

Group 06

Zombiator

## Requirement Specification

Nhi Dinh	2314582
Lihini Hewage	2315328
Kamonnun Silarat	2322365
Jiayue Zheng	2315316

**Version history**

Version	Date	Author	Description
1.0	13.06.2023	Nhi Dinh	Finalize the document

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# 1 Introduction

## 1.1 Purpose of the Document

This document serves as a comprehensive requirements specification for **Zombiator**. Its main purpose is to provide a clear and structured outline of the project's objectives, functions, and quality requirements, as well as constraints. It serves as a foundational reference for all stakeholders involved in the game development process, including project developers, project team leaders and teachers.

## 1.2 Target Audience

The intended audience for this document includes:

- **Project Developers:** The individuals are responsible for designing, coding, and implementing functions, features of the product.
- **Project Team Leaders:** The individuals who oversee and manage the development process, ensuring that it aligns with the defined requirements and project goals.
- **Teachers (Testers and Graders):** Educators who actively participate in testing Zombiator, assess and grade the game based on the predefined criteria as well as providing valuable feedback on the product.

## 1.3 Document Structure

To ensure clarity and facilitate efficient use of this document, it is organized into the following key sections:

- **Vision:** provides an overall vision statement that represents the goals, and core concepts of the product. In this section, we also provide a flow chart to show how the program plays out and the stages players will go through.
- **Functional Requirements:** includes the specific functions and features of the game. It also provides a detailed overview of the game concept and outlines various use cases.

- **Quality Requirements:** includes the quality standards and criteria that Zombiator must meet such as performance, reliability, usability, and other factors that contribute to a high-quality player experience.

## 2 Vision

### 2.1 Overview

The vision section provides a overall understanding of our product, offers insight into the game idea, the game mechanics, and player's journey.

### 2.2 Game idea

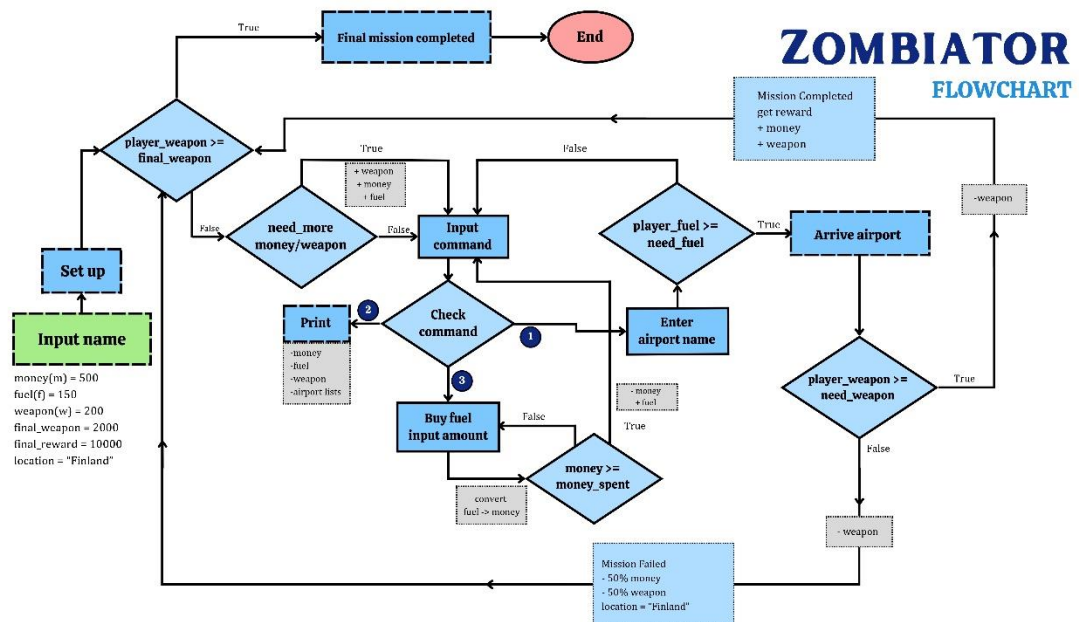
In 2025, Earth's environment is in crisis, causing a pandemic. A strange virus has turned people into zombies, starting in Spain and spreading worldwide. In **Zombiator**, player will play as a hero from Finland, the last safe place on Earth during a zombie outbreak. The mission is to rescue people trapped in other countries in the Schengen area.

