

DEPARTMENT OF CSE AI AND CSE AIML

INTRODUCTION TO AI

REPORT ON

AI-Powered Number Guessing game

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# INTRODUCTION

Ai Number Guessing Game is an easy to use interactive game where user can guess random number from 1 to 100. This game will give hints to the user so that user can improve his guesses until he makes the right guess. This game will enhance logical reasoning.

# Methodology

Random Number Generation: An AI randomly thinks of a secret number between 1 and 100 through the use of Python's `random.randint()` function. The AI asks the user to guess the number between 1 and 100. It warns the program and requests the correct number when the input number is out of range or alphanumeric. In case the user's guess is too low, the AI prompts the user for a higher guess. If the guess is higher, the AI proposes a lesser number. If the guess is accurate, the program presents a congratulatory message and the number of attempts made. The cycle continues until the correct number is guessed.

# CODE

```
import random
```

```
def number_guessing_game():
```

```
    print("🤖 AI Number Guessing Game Start! 🤖")
```

```
    print("I have thought of a number between 1 and 100. Can you guess it? 🤔")
```

```
    secret_number = random.randint(1, 100) # AI generates a random number
```

```
    attempts = 0 # Counter for the number of attempts
```

```
    while True: # Infinite loop until the correct number is guessed
```

```
        try:
```

```
            guess = int(input("Enter your guess (1-100): ")) # User input
```

```
            if guess < 1 or guess > 100:
```

```
                print("⚠️ Invalid input! Please enter a number between 1 and 100.")
```

```
                continue # If input is out of range, ask again
```

```
            attempts += 1 # Increase attempt count
```

```
            if guess < secret_number:
```

```
                print("📉 Your guess is too low. Try a bigger number!")
```

```
            elif guess > secret_number:
```

```
                print("📈 Your guess is too high. Try a smaller number!")
```

```
            else:
```

```
                print(f"🎉 Correct! You guessed the number in {attempts} attempts.
```

```
🎯")
```

```
                break # Exit loop when correct
```

```
    except ValueError: # Handles errors when user enters non-numeric input
```













```
        print("⚠️ Invalid input! Please enter a valid number.")
```

```
# Start the game
```

```
if __name__ == "__main__":
```

```
    number_guessing_game()
```

# CODE OUTPUT :

 AI Number Guessing Game Start!   
I have thought of a number between 1 and 100. Can you guess it?   
Enter your guess (1-100): 89  
 Your guess is too high. Try a smaller number!  
Enter your guess (1-100): 67  
 Your guess is too low. Try a bigger number!  
Enter your guess (1-100): 89  
 Your guess is too high. Try a smaller number!  
Enter your guess (1-100): 77  
 Your guess is too low. Try a bigger number!  
Enter your guess (1-100): 85  
 Your guess is too high. Try a smaller number!  
Enter your guess (1-100): 82  
 Your guess is too high. Try a smaller number!  
Enter your guess (1-100): 79  
 Your guess is too low. Try a bigger number!  
Enter your guess (1-100): 81  
 Correct! You guessed the number in 8 attempts. 

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# CREDITS

- Google Colab
- Chatgpt
- Google Search