Dmitri Stanchevici

Unit 3, Module 1

Ex. 1.5

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Before loop | |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | |  | **HEAP** | | | | | | **GLOBAL** | | | ADDRESS |  | 120 | 124 | 128 | 132 | … |  | 680 | | VALUE |  | 0 | 0 | 0 | 0 |  |  | 120 | |  |  | A[0] | A[1] | A[2] | A[3] | … |  | A | |
| i=0 | |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | | ADDRESS |  | 120 | 124 | 128 | 132 | … |  | 680 | | VALUE |  | 0 | 0 | 0 | 0 |  |  | 120 | |  |  | A[0] | A[1] | A[2] | A[3] | … |  | A | |
| i=1 | |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | | ADDRESS |  | 120 | 124 | 128 | 132 | … |  | 680 | | VALUE |  | 0 | 1 | 0 | 0 |  |  | 120 | |  |  | A[0] | A[1] | A[2] | A[3] | … |  | A | |
| i=2 | |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | | ADDRESS |  | 120 | 124 | 128 | 132 | … |  | 680 | | VALUE |  | 0 | 1 | 4 | 0 |  |  | 120 | |  |  | A[0] | A[1] | A[2] | A[3] | … |  | A | |
| i=3 | |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | | ADDRESS |  | 120 | 124 | 128 | 132 | … |  | 680 | | VALUE |  | 0 | 1 | 0 | 6 |  |  | 120 | |  |  | A[0] | A[1] | A[2] | A[3] | … |  | A | |

Ex. 1.10

Probability an array of length 5 is sorted in **increasing order** is: **0.0087**

Probability an array of length 5 is sorted in both increasing and decreasing order: **0.01787**