```
1   --- insert activity diagram elements from each mitigation template
2   foreach partial mitigation pm_i^h ∈ CM^h {
3       foreach operation op_i ∈ I | I ∈_t pm_i^h {
4           foreach element to be inserted el ∈_t op_i^h {
5               if el ∈_t op_{i_i}^h is of type activity {
6               --- insert new activity by computing new set of activities
7                   A^{actD^hmr} = A^{actD^hir} ∪ el }
8               if el ∈_t op_{i_i}^h is of type pin {
9               --- insert new pin by computing new set of pins
10                  P^{actD^hmr} = P^{actD^hir a} ∪ el }
11              if el ∈_t op_{i_i}^h is of type control node {
12              --- insert new control node by computing new set of control nodes
13                  C^{actD^hmr} = C^{actD^hir} ∪ el }
14              if el ∈_t op_{i_i}^h is of type activity edge {
15              ---insert new activity edge by computing new set of activity edges
16              --- make sure source and target of the activity edge exist
17                  E^{actD^hmr} = E^{actD^hir} ∪ el|
18                  el = (src, m, tar): src, tar ∈ A^{actD^hmr} ∪ P^{actD^hmr} ∪ C^{actD^hmr} }
19          }
20      }
21  }
22
```

Listing 2 Pseudo-Code insertion operation $op^{insert}$of a QVTo Script q^{hmr} to Generate Hazard-Mitigating Requirements