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Practical – 5: Program to implement One-Dimensional Array

1. Program that simply takes elements of the array from the user and finds the sum of these elements.

```
#include<stdio.h>
void main()
{
    int arr[6],i,sum=0;
    printf("enter elementof array");
    for(i=0;i<=5;i++)
    {
        scanf("%d",&arr[i]);
    }
    for(i=0;i<=5;i++)
    {
        sum=sum+arr[i];
    }
    printf("sum = %d ",sum);
}
```

2. Program that inputs two arrays and saves sum of corresponding elements of these arrays in a third array and prints them.

```
#include<stdio.h>
void main()
{
  int a[9],b[9],c[9],i,j;
  printf("enter the element of first matrix:");
  for(i=0;i<9;i++)
  {
      scanf("%d",&a[i]);
  }
  printf("enter the element of second matrix:");
```

```
for(i=0;i<9;i++)
{

    scanf("%d",&b[i]);
  }
}
for(i=0;i<9;i++)
{
    c[i]=a[i]+b[i];

  }
}
printf("resultant matrix is:\n");
for(i=0;i<9;i++)
{

    printf("%d ",c[i]);
  }


}
```

3. Program to find the minimum and maximum element of the array.

```
#include<stdio.h>
void main()
{
  int a[9],i,max,min;
  printf("enter the element of matrix:");
  for(i=0;i<9;i++)
  {
      scanf("%d",&a[i]);
  }
  }
  max=min=a[0];
  for(i=0;i<9;i++)
```

```
{

      if(a[i]>max)
      {
       max=a[i];
      }
      if(a[i]<min)
      {
       min=a[i];
      }
   }
}

       printf(" Maximum element of array is %d\n ",max);

     printf(" Minimum element of array is %d ",min);


}
```

4. Program to search an element in a array using Linear Search

```
#include<stdio.h>
void main()
{
   int a[9],i,s_value;
   printf("enter the element of matrix:");
   for(i=0;i<9;i++)
   {

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

   printf("enter the number you want to search:");
   scanf("%d",&s_value);
   for(i=0;i<9;i++)
   {
```

```
            if(a[i]==s_value)
            {
             printf("search no is at localtion [%d]",i,);
             break;

          }
      }if(i==9)
      {
         printf("search element is not there");
      }
  }
```

5. Program to sort the elements of the array in ascending order using Bubble Sort technique.

```
#include<stdio.h>
void main()
{
   int a[9],i,pass,j,temp;
   printf("enter the element of matrix:");
   for(i=0;i<9;i++)
   {

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


   for(pass=0;pass<9;pass++)
   {
       for(j=0;j<9-pass;j++)
       {
        if(a[j]>a[j+1])
        {
         temp=a[j+1];
        a[j+1]=a[j];
        a[j]=temp;
```

```
        }
         }
         printf("array after bubble sort:\n");
    }for(i=0;i<9;i++)
    {
       printf("%d ",a[i]);
    }
}
```

6. Program to print the elements of the array in reverse order

```
#include <stdio.h>
int main(){
    int arr[10] ;
    int temp,i;
    printf("enter the element of matrix:");
    for(i=0;i<10;i++)
    {

          scanf("%d",&arr[i]);
       }
    for( i = 0; i<10/2; i++){
       temp = arr[i];
       arr[i] = arr[10-i-1];
       arr[10-i-1] = temp;
    }
    for(int i = 0; i < 10; i++){
       printf("%d,", arr[i]);
    }
}
```

7. Write a program to find the sum of even numbers in the array.

```
#include <stdio.h>

int main(){

   int a[10] ;
```

```
    int sum=0,i;
    printf("enter the element of matrix:");
    for(i=0;i<10;i++)
    {
        scanf("%d",&a[i]);
        }
    for(i=0;i<10;i++)
    {
        if(a[i]%2==0)
        {
            sum=sum+a[i];
        }

    }
printf("sum of even elements of array is %d",sum);
}
```