**17. Write a program to perform Booth’s multiplication of two signed numbers using any high level language.**

**PROGRAM:**

def booth\_mult(num1, num2):

if num1 < 0:

num1 = -num1

num2 = -num2

A = 0

Q = num1

M = num2

steps = []

for i in range(1, 4):

if Q & 1 == 1:

A += M

steps.append(['A', A, 'Q', Q, 'M', M])

Q = Q >> 1

M = M << 1

return A if num1 \* num2 > 0 else -A, steps

num1 = -5

num2 = 3

result, steps = booth\_mult(num1, num2)

print("Result:", result)

print("Steps:")

for step in steps:

print(step)

**OUTPUT:**

