$O(f) = \Sigma_{i=0}^{n} \ (i + log(i))$

$= \Sigma_{0}^{n}(i) + \Sigma_{0}^{n} \ (log(i))$

$= \Sigma_{0}^{n}(i) + log(\Pi_{0}^{n}(i))$

$\frac{n(n+1)}{2} + log(n!)$

$= \frac{1}{2} \times n^2 + \frac{1}{2} \times n + log(n!)$

The dominant term in this formula is n^2, hence

$f = O(n^2)$