Algorithm 1 Creating a spanning tree on a graph with per-vertex degree constraints

1: Graph $G(V, E)$ with a total degree of 2n-2 where n is the magnitude of V
2: T = $\emptyset$
3: T += ($v1$,$v2$) where $v1$ is the vertex of largest degree in V, and $v2$ is the vertex of second largest degree. Decrement the degree of $v1$ and $v2$
4: **while** There exits a vertex in V and T with a degree > 0 **do**
5: T+= (t,v) where t is the vertex of largest degree in t, and v is the largest vertex in $V \backslash T$
6: **end while**