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COURSE NAME: DATA STRUCTURES FOR MODERN COMPUTING SYSTEMS

COURSE CODE: CSA0302

Experiment 28: Bubble Sort

Code:

```
#include <stdio.h>

int main() {
   int arr[100], n, i, j, temp;

   printf("Enter number of elements: ");
   scanf("%d", &n);

   printf("Enter %d elements:\n", n);
   for(i = 0; i < n; i++)
      scanf("%d", &arr[i]);

   printf("Original array: ");
   for(i = 0; i < n; i++)
      printf("%d ", arr[i]);
   printf("\n");

   // Bubble Sort
   for(i = 0; i < n - 1; i++) {
      for(j = 0; j < n - i - 1; j++) {
         if(arr[j] > arr[j + 1]) {
            temp = arr[j];
            arr[j] = arr[j + 1];
            arr[j + 1] = temp;
```

```
        }
      }
    }

    printf("Sorted array (Bubble Sort): ");
    for(i = 0; i < n; i++)
        printf("%d ", arr[i]);
    printf("\n");

    return 0;
}
```

Output:

```
Enter number of elements: 5
Enter 5 elements:
50 20 90 40 10
Original array: 50 20 90 40 10
Sorted array (Bubble Sort): 10 20 40 50 90


=== Code Execution Successful ===
```