

The Tower of Odyssey: Deployment and Running Guide

1. Introduction

The Tower of Odyssey is a console-based game that challenges players to navigate through a seven-floor building by solving progressively harder C++ programming puzzles. The goal is to escape the building by collecting keys, avoiding penalties, and overcoming random challenges like burglar events and earthquakes. The game incorporates a storyline where players assemble tools like a parachute and a helicopter to escape an abandoned city.

2. Prerequisites

To run and deploy The Tower of Odyssey, ensure the following requirements are met:

Software Requirements

- **Operating System:** Windows, macOS, or Linux.
- **C++ Compiler:** Any modern compiler such as GCC, Clang, or MSVC.
- **Editor/IDE:** Any code editor or IDE, such as Visual Studio, Code::Blocks, or Visual Studio Code.

Knowledge Requirements

- Basic knowledge of compiling and running C++ programs.
- Familiarity with file I/O operations for save and load functionalities.

3. Installation Instructions

1. Download or clone the repository containing the game files from the official source.
2. Ensure all the files, including:

- a. The main .cpp files
 - b. Any additional resource files (e.g., question banks or story scripts)
3. Place all files in the same directory for easy access.

4. Building the Project

Follow these steps to compile the project:

1. Open your terminal or Command Prompt.
2. Navigate to the directory containing the game files:

```
cd /path/to/TowerOfOdyssey
```

3. Compile the main C++ file using the following command:

```
g++ -o TowerOfOdyssey main.cpp
```

Replace `main.cpp` with the actual name of the primary C++ file.

4. Check for compilation errors and resolve them if necessary.

5. Running the Game

1. After successful compilation, run the game executable:

```
./TowerOfOdyssey
```

For Windows:

- a. Double-click the `TowerOfOdyssey.exe` file or run it using Command Prompt.
2. Follow the on-screen instructions to navigate the menu and start the game.

6. Game Features

Menu System

- Access options such as **Start New Game**, **Load Game**, **Highscores**, **Gameplay Instructions**, and **Story Introduction**.
- Automatic saving ensures progress is never lost.

Building Navigation

- Floors visually represented in the console as rectangles.
- Use **WASD** keys to move through the maze on each floor.

Level Mechanics

- Solve randomized C++ questions to unlock doors and locate keys.
- Avoid penalties by dodging windows and catching burglars in time.

Special Events

- **Burglar Events:** Find the burglar within a time limit to avoid losing points.
- **Earthquakes:** Debug code under pressure to stabilize the building and continue.

Scoring System

- Gain points for correct answers and successful actions.
- Penalties apply for incorrect answers, hitting windows, or failing events.

7. Testing

Testing Individual Components

1. **Doors and Windows:** Verify correct prompts for C++ questions and appropriate penalties for hitting windows.
2. **Random Events:** Test burglar and earthquake triggers to ensure timing and functionality.

3. **Scoring System:** Confirm correct score updates for all game actions.
4. **Save/Load System:** Test saving progress at each floor and loading from a saved state.

Known Issues

- Document any potential bugs or limitations that require attention.

8. Deployment

Packaging the Game

1. Compile the game into an executable file.
2. Package all required files (e.g., executables, resource files) into a ZIP folder.

Sharing the Game

- Upload the ZIP file to platforms like GitHub or a cloud service.
- Include a `README.md` file with basic instructions.
- Optionally create an installer using tools like Inno Setup (for Windows).

9. Conclusion

This guide provides a comprehensive overview of running, building, and deploying The Tower of Odyssey. Following these steps ensures a seamless experience for developers and players alike. For further inquiries or updates, refer to the project repository or contact the development team.

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The Tower of Odyssey: User Guide for Running and Deployment

Introduction

The Tower of Odyssey is an engaging console-based game designed to challenge players with C++ programming puzzles as they ascend through seven levels of a mysterious building. Each level presents unique gameplay mechanics, including randomized questions, penalties for mistakes, and exciting events like burglar chases and earthquakes.

Prerequisites

Required Software

- **Operating System:** Compatible with Windows, macOS, or Linux.
- **C++ Compiler:** Recommended options include GCC, Clang, or MSVC.
- **Code Editor/IDE:** Visual Studio, Code::Blocks, or Visual Studio Code are suggested for ease of use.

Basic Knowledge

- Familiarity with compiling and executing C++ programs.
- Understanding file input/output operations for save/load functionality.

Installation Steps

1. **Download the Game Files:**
 - a. Obtain the source code and associated files from the official repository or shared link.
 - b. Ensure all required files are in a single directory.

2. Prepare the Environment:

- a. Install a suitable C++ compiler and editor if not already available.

Building the Game

1. Open a terminal or Command Prompt.
2. Navigate to the game directory:

```
cd /path/to/TowerOfOdyssey
```

3. Compile the game using the following command:

```
g++ -o TowerOfOdyssey main.cpp
```

Replace `main.cpp` with the name of the primary game file.

4. Ensure there are no errors during compilation. Resolve issues if any arise.

Running the Game

1. After successful compilation, execute the game:

```
./TowerOfOdyssey
```

On Windows, double-click the executable or run it through Command Prompt.

2. Follow the instructions displayed on the screen to start your journey.

Gameplay Features

Main Menu

- Options include **New Game**, **Load Game**, **View Highscores**, **Instructions**, **Story**, and **Exit**.

- Progress is saved automatically after completing each level.

Navigating the Building

- Floors are represented visually as stacked rectangles in the console.
- Use **WASD** keys to move your character through each maze.

Puzzle Mechanics

- Solve C++ programming questions to unlock doors and find the hidden key.
- Incorrect answers or hitting windows result in point deductions.

Random Events

- **Burglar Alert:** Catch the burglar within the time limit to avoid losing points.
- **Earthquakes:** Debug code challenges to stabilize the building.

Scoring System

- Points are awarded for correct answers and successful actions.
- Penalties apply for mistakes or failing random events.

Testing the Game

Component Testing

- Verify door unlocking and window penalties by navigating the maze.
- Test burglar and earthquake events to ensure triggers and timers function correctly.
- Confirm scoring logic updates accurately for all actions.
- Validate save/load functionality by resuming progress from a saved state.

Debugging Tips

- Use debug statements to identify issues during development.
- Check compiler warnings and fix potential code issues before running.

Deploying the Game

Packaging

1. Compile the game into a standalone executable.
2. Include all necessary files (e.g., resource files, question banks) in a compressed ZIP folder.

Distribution

- Share the ZIP file via GitHub, cloud storage, or direct links.
- Include a README file with basic instructions and an overview.
- Optionally create an installer using tools like Inno Setup for Windows users.

Conclusion

This guide provides all the information needed to run, test, and deploy The Tower of Odyssey. By following the steps outlined, players and developers can enjoy a seamless experience. For updates or support, refer to the official project repository or contact the development team.