**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;

printf("Enter values: ");

for(int i=0; i<=9; i++){

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

sum+=a[i];

}

printf("Sum is %d", sum);

}

**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];

float sum=0.0;

printf("Enter values: ");

for(int i=0; i<=9; i++){

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

sum+=a[i];

}

printf("Sum is %f", sum/10);

}

**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], even, odd, sum1=0, sum2=0;

printf("Enter values: ");

for(int i=0; i<=9; i++){

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

if(a[i]%2==0)

{

sum1+=a[i];

even=sum1;

}

else

{

sum2+=a[i];

odd=sum2;

}

}

printf("Sum of odd numbers is %d and even numbers is %d", odd, even);

}

**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>

#include<string.h>

int main()

{

int a[10], max=-1;

printf("Enter numbers: ");

for(int i=0; i<=9; i++)

{

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

}

for(int i=0; i<=9; i++)

{

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

}

for(int i=0; i<=9; i++)

{

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

}

printf("\nLargest is %d", max);

}

**OR**

#include<stdio.h>

#include<string.h>

int main()

{

int a[10], max;

printf("Enter numbers: ");

for(int i=0; i<=9; i++)

{

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

}

for(int i=0; i<=9; i++)

{

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

}

max=a[0];

for(int i=1; i<=9; i++)

{

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

}

printf("\nGreatest is %d", max);

}

**Q5. Write a program to find the smallest number stored in an array of size 10. Take array values from the user.**

#include<stdio.h>

#include<string.h>

int main()

{

int a[10], min;

printf("Enter numbers: ");

for(int i=0; i<=9; i++)

{

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

}

for(int i=0; i<=9; i++)

{

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

}

min=a[0];

for(int i=1; i<=9; i++)

{

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

}

printf("\nSmallest is %d", min);

}

**Q6. Write a program to sort elements of an array of size 10. Take array values from the user.**

#include<stdio.h>

#include<string.h>

//int swap(int, int);

// int swap(a,b)

// {

// int temp;

// temp=a;

// a=b;

// b=temp;

// return(a,b);

// }

int main()

{

int a[10], temp;;

printf("Enter numbers: ");

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

{

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

}

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

{

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

}

for(int i=0; i<9; i++)

{

for(int j=i+1; j<10; j++)

{

if(a[i] > a[j])

{

//swap(a[i], a[j]);

temp=a[i];

a[i]=a[j];

a[j]=temp;

}

}

}

printf("\nSorted elements: \n");

for(int i=0; i<=9; i++)

{

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

}

}

**Q7. Write a program to find second largest in an array.Take array values from the user.**

#include<stdio.h>

#include<string.h>

int main()

{

int a[100], n, temp;

printf("Enter length of array: ");

scanf("%d", &n);

printf("Enter numbers: ");

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

{

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

}

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

{

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

}

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

{

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

{

if(a[i] > a[j])

{

temp=a[i];

a[i]=a[j];

a[j]=temp;

}

}

}

printf("\n");

printf("Sorted elements: ");

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

{

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

}

printf("\nSecond Largest in this array:%d", a[n-2]);

}

**Q8. Write a program to find the second smallest number in an array.Take array values from the user.**

#include<stdio.h>

#include<string.h>

int main()

{

int a[100], n, temp;

printf("Enter length of array: ");

scanf("%d", &n);

printf("Enter numbers: ");

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

{

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

}

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

{

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

}

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

{

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

{

if(a[i] > a[j])

{

temp=a[i];

a[i]=a[j];

a[j]=temp;

}

}

}

printf("\n");

printf("Sorted elements: ");

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

{

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

}

printf("\nSecond smallest in this array:%d", a[1]);

}

**Q9. 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>

#include<string.h>

int main()

{

int a[100], n, temp;

printf("Enter length of array: ");

scanf("%d", &n);

printf("Enter numbers: ");

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

{

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

}

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

{

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

}

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

{

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

{

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

{

temp=a[i];

a[i]=a[j];

a[j]=temp;

}

}

}

printf("\n");

printf("Elements in reverse order: ");

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

{

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

}

//printf("\nSecond smallest in this array:%d", a[1]);

}

**Q10. Write a program in C to copy the elements of one array into another array. Take array values from the user.**

#include<stdio.h>

#include<string.h>

int main()

{

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

printf("Enter length of array: ");

scanf("%d", &n);

printf("Enter numbers: ");

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

{

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

}

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

{

b[i]=a[i];

}

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

{

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

}

}