

NUMBER GUESSING GAME

OIBSIP – Java Development Internship (Task 2)

1. Internship Details

- **Internship Program:** Oasis Infobyte Internship Program (OIBSIP)
 - **Domain:** Java Development
 - **Task Number:** Task 2
 - **Project Title:** Number Guessing Game
 - **Intern Name:** Swetha G
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2. Problem Statement

The objective of this task is to develop a Java-based Number Guessing Game where the system generates a random number within a given range, and the user attempts to guess the correct number through dialog boxes. The system provides feedback after each guess and limits the number of attempts.

3. Project Objective

- To understand basic Java programming concepts
 - To use conditional statements and loops
 - To implement user interaction using dialog boxes
 - To generate random numbers using Java
 - To create a simple interactive game application
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4. Description of the Project

The Number Guessing Game is a simple Java application developed using **Java Swing**. The system randomly selects a number between **1 and 100**.

The user is asked to guess the number using a **JOptionPane dialog box**.

After each attempt, the system displays whether the guessed number is **higher, lower, or correct**.

The user is allowed a limited number of attempts per round.

The game also supports **multiple rounds** and maintains a **score** based on performance.

5. Features of the Project

- Random number generation
 - User input through dialog boxes (JOptionPane)
 - Higher / Lower hint after each guess
 - Limited number of attempts
 - Score calculation system
 - Support for multiple rounds
 - User-friendly interface
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6. Technologies Used

- **Programming Language:** Java
 - **Libraries Used:**
 - java.util.Random
 - javax.swing.JOptionPane
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7. How the Game Works

1. The game starts with a welcome message.
 2. The system generates a random number between 1 and 100.
 3. The user enters a guess using a dialog box.
 4. The system compares the guess with the generated number.
 5. Hints are displayed if the guess is higher or lower.
 6. The game continues until the number is guessed correctly or attempts are exhausted.
 7. The score is displayed at the end of each round.
 8. The user can choose to play again.
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8. Output Screenshots

Screenshots of the program execution such as:

- Welcome message
- User input dialog
- Result messages
- Score display

(Attached in the GitHub repository under the **screenshots** folder.)

9. GitHub Repository Link

https://github.com/itz-swetha/OIBSIP_Java_Task1_NumberGuessingGame

10. Conclusion

This project helped in understanding the core concepts of Java programming, including random number generation, conditional logic, loops, and user interaction using dialog boxes. The Number Guessing Game is a simple yet effective project to demonstrate Java fundamentals.