

Binomial Heap

Write-up

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Ins(heap, val)

```
{
    new node with value equal to key
    temporary heap
    loop until heap is NULL
        if degree of original tree > degree of temp tree
            create new heap to add original tree
        else
            add temp tree to heap
        if original heap has left over tree
            add to new heap
        if temp heap has left over tree
            add all to new heap
        if heap size < 1
            return heap
        loop over new heap
            if end
                one element remains
            else if degree of 1st tree < degree of 2nd tree
                merge
            else if degree are same
                binomial tree are same in heap
        return heap
}

get min(heap)
{
    start from 1st tree & check root. Find min of all roots
    and return
}

Extract min(heap)
{
    start from 1st tree
    if tree root is not min
        create new heap & add tree
    Merge newly created heap without min element
    return merged heap
}
```