PROJECT – NUMBER GUESSING GAME

MICRO IT PROJECT

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Introduction

- A web-based number guessing game where:

  - The user guesses a number between 1 and 100

  - Feedback is provided instantly

  - The number of attempts is tracked

Objective of the Project

- Practice JavaScript fundamentals

- Learn DOM manipulation

- Create an interactive, user-friendly mini-game

- Implement logic-based gameplay in the browser

Tools and Technologies Used

- HTML5 – Page structure

- CSS3 – Styling and responsive layout

- JavaScript – Game logic and interactivity

- VS Code – Code editing

- Google Chrome – Testing/debugging

System Workflow

1. Random number is generated on page load

2. User enters a guess and clicks submit

3. Script compares the guess to the number

4. Feedback is shown (too high, too low, correct)

5. Attempts are tracked until the user guesses correctly

Features and UI

- Dark theme with gradient backgrounds

- Responsive and centered layout

- Styled buttons with hover/active effects

- Real-time feedback and attempt tracking

- Minimal and clean interface

JavaScript Logic Overview

- Math.random() to generate number

- Input validation via DOM

- Comparison logic (if-else)

- Feedback displayed dynamically

- Attempts counter maintained

Challenges Faced

- Validating numeric input

- Preventing blank/invalid guesses

- Handling multiple submissions efficiently

- Keeping the UI clean with dynamic content changes

Learning Outcomes

- Improved understanding of core JavaScript

- Practiced DOM manipulation and event handling

- Gained experience in basic game logic

- Enhanced HTML/CSS design skills

Conclusion

- Successfully created a browser-based guessing game

- Reinforced frontend development concepts

- Achieved a working, interactive user experience

Future Scope

- Add difficulty levels (e.g.1–500, 1–1000)

- Add timer functionality

- Include a high score tracker

- Allow replaying/resetting without refreshing