

GALE-SHAPLEY (*men, women, rankings*)

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1  assign each woman and man as free
2  while some woman  $w$  is free
3      let  $m$  be the first man on  $w$ 's ranked list to whom she has not proposed
4      if  $m$  is free
5           $w$  and  $m$  become engaged to each other (and not free)
6      elseif  $m$  ranks  $w$  higher than the woman  $w'$  he is currently engaged to
7           $m$  breaks the engagement to  $w'$ , who becomes free
8           $w$  and  $m$  become engaged to each other (and not free)
9      else  $m$  rejects  $w$ , with  $w$  remaining free
10 return the stable matching consisting of the engaged pairs
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