

Binomial Heap

Krishna prasad V
IBM IPSO 17
SA

pre Insert (head, key):

```
{ Node * temp = new Node(key)
```

```
list < Node* > f
```

```
f.push-back(temp)
```

```
f = union BH (head, key)
```

```
return adjust(f)
```

```
}
```

```
adjust (list < Node* > heap)
```

```
{ if (heap.size() <= 1) return heap
```

```
list < Node* > newheap
```

```
auto it1, it2, it3
```

```
it1 = it2 = it3 = heap.begin()
```

```
if (heap.size() >= 2)
```

```
{ if2 = it1
```

```
it2++
```

```
it3 = heap.end()
```

```
}
```

```
else
```

```
{ it2++
```

```
it3 = it2
```

```
it3++
```

```
}
```

```
while (it1 != heap.end())
```

```
{ if (it2 != heap.end()) it1++
```

```
else if (it1 -> deg < it2 -> deg)
```

```
{ it1++, it2++
```

```
}
```

if (it3 != heap1(1)) it3++

}
else if (it3 != heap1(1)) { if it1 → deque ... * it2 → deque
it1 → deque ... it3 → deque
* it1 ++, * it2 ++, * it3 ++

}
return hp

}

func getmin (list <Node*> heap)

{ auto it = heap.begin()

while (it != heap.end())

{ if (*it->data < temp->data) temp = *it

it ++

}

return temp

}

func extractmin (list <Node*> heap)

{ list <Node*> newheap, lo, Node* hp;

while (it != heap.end())

{ if (*it != temp) newheap.push_back(*it)

it ++

}

lo = heap.begin()

newheap = newheap (newheap, lo)

newheap = newheap (newheap)

return newheap

}