```
GraphSort[a List, b List] := GraphSort[a, b] =
If[a[1]] === b[1],
 If[a[2]] === b[2],
   Order[a[3], b[3]] \geq 0,
   SortedQ@{a[[2]], b[[2]]}],
 SortedQ@{a[1], b[1]}};
```