quite a unique script. It controls which ending is allocated.			
SideQuests	Each file in here controls a side quest or the items related to them.			
People Controllers	The files in here conform to unique people who perhaps needed a slightly different speech assignment. A few notable files here would be: CharacterTextController.cs - controls the text on screen, clicking it to dismiss and being able to change the game state based on that. TipsGuard.cs - controls the "Advice Guard" in the spawning area. This looks at the game's state, and gives the player advice as to where to go to find quests. It uses an algorithm which randomly picks an entry out of an assortment of relevant strings.			
Object Controllers	The files here basically control every other object not related to a quest or person. Their functionality is quite self explanatory based on their file names. Doors do as we expect and money is added to the player's purse on clicking treasure boxes. It should be noted that the animators are also contained in this folder. These control the figure walking around the square, the window cleaner and the unique Zombie walking animation. I also developed a script to randomly assign variations of the same class of sound to actions. This allowed me to use all the different coin clinks, door opens and water splashes supplied by Youliang. I also wrote a controller with fairly extensive logic which changed the music based on the players location. I did this because I didn't have time to figure out FMOD.			
WanderingAl.cs	This controls the wandering Zombies. I did NOT write this script. I didn't have time to do one myself for such a small part of the game, so I acquired this from here - <a href="https://gist.github.com/mminer/1331271">https://gist.github.com/mminer/1331271</a>			

## **Section 6 - Environment Overview**

### Castletown



This is the overarching environment. This area has 4 quarters, "The Square", "The Town", "The Castle" and "The Garden".

## The Square



The Square links The Town, The Garden and The Castle and functions as a central hub area.

## The Town



The Town is where the majority of the player's interactions take place. It is host to all of the microenvironments with the label "House".

## The Castle



The castle is host to the Microenvironment "Castle Penthouse". This is only accessible after Quest 3.

## The Garden



The Garden can only be accessed after Quest 1. It allows the player to progress onto Quests 2A and 2B.

## **Section 7 - Microenvironment Overview**

## The Tavern (House A)



The Tavern is one of the first locations the player should visit. Here they can buy a room and get the "Residency Deed", finishing quest 1 and opening up the garden. There are two hidden treasure chests in this environment.

## Flower Lady's Home (House B)



The player can start the "Petals for Pennies" side quest by talking to Flower Lady Hazel. There is one treasure chest in here.

### The Bank (House C)



The Bank is involved in Quest 2B, the player can choose to unlock the door and access the safe rooms, allowing The Thieves Guild to rob it or inform the General.

### The Apothecary/Smithy (House D)



The lower floors play host to the Apothecary and Smithy which are involved in Quest 4 and Quest 2A respectively. Upstairs features bedrooms, one of which contains a cupboard with a hidden chest.

## The Temple (House E)



The Temple has one of the lost school students, featured in the side quest "Playing Truant".

## The Barracks (House F)



The Barracks' first floor has a jail where the thug responsible for starting Quest 2B is located. The second floor features the sleeping area with a treasure chest. The top floor features General Jules' office, where he is located a lot of the time. The room also features a treasure chest and the General's Prize, an item which is the focus of "The General Prize" side quest.

### The Thieves Hideout (House G)



The Thieves Hideout is a location which can only be fully accessed in Quest 3. The player can only access the first room for most of the game. When Guild Leader Mingles is through the back, the "Strange Button" on his desk may be pressed which opens up the back. The player may navigate through a maze of crates before eventually finding the princess. A Treasure Chest is also hidden in the maze.

### **The Castle Penthouse**



This area is only accessible after Quest 3. On completion of the good ending, the castle is given to the player. On the bad ending, the player will have enough money to buy the castle. This features a chest and also has the "Mysterious Twig" which is required for completing Quest 4.

## **Section 8 - Character Profiles**

"The Stranger"



The Player's character in my game is only known to the townspeople as "The Stranger". I chose not to give him any dialogue or background simply because he is a vessel in which the player can experience the game. The players can thus make of him what they want and choose the outcomes of the quests as they desire.

#### Barman Sam



The Barman found in The Tavern. Responsible for selling the Stranger a room in "Stranger Goes Home".

#### **General Jules**



The General of the City Guards found in the Barracks. Responsible for optionally reporting any criminal activity within the town to. Can optionally be used to report "The Heist Job" to and is responsible for starting and finishing the good ending of "The Stolen Princess". Also is the sole character in the "Deserted Ending"

#### Swordsmith Massey



The Swordsmith found in the Smithy. Made the murder weapon in the quest "Blood on the Grass" and is involved in the quest.

