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~~ user.

```
#include<stdio.h>
int main()
{
   int x[10], i, s=0;
   printf("Enter 10 numbers\n");
   for(i=0; i<10; i++)
   {
      scanf("%d", &x[i]);
      s=s+x[i];
   }
   printf("Sum of 10 numbers = %d", s);
   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 array[10] = {1, 9, 7, 4, 5, 6, 11, 8, 2, 0};
  int sum, i;
  float avg;
  sum = avg = 0;
  for(i=0; i<10; i++)
  {
     sum = sum + array[i];
  }
  avg = (float) sum / i;
  printf("Average of Array Value is %.2f", avg);
  return 0;
}
```

③ Write a program to calculate the sum of all even number and sum of all odd numbers, which are stored in an array of size 10. Take array values the user.

```
#include <stdio.h>
int main()
{ int odd_sum = 0, even_sum = 0;
  int i, size, a[10];
  printf("Enter a number:");
  scanf("%d", &size);
  printf("Enter the array no. \n :");
for(i=0; i<size; i++);
{
  scanf("%d", &a[i]);
}
  for(i=0; i<size; i++)
  {
    if(a[i] % 2 == 0)
    {
      even_sum = even_sum + a[i];
    }
    else
    {
      odd_sum = odd_sum + a[i];
    }
  }
  printf("\n the sum of even number is
        this Array = %d", even_sum);
  printf("\n the sum of odd numbers is
        this Array = %d", odd_sum);
  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] = {2,45,34,75,24,78,65,33,24,56};
    int i, max = -999999;
    for (i=0; i<10; i++)
    {
        if (max < a[i])
            max = a[i];
    } Printf("max value is %d", max);
    return 0;
}
```

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

```
#include<stdio.h>
int main()
{
    int a[10], i;
    Printf("Enter 10 number\n");
    for (i=0; i<=9; i++)
    {
        scanf("%d", &a[i]);
        if (a[i] < a[0])
            a[0] = a[i];
    }
    Printf("Smallest number in the array = %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] = {2,45,34,75,24,78,85,33,24,56};
    int i, j, temp;
```

```
for (i=0; i<9 ; i++)
{
  for (j= i+1; j<10 ; j++)
  {
    if (a[i]>a[j])
    {
      temp = a[i];
      a[i] = a[j];
      a[j] = temp;
    }
  }
}
for (i=0 ; i<9; i++)
{
  printf ("%d ", a[i]);
}
return 0;
}
```

```
int a[10];
int i, j, temp;
Printf ("Enter 10 number \n");
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])
```

⑦ write a program to find second largest in an array. Takes array values from the user.

```
#include<stdio.h>
int main()
{ int a[100], i, n, largest = 0, s_largest = 0;
  printf("Enter the size of the array:");
  scanf ("%d", &n);
  printf("Enter the values in the array : ");
  for (i=0; i<=n-1; i++)
  {
    scanf ("%d", &a[i]);
  }
  largest = a[0];
  for (i=1; i<=n-1; i++)
  {
    if (a[i] > largest)
    {
      s_largest = largest;
      largest = a[i];
    }else.
    { if (a[i]> s_largest && a[i] < largest)
```

```
        {
            s_largest = a[i];
        }
    }
}
    printf("The largest Value in the array is %d \n", largest);
    printf("The second largest Value in the array is %d", s_largest);
    return 0;
}
```

(2) 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[20], b[20], n, sml=0, i, j, temp;
    printf("Enter the number of terms: ");
    scanf("%d", &n);
    printf("Enter the numbers: \n");
    for(i=1; i<=n; i++)
    {
        scanf("%d", &a[i]);
        b[i] = a[i];
    }
    for(i=1; i<=n; i++)
    {
        for(j=1; j<=n; j++)
        {
            if(a[i] <= a[j])
            {
                temp = a[i];
                a[i] = a[j];
                a[j] = temp;
            }
        }
    }
    printf("\n The array elements are: \n");
    for(i=1; i<=n; i++)
    printf("%d \n", b[i]);
    printf("\n Second Smallest element is: %d", a[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.

```
#include<stdio.h>
int main()
{
  int a[100], i, n, largest=0, s_largest=0;
  printf("Enter the size of the array:");
  scanf("%d", &n);
  printf("Enter the values in the array:");
  for(i=0; i<=n-1; i++)
  {
    scanf("%d", &a[i]);
  }
    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. Takes array value from the user.

```
#include(stdio.h)
int main()
{
  int a[100], b[100], i, n, largest=0, s_largest=0;
  printf("Enter the size of the array:");
  scanf("%d", &n);
  printf("Enter the values in the array:");
  for(i=0; i<=n-1; i++)
  {
    scanf("%d", &a[i]);
    b[i]=a[i];
  }
  return 0;
}
```