

Class Binomial - Tree :

```
def __init__(self, key):
    self.key = key
    self.children = []
    self.order = 0
```

class Binomial_heap :

```
def __init__(self):
    self.trees = []
```

```
def get_min(self):
    if self.trees:
        return None
```

```
least = self.trees[0].key
```

```
for tree in self.trees:
```

```
    if tree.key < least:
```

```
        least = tree.key
```

```
return least
```

```
def merge(self, h):
```

```
    self.combine_roots(h)
```

```
    if self.trees:
```

```
        return
```

```
    i = 0
```

```
    while i < len(self.trees) - 1:
```

```
        current = self.trees[i]
```

```
        after = self.trees[i+1]
```

```
        if current.order == after.order:
```

```
            if (i+1 < len(self.trees self.trees) > 1
```

```
                and self.trees[i+2].order == after.order):
```

```
                after = self.trees[i+2]
```



```
if after_key < after_after_key:  
    after.add_at_end(after_after)
```

```
del self.trees[i+2]
```

```
else:
```

```
    after_after.add_at_end(after)
```

```
del self.trees[i+1]
```

```
else:
```

```
    if current_key < after_key:
```

```
        current.add_at_end(after)
```

```
del self.trees[i+1]
```

```
    else:
```

```
        after.add_at_end(current)
```

```
del self.trees[i]
```

```
i = i+1
```

```
def insert(self, key):
```

```
    g = BinomialHeap()
```

```
    g.trees.append(binomialTree(key))
```

```
    self.merge(g)
```