Test Cases Part 2

```
%order could be different
?-  length(L,3),random_assignment(L).
L = [w, w, w] ;
L = [w, w, l] ;
L = [w, w, r] ;
L = [w, w, c] ;
L = [w, l, w] ;
L = [w, l, l] ;
L = [w, l, r] ;
L = [w, l, c] ;
L = [w, r, w] ;
L = [w, r, l] ;
L = [w, r, r] ;
L = [w, r, c] ;
L = [w, c, w] ;
L = [w, c, l] ;
L = [w, c, r] ;
L = [w, c, c] ;
L = [l, w, w] ;
L = [l, w, l] ;
L = [l, w, r] ;
L = [l, w, c] ;
L = [l, l, w] ;
L = [l, l, l] ;
L = [l, l, r] ;
L = [l, l, c] ;
L = [l, r, w] ;
L = [l, r, l] ;
L = [l, r, r] ;
L = [l, r, c] ;
L = [l, c, w] ;
L = [l, c, l] ;
L = [l, c, r] ;
L = [l, c, c] ;
L = [r, w, w] ;
L = [r, w, l] ;
L = [r, w, r] ;
L = [r, w, c] ;
L = [r, l, w] ;
L = [r, l, l] ;
L = [r, l, r] ;
L = [r, l, c] ;
L = [r, r, w] ;
L = [r, r, l] ;
L = [r, r, r] ;
L = [r, r, c] ;
L = [r, c, w] ;
L = [r, c, l] ;
L = [r, c, r] ;
L = [r, c, c] ;
L = [c, w, w] ;
L = [c, w, l] ;
L = [c, w, r] ;
```

```
L = [c, w, c] ;
L = [c, l, w] ;
L = [c, l, l] ;
L = [c, l, r] ;
L = [c, l, c] ;
L = [c, r, w] ;
L = [c, r, l] ;
L = [c, r, r] ;
L = [c, r, c] ;
L = [c, c, w] ;
L = [c, c, l] ;
L = [c, c, r] ;
L = [c, c, c].




?- mycheck([]).
true.

?- mycheck([l]).
true ;
false.

?- mycheck([l,w,l,r]).
false.

?- mycheck([w,w,c,c]).
true.




?- check_rows( [ w, w, w, w, w, w, w, w, w, w,
                 w, w, w, w, w, w, w, w, w, w,
                 w, w, w, w, w, w, w, w, w, w,
                 w, w, w, w, w, w, w, w, w, w,
                 w, w, w, w, w, w, w, w, w, w,
                 w, w, w, c, w, w, w, w, w, w,
                 w, w, w, w, w, w, w, w, w, c,
                 w, w, w, w, w, w, w, w, w, w,
                 w, w, w, w, w, w, w, w, w, w,
                 w, w, w, w, w, w, l, r, w, w],10,10,[0,0,0,0,0,1,1,0,0,2]).
true ;
false.

?- check_rows( [ w, w, w, w, w, w, w, w, w, w,
                 w, w, w, w, w, w, w, w, w, w,
                 w, w, w, w, w, w, w, w, w, w,
                 w, w, w, w, w, w, w, w, w, w,
                 w, w, w, w, w, w, w, w, w, w,
                 w, w, w, c, w, w, w, w, w, w,
                 w, w, w, w, w, w, w, w, w, c,
                 w, w, w, w, w, w, w, w, w, w,
                 w, w, w, w, w, w, w, w, w, w,
                 w, w, w, w, w, w, l],10,10,[0,0,0,0,0,1,1,0,0,2]).
true ;
```

```
false.

?- check_rows( [ w, w, w, w, w, w, w, w, w, w,
                 w, w, w, w, w, w, w, w, w, w,
                 w, w, w, w, w, w, w, w, w, w,
                 w, w, w, w, w, w, w, w, w, w,
                 w, w, w, w, w, w, w, w, w, w,
                 w, w, w, c, w, w, w, w, w, w,
                 w, w, w, w, w, w, w, w, c,
                 w, w, w, w, w, w, w, w, w, w,
                 w, w, w, w, w, w, w, w, w, w,
                 w, w, w, w, w, w, l],10,10,[1,0,0,0,0,1,1,0,0,2]).
false.

