

Project Report

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BAS²TRAF

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1 Introduction

1.1 The group

BAS²TRAF is a group project composed of friends, who came to know each other after coming to Epita, as they were in the same class. They did not have an idea of project before forming the group, but they did so because they thought that even if individually they were not the best, they would work better with people they like than with total strangers.

As they had already went through a semester together, they knew that they could count on the others and that once the idea was found, they would all work hard to transform it into something concrete. Unfortunately one of us (Thibault faucon) did not validate the S1 and he decided that he will go to S1# for the second semester, thus our group is now composed of only 3 members, Raphaël Silverio, Augustin Brites and Antoine Solé.

1.2 The project

Episcape as its name indicate is an escape game happening inside the building of Epita in Villejuif. In this game the player will be a student who stayed late inside the building of Epita and when he finally decide to go home, he found out that he is locked inside. His goal will be to escaped the building and unfortunately for him and decide to studied the evening of the New Year Eve so he will have a time limit imposed otherwise he won't be in time to attend the party his friends organized.

There will be a mode Solo-Player and a mode multiplayer that will share similar gameplay, the difference being in the scenario and the mini-games and riddles that will be encountered. Each of the two scenario will separated in 4 parts that will be the 4 floor of the buildings. Once a player has clear all the events of a floor, he will be able to go to the next one and shouldn't need to go back to a previous floor. The main map of the Solo-Player and Multiplayer mode will be the same, as they will both happened in the building of Epita

in Villejuif.

2 Over the book of specifications

As one of our members has quit the group, there will be some modification on the distribution of the work. Otherwise we still think that what we decided at first was good and even though our game right now only start to look like what we want, we think that it is doable to do what was said in the book of specification.

We may be a little late on the projected calendar for this first presentation but we are growing more motivated as time pass since we can now do some actions in our game and thus we planned to work hard enough to take back the time we lost and be up to date for the projected calendar of the second presentation.

Here is the modified table for the division of work :

	Raphaël	Augustin	Antoine
Histoire			
Scenario Single Player	✓		
Scenario Multiplayer	✓	✓	
Design			
Caracters		✓	✓
Map	✓		✓
Gameplay			
Object Interactions	✓	✓	✓
Network		✓	✓
Interface		✓	✓
Other			
Website	✓		✓

✓ Delegate ✓ Substitute

3 Progress by part

3.1 History

3.1.1 Scenario Solo :

Raphael :

The story-line that will follow the single player mode is this one : “a student working late at night the 31st of December and when his clock shows 10 pm, he tries to get out but the door of his room his locked, he has to find the exit by using any clue that is given to him, starting with this intriguing QR code on the wall under which there is written “you stayed too late ?” ...”. The player will have to resolve equations, find clue in poems or just litterateur references or correct electronic circuits.

After scanning the QR code, the player will be sent on a website only containing text telling him “to fly you fool, under your foot put an eye”, effectively, on the ground, a piece of paving is movable, the player moves it, he finds under it a safe with a padlock and a map, useful for the rest of the game if the player don’t know the campus, and at the back of the map, there is letters that seems to be put in a strange order “kwsv://iluvw.iu”, then if the player understands it, it’s a cesar code, he will find the shift and find an url “https://first.fr” that will lead him on another only text website saying “The key of my heart opens it, as it could open a safe, you throw it to the trash it’s unsafe, and destroyed my heart with it.” so he search near the trash and effectively under it, there is a key and it opens your safe in which there is... another key.

The story goes on but i won’t spoil it to you, you’ll have to play once the game done to discover the rest of it.

3.1.2 Scenario Multi :

Antoine :

I first started to create a story where the players start in two different room on the third floor. They each had a riddle to resolve and then give one another the answer they found to unlock the door they were in. Then they should remarked that there was a key stuck inside the distributor and they should find a way to access it. I then started to think of various mini-games to give them elements one by one and at some point of time i started to lack inspiration. So I asked Raphaël to show me what he has done hoping to get some inspiration from him. And when he showed me his work, I found it so much detailed than mine that I asked him if we could change part with some of his other work, and as he was struggling on the map, we decided to change part.

Raphael :

In the multiplayer mode, the story is quite identical to the single player's one excepted that two student are locked inside different rooms, hear that they are two to be locked and communicate by phone call, every time that one player find a lead or resolve an enigma, the result his send to the other by a sample message as : "hey mate, I just found the solution of an enigma, it gives me [insert result], maybe you will have to use it". They have to progress in the game at the same rhythm if they don't want the other to wait too much because quite frequently they will need each other's result or help.

