In the first iteration, the j loop runs N times.

In the second iteration, the j loop runs N / 2 times.

In the ith iteration, the j loop runs N / 2^i times.

So, the total number of runs of loop = N + N / 2 + N / 4 + … 1

= N * (1 + 1/2 + 1/4 + 1/8 + …) < 2 * N