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COURSE NAME: DATA STRUCTURES FOR MODERN COMPUTING SYSTEMS

COURSE CODE: CSA0302

Experiment 29: Selection Sort

Code:

```
#include <stdio.h>
void selectionSort(int arr[], int n) {
    int i, j, minIndex, temp;

    for (i = 0; i < n - 1; i++) {
        minIndex = i;
        for (j = i + 1; j < n; j++) {
            if (arr[j] < arr[minIndex])
                minIndex = j;
        }
        temp = arr[i];
        arr[i] = arr[minIndex];
        arr[minIndex] = temp;
    }
}
void printArray(int arr[], int n) {
    for (int i = 0; i < n; i++)
        printf("%d ", arr[i]);
    printf("\n");
}
int main() {
    int arr[50], n;
    printf("Enter number of elements: ");
    scanf("%d", &n);
    printf("Enter %d elements:\n", n);
```

```
    for (int i = 0; i < n; i++)
        scanf("%d", &arr[i]);
    printf("\nUnsorted Array: ");
    printArray(arr, n);
    selectionSort(arr, n);
    printf("Sorted Array (Selection Sort): ");
    printArray(arr, n);
    return 0;
}
```

Output:

```
Enter number of elements: 5
Enter 5 elements:
12
18
79
10
53

Unsorted Array: 12 18 79 10 53
Sorted Array (Selection Sort): 10 12 18 53 79


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