Assignment - 14

Array in C Language

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

array values from the user.

Code

#include<stdio.h>

int main() {

    int i, a[10],s=0;

    printf("Enter 10 numbers :\n");

    for(i=0;i<=9;i++)

    {

        scanf("%d",&a[i]);

          s= s + a[i];

    }

  printf("%d ",s);

    return 0;

}

output

Enter 10 numbers :

1 2 3 4 5 6 7 8 9 0

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

Take array values from the user.

Code

#include<stdio.h>

int main() {

    int i, a[10],s=0;

    printf("Enter 10 numbers :\n");

    for(i=0;i<=9;i++)

    {

        scanf("%d",&a[i]);

          s= s + 10;

    }

  printf("The average is : %d ",s/10);

    return 0;

}

Output

Enter 10 numbers :

1 1 1 1 1 1 1 1 1 1

The average is : 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.

Code

#include<stdio.h>

int main() {

    int i, a[10],e=0,o=0;

    printf("Enter 10 numbers :\n");

    for(i=0;i<=9;i++)

    {

        scanf("%d",&a[i]);

    }

    for(i=0;i<=9;i++)

    {

        if(a[i]%2==0)

        e= e + a[i];

        else

        o= o + a[i];

    }

  printf("sum of even nums: %d \n",e);

  printf("sum of odd nums: %d \n",o);

    return 0;

}

Output

Enter 10 numbers :

1 1 1 1 1 2 2 2 2 2

sum of even nums: 10

sum of odd nums: 5

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

values from the user.

Code

#include<stdio.h>

int main() {

    int i,j, a[10];

    printf("Enter 10 numbers :\n");

    for(i=0;i<10;i++)

    {

        scanf("%d",&a[i]);

    }

    for(i=0;i<10;i++)

    {

       if(a[0]<a[i])

       {

        a[0]=a[i];

       }

    }

  printf("greatest number : %d",a[0]);

    return 0;

}

output

Enter 10 numbers :

2 5 3 6 3 6 445 6 7 5

greatest number : 445

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

values from the user.

Code

#include<stdio.h>

int main() {

    int s=0, i,j, a[10],e=0,o=0;

    printf("Enter 10 numbers :\n");

    for(i=0;i<10;i++)

    {

        scanf("%d",&a[i]);

    }

    for(i=0;i<10;i++)

    {

       if(a[o]>a[i])

       {

        a[0]=a[i];

       }

    }

  printf("greatest number : %d",a[0]);

    return 0;

}

Output

Enter 10 numbers :

5 4 6 1 8 6 4 3 4 3

greatest number : 1

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

user.

Code

#include<stdio.h>

int main() {

    int s=0, i,j, a[10],e=0,o=0;

    printf("Enter 10 numbers :\n");

    for(i=0;i<10;i++)

    {

        scanf("%d",&a[i]);

    }

    for(i=0;i<10;i++)

    {

         for(j=0;j<10;j++)

         {

              if(a[i]<a[j])

              {

                a[i] = a[i] + a[j];

                a[j] = a[i] - a[j];

                a[i] = a[i] - a[j];

              }

         }

    }

  for(i=0;i<10;i++)

  printf(" %d ",a[i]);

    return 0;

}

Output

Enter 10 numbers :

2 3 4 6 74 3 73 7 3 9

2 3 3 3 4 6 7 9 73 74

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

Code

#include<stdio.h>

int main() {

    int s=0, i,j, a[10],e=0,o=0;

    printf("Enter 10 numbers :\n");

    for(i=0;i<10;i++)

    {

        scanf("%d",&a[i]);

    }

    for(i=0;i<10;i++)

    {

         for(j=0;j<10;j++)

         {

              if(a[i]<a[j])

              {

                a[i] = a[i] + a[j];

                a[j] = a[i] - a[j];

                a[i] = a[i] - a[j];

              }

         }

    }

  printf(" second largest number : %d ",a[8]);

    return 0;

}

Output

Enter 10 numbers :

2 3 5 6 8 5 4 8 4 56

second largest number : 8

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

from the user.

Code

#include<stdio.h>

int main() {

    int s=0, i,j, a[10],e=0,o=0;

    printf("Enter 10 numbers :\n");

    for(i=0;i<10;i++)

    {

        scanf("%d",&a[i]);

    }

    for(i=0;i<10;i++)

    {

         for(j=0;j<10;j++)

         {

              if(a[i]<a[j])

              {

                a[i] = a[i] + a[j];

                a[j] = a[i] - a[j];

                a[i] = a[i] - a[j];

              }

         }

    }

  printf(" second smallest number : %d ",a[1]);

    return 0;

}

Output

Enter 10 numbers :

2 5 3 7 1 56 8 4 5 3

second smallest number : 2

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.

Code

#include<stdio.h>

int main() {

    int i, a[10],s=0;

    printf("Enter 10 numbers :\n");

    for(i=0;i<=9;i++)

    {

        scanf("%d",&a[i]);

    }

    for(i=9;i>=0;i--)

    printf("%d ",a[i]);

    return 0;

}

Output

Enter 10 numbers :

1 2 3 4 5 6 7 8 9 0

0 9 8 7 6 5 4 3 2 1

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

values from the user.

Code

#include<stdio.h>

int main() {

    int i, a[10],b[10],s=0;

    printf("Enter 10 numbers :\n");

    for(i=0;i<=9;i++)

    {

        scanf("%d",&a[i]);

    }

    for(i=0;i<=9;i++)

       b[i]=a[i];

   printf("element to another array \n");

    for(i=0;i<=9;i++)

    printf("%d ",b[i]);

    return 0;

}

Output

Enter 10 numbers :

1 2 3 4 5 6 7 8 9 0

element to another array

1 2 3 4 5 6 7 8 9 0