

Array in C Language

Assignment-14

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

Ans:-

```
#include<stdio.h>
int main()
{
    int a[10],i,sum=0;
    printf("Enter 10 number\n");
    for(i=0;i<10;i++)
    {
        scanf("%d",&a[i]);
        sum=sum+a[i];
    }
    printf("sum of 10 numbers 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.

Ans:-

```
#include<stdio.h>
int main()
{
    int a[10],i,sum=0;
    float avg;
    printf("Enter 10 number\n");
    for(i=0;i<10;i++)
    {
        scanf("%d",&a[i]);
        sum=sum+a[i];
    }
    avg=sum/10.0;
    printf("average of 10 numbers 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.

Ans:-

```
#include<stdio.h>
int main()
{
    int a[10],i,so=0,se=0;
    printf("Enter 10 number\n");
}
```

```

for(i=0;i<10;i++)
{
    scanf("%d",&a[i]);
    if(a[i]%2)
        so=so+a[i];
    else
        se=se+a[i];
}
printf("Sum of Even numbers is=%d\n",se);
printf("Sum of odd numbers is=%d",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.

Ans:-

```

#include<stdio.h>
int main()
{
    int a[10],i,x;
    printf("Enter 10 number\n");
    for(i=0;i<10;i++)
    {
        scanf("%d",&a[i]);
    }
    x=a[0];
    for(i=1;i<10;i++)
        x=x>a[i]?x:a[i];
    printf("Greatest number is=%d",x);
    return 0;
}

```

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

Ans:-

```

#include<stdio.h>
int main()
{
    int a[10],i,x;
    printf("Enter 10 number\n");
    for(i=0;i<10;i++)
    {
        scanf("%d",&a[i]);
    }
    x=a[0];
    for(i=1;i<10;i++)
        x=x<a[i]?x:a[i];
    printf("Smallest number is=%d",x);
    return 0;
}

```

```
}
```

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

Ans:-

```
#include<stdio.h>
int main()
{
    int a[10],x,i,j;
    printf("Enter 10 number ");
    for(i=0;i<10;i++)
        scanf("%d",&a[i]);
    for(i=0;i<10;i++)
    {
        x=a[i];
        for(j=i;j<10;j++)
            x=x<a[j]?x:a[j];
        for(j=i;j<10;j++)
            if(x==a[j])
            {
                a[j]=a[i];
                a[i]=x;
                break;
            }
        printf("%d ",a[i]);
    }
    return 0;
}
```

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

Ans:-

```
#include<stdio.h>
int main()
{
    int n,l,sl=0,i,j;
    printf("Enter the size of array ");
    scanf("%d",&n);
    int a[n];
    printf("Enter %d number:-");
    for(i=0;i<n;i++)
        scanf("%d",&a[i]);
    l=a[0];
    for(i=0;i<nw;i++)
    {
        if(a[i]>l)
        {
            sl=l;
            l=a[i];
        }
    }
}
```

```

        else
            if(a[i]>sl)
                sl=a[i];
    }
    printf("Second largest value =%d",sl);
    return 0;
}

```

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

Ans:-

```

#include<stdio.h>
int main()
{
    int a[10],x,i,j;
    printf("Enter 10 number ");
    for(i=0;i<10;i++)
        scanf("%d",&a[i]);
    for(i=0;i<10;i++)
    {
        x=a[i];
        for(j=i;j<10;j++)
            x=x<a[j]?x:a[j];
        for(j=i;j<10;j++)
            if(x==a[j])
            {
                a[j]=a[i];
                a[i]=x;
                break;
            }
        if(i==1)
            break;
    }
    printf("Second largest value %d ",a[i]);
    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.

Ans:-

```

#include<stdio.h>
int main()
{
    int n,x,i;
    printf("Enter the size of array ");
    scanf("%d",&n);
    int a[n];
    printf("Enter %d number\n",n);
    for(i=0;i<n;i++)

```

```

        scanf("%d",&a[i]);
    printf("%d value is in reverse order\n",n);
    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.

Ans:-

```

#include<stdio.h>
int main()
{
    int a[6],b[6],i;
    printf("Enter 6 number\n");
    for(i=0;i<6;i++)
    {
        scanf("%d",&a[i]);
        b[i]=a[i];
        printf("%d ",b[i]);
    }
    return 0;
}

```