

The Big-O time complexity for delMax(): $O(\log n)$.

```
while ((k*d+1) < size) {  
    int i = max(k);  
    if(a[i] > a[k]) {  
        swap(k,i);  
        k = i;  
    }  
    else {  
        break;  
    }  
}
```

The Big-O time complexity for daryHeapsort(): $O(n \log n)$.

```
for(int i = 0; i < size; i++) {  
    sortedArray[i] = delMax();  
}
```

the time complexity for swap and delete are $O(1)$ and for sink it's $O(\log n)$ because in all the loops the range of array is decided by two. The loop has n time, delMax() is called every-time. the Big-O complexity of the daryHeapsort() is $O(n \log n)$