

IT-SEP4C-S18 – Serious Game

Project Report

# The Frangovers

## 

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Table of Contents

[Introduction 5](#_Toc515473116)

[Requirements 6](#_Toc515473117)

[Analysis 7](#_Toc515473118)

[Use case diagram 7](#_Toc515473119)

[Use case description 8](#_Toc515473120)

[Domain model 9](#_Toc515473121)

[Design 10](#_Toc515473122)

[Implementation 11](#_Toc515473130)

[Test 12](#_Toc515473131)

[Results and discussion 13](#_Toc515473132)

[Conclusions 14](#_Toc515473133)

[Project future 15](#_Toc515473134)

[Source of information 16](#_Toc515473135)

# Abstract

*The customer is the Insight Games, a Danish company that focuses on developing fun and educational games for use in companies as well as schools and universities. The company required a serious game for memorization training that will be developed for both mobile and pc platforms. The system is user-friendly and can be used by anyone who wants to play the simple lightweight game. A user can choose between playing a random level or the specific one. After the user starts the game, he runs around the maze and finds statues or specific doors and gets access to different minigames for brain training. After the user finishes the minigame he will get a key and can continue in the maze until he finishes the level.*

# Introduction

The project presented is based on a requirement from the Ensight Games company which came with a demand for a serious game for memorization thinking. They focus and develop fun and educational games for use in companies as well as schools and universities. The purpose is to create a user-friendly game that would help people with training their short-term memory. It should be in a form that is both entertaining and appealing to young people.

Main features of the game must include simple controls and clear rules. The game must be able to run on both PC and mobile platform.

# Requirements

1. A user should be able to use application on both PC and mobile platform.
2. The system should have sound effects.
3. The system should have smooth animations to change scenes.
4. A user should be able to launch the application through the menu.
5. The system should be optimized.
6. The system should give instructions to the player.
7. A user should be able to move by using game controllers.
8. A user should be able to easily quit from the game.
9. The system should have different types of memory games for brain training.
10. The system should have different levels.
11. The system should have a story.
12. The system should have a least one character.
13. The system should have more levels.
14. The system should contain procedurally generated mazes.
15. The user should have view from third person.
16. The system should have pexeso minigame.
17. The system should have Simon says minigame.
18. The system should have hidden object in room minigame.
19. The system should have Sailor puzzle minigame.
20. The system should have nice skybox.
21. The system should contain statues.
22. The user should be able to exit the labyrinth through the exit in the centre.
23. The user should be able to access minigame by statues.

# Analysis

## Use case diagram

The following figure represents the Use Case Diagram for the system based on the above mentioned important requirements.

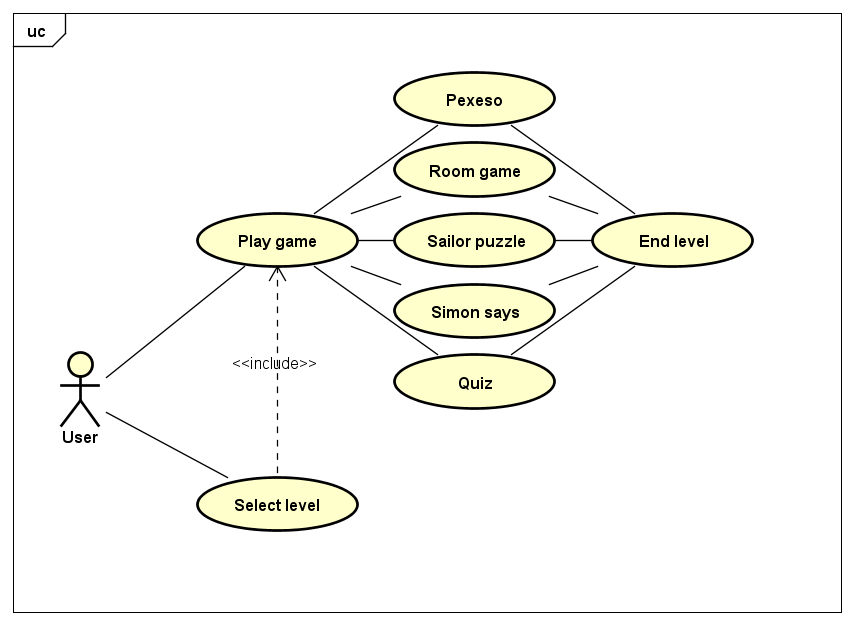


Figure 1: USE CASE DIAGRAM

This table is showing the summaries of all use cases:

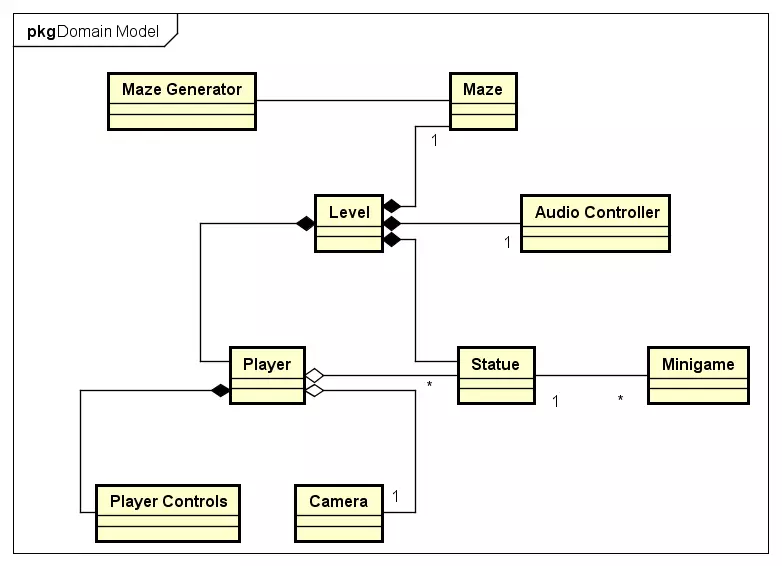
|  |  |
| --- | --- |
| **USE CASE** | **SUMMARY** |
| Play game | User plays the game. |
| Select level | User selects level. |
| Pexeso | User looks for matching pairs. |
| Room game | User looks for hidden objects. |
| Sailor puzzle | User solves sailing puzzles. |
| Simon says | User repeats sequences after Simon. |
| Quiz | User solves quiz. |
| End level | Next level is loaded. |

Figure 2: USE CASE SUMMARIES

## Use case description

## Domain model

The game will contain player, which will be controlled by the user and will contain the camera. The player can interact with statues, through which access to minigame is granted. Labyrinths will be generated using Maze Generator. The level contains Player, Maze, and the audio controls.



# Design

## Architecture

## Technologies

## Design patterns

## Class diagrams

## Interaction diagrams

## UI design choices

## Data model

# Implementation

# Test

# Results and discussion

# Conclusions

# Project future

# Source of information