ASSIGNMENT – 14

1. Write a program to calculate the sum of numbers stored in an array of size 10. Take array values from the user.

#include<stdio.h>

int main()

{

    int a[10],sum=0,i;

    printf("Enter 10 numbers : ");

    for ( i = 0; i < 10; i++)

        scanf("%d",&a[i]);

    for(i=0;i<10;i++)

        sum+=a[i];

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

    return 0;

}

2. Write a program to calculate the average of numbers stored in an array of size 10. Take array values from the user.

#include<stdio.h>

int main()

{

    int a[10],sum=0,i;

    float avg;

    printf("Enter 10 numbers : ");

    for ( i = 0; i < 10; i++)

        scanf("%d",&a[i]);

    for(i=0;i<10;i++)

        sum+=a[i];

    avg=sum/10;

    printf("Average of elements of array is : %.2f",avg);

    return 0;

}

3. Write a program to calculate the sum of all even numbers and sum of all odd numbers, which are stored in an array of size 10. Take array values from the user.

#include<stdio.h>

int main()

{

    int a[10],sum1=0,sum2=0,i;

    printf("Enter 10 numbers : ");

    for ( i = 0; i < 10; i++)

    {

        scanf("%d",&a[i]);

        if(a[i]%2==0)

            sum1+=a[i];

        else

            sum2+=a[i];

    }

    printf("Sum of even elements of array is : %d",sum1);

    printf("\nSum of odd elements of array is : %d",sum2);

    return 0;}

4. Write a program to find the greatest number stored in an array of size 10. Take array values from the user.

#include<stdio.h>

int main()

{

    int a[10],max=0,i;

    printf("Enter 10 numbers : ");

    for ( i = 0; i < 10; i++)

    {

        scanf("%d",&a[i]);

        if(a[i]>max)

            max=a[i];

    }

    printf("Largest elements of array is : %d",max);

    return 0;

}

5. Write a program to find the smallest number stored in an array of size 10. Take array values from the user.

#include<stdio.h>

int main()

{

    int a[10],min=0,i;

    printf("Enter 10 numbers : ");

    for ( i = 0; i < 10; i++)

    {

        scanf("%d",&a[i]);

        if(a[i]<min)

            min=a[i];

    }

    printf("Smallest elements of array is : %d",min);

    return 0;

}

6. Write a program to sort elements of an array of size 10. Take array values from the user.

#include<stdio.h>

int main()

{

    int a[10],max=0,i,j,temp;

    printf("Enter 10 numbers : ");

    for ( i = 0; i < 10; i++)

    {

        scanf("%d",&a[i]);

    }

    for(i=0;i<9;i++)

    {

        for(j=i+1;j<10;j++)

        {

            if(a[i]>a[j])

            {

                temp=a[i];

                a[i]=a[j];

                a[j]=temp;

            }

        }

    }

    for(i=0;i<10;i++)

        printf("%d ",a[i]);

    return 0;

}

7. Write a program to find second largest in an array.Take array values from the user.

#include<stdio.h>

int main()

{

    int n=0,max1,max2=0,i;

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

    scanf("%d",&n);

    int a[n];

    printf("Enter %d numbers : ",n);

    for ( i = 0; i < n; i++)

        scanf("%d",&a[i]);

    max1=a[0];

    for(i=1;i<n;i++)

    {

        if(max1<a[i])

        {

            max2=max1;

            max1=a[i];

        }

        else if(a[i]<max1 && a[i]>max2)

            max2=a[i];

    }

    printf("Second largest elements of array is : %d",max2);

    return 0;

}

8. Write a program to find the second smallest number in an array.Take array values from the user.

#include<stdio.h>

int main()

{

    int n=0,min1,min2=0,i;

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

    scanf("%d",&n);

    int a[n];

    printf("Enter %d numbers : ",n);

    for ( i = 0; i < n; i++)

        scanf("%d",&a[i]);

    min1=a[0];

    for(i=1;i<n;i++)

    {

        if(min1>a[i])

        {

            min2=min1;

            min1=a[i];

        }

        else if(a[i]>min1 && a[i]<min2)

            min2=a[i];

    }

    printf("Second smallest elements of array is : %d",min2);

    return 0;

}

9. Write a program in C to read n number of values in an array and display it in reverse order. Take array values from the user.

#include<stdio.h>

int main()

{

    int n=0,i;

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

    scanf("%d",&n);

    int a[n];

    printf("Enter %d numbers : ",n);

    for ( i = 0; i < n; i++)

        scanf("%d",&a[i]);

    printf("Array in reverse order is : ");

    for(i=n-1;i>=0;i--)

        printf("%d ",a[i]);

    return 0;

}

10. Write a program in C to copy the elements of one array into another array.Take array values from the user.

#include<stdio.h>

int main()

{

    int n=0,i;

    printf("Enter the number of elements in array 1 : ");

    scanf("%d",&n);

    int a[n],b[n];

    printf("Enter %d elements of array 1 : ",n);

    for ( i = 0; i < n; i++)

        scanf("%d",&a[i]);

    printf("Copying the elements from array 1 to array 2 --- \n");

    printf("Successfully copied :-)");

    printf("\nDisplaying Array 2 : ");

    for(i=0;i<n;i++)

        b[i]=a[i];

    for(i=0;i<n;i++)

        printf("%d ",b[i]);

    return 0;

}