#### Old Lady Halliday



The Witch found in the Apothecary. She is responsible for the quest "The Mysterious Root", involved in delegating what ending the player experiences.

#### **Minister Moberly**



The Minister found in the Temple. Takes part in the ending of "The Mysterious Root" in the "Good Ending".

#### **Bank Clerk Coyle**



The Bank Clerk found in the Bank. Remarks only to the Player's actions in "The Heist Job".

#### Headmaster Yannis



The Headmaster found in the School. Responsible for starting the Side Quest "Playing Truant".

#### Guild Leader Mingles



The Leader of the Thieves Guild, found in the Thieves Hideout. Responsible for the Murder in "The Blood on the Grass". Also responsible for kidnaping the princess in "The Stolen Princess".

#### Flower Lady Hazel



The lady in the house opposite the Bank. Responsible for starting the Side Quest "Petals for Pennies".

#### **Princess Chelsea**



The princess of Castletown. The focus of "The Stolen Princess". Can marry the player in the "Good Ending".

#### **Thieves Guild Thug**



Several variations of this character appear throughout Castle town. They are most likely up to nefarious activities.

#### **City Guard**



Several variations of this character appear throughout Castle town. They appear within the Barracks and at connecting points of the city. Several are involved in different quests. They may be seen with spears or without their helmets on. Several unique ones are involved in distributing quests or offering advice. The one seen in the location the player spawns in is responsible for giving the player randomised clues of where to start quests based on the game state. Another, located in front of the castle offers to sell the penthouse for 5000 gold. This amount of money can only be attained by experiencing the "Bad Ending" of "The Stolen Princess".

#### School Pupil



Several variations of this character appear throughout Castletown. They are the youth of Castletown and appear in the School. Two are involved in the side quest "Playing Truant".

#### Zombie



These characters appear only in the "Bad Ending" and have infected Castletown if all the players endings have lead to the "Bad Endings" in Quest 2A, 2B and 3.

## Section 9 - Main Quest Synopses

## The Stranger Goes Home (Quest 1)



"The Stranger Goes Home" is the first quest in the game. It is a linear quest and acts firstly as an incentive to get the player to explore and uncover a bit of the world. The aim of the quest is to obtain residency within the town, acquiring a room at the Tavern and picking up the "Residency Deed" item. In this state, we encounter the garden being closed.

What has to be done before the player gains access to the room is acquire enough money to purchase it. This can be done in a variety of ways which encourage exploration of the open world. Players may search buildings for money chests (of which there are several) located throughout the environment or players may start and complete side quests by talking to unique NPCs within the city. Once this quest is completed, the player has the option to start Quest 2A or continue Quest 2B if they have already started it.

## The Blood on the Grass (Quest 2A)



"The Blood on the Grass" can only be started after the player has gained access to the Garden. Once in the garden, the quest is started by talking to the Guard Commander. Who asks the player to look for evidence surrounding the murder which has recently occurred. The Guards at his side offer up tips depending on the different states of this quest.

A "Bloody Dagger" may be found and shown to the Guard Commander. This prompts him to ask the player to attempt to find the location it was bought. The player will eventually find himself over in the Town, following the other guard's clues speaking to the swordsmith in the Smithy. Swordsmith Massey tells the player that the person who bought the blade lives in the house opposite the barracks (Thieves Guild). Upon entering the Thieves Guild. Thieves Guild Leader Mingles offers the player 1000 gold if he doesn't tell the guards he had the blade, asking him to "think about it". Talking to Mingles again prompts him to give the player 1000 gold. If the player however goes back to the Guard Commander at this point, the Guard Commander thanks him for reporting back and gives him 100 gold.

### The Heist Job (Quest 2B)



"The Heist Job" may be started before completion of Quest 1 but will require access to the Garden to progress. The player can initiate the quest by talking to the jailed thug in the barracks. This leads him to convene with the thug in the garden who gives a key and tells the player to meet with his associate in the bank. When the player enters to back and talks to the suspicious thug, he is offered 1000 gold to open the door. If the player complies, the door is opened and the gold is given upon speaking to the thug again. This closes on the quest on the "bad" ending. The player may at any point inform General Jules as to the bank robbers, netting the player 100 gold and ending the quest on the "good" ending.

