#include <stdio.h>

void sjf\_preemptive(int processes[], int n, int burst\_time[])

{

int remaining\_time[n];

for (int i = 0; i < n; i++)

remaining\_time[i] = burst\_time[i];

int completed = 0, current\_time = 0;

while (completed != n)

{

int shortest\_job = -1;

for (int i = 0; i < n; i++)

{

if (remaining\_time[i] > 0)

{

if (shortest\_job == -1 || remaining\_time[i] < remaining\_time[shortest\_job])

shortest\_job = i;

}

}

printf("Executing process %d at time %d\n", processes[shortest\_job], current\_time);

remaining\_time[shortest\_job]--;

current\_time++;

if (remaining\_time[shortest\_job] == 0)

{

completed++;

printf("Process %d completed at time %d\n", processes[shortest\_job], current\_time);

}

}

}

int main()

{

int n;

printf("Enter the number of processes: ");

scanf("%d", &n);

int processes[n];

int burst\_time[n];

printf("Enter the burst time for each process:\n");

for (int i = 0; i < n; i++)

{

printf("Process %d: ", i + 1);

scanf("%d", &burst\_time[i]);

processes[i] = i + 1;

}

sjf\_preemptive(processes, n, burst\_time);

return 0;

}