Q 01,

```c
#include <stdio.h>

int main()

{

 int array_size = 10;

 int array[array_size];

 printf("Enter 10 integer values for the array:\n");

 for (int i = 0; i < array_size; i++)

{

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

 }

 int minimum = array[0];

 int maximum = array[0];

 int sum = array[0];

 for (int i = 1; i < array_size; i++)

{

 if (array[i] < minimum)

{

 minimum = array[i];

 }

 if (array[i] > maximum)

{

 maximum = array[i];

 }

 sum += array[i];

 }

 float average = (float)sum / array_size;

 int reversed_array[array_size];

 for (int i = 0; i < array_size; i++)
```

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  {
reversed_array[i] = array[array_size - 1 - i];

}

printf("single dimensional Array:");

for (int i = 0; i < array_size; i++)

  {

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

}

printf("\nMinimum Value: %d\n", minimum);

printf("Maximum Value: %d\n", maximum);

printf("Average Value: %.2f\n", average);

printf("Reverse Order:");

for (int i = 0; i < array_size; i++)

  {

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

}

printf("\n");


return 0;

}
```

Q 02,

```c
#include <stdio.h>

void userinputarray(int size, int array[]) {
    for (int i = 0; i < size; i++) {
        printf("Enter element %d: ", i + 1);
        scanf("%d", &array[i]);
    }
}

int scalar(int size, int array[]) {
    int sum = 0;
    for (int i = 0; i < size; i++) {
        sum += array[i];
    }
    return sum;
}

void vector(int size, int array1[], int array2[], int result[]) {
    for (int i = 0; i < size; i++) {
        result[i] = array1[i] + array2[i];
    }
}

int main() {
    int size;
    printf("Enter the size of the arrays: ");
    scanf("%d", &size);
```

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    if (size <= 0) {

        printf("Size should be a positive integer.\n");

        return 1;

    }


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


    printf("\nFor Array 1:\n");

    userinputarray(size, array1);


    printf("\nFor Array 2:\n");

    userinputarray(size, array2);


    int sresult = scalar(size, array1);

    printf("\nScalar Sum: %d\n", sresult);


    vector(size, array1, array2, vresult);

    printf("\nVector Sum: ");

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

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

    }

    printf("\n");


    return 0;

}
```