

[Heap operations in Maple

```
> S := [[x,5], [x,6], [y,2], [x,1], [x,3], [z,7], [x,2], [y,5]];
      S:= [[x,5], [x,6], [y,2], [x,1], [x,3], [z,7], [x,2], [y,5]]
```

[Sort S on the second component

```
> less := proc(a,b) evalb( a[2] < b[2] ) end;
      less:=proc(a, b) evalb(a[2] < b[2]) end proc
```

```
> H := heap[new](less);
      H:= table([0 = 0, `<` = less])
```

```
> for a in S do heap[insert](a,H) od;
```

[x, 5]

[x, 6]

[y, 2]

[x, 1]

[x, 3]

[z, 7]

[x, 2]

[y, 5]

```
> heap[max](H);
```

[z, 7]

```
> while not heap[empty](H) do heap[extract](H) od;
```

[z, 7]

[x, 6]

[y, 5]

[x, 5]

[x, 3]

[x, 2]

[y, 2]

[x, 1]