|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 35 | 50 | 15 | 25 | 80 | 20 | 90 | 45 | +infinity |

20<=35 TRUE STOP Q

90<=35 FALSE MOVE Q TO LHS

45<=35 FALSE MOVE Q TO LHS

50>=35 TRUE STOP P

Check for Q

Q<=PIVOT or Not

If yes then stop Q

Else move Q to LHS

Check for P

P>=PIVOT or Not

If yes then stop P

Else move P to RHS

Q

P

Pivot

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 35 | 50 | 15 | 25 | 80 | 20 | 90 | 45 | +infinity |

NOW CHECK P AND Q CROSSED EACH OTHER OR NOT

IF NOT THEN SWAP THE VALUE OF P AND Q

IF YES THEN SWAP THE VALUE OF Q AND PIVOT

Q

P

Pivot

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 35 | 20 | 15 | 25 | 80 | 50 | 90 | 45 | +infinity |

Pivot

Q

P

50<=35 FALSE MOVE Q TO LHS

80<=35 FALSE MOVE Q TO LHS

25<=35 TRUE STOP Q

20>=35 FALSE MOVE P TO RHS

15>=35 FALSE MOVE P TO RHS

25>=35 FALSE MOVE P TO RHS

80>=35 TRUE STOP P

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 35 | 20 | 15 | 25 | 80 | 50 | 90 | 45 | +infinity |

Q

P

Pivot

NOW CHECK P AND Q CROSSED EACH OTHER OR NOT

IF NOT THEN SWAP THE VALUE OF P AND Q

IF YES THEN SWAP THE VALUE OF Q AND PIVOT

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 25 | 20 | 15 | **35** | 80 | 50 | 90 | 45 | +infinity |

DIVIDE THE ENTIRE ARRAY INTO TWO SUBARRAY

LEFT SUB ARRAY

25 20 15 +INFINITY

(APPLY QUICK SORT AGAIN)

RIGHT SUB ARRAY

80 50 90 45 +INFINITY

(APPLY QUICK SORT AGAIN)

DO IT FIRST

FINALLY WE WILL GET TWO SORTED SUB ARRAY

THEN COMBINE THEM