

# **Request for Proposal**

**Maryam Mohammadi**

**Kharazmi University**

**Fall 1403**

# **Introduction**

## **Purpose**

This Request for Proposal (RFP) invites qualified game development firms and freelancers to submit proposals for the development of 2048, a single-player puzzle game. The purpose of the project is to create an engaging and challenging game where players combine numbered tiles to reach the 2048 tile. The game will focus on providing an entertaining experience with simple yet addictive gameplay, smooth tile movement, and a visually appealing interface. The game will be designed to offer a balanced difficulty progression, ensuring that players remain engaged and motivated to keep playing.

## **Company Background**

Riot Games is dedicated to providing innovative and immersive gaming experiences to players worldwide. We aim to create engaging, competitive, and highly interactive games that foster a strong sense of community and bring people together through shared experiences. Our focus is on pushing the boundaries of game design and ensuring that every player has a thrilling and enjoyable experience.

# **Project Overview**

## **Project Goals**

- Develop an engaging and challenging single-player puzzle game focused on reaching the 2048 tile by combining numbered tiles.
- Implement smooth and intuitive tile movement, allowing for precise control with arrow key inputs.
- Introduce a simple yet addictive scoring system, rewarding players for efficient tile combinations.
- Ensure the game's interface is clean and visually appealing, with easy-to-read tile values and score display.
- Optimize the game for smooth performance across different platforms (Windows, macOS).
- Provide a seamless user experience with easy restart functionality and clear game-over conditions.
- Implement a responsive and user-friendly design, ensuring that players can quickly learn and enjoy the gameplay mechanics.

## Project Scope

The scope of the project includes the design, development, testing, deployment, and maintenance of the 2048 puzzle game. The game will be developed using Python, with an emphasis on creating an intuitive user interface and smooth tile movement mechanics. The project will focus on implementing the core game features, such as tile merging, random tile generation, and score tracking. Thorough testing will be conducted to ensure a seamless user experience and proper functionality across multiple platforms (Windows, macOS). Maintenance will include bug fixes, performance optimization, and potential feature updates post-launch.

## Proposal Guidelines

### Submission Instructions

Proposals must be received by 11/22/2024 . Please send your proposals to [Djadeja@riotgames.com](mailto:Djadeja@riotgames.com) . Proposals received after this date will not be considered.

### Proposal Format

- **Cover Letter:** Brief introduction of your firm, including contact information.
- **Executive Summary:** Overview of your proposal.
- **Company Background:** History, expertise, and key personnel involved in the project.
- **Project Plan:** Detailed plan outlining your approach to the project, including timelines and milestones.
- **Technical Approach:** Description of the technologies and tools you will use.
- **Cost Proposal:** Detailed budget including all costs associated with the project.
- **Previous Work:** Examples of similar projects completed.
- **References:** Contact information for at least three clients for whom you have completed similar work.

## Detailed Requirements

## Functional Requirements

- **Tile Movement:** The player should be able to move the tiles in four directions (up, down, left, or right) using the arrow keys.
- **Tile Merging:** When two tiles with the same value collide, they should merge into a single tile with the sum of their values.
- **New Tile Generation:** A new tile (either a 2 or 4) should be randomly placed on the grid after every move.
- **Scoring:** The score should increase when tiles merge, based on the value of the merged tiles. The score should be displayed at the top of the screen.
- **Game Over:** The game should end when no moves are available, and a game over message should be displayed.
- **Reset Functionality:** The player should be able to restart the game by pressing a "New Game" button.
- **Undo Functionality:** Players should have the option to undo their last move.

## Design Constraints

- **Frame Rate:** The game should maintain a smooth frame rate of at least 30 FPS to ensure smooth tile movements and transitions.
- **Load Time:** The game should load within 3 seconds to ensure quick startup and smooth user experience.
- **Tile Appearance:** Tiles must be easily distinguishable from one another based on their value, using a consistent color palette.
- **Grid Size:** The game must use a fixed 4x4 grid layout, with no additional grid sizes allowed.
- **Screen Resolution:** The game interface should scale to fit both standard and high-resolution screens while maintaining the grid and score display readability.

## Security Requirements

- **Responsive Design:** The game interface should adapt to different screen sizes and resolutions, ensuring that all elements are visible and accessible on various devices (e.g., desktops, laptops).
- **Visual Aesthetics:** The design should have a clean and modern aesthetic with a focus on legibility and easy-to-understand game mechanics.
- **Optimized Performance:** All assets, including tiles and backgrounds, should be optimized for performance, ensuring the game runs smoothly without unnecessary delays or lag.

- **Data Integrity:** The score and game progress data should be stored securely, ensuring no data loss between sessions.

## Project Timeline

The development of Tirandazi is expected to begin on December 1, 2024 and be completed by December 14, 2024. Below is the revised timeline:

The development of the 2048 game is expected to begin on December 2, 2024, and be completed by December 14, 2024. Below is the revised timeline:

- **Requirement Analysis: December 2 – December 4, 2024**  
(Understand and document detailed game mechanics, features, and player experience goals.)
- **Design Phase: December 5 – December 7, 2024**  
(Develop game concept art, wireframes, and UI/UX mockups to guide the visual and interactive design of the game.)
- **Development Phase: December 8 – December 10, 2024**  
(Implement core game functionalities, including tile movement, merging mechanics, scoring systems, and UI using Python and Pygame.)
- **Testing Phase: December 11 – December 12, 2024**  
(Conduct thorough testing, including gameplay, functionality, and performance tests to ensure smooth tile movement, proper merging logic, and accurate scoring.)
- **Deployment: December 13 – December 14, 2024**  
(Deploy the game to a staging environment for final approval, followed by the launch on the desired platform(s).)

## Evaluation Criteria

Proposals for the development of the 2048 game will be evaluated based on the following criteria:

- **Technical Expertise:** Experience and technical skills in developing similar puzzle or game projects, with proficiency in Python and Pygame.
- **Project Plan:** Feasibility and completeness of the proposed plan, including clear timelines, milestones, and deliverables.

- **Cost:** Overall cost and value for money, ensuring that the proposal is within budget while offering quality development.
- **References:** Feedback from previous clients, with an emphasis on successful project delivery and client satisfaction.
- **Portfolio:** Quality and relevance of past projects, particularly those involving game development or interactive applications.

## Terms and Conditions

- **2048** reserves the right to reject any or all proposals.
- All submitted proposals become the property of **2048**
- The winning bidder will be required to sign a contract with **2048** that includes project details, timelines, costs, and confidentiality agreements.
- The project will be initiated only after the signing of the contract and the receipt of an initial payment.
- Any changes in scope or additional features requested during development may incur additional costs and require a new agreement or amendment to the existing contract.

## Contact Information

**For any queries or additional information, please contact:**

- **Name:** Dylan Jadeja
- **Title:** Riot Games
- **Email:** [Djadeja@riotgames.com](mailto:Djadeja@riotgames.com)
- **Phone:** +131033\*\*\*\*\*