3.2 Design

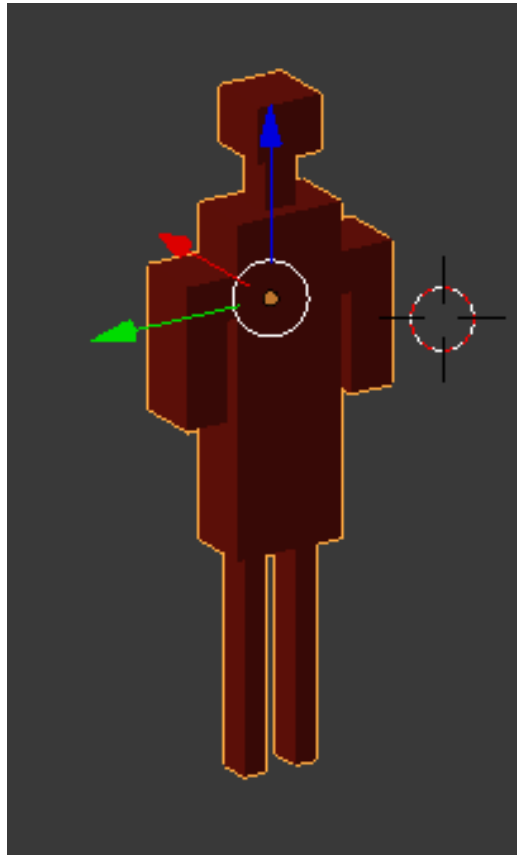
3.2.1 Characters

Augustin :

I did the prefab of the Player in the solo mode and the prefab of the Player in multiplayer mode which was a lot more difficult with all the additional Network settings. I added a bloc that follow the player's camera to know in which direction this one goes. I made a mistake: I try to do the Solo-Player from the MultiPlayer that I did before. But it confused me a lot more that if I did the reverse.

Antoine :

I created a modelisation for the player, but as it is really complicated to do a good one and it wasn't really our priority for now it looks like a character made of Lego. However, it gaves us some problems because unity and blender's axes are not identical so it added some delay to our calendar.



Current design of the character

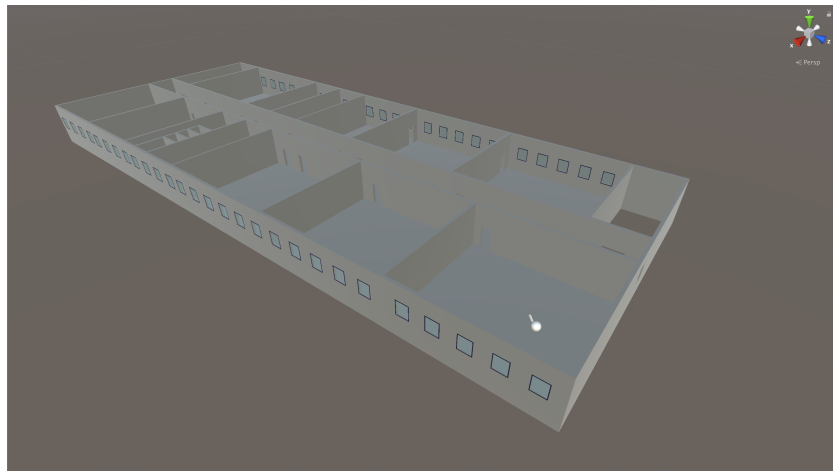
3.2.2 Map

Raphaël :

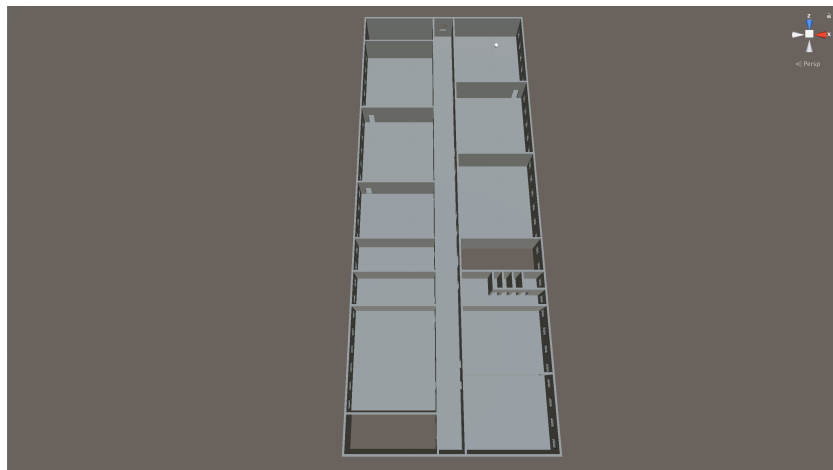
At the beginning, I and Thibault were given the realization of the game's map, but after the leaving of thibault and the discovery of the hard task that was the understanding of Blender (I spend a whole afternoon trying to understand how to do just a block of a certain size for the beginning of the map, but I did not understand a bit of it) and after the failure that was the trial of Blender, I wanted to do the map on Google Sketchup, remembering doing houses and other thing s on it in middle school, but I spend too much

