Experiment No: 01
Experiment Name: 1D Array

a) Initializing 1D Array.
Here we can declare and initialize a 1d array:
Source Code:

```
#include<stdio.h>
int main()
{
   int arr[5] = {10, 20, 30, 40, 50};
   printf("Array initialized.");
   return 0;
}
```

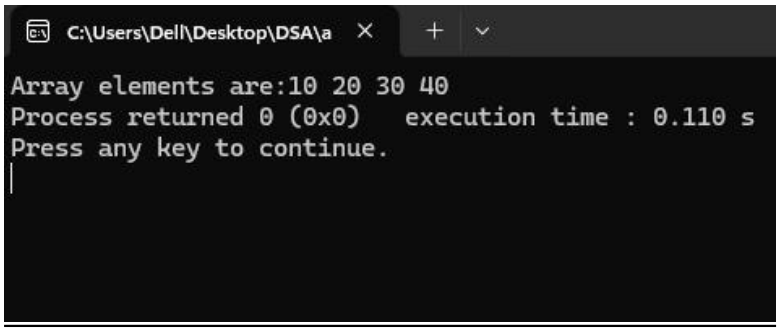
b) Take user input in 1D Array/Read elements of 1D Array.
This code will allow the user to input elements:
Source Code:

```
#include<stdio.h>
int main()
 {
   int n,i;
   printf("Enter the size of the array: ");
   scanf("%d",&n);
   int arr[n];
   printf("Enter %d elements:\n",n);
   for (i=0;i<n;i++)
   {
   scanf("%d",&arr[i]);
   }
   printf("Array elements stored.");
   return 0;
}
```

c) Print elements of 1D Array.
Here we print the elements of the array:
Source Code:

```
#include<stdio.h>
int main()
{
   int arr[]={10,20,30,40,50};
   int n=sizeof(arr[0]);
   printf("Array elements are:");
   for(int i=0;i<n;i++)  {
   printf("%d ",arr[i]);
   }
   return 0;
}
```

Output:



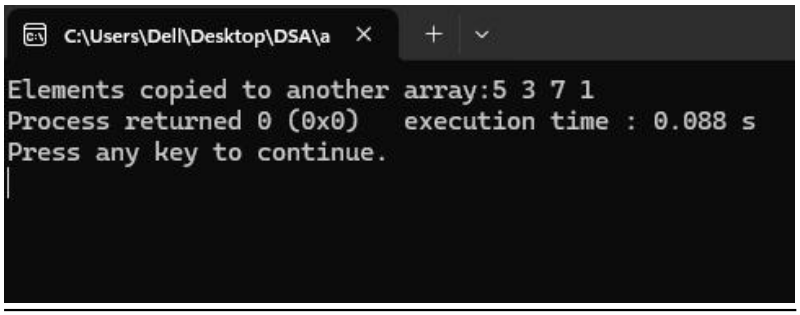
d)Copy the elements of one array to another array.

This program copies elements from one array to another:

Source Code:

```
#include<stdio.h>
int main() {
   int arr1[]={10, 20, 30, 40, 50};
   int n=sizeof(arr1[0]);
   int arr2[n];
   for(int i=0;i<n;i++) {
   arr2[i] = arr1[i];
   }
   printf("Elements copied to another array:");
   for (int i= 0;i<n;i++){
   printf("%d ",arr2[i]);
   }
   return 0;
}
```

Output:



Discussion: In today's lab we got knew about the 1d array. A 1D array, known as a one-dimensional array, is one of the fundamental concepts in programming. It's essentially a collection of elements of the same data type, stored in contiguous memory locations.In our lab report we initialized,took user input,printed the elements of the 1d array and alsp copied the elements of one array to another array.Since we already have basic knowladge about 1d array in c programming, we are easily understand the task and able to do coding step by step without any issue.