EXP-4 :-

PROGRAM :-

```
#include <stdio.h>
#include <stdlib.h>
#define MAX_PROCESSES 100
typedef struct {
    int id;
    int execution_time;
} Process;
void scheduleProcesses(Process processes[], int n) {
    int completed = 0;
    int total_time = 0;
    int min_index;
    while (completed < n) {
        min_index = -1;
        for (int i = 0; i < n; i++) {
            if (processes[i].execution_time > 0) {
                if (min_index == -1 || processes[i].execution_time < processes[min_index].execution_time)
{
                    min_index = i;
                }
            }
        }
        if (min_index != -1) {
            total_time += processes[min_index].execution_time;
            printf("Process %d executed for %d time units.\n", processes[min_index].id,
processes[min_index].execution_time);
            processes[min_index].execution_time = 0;
            completed++;
        }
    }
    printf("All processes completed in %d time units.\n", total_time);
```

```
}
int main() {
    Process processes[MAX_PROCESSES];
    int n;
    printf("Enter the number of processes: ");
    scanf("%d", &n);
    for (int i = 0; i < n; i++) {
        processes[i].id = i + 1;
        printf("Enter execution time for process %d: ", processes[i].id);
        scanf("%d", &processes[i].execution_time);
    }
    scheduleProcesses(processes, n);
    return 0;
}
```

OUTPUT :-

```
Enter the number of processes: 5
Enter execution time for process 1: 10
Enter execution time for process 2: 15
Enter execution time for process 3: 5
Enter execution time for process 4: 15
Enter execution time for process 5: 2
Process 5 executed for 2 time units.
Process 3 executed for 5 time units.
Process 1 executed for 10 time units.
Process 2 executed for 15 time units.
Process 4 executed for 15 time units.
All processes completed in 47 time units.


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