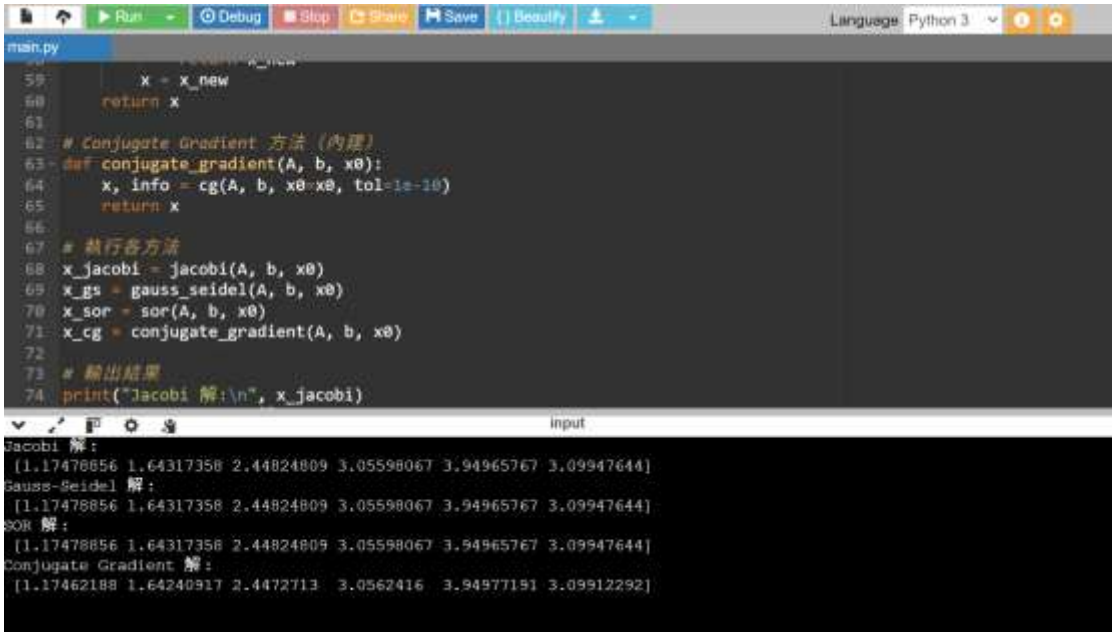
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Language
Python 3
main.py
x = x_new
return x
# Conjugate Gradient 方法 (內建)
def conjugate_gradient(A, b, x0):
x, info = cg(A, b, x0=x0, tol=1e-10)
return x
# 執行各方法
x_jacobi = jacobi(A, b, x0)
x_gs = gauss_seidel(A, b, x0)
x_sor = sor(A, b, x0)
x_cg = conjugate_gradient(A, b, x0)
# 輸出結果
print("Jacobi 解:\n", x_jacobi)
input
Jacobi 解:
[1.17478856 1.64317358 2.44824809 3.05598067 3.94965767 3.09947644]
Gauss-Seidel 解:
[1.17478856 1.64317358 2.44824809 3.05598067 3.94965767 3.09947644]
SOR 解:
[1.17478856 1.64317358 2.44824809 3.05598067 3.94965767 3.09947644]
Conjugate Gradient 解:
[1.17462188 1.64240917 2.4472713 3.0562416 3.94977191 3.09912292]