?- check_rows( [],10,10,[1,0,0,0,0,1,1,0,0,2]).
true ;
false.




?- check_columns([],10,10,[0,0,0,1,0,0,1,1,0,1]).
true ;
false.

?- check_columns([w,w,w],10,10,[0,0,0,1,0,0,1,1,0,1]).
true ;
false.

?- check_columns([  w, w, w, w, w, w, w, w, w, w,
                    w, w, w, w, w, w, w, w, w, w,
                    w, w, w, w, w, w, w, w, w, w,
                    w, w, w, w, w, w, w, w, w, w,
                    w, w, w, w, w, w, w, w, w, w,
                    w, w, w, c, w, w, w, w, w, w,
                    w, w, w, w, w, w, w, w, w, c,
                    w, w, w, w, w, w, w, w, w, w,
                    w, w, w, w, w, w, w, w, w, w,
                    w, w, w, w, w, w, l, r, w, w],10,10,[2,0,0,1,0,0,1,1,0,1]).
false.

?- check_columns([  w, w, w, w, w, w, w, w, w, w,
                    w, w, w, w, w, w, w, w, w, w,
                    w, w, w, w, w, w, w, w, w, w,
                    w, w, w, w, w, w, w, w, w, w,
                    w, w, w, w, w, w, w, w, w, w,
                    w, w, w, c, w, w, w, w, w, w,
                    w, w, w, w, w, w, w, w, w, c,
                    w, w, w, w, w, w, w, w, w, w,
                    w, w, w, w, w, w, w, w, w, w,
                    w, w, w, w, w, w, l, r, w, w],10,10,[0,0,0,1,0,0,1,1,0,1]).
true ;
false.




?- check_submarines([],3,3,1).
true ;
false.
```

```
?- check_submarines([w,w,c,c],3,3,1).
false.

?- check_submarines([w,w,w,w,w,w,w,w,w],3,3,1).
false.

?- check_submarines([w,w,w,w,w,w,w,c,w],3,3,1).
true ;
false.




?- check_destroyer([],3,3,1).
true.

?- check_destroyer([l,r],3,3,1).
true.

?- check_destroyer([l,w],3,3,1).
true ;
false.

?- check_destroyer([w,w,w,w,w,w,w,w,w],3,3,1).
false.

?- check_destroyer([w,w,w,w,w,w,w,l,r],3,3,1).
true ;
false.

?- check_destroyer([w,w,w,w,w,l,r,w,w],3,3,1).
false.


%for the hints: at(0,0,w).
?- battleship(L,3,3,1,1,[0,2,1],[2,1,0]).
L = [w, w, w, l, r, w, c, w, w] ;
false

%for the hints: at(2,0,c). at(2,1,r).
?-battleship(L,4,4,3,2,[1,2,1,3],[2,1,3,1]).
L = [w, w, c, w, w, l, r, w, c, w, w, c, w, l, r] ;
false.

%for the hints: at(5,0,w). at(3,5,c). at(9,6,c).
?-battleship(L,10,10,2,1,[0,0,0,0,0,1,1,0,0,2],[0,0,0,1,0,0,1,1,0,1]).
L = [    w, w, w, w, w, w, w, w, w, w,
         w, w, w, w, w, w, w, w, w, w,
         w, w, w, w, w, w, w, w, w, w,
         w, w, w, w, w, w, w, w, w, w,
         w, w, w, w, w, w, w, w, w, w,
         w, w, w, c, w, w, w, w, w, w,
         w, w, w, w, w, w, w, w, w, c,
         w, w, w, w, w, w, w, w, w, w,
         w, w, w, w, w, w, w, w, w, w,
         w, w, w, w, w, w, l, r, w, w] ;
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