



ASSIGNMENT 2 SORTING WITH HEAP

Data Structures and Algorithm



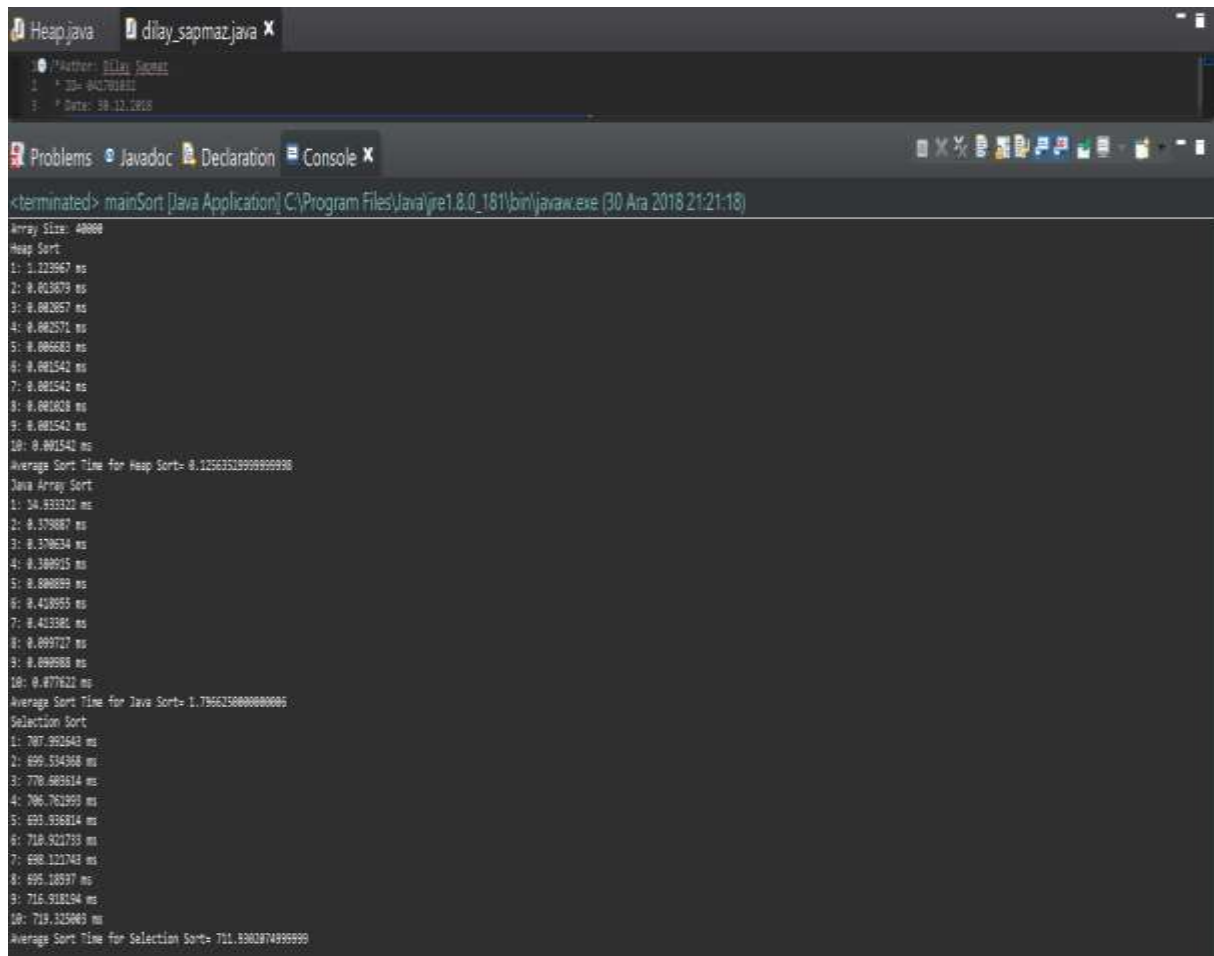
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PURPOSE: This code sorting an array with 3 different sort and compares every sort with their milliseconds.

I see that heap sort is the best way to sort in a short time.

Output:



```
Heap.java  dilay_sapmaz.java X
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  * Date: 30.12.2018

Problems  Javadoc  Declaration  Console X
<terminated> mainSort [Java Application] C:\Program Files\Java\jre1.8.0_181\bin\javaw.exe (30 Ara 2018 21:21:18)
Array Size: 40000
Heap Sort
1: 1.223967 ms
2: 0.603879 ms
3: 0.603867 ms
4: 0.602571 ms
5: 0.606683 ms
6: 0.601542 ms
7: 0.601542 ms
8: 0.601828 ms
9: 0.601542 ms
10: 0.601542 ms
Average Sort Time for Heap Sort= 0.12563519999999998
Java Array Sort
1: 34.933322 ms
2: 0.379887 ms
3: 0.370634 ms
4: 0.360025 ms
5: 0.600899 ms
6: 0.438955 ms
7: 0.433381 ms
8: 0.609727 ms
9: 0.609588 ms
10: 0.677622 ms
Average Sort Time for Java Sort= 1.78662500000000005
Selection Sort
1: 707.992643 ms
2: 699.534368 ms
3: 770.603614 ms
4: 706.762999 ms
5: 699.936814 ms
6: 718.921733 ms
7: 698.121743 ms
8: 695.18937 ms
9: 716.918194 ms
10: 719.325869 ms
Average Sort Time for Selection Sort= 711.9302874999999
```