

# Algorytmy i struktury danych - Kopiec binarny i kolejka priorytetowa

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## Kopiec binarny i kolejka priorytetowa - funkcje i procedury

```
STRUCT-HEAP
  data[1..20]
  length = 0
  heap-size = 0
HEAP-INIT(T, tab, n)
PARENT(i)
LEFT(i)
RIGHT(i)
MAX-HEAPIFY(T, i)
BUILD-MAX-HEAP(T)
HEAP-MAXIMUM(T)
HEAP-EXTRACT-MAX(T)
HEAP-INCREASE-KEY(T, i, key)
MAX-HEAP-INSERT(T, key)
```

## Kopiec binarny i kolejka priorytetowa

```
STRUCT-HEAP T
tab =(4,1,3,2,16,9,10,14,8,7)
HEAP-INIT(T,tab,tab.length)
BUILD-MAX-HEAP(T)
WRITE(T) //16 14 10 8 7 9 3 2 4 1
MAX-HEAP-INSERT(T,15)
WRITE(T) //16 15 10 8 14 9 3 2 4 1 7
WRITE(HEAP-MAXIMUM(T)) //16
WRITE(T) //16 15 10 8 14 9 3 2 4 1 7
WRITE(HEAP-EXTRACT-MAX(T)) //16
WRITE(T) //15 14 10 8 7 9 3 2 4 1
HEAP-INCREASE-KEY(T,4,19)
WRITE(T) //19 15 10 14 7 9 3 2 4 1
```