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**Input:** Graph  $G = \langle V, E \rangle$

**Output:** Edge set  $T$  forming a min. span tree

▷ Here, the *MakeSet*, *FindSet*, *Union* make use of a disjoint-set structure.

**procedure** KRUSKAL( $G$ )

$T \leftarrow \emptyset$

▷ set of edges

$S \leftarrow \emptyset$

▷ set of disjoint sets

**for**  $v \in V$  **do**

$S \leftarrow S \cup \text{MakeSet}(v)$

**for**  $(u, v) \in G.E$  (ordered by weight) **do**

$set_u \leftarrow \text{FindSet}(u)$

$set_v \leftarrow \text{FindSet}(v)$

**if**  $set_u \neq set_v$  **then**

$T \leftarrow T \cup \{(u, v)\}$

$\text{Union}(set_u, set_v)$

**return**  $T$

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**Input:** Graph  $G = \langle V, E \rangle$   
**Output:**  $E$  of  $G$  containing only the edges belonging to a min. span tree  
▷ Connectivity can be checked via graph traversal algorithms, namely BFS or DFS.

```
procedure REVERSE_DELETE( $G$ )  
    Sort  $G.E$  in descending order  
     $i \leftarrow 0$   
    while  $i < |E|$  do  
         $e \leftarrow E[i]$   
        Delete  $e$                                 ▷  $i$  is now at the next edge  
        if  $G$  not connected then  
             $E[i] \leftarrow e$                                 ▷ Re-add edge  
             $i \leftarrow i + 1$                                 ▷ Move on to next edge  
    return  $G.E$ 
```

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