Q.1 Write a Program to find the length of a 1D array.
For example,
Input:
Enter array size: 5
Enter array elements:
a[0] = 3
a[1] = 7
a[2] = 1
a[3] = 8
a[4] = 6

Output:
Length of an Array: 5
Ans: #include <stdio.h>

```
int main() {
    int a;
    printf("Enter array size: ");
    scanf("%d", &a);

    int arr[a];
    printf("Enter array elements:\n");
    for (int i = 0; i < a; i++) {
        printf("a[%d] = ", i);
        scanf("%d", &arr[i]);
    }
 int length = sizeof(arr) / sizeof(arr[a]);
    printf("Length of an Array: %d\n",length);

    return 0;
}
```

O\p: /tmp/6iq36L83h6.o
Enter array size: 5
Enter array elements:
a[0] = 3
a[1] = 7
a[2] = 1
a[3] = 8
a[4] = 6
Length of an Array: 5

=== Code Execution Successful ===

Q.2 Write a Program to find the average of a 1D array.

For example,

Input:

Enter array size: 5

Enter array elements:

a[0] = 12

a[1] = 42

a[2] = 18

a[3] = 50

a[4] = 26

Output:

Average of an Array: 29.6

Ans: #include <stdio.h>

```
int main() {
    int n;
    printf("Enter array size: ");
    scanf("%d", &n);
    int a[n];
    for(int i = 0; i < n; i++) {
        printf("a[%d] = ", i);
        scanf("%d", &a[i]);
    }
    int sum = 0;
    for(int i = 0; i < n; i++) {
        sum =sum + a[i];
    }
    float avg=(float)sum/n;
    printf("Average of an Array: %.1f\n", avg);

    return 0;
}
```

O\p: /tmp/XVJoLYhvTw.o

Enter array size: 5

a[0] = 12

a[1] = 42

a[2] = 18

a[3] = 50

a[4] = 26

Average of an Array: 29.6

=== Code Execution Successful ===

=== Code Execution Successful ===

Q.3 Write a Program to perform the addition operation of two 1D arrays & store it in another array. Keep in mind that both array sizes must be the same.

For example,

Input:

Enter array size: 5

Enter array A's elements:

a[0] = 7

a[1] = 4

a[2] = 9

a[3] = 5

a[4] = 2

Enter array B's elements:

b[0] = 1

b[1] = 3

b[2] = 1

b[3] = 7

b[4] = 3

Output:

Array C is: 8, 7, 10, 12, 5

Ans: // Online C compiler to run C program online

```
#include <stdio.h>

int main() {
   int n;
   printf("enter array size:");
   scanf("%d",&n);
   printf("Enter array A's elements:\n");
   int a[n];
     for(int i = 0; i < n; i++) {
       printf("a[%d] = ", i);
       scanf("\n%d", &a[i]);
   }
 printf("Enter array B's elements:\n");
   int b[n];
```

```
      for(int i = 0; i < n; i++) {
        printf("b[%d] = ", i);
        scanf("\n%d", &b[i]);
    }
    int c[n];
for(int i=0;i<n;i++){
    c[i]=a[i]+b[i];
}
printf("array c is:");
for(int i=0; i<n;i++){
    printf("%d,",c[i]);
}
    return 0;
}
O\p: /tmp/ckFoiMnGX8.o
enter array size:5
Enter array A's elements:
a[0] = 7
a[1] = 4
a[2] = 9
a[3] = 5
a[4] = 2
Enter array B's elements:
b[0] = 1
b[1] = 3
b[2] = 1
b[3] = 7
b[4] = 3
array c is:8,7,10,12,5,

=== Code Execution Successful ===
```