Codesoft Internship Tasks

Task 1 :Calculator

In [1]:
```
def add(x,y):
    return x+y

def subtract(x,y):
    return x-y

def multiply(x,y):
    return x*y

def divide(x,y):
    if y==0:
        return "Error! Division by zero."
    else:
        return x / y

print("Select operation:")
print("1. Add")
print("2. Subtract")
print("3. Multiply")
print("4. Divide")

choice=input("Enter choice (1/2/3/4): ")

num1=float(input("Enter first number: "))
num2=float(input("Enter second number: "))

if choice=='1':
    print(num1,"+",num2,"=",add(num1, num2))

elif choice=='2':
    print(num1,"-",num2,"=",subtract(num1, num2))

elif choice=='3':
    print(num1,"*",num2,"=",multiply(num1, num2))

elif choice=='4':
    print(num1,"/",num2,"=",divide(num1, num2))

else:
    print("Invalid input")
```

```
Select operation:
1. Add
2. Subtract
3. Multiply
4. Divide
Enter choice (1/2/3/4): 1
Enter first number: 33
Enter second number: 54
33.0 + 54.0 = 87.0
```

Task 2: Password Generator

In [1]:
```
import random
import string
def generate_password(length):
    characters=string.ascii_letters+string.digits+string.punctuation
    password=''.join(random.choice(characters)for _ in range(length))
    return password
def main():
    length=int(input("Enter the desired length of the password: "))
    password=generate_password(length)
    print("Generated Password:",password)

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

```
Enter the desired length of the password: 10
Generated Password: KbLK7`>5R8
```

Task 3:Rock Papper Scissors-Game

In [1]:
```
import random

# Function to get the computer's choice
def get_computer_choice():
    choices = ["rock", "paper", "scissors"]
    return random.choice(choices)

# Function to determine the winner
def determine_winner(user_choice, computer_choice):
    if user_choice == computer_choice:
        return "tie"
    elif (user_choice == "rock" and computer_choice == "scissors") or \
         (user_choice == "scissors" and computer_choice == "paper") or \
         (user_choice == "paper" and computer_choice == "rock"):
        return "user"
    else:
        return "computer"

# Function to play the game
def play_game():
    user_score = 0
    computer_score = 0

    while True:
        user_choice = input("Enter rock, paper, or scissors: ").lower()
        if user_choice not in ["rock", "paper", "scissors"]:
            print("Invalid choice. Please try again.")
            continue

        computer_choice = get_computer_choice()
        print(f"Computer chose: {computer_choice}")

        winner = determine_winner(user_choice, computer_choice)
        if winner == "tie":
            print("It's a tie!")
        elif winner == "user":
            print("You win!")
            user_score += 1
        else:
            print("You lose!")
            computer_score += 1

        print(f"Scores -> You: {user_score}, Computer: {computer_score}")

        play_again = input("Do you want to play again? (yes/no): ").lower()
        if play_again != "yes":
            break

    print("Thanks for playing!")

# Run the game
play_game()
```

```
Enter rock, paper, or scissors: scissors
Computer chose: scissors
It's a tie!
Scores -> You: 0, Computer: 0
Do you want to play again? (yes/no): no
Thanks for playing!
```

In [ ]: