

Number Guessing Game with Score Tracking

Members
:

Minal
zahra

Ateeq
chohan

INTRODUCTION

Objective: Players must guess a randomly selected number within a specified range.

Feedback: The game provides feedback after each guess (too high, too low, or correct).

Difficulty Levels: Offers multiple difficulty levels (easy, medium, hard) with different number ranges.

Score Tracking: Players' scores are based on the number of attempts, with fewer attempts earning more points.

Hints: Players receive helpful hints to improve their guesses (e.g., "too high" or "too low").

High Scores: The game tracks the highest score across sessions.

Replayability: Players can play multiple rounds and try to improve their score with each attempt.



KEYPOINTS

**Random Number Generation:**

The game randomly selects a number within a specified range for the player to guess.



Feedback: Provides feedback on each guess (too high, too low, or correct).



Score Tracking: The score is based on the number of attempts, with fewer attempts earning more points.



Difficulty Levels: Offers easy, medium, and hard modes with varying number ranges.



Hints: Provides hints like "too high" or "too low" to help players improve their guesses.



High Score: Tracks and displays the highest score across sessions.



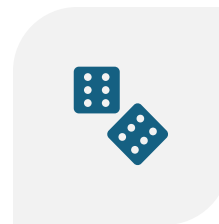
Multiple Rounds: Players can play multiple rounds with cumulative scores.



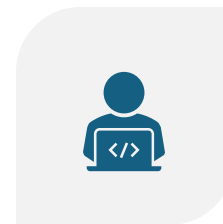
Replayability: Players can choose to play again after completing a round.



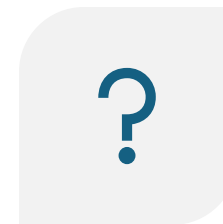
FEATURES



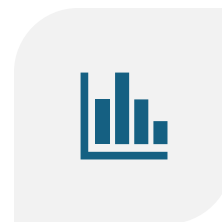
RANDOM NUMBER GENERATION: RANDOMLY SELECTS A NUMBER WITHIN A SPECIFIED RANGE FOR PLAYERS TO GUESS.



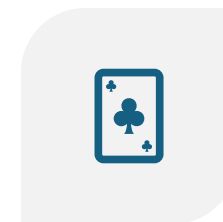
DIFFICULTY LEVELS: PLAYERS CAN CHOOSE FROM EASY, MEDIUM, OR HARD MODES, ADJUSTING THE NUMBER RANGE.



FEEDBACK ON GUESSES: PROVIDES IMMEDIATE FEEDBACK ON WHETHER THE GUESS IS TOO HIGH, TOO LOW, OR CORRECT.

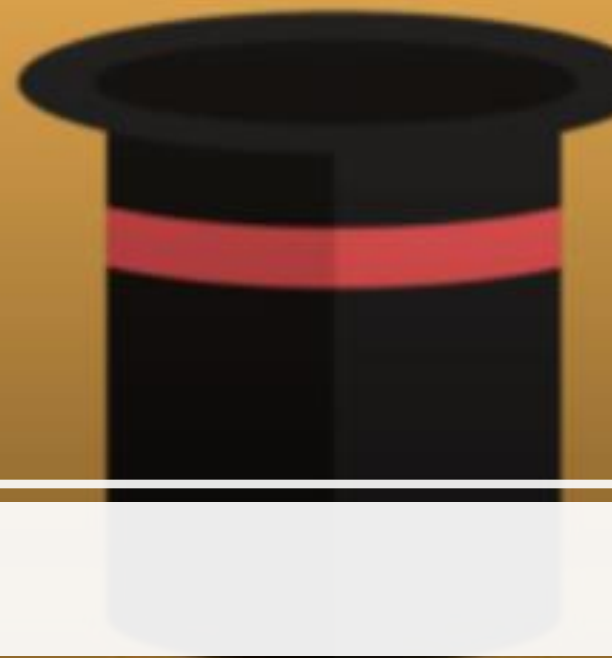


SCORE TRACKING: SCORES ARE CALCULATED BASED ON THE NUMBER OF ATTEMPTS, WITH FEWER ATTEMPTS RESULTING IN A HIGHER SCORE.



HINTS SYSTEM: OFFERS HINTS SUCH AS "TOO HIGH" OR "TOO LOW" AFTER EACH GUESS TO HELP PLAYERS.

**GUESS THE
NUMBER**



PRINCIPLES:



Randomization: Randomly generates a number for each round.



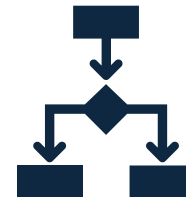
User Interaction: Players make guesses and receive immediate feedback.



Feedback and Learning: Provides hints to help players improve their guesses.



Competition: Tracks scores based on the number of attempts, encouraging better performance.



Replayability: Offers multiple rounds and difficulty levels for continuous challenge.



Engagement: Motivates players to improve through score tracking and feedback.

TESTING AND VALIDATION



Unit Testing: Check random number generation and correct score calculation.



Functional Testing: Ensure proper game flow, including feedback after guesses and the replay option.



Boundary Testing: Test edge cases like boundary numbers and large numbers of attempts.



Input Validation: Ensure the game handles invalid inputs (e.g., letters or negative numbers) properly.



User Interface Testing: Verify correct feedback display and accurate score tracking.



Performance Testing: Test the game's performance during multiple rounds and with large number ranges.



Validation: Ensure correctness, consistency, and a smooth user experience.

REAL LIFE CHALLENGES AND CONSIDERATIONS

Input Handling:

Properly manage invalid inputs (e.g., non-numeric values) with clear error messages.

Random Number

Generation: Ensure fairness and security in random number selection.

Scalability:

Optimize performance when expanding number ranges or handling multiple rounds.

User Engagement:

Keep players interested with features like high scores and difficulty levels.

Cross-Platform

Compatibility: Ensure the game works smoothly on different operating systems.

Error-Free Flow:

Prevent bugs and crashes through extensive testing.

UI Design:

Create a simple and intuitive interface for ease of use.

Security:

Protect player data and prevent cheating if the game is online or stores personal information.

CONCLUSION



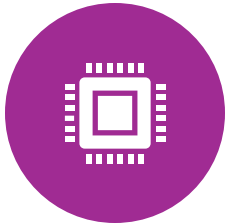
The game offers an engaging and interactive experience with random number guessing.



Features like difficulty levels, score tracking, and feedback enhance player experience.



It encourages improvement and replayability through score-based challenges.



The game is optimized for performance, handling input, scalability, and cross-platform compatibility.



It combines simple gameplay with competitive elements, suitable for both casual and experienced players.



ANY QUESTIONS