***Tutorial 6***

1. #include <stdio.h>

void vector\_product(int \*array1, int \*array2, int \*array3, int size) {

for (int i = 0; i < size; i++) {

array3[i] = array1[i] \* array2[i];

}

}

int scalar\_product(int \*array1, int \*array2, int size) {

int sum = 0;

for (int i = 0; i < size; i++) {

sum += array1[i] \* array2[i];

}

return sum;

}

int main() {

int size;

printf("Enter the size of the arrays: ");

scanf("%d", &size);

int array1[size], array2[size], array3[size];

printf("Enter the elements of the first array: ");

for (int i = 0; i < size; i++) {

scanf("%d", &array1[i]);

}

printf("Enter the elements of the second array: ");

for (int i = 0; i < size; i++) {

scanf("%d", &array2[i]);

}

vector\_product(array1, array2, array3, size);

printf("The vector product is: ");

for (int i = 0; i < size; i++) {

printf("%d ", array3[i]);

}

printf("\n");

int scalar\_product\_result = scalar\_product(array1, array2, size);

printf("The scalar product is: %d\n", scalar\_product\_result);

return 0;

}