

```

1      --- remove activity diagram elements from each mitigation template
2      foreach partial mitigation  $pm_i^h \in CM^h$  {
3          foreach operation  $op_i \in R \mid R \in pm_i^h$  {
4              foreach element to be removed  $el \in op_i^h$  {
5                  if  $el \in op_i^h$  is of type activity {
6                      --- remove activity by computing new set of activities
7                       $A^{actD^{hmr}} = A^{ctD^{hir}} \setminus el$  }
8                  if  $el \in op_i^h$  is of type pin {
9                      --- remove pin by computing new set of pins
10                      $p^{actD^{hmr}} = p^{ctD^{hir}} \setminus el$  }
11                 if  $el \in op_i^h$  is of type control node {
12                     --- remove control node by computing new set of control nodes
13                      $C^{actD^{hmr}} = C^{actD^{hir}} \setminus el$  }
14                 if  $el \in op_i^h$  is of type activity edge {
15                     ---remove activity edge by computing new set of activity edges
16                      $E^{actD^{hmr}} = E^{actD^{hir}} \setminus el$  }
17                     --- remove activity edges connected to the removed element
18                      $E^{actD^{hmr}} = E^{actD^{hir}} \setminus ex \mid \forall ex \in E^{ad^{hmr}} : src^{ex} \vee tar^{ex} = el$ 
19                 }
20             }
21         }
22     }
23 
```

Listing 1 Pseudo-Code remove operation op^{remove} of a QVTo Script q^{hmr} to Generate Hazard-Mitigating Requirements