

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

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],i,sum=0;;
    printf("Enter 10 numbers ");
    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.**

```
#include<stdio.h>
int main()
{
    int a[10],i,sum=0;
    float avg;
    printf("Enter 10 numbers ");
    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.**

```
#include<stdio.h>
int main()
{
    int a[10],i,EvSum=0,OdSum=0;
```

```

printf("Enter 10 numbers of an array ");
for(i=0;i<10;i++)
{
    scanf("%d",&a[i]);
}
for(i=0;i<10;i++)
{
    if(a[i]%2==0)
        EvSum=EvSum+a[i];
    else
        OdSum=OdSum+a[i];
}
printf("Sum of all Even numbers is %d ",EvSum);
printf("\nSum of all Even numbers is %d ",OdSum);

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],i;
    printf("Enter 10 numbers of an array ");
    for(i=1;i<10;i++)
    {
        scanf("%d",&a[i]);
        if(a[0]<a[i])
            a[0]=a[i];
    }
    printf("Greatest number is %d ",a[0]);
    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],i;
    printf("Enter 10 numbers of an array ");
    for(i=0;i<10;i++)
    {

```

```

        scanf("%d",&a[i]);
        if(a[0]>a[i])
            a[0]=a[i];
    }
    printf("Smallest number is %d ",a[0]);

    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],i,j,swap;
    printf("Enter the elements of array ");
    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])
            {
                swap=a[i];
                a[i]=a[j];
                a[j]=swap;
            }
        }
    }
    printf("After sorting elements are ");
    for(i=0;i<9;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 a[10],i,j,swap;
    printf("Enter a number ");
    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])
        {
            swap=a[i];
            a[i]=a[j];
            a[j]=swap;
        }
    }
}
printf("Second largest element is %d",a[8]);

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 a[10],i,j,swap;
    printf("Enter a number ");
    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])
            {
                swap=a[i];
                a[i]=a[j];
                a[j]=swap;
            }
        }
    }
    printf("Second smallest number is %d",a[1]);
    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 a[100],i,n;

    printf("Enter array size ");
    scanf("%d",&n);
    printf("Enter array elements ");
    for(i=0;i<n;i++)
        scanf("%d",&a[i]);

    printf("Reverse order elements are ");
    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 A[5],i;
    int B[5];
    printf("Enter the elements of an A array ");
    for(i=0;i<5;i++)
        scanf("%d",&A[i]);

    printf("Elements of an B array are ");
    for(i=0;i<5;i++)
    {
        B[i]=A[i];
        printf("%d ",B[i]);
    }
    return 0;
}
```