# 1333. Filter Restaurants by Vegan-Friendly, Price and Distance

Given the array `restaurants` where `restaurants[i] = [idi, ratingi, veganFriendlyi, pricei, distancei]`. You have to filter the restaurants using three filters.

The `veganFriendly` filter will be either *true* (meaning you should only include restaurants with `veganFriendlyi` set to true) or *false* (meaning you can include any restaurant). In addition, you have the filters `maxPrice` and `maxDistance` which are the maximum value for price and distance of restaurants you should consider respectively.

Return the array of restaurant ***IDs*** after filtering, ordered by **rating** from highest to lowest. For restaurants with the same rating, order them by ***id*** from highest to lowest. For simplicity `veganFriendlyi` and `veganFriendly` take value *1* when it is *true*, and *0* when it is *false*.

**Example 1:**

**Input:** restaurants = [[1,4,1,40,10],[2,8,0,50,5],[3,8,1,30,4],[4,10,0,10,3],[5,1,1,15,1]],
veganFriendly = 1, maxPrice = 50, maxDistance = 10
**Output:** [3,1,5]
**Explanation:** The restaurants are:
Restaurant 1 [id=1, rating=4, veganFriendly=1, price=40, distance=10]
Restaurant 2 [id=2, rating=8, veganFriendly=0, price=50, distance=5]
Restaurant 3 [id=3, rating=8, veganFriendly=1, price=30, distance=4]
Restaurant 4 [id=4, rating=10, veganFriendly=0, price=10, distance=3]
Restaurant 5 [id=5, rating=1, veganFriendly=1, price=15, distance=1]
After filter restaurants with veganFriendly = 1, maxPrice = 50 and maxDistance = 10 we have restaurant 3,
restaurant 1 and restaurant 5 (ordered by rating from highest to lowest).

**Example 2:**

**Input:** restaurants = [[1,4,1,40,10],[2,8,0,50,5],[3,8,1,30,4],[4,10,0,10,3],[5,1,1,15,1]], veganFriendly = 0,
maxPrice = 50, maxDistance = 10
**Output:** [4,3,2,1,5]
**Explanation:** The restaurants are the same as in example 1, but in this case the filter veganFriendly = 0,
therefore all restaurants are considered.

**Example 3:**

**Input:** restaurants = [[1,4,1,40,10],[2,8,0,50,5],[3,8,1,30,4],[4,10,0,10,3],[5,1,1,15,1]], veganFriendly = 0,
maxPrice = 30, maxDistance = 3
**Output:** [4,5]

```
def filterRestaurants(self, restaurants: List[List[int]], veganFriendly:
int, maxPrice: int, maxDistance: int) -> List[int]:
        # resVf = []
        # resNvf = []
        # for ids,rating,vf,price,dis in restaurants:
        #     if vf==1 and price<=maxPrice and dis<=maxDistance:
        #         resVf.append([ids,rating,vf,price,dis])
        #     if (vf==0 or vf==1) and price<=maxPrice and
dis<=maxDistance:
        #         resNvf.append([ids,rating,vf,price,dis])
        # resVf = sorted(resVf,key=lambda x:(-x[1],-x[0]))
        # resNvf = sorted(resNvf,key=lambda x:(-x[1],-x[0]))
        # if veganFriendly:
        #     return [x[0] for x in resVf]
        # else:
        #     return [x[0] for x in resNvf]
        restaurants.sort(key=lambda x:(-x[1],-x[0]))
        return [x[0] for x in restaurants if x[2]>=veganFriendly and x[3]
<=maxPrice and x[4]<=maxDistance]
```