Here's what the game is about:

- **Rescue the World:** Player's mission is to save survivors in different countries.
- **Manage Resources:** Player will need money, fuel, and weapons to complete the mission. Fuel lets the player fly to faraway cities, and weapons help player fight zombies.
- **Face Challenges:** Each city has a different mission, with random difficulty levels.
- **Earn Rewards:** Completing mission gives the player money and weapons. Harder missions mean bigger rewards.
- **Unlock the Final Challenge:** Collecting enough weapons, and the player can go to **Madrid**, the zombie's main lair. Completing the mission in **Madrid**, the player gets huge rewards and becomes a hero.

## 2.3 Game flow chart

The flow chart will provide insight into how the game will play out and what stages players will go through.



## 3 Functional Requirements

In this chapter, we break down the user stories to outline player interactions, gameplay mechanics, and goals to ensure that the product delivers a great gaming experience. Each user story identifies a specific action or ability that the player has, and a benefit the user can gain by completing the action. Functional requirements are an essential component of this document, complementing the overall vision and quality requirements, and together they form a comprehensive blueprint for developing and successfully implementing Zombiator.

User Story	As a/an	I want to / I can	So that
1	Player	Read the game story	I can understand the game's purpose and mission

2	Player	Enter a name when starting the game	I can personalize the gaming experience and create my unique identity.
3	Player	Choose the country I want to go	My airplane will move there, allowing me to do my rescue missions effectively
4	Player	See the error notification if I enter unavailable country	helping me make valid choices and preventing confusion.
5	Player	Check current inventory (money, fuel, weapons)	I can manage my resources efficiently during gameplay
6	Player	View a list of approachable countries	I can have a clear overview of available destinations.
7	Player	Purchase fuel with money	I have enough fuel to travel to faraway countries and complete my missions.
8	Player	See an error notification if I enter an invalid value when purchasing	I can avoid mistakes and ensuring a smooth gaming experience.
9	Player	Start a rescue mission in a chosen country	I can do the core action of saving survivors and earning rewards.
10	Player	Complete a mission	I can receive rewards such as money and weapons.
11	Player	See a notification if I don't complete a mission in a country.	I can know the result of my mission and what happens next.
12	Player	Access final mission in Madrid after collecting enough weapons	I can complete the final mission and become a hero
13	Player	View the ranking list to see my scores	I can compare my performance with other players and strive for the top position
14	Player	Automatically receive the necessary money, fuel, and weapons to continue the mission if I can't move to any country	I can be sure of no interruption during the game

## 4 Quality Requirements

In this chapter, we outline the specific quality requirements that **Zombiator** must meet to deliver a seamless and enjoyable gaming experience. These requirements set the standard for the game performance, ensuring the game operates efficiently and responds promptly to user actions.

### Performance Requirements:

- **Fetching Data:** Fetching airport information from the database must take a maximum of two seconds.
- **Instant Feedback:** The user must get instant feedback from every actions they perform.

### Reliability Requirements:

- **Stability:** Ensure the game does not crash or freeze during gameplay.
- **Graceful Handling:** The game should handle unexpected situations gracefully.

### Compatibility Requirements:

- **Platform Compatibility:** The game should be playable both in a console using the keyboard (phase 1) and in a browser (phase 2).

### Usability Requirements:

- **User Experience (UX):** the game instructions are clear and easy to understand.
- **User's age:** The game's content and gameplay must be suitable for young users (12+)

### Gameplay Balance Requirements:

- **Difficulty Balance:** The difficulty levels should be balanced, offering a fair and enjoyable experience. The game should not be too easy to win, but it should also not be too difficult to accomplish.



**Data Integrity and Maintenance:** The game's relational database, derived from the airport database used in this course, must ensure data integrity through constraints and validation. At the same time, it must support the schema modifications for long-term maintenance and adaptability, allow for flexible schema extension while maintaining data accuracy and consistency.

These quality requirements will help ensure that **Zombiator** meets high standards of performance, reliability, usability, and player experience while maintaining balanced and enjoyable gameplay.