

To create a program that plays cows and bulls game with the user

```
import random

def random_number():
    digits = list(range(10))
    random.shuffle(digits)
    return "".join(map(str, digits[:4]))

def count_cowsandbulls(random_num, guess):
    cows = 0
    bulls = 0
    for i in range(4):
        if guess[i] == random_num[i]:
            cows += 1
        else:
            bulls += 1
    return cows, bulls

def main():
    random_num = random_number()
    attempts = 0
    print("Welcome to the Cows and Bulls Game!")
    print("Try to guess the 4-digit number.")
    while True:
        guess = input("Enter your guess: ")
        if len(guess) != 4 or not guess.isdigit() or len(set(guess)) != 4:
            print("Invalid input. Please enter a 4-digit number with non-repeated digits.")
            continue
```

```
    attempts += 1

    cows = count_cowsandbulls(secret_number, guess)
    bulls = count_cowsandbulls(secret_number, guess)

    print("{cows}", cows, "{bulls}" bulls)

    if cows == 4:

        print("Congratulations! You've guessed the number {secret_number} in {attempts} attempts.")
        break

if __name__ == "__main__":
    main()
```