

EXPERIMENT 8

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Roll no – 9

```
#include <stdio.h>

void swap(int *x, int *y) {
    int temp = *x;
    *x = *y;
    *y = temp;
}

void selectionSort(int arr[], int n) {
    for (int i = 0; i < n - 1; i++) {
        int min_index = i;
        for (int j = i + 1; j < n; j++) {
            if (arr[j] < arr[min_index]) {
                min_index = j;
            }
        }
        if (min_index != i) {
            swap(&arr[i], &arr[min_index]);
        }
    }
}

int main() {
    int n;

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

    int arr[n];

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

    selectionSort(arr, n);

    printf("Sorted array in ascending order:");
    for (int i = 0; i < n; i++) {
        printf("%d ", arr[i]);
    }
}
```

```
return 0;
```

```
}
```

```
user123@itadmin:~/Desktop/temp$ gcc expt8.c
```

```
user123@itadmin:~/Desktop/temp$ ./a.out
```

```
Enter the number of elements: 8
```

```
Enter 8 elements:
```

```
99 89 78 98 88 0 23 45
```

```
Sorted array in ascending order:0 23 45 78 88 89 98 99 user123@itadmin:~/Desktop/temp$
```