$$T(n) = T\left(\frac{n}{2}\right) + T\left(\frac{n}{2}\right) + C$$

$$= 4T\left(\frac{n}{4}\right) + 2C + C$$

$$= 8T\left(\frac{n}{8}\right) + 4C + 2C + C$$

$$\vdots$$

$$= n\,T(1) + C\left(\frac{2(1-2^{k-1})}{-1} + 1\right)$$

$$= n\,T(1) + (n-1)\,C$$

$$\therefore O(n)$$

Assume $n = 2^k$