Assignment - 14 A Job Ready Bootcamp in C++, DSA and IOT

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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.

#include<stdio.h>

int main()

{

int a[10],sum=0,i;

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

{

printf("Enter a number:\n");

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

sum=sum+a[i];

}

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

printf("\n");

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;

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

{

printf("Enter a number:\n");

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

sum=sum+a[i];

}

printf("Average is %d",sum/10);

printf("\n");

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 i,a[10],so=0,se=0;

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

{

printf("Enter a number:\n");

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

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

{

se=a[i]+se;

}

else

so=a[i]+so;

}

printf("Sum of all entered even numbers is %d\n",se);

printf("Sum of all entered odd numbers is %d\n",so);

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 i,g=-999999,a[10];

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

{

printf("Enter a number:\n");

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

if(g<a[i])

g=a[i];

}

printf("%d is the greatest number:\n",g);

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 i,s=999999999,a[10];

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

{

printf("Enter a number:\n");

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

if(s>a[i])

s=a[i];

}

printf("%d is the smallest number",s);

}

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 i,j,t,a[10];

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

{

printf("Enter a number:\n");

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

}

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

{

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

{

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

{

t=a[i];

a[i]=a[j];

a[j]=t;

}

}

}

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

{

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

}

printf("\n");

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 i,lrg,s\_lrg=-9999,n;

printf("Enter the size of the array\n");

scanf("%d",&n);

int a[n];

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

{

printf("Enter a number:\n");

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

}

lrg=a[0];

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

{

if(a[i]>lrg)

{

s\_lrg=lrg;

lrg=a[i];

}

if(a[i]>s\_lrg && a[i]<lrg)

s\_lrg=a[i];

}

printf("%d is the largest Number in the array\n",lrg);

printf("%d is the second largest Number in the array\n",s\_lrg);

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 i,sml,s\_sml,n;

printf("Enter the size of the array:\n");

scanf("%d",&n);

int a[n];

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

{

printf("Enter a number:\n");

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

}

sml=a[0];

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

{

if(a[i]<sml)

{

s\_sml=sml;

sml=a[i];

}

if(a[i]<s\_sml && a[i]>sml)

s\_sml=a[i];

}

printf("%d is the smallest number in the array\n",sml);

printf("%d is the second smallest number in the array\n",s\_sml);

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 i,n;

printf("Enter the size of the array:\n");

scanf("%d",&n);

int a[n];

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

{

printf("Enter a number:\n");

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

}

for(i=n-1;i>=0;i--)

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

printf("\n");

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 i,j,t,n;

printf("Enter the size of the array:\n");

scanf("%d",&n);

int a[n],b[n];

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

{

printf("Enter a number:\n");

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

}

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

{

b[i]=a[i];

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

}

printf("\n");

return 0;

}