

Elaborate a program that:

1. Creates an array with initialization and calculates the sum of array elements.
2. Creates an array with initialization and calculates the max value in that array.
3. Creates an array with initialization and sorts the array elements.
4. Implements a matrix and a scalar (integer or double) multiplication  $a * A$ , where  $a$  is a scalar and  $A$  is  $3 \times 3$  matrix.
5. Implements dot product of two vectors  $A * B$ , where  $A$  and  $B$  are two vectors  $(a_1 * b_1 + a_2 * b_2 + a_3 * b_3)$ .