Specifications – Aaron Ward

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1) **Give an integer array f[0..n] where {n ≥ 0}**
   calculate the product of the elements in F

```
|[ con N : int; {N ≥ 0}
        F : array [0 .. N] of int
   Var product : int
        Product = 1

        S
{product = *j: 0 ≤ j < N: f.j}
]|
```

2) **Given an integer array f[0..N] where {n >/ 0}**
   Calculate the frequency of elements > 100

```
|[ con N : int; {N ≥ 0}
   var freq : int
        f : array [0..N] of int
   freq := 0

        S
{freq = #j: 0 ≤ j < N: f.j > 100}
```

3) **Given an integer array f[0..N] and integer array m[0..n] where {n >0}**
   State the F is a copy of M

```
|[ con N : int; {N ≥ 0}
    f: array [0..N] of int
   M : array[0..N] of int

        S
{∀ J : 0≤ J < N: f.j = m.j}
```

4) **Given an character array f[0..N] where {n ≥ 0}**
   Calculate the frequency of the letter 'A'

```
|[ con N : int; {N ≥ 0}
        F: array [0..N] of char
   Var freq : int
```

S

{Freq = #j: 0≤ J < N: f.j := ‘A’}

5) **Using the function called toUpper(char) and the character array f[0..n], where {N> 0}, containing all lowercase characters, State that F is equal to all uppercase characters after a program S executes**

|[con N : int; {N ≥ 0}

F: array [0..N} of char

S

{∀ j: 0≤ j < N: toUpper(f.i) }