# Assignment – 14

## A Job Ready Bootcamp in C++, DSA and IOT MySirG 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.**

**Ans:-**

```c
#include <stdio.h>

int main() {
    int num[10],i,sum=0;
    printf("enter 10 number\n");
    for(i=0;i<=9;i++)
    {
        scanf("%d",&num[i]);
        sum=sum+num[i];
    }
    printf("%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:-**

```c
#include <stdio.h>

int main() {
    int num[10],i,sum=0;
    float avg;
    printf("enter 10 number\n");
    for(i=0;i<=9;i++)
    {
        scanf("%d",&num[i]);
        sum=sum+num[i];
        avg=sum/10.0;
    }
    printf("avg=%f ",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 num[10],i,se=0,so=0;
    printf("enter 10 number\n");
    for(i=0;i<=9;i++)
    {
        scanf("%d",&num[i]);
        if(num[i]%2==0)
        se=se+num[i];
        else
        so=so+num[i];
    }
    printf("\nsum of all even number:%d",se);
    printf("\nsum of all odd number:%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 arr[10],i,max=-999;
    printf("enter 10 number\n");
    for(i=0;i<=9;i++)
    {
        scanf("%d",&arr[i]);
        if(max<arr[i])
        max=arr[i];
    }
    printf("greatest number is:%d",max);

    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:-**

```c
#include <stdio.h>

int main() {
    int arr[10],i,min=1000;
    printf("enter 10 number\n");
    for(i=0;i<=9;i++)
    {
        scanf("%d",&arr[i]);
        if(min>arr[i])
        min=arr[i];
    }
    printf("smallest number is:%d",min);

    return 0;
}
```

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

**Ans:-**

```c
#include <stdio.h>

int main() {
    int arr[10],i,j,temp;
    printf("enter 10 number\n");
    for(i=0;i<=9;i++)
    scanf("%d",&arr[i]);
    for(i=0;i<9;i++)
    {
        for(j=i+1;j<10;j++)
        {
            if(arr[i]>arr[j])
            {
                temp=arr[i];
                arr[i]=arr[j];
                arr[j]=temp;

            }
        }
    }
    for(i=0;i<10;i++)
    {
        printf ("%d ,",arr[i]);
    }
    return 0;
}
```

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

**Ans**:-

```c
#include <stdio.h>

int main() {
    int n;
    printf("how many elements do you want to enter;");
    scanf("%d",&n);
    printf ("enter %d number:\n",n);
    int arr[n];
    for(int i=0;i<n;i++)
    {
        scanf ("%d",&arr[i]);
    }
    int i,j,temp;
    for(i=0;i<(n-1);i++)
    {
        for(j=i+1;j<n;j++)
        {
            if(arr[i]>arr[j])
            {
                temp=arr[i];
                arr[i]=arr[j];
                arr[j]=temp;
            }
        }
    }
    for(i=0;i<n;i++)
    {
        printf ("%d,",arr[i]);
    }
    printf ("\nsecond largest number=%d",arr[n-2]);

    return 0;
}
```

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

**Ans**:-

```c
#include <stdio.h>

int main() {
    int n;
    printf("how many elements do you want to enter:");
    scanf("%d",&n);
    printf ("enter %d number:\n",n);
    int arr[n];
    for(int i=0;i<n;i++)
    {
        scanf ("%d",&arr[i]);
    }
    int i,j,temp;
    for(i=0;i<(n-1);i++)
    {
        for(j=i+1;j<n;j++)
        {
            if(arr[i]<arr[j])
            {
                temp=arr[j];
                arr[j]=arr[i];
                arr[i]=temp;
            }
        }
    }
    for(i=0;i<n;i++)
    {
        printf ("%d,",arr[i]);
    }
    printf ("\nsecond smallest number=%d",arr[n-2]);

    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**:-

```c
#include <stdio.h>

int main() {
    int n;
    printf("enter the size of array:\n");
    scanf("%d",&n);
    printf ("enter %d number:\n",n);
    int arr[n],i;
    for(i=0;i<n;i++)
    {
        scanf ("%d",&arr[i]);
    }
    for(i=n-1;i>=0;i--)
    {
        printf ("%d,",arr[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**:-

```c
#include <stdio.h>

int main() {
    int n;
    printf("enter the size of array:\n");
    scanf("%d",&n);
    printf ("enter %d number:\n",n);
    int arr[n],i,copy[n];
    for(i=0;i<n;i++)
    {
        scanf ("%d",&arr[i]);
        copy[i]=arr[i];
        printf("%d,",copy[i]);
    }
    return 0;
}
```