

## Buyers-Sellers matching

**Write a function that solves the following problem**

*(can be solved in any language or pseudocode)*

There are N sellers of a certain good, each with a specific quantity available.

There are M buyers each desiring to buy a certain quantity.

Some buyers are restricted from buying from specific sellers.

Provided that the sum of quantities match (total demand and supply are the same), we want to satisfy all buyers and sellers without breaking any restriction.

Input:

- list with Seller quantities: int [] **sqList**
- list with Buyer quantities: int [] **bqList**
- matrix with buyer/seller: int [][] **restrictions**

output:

- matrix with buyer/seller: int [][] **assignments**. 0 signals a restriction

Example:

```
sqList := [10, 20, 5, 30, 35];
```

```
bqList := [5, 50, 20, 25];
```

```
resrtictions := [
```

```
[1, 1, 1, 1, 1],
```

```
[1, 1, 1, 0, 1],
```

```
[0, 1, 1, 0, 1],
```

```
[1, 1, 1, 1, 1]
```

```
];
```

```
assignments = [
```

```
[0, 0, 0, 5, 0],
```

```
[10, 15, 0, 0, 25],
```

```
[0, 5, 5, 0, 10],
```

```
[0, 0, 0, 25, 0]
```

```
];
```