```
For i = 1 to N
   For j = 1 to M
      B[i][j] = B[i+1][j-1]
   Endfor
Endfor
```

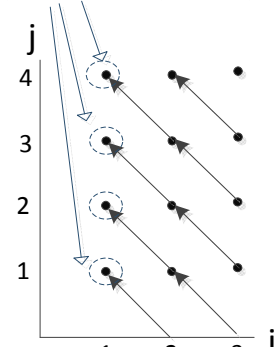
Distance vector: [1,-1]
Direction vector: [<, >]

Outer loop carries dependency

After loop interchange:
Direction vector = [>,<]

Loop interchange is illegal for this loop nest

Can be performed in parallel if outer loop is performed sequentially



Iteration Space

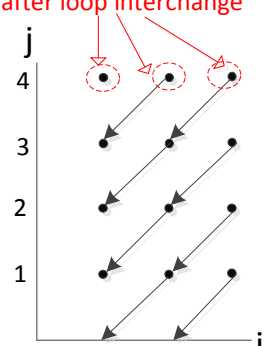
```
For i = 1 to N
   For j = 1 to M
      B[i][j] = B[i-1][j-1]
   Endfor
Endfor
```

Distance vector: [1,1]
Direction vector: [<, <]

After loop interchange:
Direction vector = [<,<]

Loop interchange is legal for this loop nest

Parallelizable i loop after loop interchange



Iteration Space