

main: initialize matrix A[N][N+1] as [A|B]

```
-----  
1.00  1.00  1.00  4.00  22.00  
1.00  1.00  4.00  1.00  19.00  
1.00  4.00  1.00  1.00  16.00  
4.00  1.00  1.00  1.00  13.00
```

main: create N=4 working threads

partial pivoting by thread 0 on row 0: pivot_row=3 pivot= 4.00

main: wait for all 4 working threads to join

thread 1 do row 1

thread 2 do row 2

thread 3 do row 3

```
-----  
4.00  1.00  1.00  1.00  13.00  
0.00  0.75  3.75  0.75  15.75  
0.00  3.75  0.75  0.75  12.75  
0.00  0.75  0.75  3.75  18.75
```

partial pivoting by thread 1 on row 1: pivot_row=2 pivot= 3.75

thread 2 do row 2

thread 3 do row 3

partial pivoting by thread 2 on row 2: pivot_row=2 pivot= 3.60

```
-----  
4.00  1.00  1.00  1.00  13.00  
0.00  3.75  0.75  0.75  12.75  
0.00  0.00  3.60  0.60  13.20  
0.00  0.00  0.60  3.60  16.20
```

thread 3 do row 3

```
-----  
4.00  1.00  1.00  1.00  13.00  
0.00  3.75  0.75  0.75  12.75  
0.00  0.00  3.60  0.60  13.20  
0.00  0.00  0.00  3.50  14.00
```

main: back substitution : The solution is :

```
1.00  2.00  3.00  4.00
```