SORTING ELEMENTS IN DESCENDING ORDER (TYPE 2)

AIM: SORTING IN DESCENDING ORDER

1. Index1 = P = 1
2. Index2 = Q = 0

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| INDEX | 0 | 1 | 2 | 3 |
| VALUE | 1 | 0 | 9 | 7 |
| VAR | Q | P |  |  |
| Q>P  CANNOT SHIFT Q SINCE P!=Q  P IS SHIFTED BY 1 | | | | |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| INDEX | 0 | 1 | 2 | 3 |
| VALUE | 1 | 0 | 9 | 7 |
| VAR | Q |  | P |  |
| Q<P  SWAP P AND Q  THEN SHIFT Q BY 1 | | | | |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| INDEX | 0 | 1 | 2 | 3 |
| VALUE | 9 | 0 | 1 | 7 |
| VAR |  | Q | P |  |
| Q<P  SWAP P AND Q  THEN Q CANNOT BE SHIFTED SINCE P!=Q  P IS SHIFTED BY 1 | | | | |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| INDEX | 0 | 1 | 2 | 3 |
| VALUE | 9 | 1 | 0 | 7 |
| VAR | Q |  |  | P |
| Q>P  SHIFT Q BY 1 | | | | |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| INDEX | 0 | 1 | 2 | 3 |
| VALUE | 9 | 1 | 0 | 7 |
| VAR |  | Q |  | P |
| Q<P  SWAP P AND Q  THEN SHIFT Q BY 1 | | | | |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| INDEX | 0 | 1 | 2 | 3 |
| VALUE | 9 | 7 | 0 | 1 |
| VAR |  |  | Q | P |
| Q<P  SWAP P AND Q  THEN Q CANNOT BE SHIFTED SINCE P!=Q | | | | |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| INDEX | 0 | 1 | 2 | 3 |
| VALUE | 9 | 7 | 1 | 0 |
| VAR |  |  | Q | P |
| Q<P  SWAP P AND Q  THEN Q CANNOT BE SHIFTED SINCE P!=Q | | | | |

THE ARRAY IS SORTED SUCCESFULLY IN DESCENDING ORDER

LOGIC:

ONE FOR LOOP AND ONE WHILE LOOP IS PRESENT.

1. FOR LOOP: IT IS FOR INDEX 1 AND RUNS TILL LENGTH -1
2. WHILE LOOP: IT IS FOR INDEX 2 AND RUNS WHILE INDEX 1 IS NOT EQUAL TO INDEX 1
   1. IF ARRAY[INDEX2]<ARRAY[INDEX1] : SWAP

THEN INCRMENT INDEX 2