time on it without having concrete results and we weren't even certain to be able to take it and use it into unity so I abandoned and then exchanged the realization of the map with the creation of the scenario for the multiplayer with Antoine.

Antoine :



Side view of the current map



Upper view of the current map

After we exchanged part with Raphaël, i first tried to do the map on unity, but I quickly understood that it was not possible. Then I thought about SolidWorks that I used last year for my project in engineer science but it is not really suitable to 3D modeling as it is not its primary goal. Finally I remembered that Blender was a good editor and decided to use it. For the first object I decided to create a chair as I thought it is a simple model but I realized that not everything is simple. I passed something like 5 hours to try and retry as I used the function of Blender incorrectly or because I tried something without properly calculating the distance and little things like this. After I tried to give it a material but because I didn't find a way to make it look even a little real, I only implemented material to give a color to the objects, and not any textures yet. After that i did quickly a desk, a door and a window, each corresponding to the one at school. Then I started to do the map of the third floor, i based it on the plan of emergency exit that are displayed next to the stairs in school. I passed some time pondering about the value and once I decided them it was not very hard. I encountered some problem to created hole in the wall to create space for the window and door as it messed with the mesh and I had to recreated the edges and faces one by one.

3.3 Gameplay

We have been really late in creating object interactions because we were late on scenarios at the beginning and on the realization of the map, so gameplay is still on process and is going to be (and is already) our main subject when we work now because we know that it is our biggest delay.

3.4 Network

Augustin:

I did the multiplayer Mode with the network implementation. At this point, Players can connect each others either on two different network or in the same one (local), but they need to have the same build of the game (the same executable). So, to play with a friend, they need both to go on the multiplayer Mode, the first one has to create a game with a name, he will be the server and the client at the same time. After this, the second one will put the name of his friend's game and will join him. They will spawn at two different point, defined within the code. I also did the multiplayers scene by taking the prefab of the player, the map, all the network settings and did the lobby (when we wait to create or join a game). It was a new thing to me and there are some part pretty difficult. Mainly the fact that characters need to be control individually. So I had to create a new script with everything that the player can and cannot control like the movement, the camera of the other player. I needed some times to adapt myself with different camera also and all the network settings. In spite of this, I had understood rather quickly the scripts which was used to the movement of the player and the camera.

3.5 Interface

Raphael :

I started creating the main menu following a tutorial on the Unity website, a one hour video that turned to be nine hours of understanding because of the complexity of Unity and of some subtleties of the software. It was very hard just to create the background and the button, once this was done, it came very easily the understanding of linking scenes to make clickable buttons "single player" and "multiplayer" that were leading to the corresponding scenes.

Here is a look at main menu and options menu :



Main menu look



Option menu first look

3.6 Website

Raphaël :

As Thibault is leaving, I am now responsible of this part of the project, however, he did began it and left me a home page and 2 other pages for the description of the group members and of the project, so I mainly have some design to modify but he did a big part of it even if we still have some delay over this part of the project.

4 Advanced and Delay

Globally, we are a little late, it is due to our lack of understanding of the priorities on the game structure, as it is the first that we are building and also because since we were a little lost at the start it was difficult to motivate ourselves to work hard early and so we started working on the project too slowly at the start.

4.1 History

Scenario Solo :

The more complicated thing in creating the storyline of the game, is to find inspiration and trying to innovate instead of juste copy-paste enigma seen before. The scenario of the singleplayer is right on time if it isn't in advance, but after a review with the whole group, it may have to be changed over some point, so if it does, we can say that it is just right on time.

Scenario Multi :

As for the single player, the lack of inspiration can cause delay over the creation of the scenario of the multiplayer mode, and it is even more complicated that you have to put both players in relation, so one story is intricated inside the one of the other player.

