

## Map Reduce Pseudo code for Matrix addition

map(key, value):

```
// value is ("A", i, j, aij) or ("B", i, j, bij)
```

```
i = value[1]
```

```
j = value[2]
```

```
if value[0] == "A":
```

```
    aij = value[3]
```

```
    emit(i, ("A", j, aij))
```

```
else:
```

```
    bij = value[3]
```

```
    emit(i, ("B", j, bij))
```

reduce(key, values):

```
// key is j
```

```
// values is a list of ("A", i, aij) and ("B", k, bjk)
```

```
list_A = [(j, aij) for (M, j, aij) in values if M == "A"]
```

```
list_B = [(j, bij) for (M, j, bij) in values if M == "B"]
```

```
for (j, aij) in list_A:
```

```
    for (j, bij) in list_B:
```

```
        emit((i, j), aij+bij)
```