**Array**

**1D array**

**1. Write a program to accept n numbers in an array and display the largest and smallest number. Using these values, calculate the range of elements in the array.**

#include<stdio.h>

int main()

{

int a[50],i,n,large,small;

printf("\nEnter the number of elements");

scanf("%d",&n);

printf("\nInput the array elements : ");

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

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

large=small=a[0];

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

{

if(a[i]>large)

large=a[i];

if(a[i]<small)

small=a[i];

}

printf("\nThe smallest element is %d\n",small);

printf("\nThe largest element is %d\n",large);

printf("range of the element in the array i.e %d-%d=%d\n",large,small,large-small);

return 0;

}

**Output**

PS D:\Array 1d array> gcc a1.c

PS D:\Array 1d array> .\a.exe

Enter the number of elements5

Input the array elements : 1 4 5 7 8

The smallest element is 1

The largest element is 8

range of the element in the array i.e 8-1=7

**2. Write a program to accept an array of n elements and a number say key. Check whether key is present in the array or not.**

#include<stdio.h>

int main()

{

int a[50],i,m,p;

printf("enter the number of elements=");

scanf("%d",&p);

printf("enter the elements=");

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

{

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

}

printf("enter key=");

scanf("%d",&m);

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

{

if(a[i]==m)

{

printf("your key is inside the ray");

return 0;

}

}

printf("your key is not inside the array");

}

**Output**

PS D:\Array 1d array> gcc a2.c

PS D:\Array 1d array> .\a.exe

enter the number of elements=4

enter the elements=1 4 5 7

enter key=4

your key is inside the ray

**3. Write a program to accept an integer array and an integer say num and counts the occurrences of the num in the array.**

#include<stdio.h>

int main()

{

int a[50],i,m,p,j=0;

printf("enter the number of elements=");

scanf("%d",&p);

printf("enter the elements=");

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

{

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

}

printf("enter the no you want to the occurance of");

scanf("%d",&m);

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

{

if(a[i]==m)

{

j++;

}

}

printf("your number's occurance is %d times inside the array",j);

}

**Output**

PS D:\Array 1d array> gcc a3.c

PS D:\Array 1d array> .\a.exe

enter the number of elements=4

enter the elements=1 2 4 5

enter the no you want to the occurance of

5

your number's occurance is 1 times inside the array

**4. Write a program to accept n numbers from the user and store them in an array. Then sort the array in descending order and display it.**

#include <stdio.h>

int main ()

{

int number[30];

int i, j, a, n;

printf("Enter the value of N\n");

scanf("%d", &n);

printf("Enter the numbers \n");

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

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

/\* sorting begins ... \*/

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

{

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

{

if (number[i] < number[j])

{

a = number[i];

number[i] = number[j];

number[j] = a;

}

}

}

printf("The numbers arranged in descending order are given below\n");

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

{

printf("%d\n", number[i]);

}

}

**Output**

PS D:\Array 1d array> gcc a4.c

PS D:\Array 1d array> .\a.exe

Enter the value of N

4

Enter the numbers

5 6 8 9

The numbers arranged in descending order are given below

9

8

6

5

**5. Write a program to accept a decimal number and convert it to binary.**

#include <stdio.h>

int main()

{

int a[10], number, i, j;

printf("\n Please Enter the Number You want to Convert into binarry : ");

scanf("%d", &number);

for(i = 0; number > 0; i++)

{

a[i] = number % 2;

number = number / 2;

}

printf("\n Binary Number of a Given Number = ");

for(j = i - 1; j >= 0; j--) {

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

}

printf("\n");

return 0;

}

**Output**

PS D:\Array 1d array> gcc a5.c

PS D:\Array 1d array> .\a.exe

Please Enter the Number You want to Convert into binarry : 7

Binary Number of a Given Number = 1 1 1