Ex. No17

Locate and Display the Contents of an Array using Pointers

Aim:

To write a C program to locate and display the contents of an array using pointers.

Algorithm:

1) Start the program.
2) Declare an integer pointer variable ‘ptr’, array ‘a[20]’, ‘i’ and ‘n’.
3) Get the number of elements ‘n’.
4) Assign the address of ‘a[0]’ to ‘ptr’.
5) For ‘i’ equal to 0 to ‘n’ do the following
   a). Get the value for ‘a[i]’.
6) For ‘i’ equal to 0 to ‘n’ do the following
   a). Display the array value using ‘*ptr’ and address using ‘ptr’.
   b). Increment ‘ptr’ value by one.
7) Strop the program.

Program:

```
#include<stdio.h>
#include<conio.h>


void main()
{
 int *ptr, a[20],i,n;
 clrscr();
 ptr = &a[0];
 printf("\nEnter the number of elements: ");
 scanf("%d",&n);
 printf("\nEnter the numbers one by one\n");
 for(i=0;i<n;i++)
  scanf("%d",&a[i]);
 for(i=0;i<n;i++)
 {
  printf("\n%d is stored in %x (%u)",*ptr,ptr,ptr);
  ptr++;
 }
 getch();
}
```

Result:

Thus the C program to locate and display the contents of an array using pointers is executed successfully.