Φύλλο εργασίας 2

Παρακάτω σας δίνετε η γενική περιγραφή του αλγόριθμου της φυσαλίδας .

Για i = 1 μέχρι μήκος\_πίνακα[A]

Για j ← μήκος\_πίνακα[A] μέχρι i + 1 βήμα -1

ΑΝ A[j] < A[j - 1]

Temp=A[j]

A[j]=A[j-1]

A[j-1]=temp

Τελος\_αν

Επόμενο j

Επόμενο i

Έστω πίνακας Α με πέντε αριθμούς

|  |  |
| --- | --- |
| **J** | **A[j]** |
| 1 | 48 |
| 2 | 3 |
| 3 | 40 |
| 4 | 5 |
| 5 | 6 |

**Δραστηριότητα 1:** Παρακολουθήστε στον πίνακα την δημιουργία του πίνακα τιμών μετά την εκτέλεση του αλγόριθμου της φυσαλίδας για τον παραπάνω πίνακα Α[]

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Πίνακας Τιμών κατά την εκτέλεση του αλγόριθμου της φυσαλίδας** | | | | | | | | | | | | | | | | | |
| I | 1 | 1 | | 1 | 1 | | 2 | | 2 | 2 | | 3 | 3 | | 4 | | 5 |
| J | 5 | 4 | | 3 | 2 | | 5 | | 4 | 3 | | 5 | 4 | | 5 | | 5 |
| A[j]<A[j-1] | OXI | NAI | | OXI | NAI | | NAI | | OXI | NAI | | OXI | NAI | | NAI | | OXI |
| Temp |  |  | 5 | 5 | 5 | 3 | 3 | 6 | 6 | 6 | 5 | 5 | 5 | 6 | 6 | 40 | 40 |
| A[j-1] | 5 | 40 | 5 | 3 | 48 | 3 | 40 | 6 | 5 | 48 | 5 | 6 | 48 | 6 | 48 | 40 | 40 |
| A[j] | 6 | 5 | 40 | 5 | 3 | 48 | 6 | 40 | 6 | 5 | 48 | 40 | 6 | 48 | 40 | 48 | 48 |
|  |  |  | |  |  | |  | |  |  | |  |  | |  | |  |
| A[1] | 48 | 48 | | 48 | **3** | | 3 | | 3 | 3 | | 3 | 3 | | 3 | | 3 |
| A[2] | 3 | 3 | | **3** | **48** | | 48 | | 48 | **5** | | 5 | 5 | | 5 | | 5 |
| A[3] | 40 | **5** | | **5** | **5** | | **5** | | **5** | **48** | | **48** | **6** | | 6 | | 6 |
| A[4] | **5** | **40** | | **40** | **40** | | 6 | | **6** | **6** | | 6 | **48** | | **40** | | **40** |
| A[5] | **6** | 6 | | 6 | 6 | | 40 | | 40 | 40 | | 40 | 40 | | **48** | | **48** |

**Δραστηριότητα 2: Συμπληρώστε τον πίνακα τιμών για τον παρακάτω πίνακα Α[]**

Για i = 1 μέχρι μήκος\_πίνακα[A]

Για j ← μήκος\_πίνακα[A] μέχρι i + 1 βήμα -1

ΑΝ A[j] < A[j - 1]

Temp=A[j]

A[j]=A[j-1]

A[j-1]=temp

Τελος\_αν

Επόμενο j

Επόμενο i

Έστω πίνακας Α με πέντε αριθμούς

|  |  |
| --- | --- |
| **J** | **A[j]** |
| 1 | 37 |
| 2 | 4 |
| 3 | 50 |
| 4 | 21 |
| 5 | 9 |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Πίνακας Τιμών κατά την εκτέλεση του αλγόριθμου της φυσαλίδας** | | | | | | | | | | | | | | | | | | | | | | | | |
| I |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| J |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| A[j]<A[j-1] |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Temp |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| A[j-1] |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| A[j] |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| A[1] |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| A[2] |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| A[3] |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| A[4] |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| A[5] |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

**Δραστηριότητα 3(για το σπίτι): Συμπληρώστε τον πίνακα τιμών για τον παρακάτω πίνακα Α[] και ανεβάστε στο edmodo την απάντησή σας.**

Για i = 1 μέχρι μήκος\_πίνακα[A]

Για j ← μήκος\_πίνακα[A] μέχρι i + 1 βήμα -1

ΑΝ A[j] < A[j - 1]

Temp=A[j]

A[j]=A[j-1]

A[j-1]=temp

Τελος\_αν

Επόμενο j

Επόμενο i

Έστω πίνακας Α με πέντε αριθμούς

|  |  |
| --- | --- |
| **J** | **A[j]** |
| 1 | 55 |
| 2 | 46 |
| 3 | 53 |
| 4 | 21 |
| 5 | 9 |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Πίνακας Τιμών κατά την εκτέλεση του αλγόριθμου της φυσαλίδας** | | | | | | | | | | | | | | | | | | | | | | | | |
| I |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| J |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| A[j]<A[j-1] |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Temp |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| A[j-1] |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| A[j] |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| A[1] |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| A[2] |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| A[3] |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| A[4] |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| A[5] |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |