

ARRAYS

After completing this lab, the students should be able to

- Explain the syntax of array declaration, array assignments and array initialization in ANSI and in managed C.
- Write programs to model repetitive data using arrays
- Manipulate the array data structure.

Experiment

1. The reverse program prompts the user to enter a series of numbers, then writes the numbers in reverse order. Run and test the program with the following numbers:

Enter 10 numbers: 34 82 49 102 7 94 23 11 50 31

```
/* Reverses a series of numbers */  
#include <stdio.h>  
#define N 10  
  
int main(void)  
{  
    int a[N], i;  
    printf("Enter %d numbers: ", N);  
    for (i = 0; i < N; i++)  
        scanf("%d", &a[i]);  
  
    printf("In reverse order:");  
    for (i = N - 1; i >= 0; i--)  
        printf(" %d", a[i]);  
    printf("\n");  
  
    return 0;  
}
```

2. Using array find out average of 20 integer values.

3. Write a C program to find sum of two matrix of order 2*2 using multidimensional arrays where, elements of matrix are entered by user. A session with the program should have the following appearance:

```
Enter the elements of 1st matrix
Enter a11: 2;
Enter a12: 0.5;
Enter a21: -1.1;
Enter a22: 2;
Enter the elements of 2nd matrix
Enter b11: 0.2;
Enter b12: 0;
Enter b21: 0.23;
Enter b22: 23;
```

```
Sum Of Matrix:
2.2      0.5
-0.9     25.0
```