|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 40 | 70 | 20 | 60 | 90 | 10 | 50 | 30 |

i j

B1: So sánh i[0] với j[1] . Nếu i bé hơn j không đổi chỗ. Ngược lại thì đổi chỗ và so sánh i[0] với j[++]

i[0] < j[1] => không đổi

0 1 2 3 4 5 6 7

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 40 | 70 | 20 | 60 | 90 | 10 | 50 | 30 |

i j

B2: Tương tự B1. i[0] > j[2] => Swap, j++

0 1 2 3 4 5 6 7

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 20 | 70 | 40 | 60 | 90 | 10 | 50 | 30 |

i j

B3: i[0] < j[3] => Không đổi, j++

0 1 2 3 4 5 6 7

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 20 | 70 | 40 | 60 | 90 | 10 | 50 | 30 |

i j

B4: i[0] < j[4] => Không đổi, j++

0 1 2 3 4 5 6 7

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 20 | 70 | 40 | 60 | 90 | 10 | 50 | 30 |

i j

B5: i[0] > j[5] => Swap, j++

0 1 2 3 4 5 6 7

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 10 | 70 | 40 | 60 | 90 | 20 | 50 | 30 |

i j

B6: i[0] < j[6] => Không đổi, j++

0 1 2 3 4 5 6 7

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 10 | 70 | 40 | 60 | 90 | 20 | 50 | 30 |

i j

B7: i[0] < j[7] => Không đổi, i++, j=i+1

0 1 2 3 4 5 6 7

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 10 | 70 | 40 | 60 | 90 | 20 | 50 | 30 |

i j

B8: i[1] > j[2] => Swap

0 1 2 3 4 5 6 7

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 10 | 40 | 70 | 60 | 90 | 20 | 50 | 30 |

i j

B9: i[1] < j[3] => Không đổi

0 1 2 3 4 5 6 7

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 10 | 40 | 70 | 60 | 90 | 20 | 50 | 30 |

i j

B10: i[1] < j[4] => Không đổi

0 1 2 3 4 5 6 7

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 10 | 40 | 70 | 60 | 90 | 20 | 50 | 30 |

i j

B11: i[1] < j[5] => Swap

0 1 2 3 4 5 6 7

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 10 | 20 | 70 | 60 | 90 | 40 | 50 | 30 |

i j

B12: i[1] < j[6] => Không đổi

0 1 2 3 4 5 6 7

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 10 | 20 | 70 | 60 | 90 | 40 | 50 | 30 |

i j

B13: i[1] < j[7] => Không đổi

0 1 2 3 4 5 6 7

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 10 | 20 | 70 | 60 | 90 | 40 | 50 | 30 |

i j

B14: i[2] > j[3] => Swap

0 1 2 3 4 5 6 7

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 10 | 20 | 60 | 70 | 90 | 40 | 50 | 30 |

i j

B15: i[2] < j[4] => Không đổi

0 1 2 3 4 5 6 7

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 10 | 20 | 60 | 70 | 90 | 40 | 50 | 30 |

i j

B16: i[2] > j[5] => Swap

0 1 2 3 4 5 6 7

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 10 | 20 | 40 | 70 | 90 | 60 | 50 | 30 |

i j

B17: i[2] < j[6] => Không đổi

0 1 2 3 4 5 6 7

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 10 | 20 | 40 | 70 | 90 | 60 | 50 | 30 |

i j

B18: i[2] > j[7] => Swap

0 1 2 3 4 5 6 7

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 10 | 20 | 30 | 70 | 90 | 60 | 50 | 40 |

i j

B19: i[3] < j[4] => Không đổi

0 1 2 3 4 5 6 7

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 10 | 20 | 30 | 70 | 90 | 60 | 50 | 40 |

i j

B20: i[3] > j[5] => Swap

0 1 2 3 4 5 6 7

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 10 | 20 | 30 | 60 | 90 | 70 | 50 | 40 |

i j

B21: i[3] > j[6] => Swap

0 1 2 3 4 5 6 7

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 10 | 20 | 30 | 50 | 90 | 70 | 60 | 40 |

i j

B22: i[3] > j[7] => Swap

0 1 2 3 4 5 6 7

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 10 | 20 | 30 | 40 | 90 | 70 | 60 | 50 |

i j

B23: i[4] > j[5] => Swap

0 1 2 3 4 5 6 7

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 10 | 20 | 30 | 40 | 70 | 90 | 60 | 50 |

i j

B24: i[4] > j[6] => Swap

0 1 2 3 4 5 6 7

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 10 | 20 | 30 | 40 | 60 | 90 | 70 | 50 |

i j

B25: i[4] > j[7] => Swap

0 1 2 3 4 5 6 7

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 10 | 20 | 30 | 40 | 50 | 90 | 70 | 60 |

i j

B26: i[5] > j[6] => Swap

0 1 2 3 4 5 6 7

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 10 | 20 | 30 | 40 | 50 | 70 | 90 | 60 |

i j

B27: i[5] > j[7] => Swap

0 1 2 3 4 5 6 7

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 10 | 20 | 30 | 40 | 50 | 60 | 90 | 70 |

i j

B28: i[6] > j[7] => Swap

0 1 2 3 4 5 6 7

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| 10 | 20 | 30 | 40 | 50 | 60 | 70 | 90 |

i j

=> Dãy số đã được xếp thứ tự tang dần

Độ phức tạp của thuật toán

|  |  |  |
| --- | --- | --- |
| **Trường hợp** | Số lần so sánh | Số lần hoán vị |
| Tốt nhất |  | 0 |
| Xấu nhất |  |  |