Because it was started by Raphaël a little bit late because of the rearrange-

ment of the book of specifications, it is a little bit late but tends to be at finished as it should be done in few days after the oral.

4.2 Design

We are late on the design globally, we did not think it would take so much time to create even a little thing, and it took us a lot of time to get to know the modelling editor as it was our first time using them.

Characters :

As thibault was originally in charge of this part, and we forgot about it later on, it is quite late and only a basic modelling has been done. But the controller for the movement is done.

Map :

We are a little late on the map as we said there would be 50 percent done by the first presentation, but currently it should be around 35-40 percent as only the third floor is done but there is most of the object form the other floor that have been done (chair, desk, door) and thus it should be quick to do the other floor. This delay is due to having to take in hand the software used to do the modelling, and also because we change the person in charge 3 weeks after starting the project.

4.3 Object interaction

This is one of the most important part of the game but it needs other parts such as the character and the map for us to be able to do it. As such we did not started it yet because we were focused on the other parts and could'nt do it before as we first needed other part to be done.

4.4 Network

We are in advance on this point, it is already possible to connect two player together on the same scene, and this locally or online. We will probably have

to add some function when we will implement all the interaction between player or with an object.

4.5 Interface

We can say that interfaces, even if it was hard, advanced well and are now ahead of time because main menu and option menu is done and we know the function that is to be written for the escape menu in game so main of interface is done, we only have left to make some button clickable.

4.6 Website

The site as some delay because of the leaving of Thibault so for now we just have the beginning, the form of the website, we have to optimize it for a better render.

5 Planned progresses

This is what we plan to realized for the next presentation.

Scenario Solo :

Between first and second presentation, the scenario must be finished at 90% to be able to begin correctly the interaction with objects.

Scenario Multi :

Same as for single player's scenario, between first and second presentation, the scenario must be finished at 90% to be able to begin correctly the interaction with objects.

Network :

For now, it worked properly, we will see how the code will behave after implement some code. We just have to do the design of the matchmaking and the lobby. Network will also have to take in account the object interactions

of both players at the same time, for example, if one opens a door and the other does it at the same time, it has to understand it and make the game work without crashing.

Characters :

We reorganized ourselves on this point, this and the map will be a big point until the next presentation. We should have done all the design of the Solo-Players and both of the multiplayer until the second presentation to catch up on our delay and also because it is necessary to advance on object interactions.

Map :

All four floor should have the structure done, and the basic objects (board, lamp, computer, screen) should also be done. The different floors and objects should also be resized so they go along one another and it look realistic (a chair can't be bigger than the player, and the player can't be so small that he cannot look up to the window). There will also be some special object created according to the scenario, those should be complete, with materials and textures done.

Object interaction :

It is going to be the main part after the first soutenance because it is the less advance one. We have to instance some object that we can interact with for example light up a computer, take an object on a table, take a key, insert it in a padlock and other interactions which will be motionless. There are some other things on this section we want to do like the inventory or maybe try to destroy walls.

Interface :

Escape menu and map menu will have to be finished and all button leading to real actions (volume & languages for example)

Website :

For next presentation, we plan to have a website fully optimized and which would assemble all the specificities required form it.

5.1 Previsionnal Calendar

As seen before, we have delay and advances, so we have changed our previsionnal calendar to re estimate our advances for next presentation, here it is :

	Presentation 2	Presentation 3
Histoire		
Scenario Single Player	90 %	100 %
Scenario Multiplayer	90 %	100 %
Design		
Caracters	60 %	100 %
Map	75 %	100 %
Gameplay		
Object Interactions	70 %	100 %
Network	60 %	100 %
Interface	80 %	100 %
Other		
Website	50 %	100 %

6 Conclusion

The beginning of the project has been tough, on a first hand, because of the difficulty to handle Unity and design software as Bender, on the other hand we weren't well organize and weren't respecting the schedule that we've tell ourselves (when to work, when to meet each other about the project...) and the departure of Thibault does not help, but we're more motivated and now that we understood how to use well all the environment of work at our disposition, we'll have a better game for the second presentation.

7 Annexes

Illustrations Table

Figure 1: New Repartition of the work

Figure 2: Character current look

Figure 3: Side view of the map

Figure 4: Upper view of the map

Figure 5: Current look of the main menu

Figure 6: Current look of the option menu

Figure 7: Previsionnal Calendar