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**Input** :  $\mathcal{Q}$ , a set query points and  $\mathcal{R}$ , a set of reference point;

**Output**: A list of  $k$  *reference* points for each *query* point;

```
1 foreach query point  $q \in \mathcal{Q}$  do  
2   compute distances between  $q$  and all  $r \in \mathcal{R}$ ;  
3   sort the computed distances;  
4   select  $k$ -nearest reference points corresponding to  $k$  smallest distances;
```

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