Prims Algorithm

The following is a general outline of Prims Algorithm. The purpose is for the reader to translate the algorithm into a programming language of their preference. (We denote $\omega(e)$ to be the weight of an edge e in a graph G).

Algorithm:
Input graph $G = (V, E)$
Let $V_T = \emptyset, E_T = \emptyset$ repersent the vertex and edge set of the minimum spanning tree.
Preform $x \cup V_T$ for some arbritrary x.
While($|V_T| \neq |V|$){
    Let $\gamma = \emptyset, \omega(\gamma) = \infty$ be the edge in X with minimum weight;
    Let $\alpha = \emptyset$ be the vertex in γ that is also in the cut induced by V_T;
    for($e = xy \in E$){
        if($x \in V_T \wedge y \notin V_T$)
            if($\omega(e) \leq \omega(\gamma)$) $\gamma = e$, $\alpha = y$;
        else if($y \in V_T \wedge x \notin V_T$)
            if($\omega(e) \leq \omega(\gamma)$) $\gamma = e$, $\alpha = x$;
    }
    $V_T = V_T \cup \alpha$, $E_T = E_T \cup \gamma$;
}