```
1   FUNCTION_BLOCK FB_ResetShelfArray
2   VAR
3       executed : BOOL := FALSE ;   (* Flag to track whether the reset operation
    has been executed *)
4   END_VAR
5   VAR_OUTPUT
6       shelfArray : ARRAY [ 1 .. 42 ] OF ShelfSpace ;   (* Output array of shelf
    spaces *)
7   END_VAR
8   VAR
9       shelfIndex : INT ;                          (* Index for iterating through
    shelves *)
10      row : INT ;                                 (* Row index for calculating y
    coordinate *)
11      column : INT ;                              (* Column index for calculating x
     coordinate *)
12  END_VAR
13
```

```
1   IF NOT executed THEN   (* Check if reset operation has not been executed yet *)
2       shelfIndex := 1 ;   (* Start index from 1 *)
3
4       FOR row := 1 TO 6 DO
5           FOR column := 1 TO 7 DO
6               shelfArray [ shelfIndex ] . x := column ;    (* Set x coordinate of
    the shelf *)
7               shelfArray [ shelfIndex ] . y := row ;       (* Set y coordinate of
    the shelf *)
8               shelfArray [ shelfIndex ] . partID := '00' ;   (* Set part ID to '00'
    for all shelves *)
9
10              shelfIndex := shelfIndex + 1 ;   (* Increment shelf index *)
11          END_FOR ;
12      END_FOR ;
13
14      executed := TRUE ;   (* Set the flag to indicate that reset operation has
    been executed *)
15  END_IF ;
16
```