1. Read and Print Elements of an Array

**Input:** Size of array and elements  
**Process:** Store elements in an array, then print them  
**Output:** Display array elements

**Code:**

#include <stdio.h>

void main()

{

int a[5], i;

scanf("%d", &n);

printf("Enter %d elements: ", n);

for(i=0; i<5; i++)

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

for(i=0; i<5; i++)

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

}

**OUTPUT:**

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Description automatically generated**

**2. Sum of Elements of an Array**

**Input:** Size and elements of array  
**Process:** Add all elements  
**Output:** Display sum

**Code:**

#include <stdio.h>

void main() {

int arr[100], n, i, sum=0;

scanf("%d", &n);

printf("Enter %d elements: ", n);

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

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

sum += arr[i];

}

printf("Sum = %d\n", sum);

}

**OUTPUT:**

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**3 Maximum and Minimum Element in an Array**

**Input:** Array elements  
**Process:** Compare elements to find max and min  
**Output:** Display max and min

Code:

#include <stdio.h>

void main()

{

int arr[100], n, i, max, min;

scanf("%d", &n);

printf("Enter %d elements: ", n);

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

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

max=min=arr[0];

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

if(arr[i]>max) max=arr[i];

if(arr[i]<min) min=arr[i];

}

printf("Max = %d, Min = %d\n", max, min);

}

**OUTPUT:**

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4 **Reverse an Array**

**Input:** Array elements  
**Process:** Swap first with last, second with second-last, etc.  
**Output:** Display reversed array

Code :

#include <stdio.h>

void main()

{

int a[100], n, i, temp;

scanf("%d", &n);

printf("Enter %d elements: ", n);

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

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

for(i=0; i<n/2; i++)

{

temp = arr[i];

arr[i] = arr[n-1-i];

arr[n-1-i] = temp;

}

printf("Reversed array:\n");

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

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

}

**OUTPUT:**

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Description automatically generated**

5 **Search Element in an Array (Linear Search)**

**Input:** Array elements and search key  
**Process:** Compare each element with key  
**Output:** Position if found, else not found

Code:

#include <stdio.h>

void main()

{

int arr[100], n, i, key, found=0;

scanf("%d", &n);

printf("Enter %d elements: ", n);

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

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

printf("Enter element to search: ");

scanf("%d", &key);

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

if(arr[i]==key) {

printf("Found at position %d\n", i+1);

found=1;

break;

}

}

if(!found)

printf("Not found\n");

}

OUTPUT:

A black screen with white text

Description automatically generated

6.**Sort Array in Ascending Order**

**Input:** Array elements  
**Process:** Use bubble sort  
**Output:** Display sorted array

Code:

#include <stdio.h>

void main()

{

int arr[100], n, i, j, temp;

scanf("%d", &n);

printf("Enter %d elements: ", n);

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

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

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

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

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

temp=arr[i];

arr[i]=arr[j];

arr[j]=temp;

}

}

}

printf("Sorted array:\n");

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

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

}

OUTPUT:

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7 **Insert an Element in an Array**

**Input:** Array elements, position, and element to insert  
**Process:** Shift elements right, place new element  
**Output:** Display updated array

Code :

#include <stdio.h>

void main()

{

int arr[100], n, i, pos, val;

scanf("%d", &n);

printf("Enter %d elements: ", n);

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

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

printf("Enter position and value: ");

scanf("%d %d", &pos, &val);

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

arr[i]=arr[i-1];

arr[pos-1]=val;

n++;

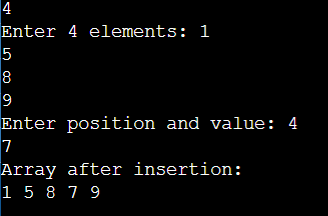
printf("Array after insertion:\n");

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

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

}

OUTPUT:



8 **Delete an Element from an Array**

**Input:** Array elements and position  
**Process:** Shift elements left to remove element  
**Output:** Display updated array

Code:

#include <stdio.h>

void main()

{

int arr[100], n, i, pos;

scanf("%d", &n);

printf("Enter %d elements: ", n);

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

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

printf("Enter position to delete: ");

scanf("%d", &pos);

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

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

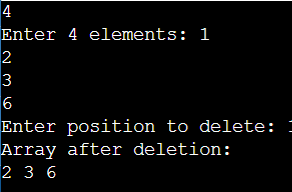
n--;

printf("Array after deletion:\n");

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

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

}

OUTPUT: 

9 **Frequency of Elements in an Array**

**Input:** Array elements  
**Process:** Count occurrence of each element  
**Output:** Display frequency

Code:

#include <stdio.h>

void main() {

int arr[100], freq[100], n, i, j, count;

scanf("%d", &n);

printf("Enter %d elements: ", n);

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

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

freq[i] = -1;

}

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

count = 1;

if(freq[i]==-1) {

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

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

count++;

freq[j]=0;

}

}

freq[i]=count;

}

}

printf("Frequency of elements:\n");

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

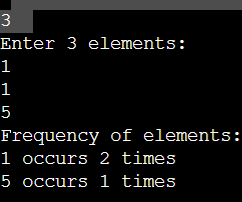
if(freq[i]>0)

printf("%d occurs %d times\n", arr[i], freq[i]);

}

}

0UTPUT:



10 **Merge Two Arrays**

**Input:** Two arrays and their sizes  
**Process:** Append second array to first  
**Output:** Display merged array

Code:

#include <stdio.h>

void main() {

int a[50], b[50], c[100], n1, n2, i, j;

scanf("%d", &n1);

printf("Enter %d elements: ", n1);

for(i=0; i<n1; i++)

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

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

scanf("%d", &n2);

printf("Enter %d elements: ", n2);

for(i=0; i<n2; i++)

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

for(i=0; i<n1; i++)

c[i]=a[i];

for(j=0; j<n2; j++,i++)

c[i]=b[j];

printf("Merged array:\n");

for(i=0; i<n1+n2; i++)

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

}

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