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.

```
#include<stdio.h>

int main()
{
   int a[10],i,sum=0;
   printf("Enter 10 number ");
   for(i=0;i<10;i++)
   {
      scanf("%d",&a[i]);
   }

   for(i=0;i<10;i++)
   {
      sum=sum+a[i];
   }
   printf("sum = %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,avg=0;
```

```
    printf("Enter 10 number ");
    for(i=0;i<10;i++)
    {
        scanf("%d",&a[i]);
    }

    for(i=0;i<10;i++)
    {
        sum=sum+a[i];
    }
    avg = sum/10;
    printf("Average = %d",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,evensum=0,oddsum=0;
    printf("Enter 10 number ");
    for(i=0;i<10;i++)
    {
        scanf("%d",&a[i]);
    }

    for(i=0;i<10;i++)
    {
        if(a[i]%2==0)
        {
```

```
            evensum = evensum+a[i];
        }
        else
            oddsum=oddsum+a[i];
    }
    printf("Even sum = %d",evensum);
    printf("\nOdd sum = %d",oddsum);

    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];
    int i;
    int greatest;
    printf("Enter ten values:");
    for (i = 0; i < 10; i++)
        {
          scanf("%d", &a[i]);
        }

    greatest = a[0];
    for (i=0;i<10;i++)
        {
          if (a[i]>greatest)
          {
            greatest = a[i];
          }
        }
```

```
    printf(" Greatest of ten numbers is %d", greatest);
    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];
    int i;
    int smallest;
    printf("Enter ten values:");
    for (i = 0; i < 10; i++)
        {
          scanf("%d", &a[i]);
        }

    smallest = a[0];
    for (i=0;i<10;i++)
        {
          if (a[i]<smallest)
          {
            smallest = a[i];
          }
        }
    printf(" Smallest of ten numbers is %d", smallest);
    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],length,i,j;
   int temp = 0;

   printf("Enter 10 values ");
   for(i=0;i<10;i++)
   {
      scanf("%d",&arr[i]);
   }
   length = sizeof(arr)/sizeof(arr[0]);

   printf("Elements of original array: \n");
   for (i = 0; i<length; i++)
      {
         printf("%d ", arr[i]);
      }

   for (i=0;i<length; i++)
   {
      for(j=i+1; j<length; j++)
      {
        if(arr[i] > arr[j])
        {
            temp = arr[i];
            arr[i] = arr[j];
            arr[j] = temp;
        }
      }
   }
```

```
    printf("\n");
    printf("Elements of array sorted order: \n");
    for(i=0; i<length; i++) {
        printf("%d ", arr[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];
    int i;
    int greatest;
    printf("Enter ten values:");
    for (i = 0; i < 10; i++)
        {
          scanf("%d", &a[i]);
        }

    greatest = a[0];
    for (i=0;i<10;i++)
        {
          if (a[i]>greatest)
          {
            greatest = a[i-1];
          }
        }
    printf(" Second Greatest of ten numbers is %d", greatest);
    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];
   int i;
   int smallest;
   printf("Enter ten values:");
   for (i = 0; i < 10; i++)
      {
        scanf("%d", &a[i]);
      }

   smallest = a[0];
   for (i=0;i<10;i++)
      {
        if (a[i]<smallest)
        {
          smallest = a[i-1];
        }
      }
   printf(" Second Smallest of ten numbers is %d", smallest);
   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 arr[10],i;
    printf("Enter 10 values ");
    for(i=0;i<10;i++)
    {
        scanf("%d",&arr[i]);
    }
    printf("Numbers are: ");
     for(i=0;i<10;i++)
    {
        printf("%d ",arr[i]);
    }
    printf("\n\nReverse number :");
     for(i=9;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.

```
                #include<stdio.h>

int main()
{
    int arr[10],i,j;
    printf("Enter 10 values : ");
    for(i=0;i<10;i++)
    {
        scanf("%d",&arr[i]);
    }
    printf("Original array : ");
```

```
    for(i=0;i<10;i++)
    {
        printf("%d ",arr[i]);
    }
    printf("\n\nCopy Another array : ");

    arr[j]=arr[i];

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