

SJF :

```
#include <stdio.h>
#include <limits.h>
```

```
struct process {
    int at, st, ft;
} ready_list[10];
```

```
int n;
```

```
int dispatcher(int time) {
    int bt = INT_MAX, index = -1;
    for (int i = 0; i < n; i++) {
        if (ready_list[i].ft == 0 && ready_list[i].at <= time && ready_list[i].st < bt) {
            bt = ready_list[i].st;
            index = i;
        }
    }
    return index;
}
```

```
int main() {
    printf("Enter number of processes: ");
    scanf("%d", &n);

    for (int i = 0; i < n; i++) {
        printf("Enter Arrival Time and Service Time for Process %d: ", i + 1);
        scanf("%d %d", &ready_list[i].at, &ready_list[i].st);
    }
}
```

```
int cur_time = 0, i = 0;
while (i < n) {
    int pid = dispatcher(cur_time);
    if (pid == -1) {
        cur_time++;
        continue;
    }

    ready_list[pid].ft = cur_time + ready_list[pid].st;
    cur_time += ready_list[pid].st;
    i++;
}
```

```
printf("Process\tAT\tBT\tFT\tTT\tWT\n");
for (int i = 0; i < n; i++) {
    int tt = ready_list[i].ft - ready_list[i].at;
    int wt = tt - ready_list[i].st;
```

```
        printf("%d\t%d\t%d\t%d\t%d\t%d\n", i + 1, ready_list[i].at, ready_list[i].st, ready_list[i].ft,  
tt, wt);  
    }  
  
    return 0;  
}
```