Bangladesh University of Business & Technology (BUBT)

Lab Report

Course Title : Structured Programming Language Lab

Course Code : CSE 102

Experiment No : 02

Experiment Name : Array

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Question 1: Write a C program to read and print elements of array

```c
//Shanto
#include <stdio.h>
int main() {
int n, i;
printf("Enter number of elements: ");
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 are:\n");
for(i = 0; i < n; i++) {
printf("%d ", arr[i]);
}
printf("\n");
return 0;
}
```

```
"C:\Users\Shanto\OneDrive\D
Enter 5 elements:
10 20 30 40 50
Array elements are:
10 20 30 40 50

Process returned 0 (0x0)   execution time : 7.797 s
Press any key to continue.
```

Question 2: Write a C program to print all negative elements in an array

```c
//Shanto
#include <stdio.h>
int main() {
int n, i;
printf("Enter number of elements: ");
scanf("%d", &n);
int arr[n];
printf("Enter %d elements:\n", n);
for(i = 0; i < n; i++) {
scanf("%d", &arr[i]);
}
printf("Negative elements in the array are:\n");
for(i = 0; i < n; i++) {
if(arr[i] < 0) {
printf("%d ", arr[i]);
}
}
printf("\n");
return 0;
}
```

```
"C:\Users\Shanto\OneDrive\D
Enter number of elements: 3
Enter 3 elements:
-1 5 7
Negative elements in the array are:
-1
```

Question 3: Write a C program to find sum of all array elements

```c
//Shanto
#include <stdio.h>
int main() {
int n, i, sum = 0;
printf("Enter number of elements: ");
scanf("%d", &n);
int arr[n];
printf("Enter %d elements:\n", n);
for(i = 0; i < n; i++) {
scanf("%d", &arr[i]);
}
for(i = 0; i < n; i++) {
sum += arr[i];
}
printf("Sum of all array elements = %d\n", sum);
return 0;
}
```

```
"C:\Users\Shanto\OneDrive\D
Enter number of elements: 3
Enter 3 elements:
7 3 10
Sum of all array elements = 20
```

Question 4: Write a C program to find maximum and minimum element in an array

```c
//Shanto
#include <stdio.h>
int main() {
int n, i, max, min;
printf("Enter number of elements: ");
scanf("%d", &n);
int a[n];
printf("Enter elements: ");
for(i = 0; i < n; i++) scanf("%d", &a[i]);
max = min = a[0];
for(i = 1; i < n; i++) {
if(a[i] > max) max = a[i];
if(a[i] < min) min = a[i];
}
printf("Max = %d\nMin = %d\n", max, min);
return 0;
}
```

```
"C:\Users\Shanto\OneDrive\D
Enter number of elements: 3
Enter elements: 7
8
9
Max = 9
Min = 7
```

Question 5: Linear search

```c
//Shanto
#include<stdio.h>
int main(){
int flag = 0, i, search_value, a[20] = {10, 2, -1, 0, -3, 9};
printf("Enter search value: ");
scanf("%d", &search_value);
for(i = 0; i < 6; i++){
if(search_value == a[i]){
flag = 1;
break;
}
}
if(flag == 1){
printf("Value is found");
}
else{
printf("Value not found");
}
return 0;
}
```