Experiment 30: Insertion Sort

Code:

```c
#include <stdio.h>

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

    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");

    // Insertion Sort
for(i = 1; i < n; i++) {
key = arr[i];
        j = i - 1;

        while(j >= 0 && arr[j] > key) {
arr[j + 1] = arr[j];

            j--;
        }
```

```c
        arr[j + 1] = key;

    }


    printf("Sorted array (Insertion Sort): ");
for(i = 0; i < n; i++)        printf("%d ",

arr[i]);    printf("\n");


    return 0;
}
```

Output:

```
Enter number of elements: 6
Enter 6 elements:
7 2 9 3 4 10
Original array: 7 2 9 3 4 10
Sorted array (Insertion Sort): 2 3 4 7 9 10


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