

CMPT 125,  
Fall 2012, SFU Burnaby  
Instructor: Diana Cukierman  
Final Project: "Wizards, witches and horcruxes" game, ©Diana Cukierman<sup>1</sup>

*This is a 3 (Three) team people work (you can also work in teams of 2 or individually if you prefer so – **although it is highly recommended that you work in teams**). While you may discuss generalities with colleagues from other teams about this exercise, you cannot develop the same code, nor share code or diagrams among teams, nor obtain code or diagrams from other sources except the ones provided to the class.*

*Being a team exercise it places a big responsibility on each individual. You want to respect your partner/s and yourself: DO YOUR SHARE, and BE KNOWLEDGEABLE OF THE WHOLE PROJECT. Keep in mind that exercises related to this project will likely be part of the final exam.*

**Submission deadline:**

**Last day of classes, week #14 in our week numbering, Wednesday April 11, 3:15 PM i.e. immediately before the beginning of the last class in the semester. THE DEADLINE IS FIRM**, it is the last possibility for you to submit. No exceptions can be made as a solution will be discussed in this last class and then it will be posted. Also during this last class we will be showing the execution of those projects of those authors who would like to show a demo to the class.

*You may submit before the deadline. Notice that initial material including documentation and coding will be provided. You are highly encouraged to make use of such.*

**A. General description of the game.**

1. In this project you are asked to implement an adventure game. The game is played by two wizards or witches (two players, where each player may be a program-simulated player or the user). The game unfolds on a "board" which is composed of a number of "cells" which are numbered areas where the players can land as they travel. The players start the game from cell #0 with some initial "life points", and they travel aiming to collect seven (7) "horcruxes" that are dispersed in this different cells. (Just for you to know about this world: wizard-witches players are likely traveling with brooms or other magical means, horcruxes are common objects, but they contain parts of "Voldemort's soul". Voldemort is a very powerful and the most evil ever wizard<sup>2</sup>).
2. The players need to collect and keep the horcruxes as they travel (we will assume that horcruxes will not harm the players as they keep them), and if any of the players gets to collect the 7 horcruxes he/she wins (and the game is over) as long as he/she remained alive during the travelling!

---

<sup>1</sup>Some terminology and some characters are inspired in Harry Potter's books, by J.K. Rowling. Some very simplified and approximate explanations are provided about this terminology and characters. On the other hand, while using this terminology this game is not describing in any way any of the Harry Potter books or films.

<sup>2</sup> The characters names and their behaviour, again, are inspired in Harry Potter's books.

3. As may be expected, during their travelling players will face dangers, such as “dementors” (dark flying creatures who take away life points from the players) . Luckily, players also may find friendly “domestic elves” (magic creatures who will give life points back to players). It may be the case also that players help each other or attack each other, and/or rob each other horcruxes and/or life points, if they happen to land in the same cell!
4. Therefore, during their travelling, players may lose and or gain life points, may be killed, may find and/or lose the horcruxes or not. Players may even encounter Voldemort himself, who will kill the poor player who lands in the cell where he is. If, on the other hand, “Dumbledore” is in that same cell at that same time, the player will be safe because Dumbledore will fight against Voldemort. (Dumbledore is a very powerful good wizard).
5. The horcruxes are placed in specific cells and stay there from the game start until they are picked up by some player (who will then carry the horcruxes with him/her). The various creatures and specific wizards (dementors, elves, Voldemort and Dumbledore) will also stay in the same cell from the start of the game till the end. However, notice that, after the player was attacked by the dementors there will be one less dementor remaining in the cell.
6. Hence, (luckily for the players!) dementors will gradually diminish as the players visit the cells. On the other hand, unluckily for the players, players cannot know in advance where any of these creatures or specific wizards are, so, as they travel and arrive to a cell, they may be attacked or saved!
7. The choice of where to place the 7 horcruxes , how many dementors and elves to place in the different cells and where to place Voldemort and Dumbledore will be done randomly, based in parameters (range limit values) that the user will provide before starting the game. The user will also be asked to provide initial life points for the wizard-witches-players up to a certain maximum of life points. (Fixed values may also be created for testing).
8. The way that program-simulated players move through the board is by throwing a die, which will allow to determine where the next cell is for the player based on the current position. Certain types of players however can choose to throw the die two (2) times in total, as explained in the detailed description. The “user” player on the other hand directly chooses which cell to move to, without rolling the die.
9. The game is over when one of the (or both) players die or when one of the players collected the seven horcruxes or until a certain maximum number of turns (the maximum value is defined by the user) took place. (One turn involves the travelling of one player).

**Check the posted sample runs, screen shots and notes from class about the design process: pdf version of power point notes # 28 and # 28b**  
**More details will be posted and announced**

*End of brief description of final project*