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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 ===
```