Assignment 1

Formal Methods CSE356

**Submitted By:**

|  |  |
| --- | --- |
| **Name** | **Roll No** |
| Sameer Rehman | SP20-BSE-050 |

**Solution: a)**

**Pre-conditions:**

* arr1 is an integer array with a range of 1...50. • arr2 is an integer array with a range of 1...50.
* arr3 is an integer array with a range of 1...50.
* All the elements of arr3 are initialized to 0.
* **Vi:1…50. arr3[i] = 0**

**Post-conditions:**

* arr3 is an integer array with a range of 1...50.
* For each index i from 1 to 50, the element of arr3 at index i is equal to the product of the elements of arr1 and arr2 at the same index i.
* **Vi: 1…50. arr3[i] = arr2[i]= arr1[i]**

**b)**

**Pre-conditions:**

* vals is an integer array with a range of 1...200.
* searchfor is an integer
* **Vi: 1…200.vals[i]**

**Post-conditions:**

* If searchfor occurs in vals, found is set to 1.
* If searchfor does not occur in vals, found is set to 2.
* **Search for € vals => found = 1**