

The `algpseudocode` package does not have commands in its user guide/manual or instructions documentation to indicate the input and output of algorithms, heuristics, or procedures.

Algorithm 1 The Bellman-Kalaba algorithm(G, u, l, p)

Input: G, u, l, p **Output:** Nothing

```
1: procedure BELLMANKALABA( $G, u, l, p$ )
2:   for all  $v \in V(G)$  do
3:      $l(v) \leftarrow \infty$ 
4:   end for
5:    $l(u) \leftarrow 0$ 
6:   repeat
7:     for  $i \leftarrow 1, n$  do
8:        $min \leftarrow l(v_i)$ 
9:       for  $j \leftarrow 1, n$  do
10:        if  $min > e(v_i, v_j) + l(v_j)$  then
11:           $min \leftarrow e(v_i, v_j) + l(v_j)$ 
12:           $p(i) \leftarrow v_j$ 
13:        end if
14:      end for
15:       $l?(i) \leftarrow min$ 
16:    end for
17:     $changed \leftarrow l \neq l?$ 
18:     $l \leftarrow l?$ 
19:  until  $\neg changed$ 
20:  return Nothing
21: end procedure

22: procedure FINDPATHBK( $v, u, p$ )
23:   if  $v = u$  then
24:     Write  $v$ 
25:   else
26:      $w \leftarrow v$ 
27:     while  $w \neq u$  do
28:       Write  $w$ 
29:        $w \leftarrow p(w)$ 
30:     end while
31:   end if
32: end procedure
```

Algorithm 2 Part 1

```
1: procedure BELLMANKALABA( $G, u, l, p$ )
2:   for all  $v \in V(G)$  do
3:      $l(v) \leftarrow \infty$ 
4:   end for
5:    $l(u) \leftarrow 0$ 
6:   repeat
7:     for  $i \leftarrow 1, n$  do
8:        $min \leftarrow l(v_i)$ 
9:       for  $j \leftarrow 1, n$  do
10:        if  $min > e(v_i, v_j) + l(v_j)$  then
11:           $min \leftarrow e(v_i, v_j) + l(v_j)$ 
12:        end if
12:       $\triangleright$  For some reason we need to break here!
```

And we need to put some additional text between...

Algorithm 3 Part 2

```
13:     $p(i) \leftarrow v_j$ 
14:    end if
15:    end for
16:     $l?(i) \leftarrow min$ 
17:  end for
18:   $changed \leftarrow l \neq l?$ 
19:   $l \leftarrow l?$ 
20:  until  $\neg changed$ 
21: end procedure
```

Algorithm 4 A small pseudocode

```
1:  $s \leftarrow 0$ 
2:  $p \leftarrow 0$ 
3: for  $i \leftarrow 1, 10$  do
4:    $s \leftarrow s + i$ 
5:    $p \leftarrow p + s$ 
6: end for
```
