

UNIVERSITÉ CATHOLIQUE DE LOUVAIN

INGI1131

CONCEPTS OF COMPUTER LANGUAGES

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# Zombieland

Course Project

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Group 43

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|---------|---------|------------|
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# 1 Introduction

Context : Zombie apocalypse, mutants

Why : need for food medicine, ressources

Task : simulator to reduce human loss (+ pass time)

## 2 Architecture and design

### 2.1 Components

diagramme des interactions

### 2.2 Controller

states + responsibilities

### 2.3 Cell

room == grid of cells

states + responsibilities

### 2.4 Players

states + responsibilities

interaction between them Brave and zombies in contiguous cells :

- if bullets left then
  - - if brave facing, brave wins and zombie dies
  - - else if brave not facing then
  - - - if zombie facing, brave dies and game over
  - - - else nothing happens
- (petits dessins)

#### 2.4.1 Brave

depends on the player

#### 2.4.2 Zombies

AI : try moving 3 turns in the same direction, destroy objects 20 % of the time, change direction randomly if obstacle. If brave, attempt to kill her.

### 2.5 Other

QtK ?

## 3 Concurrency issues

synchronization of the turns between the brave and the zombies

synchronization between the zombies : not on the same cell

## 4 Conclusion

should fulfill the requirements and provide some help to survive