Consider the following program:

def mystery(x):
    print(x)
    if (x == 1):
        # stack Q1
        return 1
    else:
        return x + mystery(x/2)

def main():
    n = 8
    result = mystery(n)
    print("Result: \%d\n\% (result))

main()

1. Draw the stack as it appears when the program reaches the line #stack Q1.
2. What output is produced by the whole program?