C PROGRAMMING LAB

Practice Sheet

Arrays

1. Program to read elements into a 1-D array and to display the elements.

```
#include <stdio.h>

int main()
{

 int values [10], n,i;

 printf("How many numbers: ");
 scanf(“%d”,&n);

 // taking input and storing it in an array
 for (i = 0; i < n; ++i)
        {
                scanf("%d", &values[i]);
        }

 printf("Displaying integers: ");

 // printing elements of an array
 for (i = 0; i < n; ++i)
        {
                printf("%d\n", values[i]);
        }

}
```

2. Program to find average of n numbers using arrays

```
#include <stdio.h>

int main()
{
 int marks[10], i, n, sum = 0;
 float average;
 printf("Enter number of elements: ");
 scanf("%d", &n);
printf("Enter numbers:\n”);

 for(i=0; i < n; ++i)
        {
                scanf("%d", &marks[i]);
        }
```

```
 for(i=0; i < n;++i)
            {
             sum += marks[i];
            }
  average = sum / n;
  printf("Average = %f", average);
}
```

3. Program to count number of odd values in an array of integers.

```
#include <stdio.h>

int main()

{

  int values[10], i, n,count;

  printf("Enter number of elements: ");

  scanf("%d", &n);

  printf("Enter numbers:\n”);

  for(i=0; i < n; ++i)

          {

                  scanf("%d", &values[i]);

          }

for(i=0; i < n; ++i)

          {

                   if ( values[i]%2!=0)

                           count++

          }

printf(“The count of odd values = %d\n”,count);

}
```

4. Program to read n number of values in an array and display them in reverse order.

```
#include <stdio.h>

int main()
{
  int i,n,a[20];

  printf("Input the number of elements to store in the array :");
  scanf("%d",&n);
  printf("Input elements of the array :\n");
  for(i=0;i<n;i++)
```

```
        {
                scanf("%d",&a[i]);
        }

  printf("\nThe values store into the array are : \n");
  for(i=0;i<n;i++)
        {
                printf("%d\n",a[i]);
        }

  printf("\n\nThe values store into the array in reverse are :\n");
  for(i=n-1;i>=0;i--)
        {
                printf("%d\n",a[i]);
        }
}
```

5. Program to count the total number of duplicate elements in an array.

Programs to do in lab

1. Program to find sum of all elements of an array.
2. Program to count number of even values in an array.
3. Program to find the maximum value in an array.
4. Program to separate odd and even integers in array into two different arrays.
5. Program to copy the elements of one array into another array.