Pracise Exercise on Set Cover

The solutions will be available in 1-3 weeks in one of the following modules.

Consider the Set Cover Problem. Let F(i) be the frequency of element i, i.e., the number of sets containing i. Let $F = \max_i \{F(i)\}$ be the maximum frequency. Design an algorithm giving an F-approximation with a running time of $O(\# \ of \ elements \cdot \# \ of \ sets)$.