FugISTe
A Real-Life Room Escape Game

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Activities Report

Abstract—This document reports the work done on FugISTe, in the scope of Independent Studies course. FugISTe is a project with the purpose of creating educational real-life escape games in Instituto Superior Técnico (IST). After joining the project in 27th March, 2015, I worked on a one room escape game, creating the script for the game, which included mapping the room and creating pedagogical puzzles. Following that we performed test runs of the game, involving room preparation and running the game with the testing participants. All of which culminated in a working script for the game, which received positive reviews, and suggestions of improvements to the escape game.

Index Terms—FugISTe, escape game, Tagus Park, IST.

1 Introduction

This report aims to present my work done for the Independent Studies course, as an organizer of FugISTe, a project to create a real-life room escape puzzle game in IST's Tagus Park campus, proposed by professor Luísa Coheur. It will start by making a brief introduction to the project and to this kind of games, and then cover the whole process of creating the puzzle game, from creating the script, to room modeling and finally testing and result analysis.

2 The FugISTe project

Real-life room escape games are a type of physical adventure game in which people are locked in a room with other participants and have to use elements of the room to solve a series of puzzles, find clues, and escape the room within a set time limit. [1]
This kind of games have grown increasingly popular throughout Lisbon in recent years, and this project's intention is to catch on that momentum, bringing these games to IST and adding some educational flavor to the puzzles. The current goals are to create a one room escape game, focusing on puzzle solving, to be fully functional during the first semester of 2015/2016, and to make a bigger escape game encompassing the whole Tagus Park campus, focusing more on exploration, both intended for up to 5 participants.
At the time I joined the project, on 27th March, 2015, it already had gone through a test run for the one room game, but with unsatisfactory results, so we decided, on our first meeting, to start from scratch. Additionally the project has no funding, so we had to make due with what we could donate and whatever was in the professor's attic. Along the development of the project, I was assigned the task of working with another organizer, Tiago Santos, to create the script and puzzles for the one room game, in addition to setting up the room and monitoring games.

3 Scripting and puzzles

The first step in creating the game is to make a script draft that depicts the overall path and obstacles that the participants must take and surpass to escape the room. Following that, puzzles and clues are inserted, in between the

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(1.0) Excellent	ACTIVITY						DOCUMENT						
(0.8) Very Good	Object×2	Opt×1	Exec×4	Summ×.5	Concl×.5	SCORE	Struct ×.25	Ortog×.25	Exec×4	Form ×.25	Titles ×.5	File ×.5	SCORE
(0.6) Good	1.0	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	
(0.4) Fair													
(0.2) Weak													

obstacles, to provide the key to pass corresponding obstacle. So in this section it will be further described how these steps were accomplished.

3.1 Pathing the room

We started by picking up a rough draft made previously by the professor and proceeded to fill in the blanks and modify or remove the parts that seemed uninteresting or illogical.
While creating the script it became clear that having a clear vision of how the room was like was essential, so some time was dedicated (around 3 hours) to measure and map the room, as well as having a gallery of photos [2]. We then used this information to create script scenes, which described what would be used for this scene and what would be the obstacle to surpass, leaving in a blank puzzle to fill in later. So at the end of this phase we had a complete list of steps that the participants will take, from the moment they enter the room to when they find the final key.

Figure 1. The room

figures MUST be referenced in text!

3.2 Puzzling obstacles

In the next step we started creating puzzles for each of the obstacles, with some of them made educational, focusing in study material from courses taken throughout the degree, like Calculus and Algebra. One of the requirements of the project was that the content lectured through the puzzles should be easily interchangeable, so care was taken to make them easily removable, by making the resulting key of the educational puzzles always a number and the obstacles numerical locks. This facilitates the interchangeability, as making problems that result in numbers is quite easy in almost any field of study.

With this concluded, we had finished a draft of the final script, with all the puzzles required for each of the obstacles and some alternative ones as well, with different degrees of difficulty and subject.

4 Tests

With a completed script we proceeded to test the one room puzzle on 2nd June, 2015, so this section will describe the room preparation, the tests performed and the results and feedback of the groups that tested our room.

4.1 Room Preparation

The preparation started by gathering all the items that were required for the script and bringing them to the room. Afterwards, we simply arranged the items in accordance to the script. While some of the item positions were loosely described, we improvised by positioning them were we found most appropriate and updated the script accordingly. Some of the items required some modification to work as intended, as for instance bags, when sometimes locks would not properly close the bag, so we punctured a hole for the lock arm to pass through.

4.2 Running the game

To test the room we decided to bring groups of participants and perform the game from start to finish, and observe them while they solved the puzzles, to check what would be the approach taken to the problems we made. And in the end we took feedback from the participants, running a short questionnaire, asking about difficulty, length and overall enjoyment.
So on the week up to the testing day we made a call-out to our friends and colleagues to come test the puzzle game. Three groups answered the call, but we were only able to perform the test with two of them, as the second group's testing session ended later then expected.
Running the game started by bringing the group to the room, introducing them to the plot of the game and letting them loose to explore the room, giving occasional hints if the group seemed particularly stuck.

4.3 Results

During testing we found some issues revolving around clues that were not being correctly associated with the corresponding obstacle, so if the participants got through an obstacle without using a particular clue and later found it, they became confused as to what that clue meant and where could it be used. Additionally we found that some information in the items could be taken as unintended clues, so the group would became side-tracked following fake clues. Both of this issues happened with both groups.
Nonetheless both groups gave positive feedback about the game, labeling it as fun and challenging, and felt that the time passed quickly while playing. In the end we gathered useful information on how to improve the game and the puzzles.

5 Conclusion

With the increasing popularity of real-life escape games, the FugISTe project tries to bring this kind of games to IST, while adding a pedagogical aspect to them. Having joined the project on 27th March, 2015, I was assigned the task of creating the script and puzzles for an one room escape game, as well as room setup and game monitoring. Throughout the semester this tasks were performed, starting with a rough draft of the script, to modeling the room and creating the puzzles for the script, ending with some testing sessions for the game. The work done resulted in a tested and working script for the game, but it can be further improved with the feedback received and our own observations of the test runs. So I hope to continue the work done during this semester and push this project further.

Acknowledgments

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References

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Nuno Xu I am 21 years old and currently attending the Master's degree in Information Systems and Computer Engineering at IST. I have a passion for video games and hope to one day pursue my dream of becoming a video game developer.