```
1 from exceptions import Empty
 2
 3 class ArrayHeap:
 4
 5
       def __init__(self):
           self._maxsize = 10
 6
 7
           self.\_data = [-1] * self.\_maxsize
           self._currentsize = 0
 8
 9
10
       def __len__(self):
           return len(self._data)
11
12
       def is_empty(self):
           return len(self._data) == 0
13
14
15
       def maxh(self):
           if self._currentsize == 0:
16
                raise Empty('Heap is empty')
17
18
           return self._data[1]
19
20
       def insert(self, e):
21
           if self._currentsize == self._maxsize:
22
                raise Empty('No Space')
           self._currentsize += 1
23
           i = self._currentsize
24
           while i!=1 and e < self._data[i//2]:</pre>
25
                self._data[i] = self._data[i//2]
26
27
                i = i // 2
28
           self._data[i] = e
29
       def deletemin(self):
30
           if self._currentsize == 0:
31
                raise Empty('Heap is Empty')
32
           x = self._data[1]
33
           y = self._data[self._currentsize]
34
           self._currentsize -= 1
35
           i = 1
36
           ci = 2
37
38
           while ci <= self._currentsize:</pre>
39
                if ci < self._currentsize and self._data[ci] >
    self._data[ci+1]:
40
                    ci += 1
41
                if y <= self._data[ci]:</pre>
42
                    break
43
                self._data[i] = self._data[ci]
44
                i = ci
                ci = ci * 2
45
46
           self._data[i] = y
```

```
47
           return x
48
49 h = ArrayHeap()
50 h.insert(25)
51 h.insert(14)
52 h.insert(2)
53 h.insert(20)
54 h.insert(10)
55 h.insert(12)
56 for i in range(h._currentsize):
       print(h.deletemin(), end=' , ')
57
58
59
```