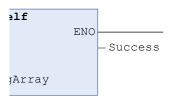
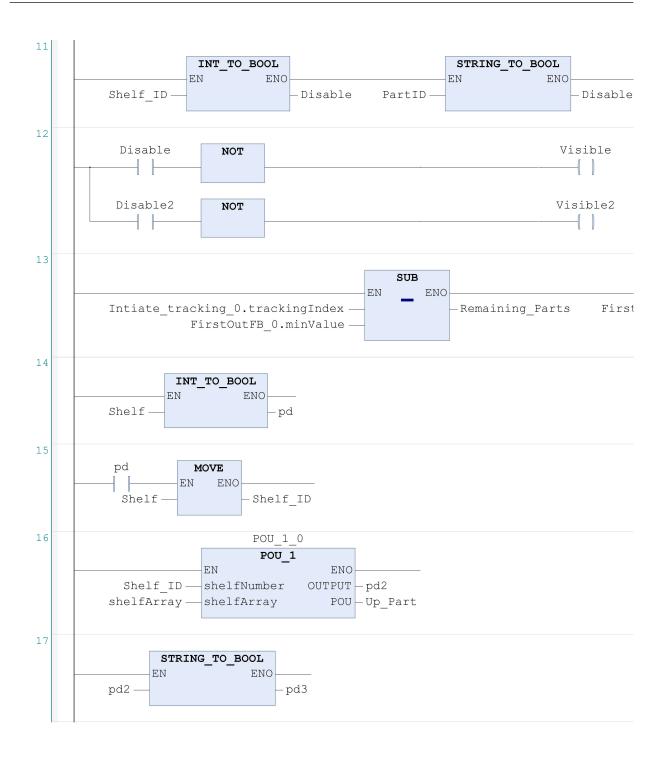
```
1
       PROGRAM Main
 2
 3
           Reset : BOOL ;
 4
           Shelf no : INT ;
 5
          PartID: STRING (23);
 6
          STORE OR NOT : BOOL ;
 7
          STORENEXTFREESPACE : BOOL ;
8
          shelfArray : ARRAY [ 1 .. 42 ] OF ShelfSpace;
9
         ResetFun : FB ResetShelfArray;
10
          Shelf no1 : INT ;
11
          start : BOOL ;
           enable : BOOL ;
12
13
          TRUE FALSE : BOOL ;
14
          AutoAdder: BOOL;
15
          ManualAdder: BOOL;
          GivenShelf: INT;
16
17
         Remove shelf : INT ;
          check: BOOL;
18
19
          Auto_PartID : STRING (23);
20
           findpartid : STRING (23);
21
           Shelf: INT;
22
           find : bool ;
23
          Remove prtid : BOOL ;
24
           Success: INT;
           INITIATE : BOOL ;
25
           shelfPartTrackingArray : ARRAY [ 1 .. 42 ] OF ShelfPartTracking;
26
27
           lastshelf : INT ;
28
           test: BOOL;
29
           Intiate_tracking_0 : Intiate_tracking;
           test2 : BOOL ;
30
31
           FirstOutFB 0 : FirstOutFB;
32
           Remove lastprt : BOOL ;
33
           Intialize: BOOL;
           Shelf ID: INT;
35
           Disable : BOOL ;
           Visible: BOOL;
37
           Remaining Parts : INT ;
38
           Disable2 : BOOL ;
39
           Visible2 : BOOL ;
40
           pd: BOOL;
           pd2 : STRING ;
41
42
           pd3: BOOL;
43
           POU 1 0 : POU 1;
           Up Part : STRING ;
44
45
           pd4: BOOL;
           R TRIG 0 : R TRIG ;
46
47
       END VAR
48
```

```
//Reset function (only to to be used once):
                     ResetFun
                                                                    Intialize
                   FB ResetShelfArray
        Reset
                                                                      _[s]
                            shelfArray - shelfArray
2
                                  Intiate tracking 0
     Intialize
                                  Intiate_tracking
                                                      ENO
                             ΕN
                shelfArray — shelfArray
    shelfPartTrackingArray — shelfPartTrackingArray
    // Next empty shelf finder:
                      GetNextFreeSpace
                     EN
        shelfArray —
                     shelfArray
                                        -Shelf no
    //Automatic New Part Adding:
                         StorePart
                     EN
                                   ENO-
          Shelf_no — shelfNumber
                                      -TRUE FALSE
            PartID — partID
         AutoAdder — activate
        shelfArray shelfArray
    // Manually Remove part from shelf:
        check
                                      ClearShelf
                            EN
                                                     ENO
                  Shelf ID — shelfNumber
                                                         - Success
                shelfArray — shelfArray
    shelfPartTrackingArray — shelfPartTrackingArray
```

```
//Manual New Part Adding:
                           StorePart
                           ENO-
            Shelf ID — shelfNumber
                                     - TRUE FALSE
              PartID — partID
         ManualAdder — activate
          shelfArray — shelfArray
     //find shelf by partid:
                       FindShelfByPartID
             PartID — partIDToFind
                                         -Shelf
         shelfArray — shelfArray
     // Remove part by part id:
      Remove_prtid
                                       ClearShelf
                             EN
                   Shelf ID — shelfNumber
                                                          -Success
                 shelfArray → shelfArray
     shelfPartTrackingArray — shelfPartTrackingArray
     // First out:
                                             FirstOutFB 0
                                              FirstOutFB
                                  ΕN
                                                                 ENO.
         shelfPartTrackingArray — shelfPartTrackingArray
                                                           First out - lastshelf
10
     // Remove oldest part:
                        R TRIG 0
      Remove_lastprt
                         R TRIG
                                                                        ClearShe
                                                               EN
                                                   lastshelf — shelfNumber
                                                  shelfArray — shelfArray
                                      shelfPartTrackingArray - shelfPartTracking
```





2

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