### The Missing Princess (Quest 3)





"The Missing Princess" may be started when both guest 2A and 2B have been completed. General Jules appears in the square, just south of the castle, informing the player that The Thieves Guild has captured Princess Chelsea. The player, assuming the location of The Thieves Guild, enters the building to find Guild Leader Mingles missing, but the Strange Button exposed. On pressing the Strange Button, the shelves move to reveal a hidden passage. This leads to a short maze in the Thieves Guild Loot Room where the player faces Guild Leader Mingles again. The player is offered 5000 Gold to go away. This locks the door and gives the player the 5000 gold, ending the quest on the "bad" ending. If the player however choses to open the door instead, Princess Chelsea in a cage is revealed. On speaking to her, she urges you to chase Guild Leader Mingles who has run away. Navigating back through the Thieves Guild, the player comes across Mingles accosted by a City Guard. The Guard tells the Player to inform General Jules that Mingles has been captured. On Informing General Jules of the news, the player is granted access to the Castle Penthouse, thus ending the quest.

## The Mysterious Root (Quest 4)



"The Mysterious Root" is a quest given by Old Lady Halliday in the Apothecary. She requires a Mysterious Root to finish her potion to see into the future. The quest however is stagnated by the fact the player cannot get the Mysterious Root until they gain access to the Castle Penthouse after Quest 3.

Depending on the outcome of Quests 2A, 2B and 3 will determine what method the player was able to gain access to the Castle Penthouse. If the player saved the Princess, they would be granted access. However, if the player had abandoned the princess, they would now be eligible to buy the Castle Penthouse due to the amount of money they have. The Quest may be continued upon picking up "The Mysterious Root."

On returning the root to Old Lady Halliday, she brews the potion as described earlier. Interacting with this potion provides three endings, all of which are determined by their actions in previous quests.

The "Good Ending" is dependent on the player saving the Princess in Quest 3. This Ending features an empty city with everyone seated at the North end of the Garden. Here, we see Minister Moberly waiting to marry the Princess to The Player. Upon talking to him, the Player is Married and becomes the King of Castletown.

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#### Good Ending:





The "Deserted Ending" is dependent on the player choosing not to save the princess but not completing both 2A or 2B on a bad ending. This ending features a deserted city, in which nobody but General Jules remains. He states that everyone left once the Princess disappeared due to corruption from The Thieves Guild.

The "Bad Ending" is dependent on the player not saving the Princess in Quest 3 and completing both 2A and 2B on the bad ending. In this ending, we see that the town is deserted from the players bad actions and is now inhabited by Zombies which wander

The player may return to the present by interacting with Old Lady Halliday's Cauldron again.

Deserted Ending:



**Bad Ending** 



## Section 10 - Side Quest Synopses

## Playing Truant (Side Quest)



"Playing Truant" is started by talking to Headmaster Yannis. He reveals that two of his pupils did not turn up for class and it he will pay the player to find them both. One may be found in the Temple, the other in the Garden. On speaking to both students, they will return to Class. Talking to Headmaster Nicolas will subsequently give the player gold and cause the students to appear in the class.

## Petals for Pennies (Side Quest)



"Petals for Pennies" can be started by talking to Flower Lady Hazel. She asks the player to bring her 10 flowers. On returning to her after picking 10 flowers in The Garden, she gives the player gold.

## The General's Prize (Side Quest)



"The General's Prize" is started by talking to the thug in the alleyway. He urges the player to steal the "General's Prize" on General Jules' desk on The Barrack's 3rd floor. Upon taking the item, it can be given to the thug for a gold reward.

## Section 11 - Other Media Used

In this section, I round up a brief description of assets I used which weren't created by myself.

### **Textures**

As referenced in the previous assignment, I used two textures from textures.com:

Texture	Name	Origin
	Flames0033	http://www.textures.com/download/flames0033/64409
	Smoke0391	http://www.textures.com/download/smoke0391/43674

## Scripts

As mentioned in the Script Overview Section, the script WonderingAI wasn't written by myself. If was found and accessed here online - <u>https://gist.github.com/mminer/1331271</u>

## Music

I was extremely fortunate to work with Hazel Turnbull for my game's background music. Upon seeing footage of my early work, she composed "City of the Thousand Wells", the game's main theme and "The City of Spiral Staircases", the game's Tavern theme. She also had a piece of hers extended for looping called "Thoroughly Modern Witch" for the Apothecary/Smithy's theme. Other pieces of her work used were "No Hero's Allowed" in The Thieves Guild and "Do You Have Any Love Birds?" for the areas which feature the Princess.

## **Sound Effects**

I was also extremely fortunate to work with Youliang Qian who created several unique sounds for my game. I sent him a video of my environment suggesting a door open, a coin clink and a water splash and he came back to me with all three, each with multiple variations and a looping fire noise.