# Assignment – 14

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

```c
#include<stdio.h>
int main()
{
    int arr[10],i,sum=0;
    printf("Enter 10 values :");
    for(i=0;i<10;i++)
        scanf("%d",&arr[i]);
    for(i=0;i<10;i++)
    {
        sum=sum+arr[i];
    }
    printf("Sum of given number 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.

```c
#include<stdio.h>
int main()
{
    int arr[10],i;
    float avg,sum=0;
    printf("Enter 10 values :");
    for(i=0;i<10;i++)
        scanf("%d",&arr[i]);
    for(i=0;i<10;i++)
    {
        sum=sum+arr[i];
    }
    avg = sum/10 ;
    printf("Average of given number is %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.

```c
#include<stdio.h>
int main()
{
    int arr[10],i,esum=0,osum=0;
    printf("Enter 10 values :");
    for(i=0;i<10;i++)
        scanf("%d",&arr[i]);
    for(i=0;i<10;i++)
    {
        if(arr[i]%2==0)
            esum=esum+arr[i];
```

```
        else
            osum=osum+arr[i];
    }
    printf("Sum of Even number is %d & Odd number is %d",esum,osum);
    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 arr[10],i,great;
    printf("Enter 10 values :");
    for(i=0;i<10;i++)
        scanf("%d",&arr[i]);
    great = arr[0];
    for(i=0;i<10;i++)
    {
        if(arr[i]>great)
            great=arr[i];
    }
    printf("Greatest number is %d",great);
    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 arr[10],i,small;
    printf("Enter 10 values :");
    for(i=0;i<10;i++)
        scanf("%d",&arr[i]);
    small = arr[0];
    for(i=0;i<10;i++)
    {
        if(arr[i]<small)
            small=arr[i];
    }
    printf("Smallest number is %d",small);
    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 arr[10],i,j,temp;
    printf("Enter 10 elements of array :");
```

```c
    for(i=0;i<10;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;
            }
        }
    }
    printf("Sorted Array is : ");
    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.

```c
#include<stdio.h>
int main()
{
    int arr[100],n,i,max,flag,min;
    printf("Enter size of array : ");
    scanf("%d",&n);
    printf("Enter %d elements of array : ",n);
    for(i=0;i<n;i++)
        scanf("%d",&arr[i]);
    max = arr[0];
    min = arr[0];
    for(i=0;i<n;i++)
    {
        if(arr[i]>max)
        {
            max = arr[i];
            flag = i;
        }
        else if(arr[i]<min)
            min = arr[i];
    }
    arr[flag] = min;
    max = min;
    for(i=0;i<n;i++)
    {
        if(arr[i]>max)
            max=arr[i];
    }
    printf("Second largest element is %d",max);
    return 0;
}
```

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

```c
#include<stdio.h>
int main()
{
    int arr[100],n,i,max,flag,min;
    printf("Enter size of array : ");
    scanf("%d",&n);
    printf("Enter %d elements of array : ",n);
    for(i=0;i<n;i++)
        scanf("%d",&arr[i]);
    max = arr[0];
    min = arr[0];
    for(i=0;i<n;i++)
    {
        if(arr[i]>max)
        {
            max = arr[i];
        }
        else if(arr[i]<min)
        {
            min = arr[i];
            flag = i;
        }
    }
    arr[flag] = max;
    min = arr[0];
    for(i=0;i<n;i++)
    {
        if(arr[i]<min)
            min=arr[i];
    }
    printf("Second smallest element is %d",min);
    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.

```c
#include<stdio.h>
int main()
{
    int arr[100],i,n;
    printf("Enter size of array : ");
    scanf("%d",&n);
    printf("Enter %d elements of array : ",n);
    for(i=0;i<n;i++)
        scanf("%d",&arr[i]);
    printf("Reverse order of given number : ");
    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.

```c
#include<stdio.h>
#include<string.h>
int main()
{
    int a[100],i,n,b[100];
    printf("Enter size of array : ");
    scanf("%d",&n);
    printf("Enter %d elements of array : ",n);
    for(i=0;i<n;i++)
        scanf("%d",&a[i]);
    for(i=0;i<n;i++)
    {
        b[i]=a[i];
    }
    for(i=0;i<n;i++)
        printf("%d ",b[i]);
    return 0;
}
```