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COURSE- BSC IT -A

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SUBJECT : OPERATING SYSTEM

IMPLEMENTATION OF FCFS SCHEDULING ALGORITHM

PROGRAM

```
#include int
waitingtime(int proc[], int n, int
burst_time[], int wait_time[]) {
wait_time[0] = 0;
for (int i = 1; i < n ; i++ ) wait_time[i] =
burst_time[i-1] + wait_time[i-1] ; return 0;
}
int turnaroundtime( int proc[], int n, int
burst_time[], int wait_time[], int tat[]) {
int i;
for ( i = 0; i < n ; i++) tat[i] =
burst_time[i] + wait_time[i]; return
0;
}
int avgtime( int proc[], int n, int burst_time[]) { int
wait_time[n], tat[n], total_wt = 0, total_tat = 0;
int i;
waitingtime(proc, n, burst_time, wait_time);
turnaroundtime(proc, n, burst_time, wait_time, tat);
printf("Processes Burst Waiting Turn around \n");
for ( i=0; itotal_tat + tat[i]; printf(" %d\t %d\t\t %d \t%d\n", i+1, burst_time[i],
```

```
wait_time[i], tat[i]); }
printf("Average waiting time = %f\n", (float)total_wt / (float)n);
printf("Average turn around time = %f\n", (float)total_tat / (float)n); return
0;
}
int main() { int proc[] = { 1, 2, 3};
int n = sizeof proc / sizeof proc[0];
int burst_time[] = {5, 8, 12};
avgtime(proc, n, burst_time);
return 0;
}
```

ALGORITHM

START

Step 1- In function int waitingtime(int proc[], int n, int burst_time[], int wait_time[])

Set wait_time[0] = 0

Loop For i = 1 and i < n and i++

Set wait_time[i] = burst_time[i-1] + wait_time[i-1]

End For

Step 2- In function int turnaroundtime( int proc[], int n, int burst_time[], int wait_time[], int tat[])

Loop For i = 0 and i < n and i++

Set tat[i] = burst_time[i] + wait_time[i]

End For

Step 3- In function int avgtime( int proc[], int n, int burst_time[])

Declare and initialize wait_time[n], tat[n], total_wt = 0, total_tat = 0;

Call waitingtime(proc, n, burst_time, wait_time)

Call turnaroundtime(proc, n, burst_time, wait_time, tat)

Loop For i=0 and i Set total_wt = total_wt + wait_time[i]

Print process number, burstime wait time and turnaround time

End For

Print "Average waiting time =i.e. total_wt / n

Print "Average turn around time = i.e. total_tat / n

Step 4- In int main()

Declare the input int proc[] = { 1, 2, 3}

Declare and initialize n = sizeof proc / sizeof proc[0]

Declare and initialize burst_time[] = {10, 5, 8}

Call avgtime(proc, n, burst_time)

STOP

C:\Users\hp\Documents\CCC.exe

```
Processes  Burst   Waiting Turn around
 1         5              0      5
 2         8              5      13
 3         12             13     25
Average waiting time = 6.000000
Average turn around time = 14.333333

Process returned 0 (0x0)   execution time : 0.269 s
Press any key to continue.
```