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KUPONDOLE, LATITPUR
(AFFILATED TO TRIBHUVAN UNIVERSITY)

LAB REPORT
LAB NO.: 6
SUBJECT: C PROGRAMMING

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SUBMITTED TO:

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1.

WAP to enter 10 floating no. in any array & display it.

```
#include <stdio.h>
int main()
{
    int i;
    float arr[10];
    Printf ("Enter the value to be stored in the array :-\n");
    for (i=0; i<=9; i++)
    {
       printf ("\n Enter the %d the element of the array:\n",
                                  i+1);
       scanf ("%f", &arr[i]);
    }
    for (i=0; i<=9; i++)
    Printf ("%.3f\t", arr[i]);
    return 0;
}
```

Output

```
Enter the 1st the element of the array :- 3
Enter the 2 the element of the array :- 4
Enter the 3 the element of the array :- 32
Enter the 4 the element of the array :- 4
Enter the 5 the element of the array :- 2
Enter the 6 the element of the array :- 6
Enter the 7 the element of the array :- 8
Enter the 8 the element of the array :- 0
Enter the 9 the element of the array :- 8
Enter the 10 the element of the array :- 6

3.0  4.0  32.0  4.0  2.0  6.0  8.0  0.0  8.0  6.0
```

2.

WAP to initialize one dimensional array of size 5 & display the sum & average of array element.

```
# include <stdio.h>

int main ()
   {
     int arr [100], n, i, s = 0;
     Printf ("Enter the no. of element : ");
      Scanf ("%d", &n);
      For (i=0 ; i<n;  i++)
      {
        printf ("Enter a[%d]=", i+1);
        scanf ("%d", & arr[i]);
      }

     for (i=0 ; i<5;  i++)
      {
        s+= arr[i];
      }
     printf ("Sum of elements = %d ", s);
     Printf (" Average of elements = %.2f ", (float) s/n);
      return 0;
   }
```

Output

```
Enter the no. of element :5
Enter a[1] = 2
Enter a[2] = 3
Enter a[3] = 5
Enter a[4] = 6
Enter a[5] = 8

Sum of elements = 24
Average of elements = 4.80.
```

3.

WAP to read list of no., sort them in ascending orders & print the sorted list.

```
#include<stdio.h>
void main()
 {
    int arr1[100];
    int n, i, j, temp;
    printf("Input the size of array : ");
    scanf("%d", &n);
    printf("Input %d element in the array :\n",n);
    for (i=0; i<n ; i++)
    {
     printf("Element : ");
     scanf("%d", &arr1[i]);
    }
 For (i=0 ; i<n ; i++)
   {
    for (j=i+1; j<n ; j++)
    {
      if (arr1[j]< arr1[i])
      {
        temp = arr1[i];
        arr1[i] = arr1[j];
        arr1[j]= temp;
      }
    }
   }
printf("Elements of array in sorted ascending order:\n");
for (i=0 ; i<n; i++)
  {
    printf("%d ", arr1[i]);
  }
    printf("\n\n");
}
```

Output

```
Input the size of array :3
Input 3 element in the array:
Element :3
Element : 46
Element: 5

Element of array in sorted
ascending order:
3 5 46.
```

4

WAP to read list of no. of using function read(), sort them in ascending order using function sort() & display the sort list using function display.

```
#include<stdio.h>
void read(int [], int)
void asc-sort(int a[100], int n);
void display(int [], int);
void main
{
    int a[100], i, n, j;
    printf("Enter n:\n");
    scanf("%d", &n);
    read(a,n);
    asc_sort(a,n);
    printf("Array in ascending order is:\n");
    display(a,n);
    getch();
}
void read(int a[100], int n)
{
  int i;
  printf("Number are\n");
  for(i=0; i<n; i++)
  {
    scanf("%d", &a[i]);
  }
}
void asc-sort(int a[100], int n)
{
  int I, j, temp;
  for(i=0; i<n-1; i++)
  {
   for(j=i+1; j<n; j++)
   {
     if(a[I]> a[j])
      {
        temp = a[i];
        a[i] = a[j];
        a[j] = temp;
   }
}
```

```
    }
  }
void display (int a[100], int n)
{
   int i;
   for (i=0; i<n ; i++)
   {
    printf ("%d\t", a[i]);
   }
}
```

5

WAP to read sq. matrix & print the same matrix by replacing its diagonal elements by minimum value among the element of original matrix

```
#include <stdio.h>
void main()
{
  int a[10][10], n, i, j, min, max;
  printf("Order of matrix? \n");
  scanf("%d", &n);
  printf("Enter element of matrix: \n");
  for (i=0; i<n; i++)
  {
    for (j=0; j<n; j++)
      {
        printf("[%d][%d]: ", i, i);
        scanf("\t %d", &a[i][j]);
      }
  }
  printf("Matrix is \n");
  for (i=0; i<n; i++)
  {
    for (j=0; j<n; j++)
      {
        printf("\t %d", a[i][j]);
      }
      printf("\n");
  }
max = a[0][0];
for (i=0; i<n; i++)
 {
  for (j=0; j<n; j++)
  {
    if (a[i][j] > max)
    {
    max = a[i][j];
   }
  else
    {min = a[i][j];
  }
}
```

```
}
printf("Matrix after putting maximun \n");
for (i=0; i<n ; i++)
{
   for (j=0 ; j<n; j++)
   {
    if (i==j)
    {
     a[i][j] = min;
    }
   }
}
for (i=0; i<n ; i++)
{
  for (j=0; j<n; j++)
      {
       printf("%d", a[i][j]);
      }
      printf("\n");
  }
  getch();
}
```

Output.

```
Order of matrix ?
2
Enter element of matrix :
[0][0] : 2
[0][1] : 4
[1][0] : 8
[1][1] : 6
Matrix is
   4     2
   8     6
```

Matrix after putting maximum

```
   6     2
   8     6
```

Conclusion & Discussion

In this sixth lab of C programming. We were able to use theoritical knowledge of array handling technique in C-programming.
We learned to write the codes step by step in order to solve array handling techinque problems.

We also learned to give proper structure to a program & execute & display a proper output.