1. #include <stdio.h>

int main()

{

//Initialize array

int arr[] = {1, 2, 3, 4, 5};

//Calculate length of array

int length = sizeof(arr)/sizeof(arr[0]);

printf("Elements of given array: \n");

//Loop through the array by incrementing value of i

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

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

}

return 0;

}

Output:

Elements of given array:

1 2 3 4 5

2. #include <stdio.h>

void main()

{

int i,n;

printf("\n\nEnter the size of the array\n");

scanf("%d",&n);

int arr[n];

printf("Input elements in the array :\n");

for(i=0; i<n; i++)

{

printf("element - %d : ",i);

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

}

printf("\nElements in array are: ");

for(i=0; i<n; i++)

{

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

}

printf("\n The elements in reverse order are :\n");

for(i=n-1;i>=0;i--)

{

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

}

printf("\n");

}

Output:

Enter the size of the array

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Input elements in the array :

element - 0 : 45 43 23 32 67 43 44

element - 1 : element - 2 : element - 3 : element - 4 : element - 5 : element - 6 :

Elements in array are: 45 43 23 32 67 43 44

The elements in reverse order are :44 43 67 32 23 43 45

3. #include <stdio.h>

int main()

{

int arr[100],size,sum=0;

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

scanf("%d",&size);

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

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

{

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

}

//calculating sum of entered array elements

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

{

sum+=arr[i];

}

printf("Sum of array elements is: %d",sum);

return 0;

}

Output: Enter size of the array: 4

Enter the elements of the array: 4 5 6 7

Sum of array elements is: 22

4. #include <stdio.h>

void main()

{

int i,j,n, count=0;

printf("\n\nEnter the size of the array\n");

scanf("%d",&n);

int arr[n];

printf("Input elements in the array :\n");

for(i=0; i<n; i++)

{

printf("element - %d : ",i);

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

}

for(i=0; i<n; i++)

{

for(j=i+1; j<n; j++)

{

if(arr[i] == arr[j])

{

count++;

break;

}

}

}

printf("\nTotal number of duplicate elements found in array = %d", count);

return 0;

}

Output:

Enter the size of the array

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Input elements in the array :

element - 0 : 1 2 3 4 5 6 3 4 2 8 7

element - 1 : element - 2 : element - 3 : element - 4 : element - 5 : element - 6 : element - 7 : element - 8 : element - 9 : element - 10 :

Total number of duplicate elements found in array = 3

5. #include <stdio.h>

#include <conio.h>

int main() {

int arr[100], size;

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

scanf("%d", &size);

printf("Enter the Elements of the array: ");

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

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

}

printf("Unique Elements in the array are: ");

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

int count = 0; // Set count to 0

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

if (arr[i] == arr[j]) {

count = count + 1; // Increment count by 1

}

}

// Check if the element appears only once

if (count == 1) {

printf("%d ", arr[i]); // Print the unique element

}

}

return 0;

}

Output: Enter the size of the array: 12

Enter the Elements of the array: 1 2 3 4 5 6 7 8 9 3 2 4

Unique Elements in the array are: 1 5 6 7 8 9

6. #include <stdio.h>

**int** main()

{

**int** arr[100] = { 0 };

**int** i, x, pos, n = 10;

    // initial array of size 10

**for** (i = 0; i < 10; i++)

        arr[i] = i + 1;

    // print the original array

**for** (i = 0; i < n; i++)

**printf**("%d ", arr[i]);

**printf**("\n");

    // element to be inserted

    x = 50;

    // position at which element

    // is to be inserted

    pos = 5;

    // increase the size by 1

    n++;

    // shift elements forward

**for** (i = n - 1; i >= pos; i--)

        arr[i] = arr[i - 1];

    // insert x at pos

    arr[pos - 1] = x;

    // print the updated array

**for** (i = 0; i < n; i++)

**printf**("%d ", arr[i]);

**printf**("\n");

**return** 0;

}

Output:

1 2 3 4 5 6 7 8 9 10

1 2 3 4 50 5 6 7 8 9 10

7. #include <stdio.h>

#include <stdlib.h>

int main(void)

{

int i, n, index, arr[10];

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

scanf("%d", &n);

printf("Enter the elements of the array: \n");

for (i = 0; i < n; i++)

{

printf("arr[%d] = ", i);

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

}

printf("Enter the index of the element to be deleted: ");

scanf("%d", &index);

if (index >= n+1)

{

printf (" \n Deletion is not possible in the array.");

}

else

{

for (i = index; i < n - 1; i++)

arr[i] = arr[i + 1];

printf("The array after deleting the element is: ");

for (i = 0; i < n - 1; i++)

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

return 0;

}

}

Output: Enter the size of the array: 9

Enter the elements of the array:

arr[0] = 12 32 13 24 56 76 34 22 31

arr[1] = arr[2] = arr[3] = arr[4] = arr[5] = arr[6] = arr[7] = arr[8] = Enter the index of the element to be deleted: 3

The array after deleting the element is: 12 32 13 56 76 34 22 31