

investment\_amount = int(input("Enter the investment amount (must be greater than 0 and less than 50,000): "))

while investment\_amount <= 0 or investment\_amount >= 50000:

print("Invalid amount. Please enter a value greater than 0 and less than 50,000.")

investment\_amount = int(input("Enter the investment amount (must be greater than 0 and less than 50,000): "))

interest\_rate = int(input("Enter the interest rate (must be greater than 0 and less than 15): "))

while interest\_rate <= 0 or interest\_rate >= 15:

print("Invalid rate. Please enter a value greater than 0 and less than 15.")

interest\_rate = int(input("Enter the interest rate (must be greater than 0 and less than 15): "))

investment\_duration\_years = int(input("Enter the investment duration in years (must be greater than 0): "))

while investment\_duration\_years <= 0:

print("Invalid duration. Please enter a value greater than 0.")

investment\_duration\_years = int(input("Enter the investment duration in years (must be greater than 0): "))

investment\_duration\_months = investment\_duration\_years \* 12

monthly\_interest\_rate = (interest\_rate / 12) / 100

total\_investment = 0

for month in range(1, investment\_duration\_months + 1):

total\_investment += investment\_amount

interest = total\_investment \* monthly\_interest\_rate

total\_investment += interest

total\_investment = round(total\_investment, 2)

if month % 12 == 0:

print(f"Year {month // 12}: Current investment value = ${total\_investment}")

print(f"\nInvestment duration: {investment\_duration\_years} years")

print(f"Yearly interest rate: {interest\_rate}%")

print(f"Monthly investment amount: ${investment\_amount}")

print(f"Total investment value after compounding: ${round(total\_investment, 2)}")

print("Completed by, Colton Carter")