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Q1 :- FCFS Algorithm

Step 1->Start

Step 2-> 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 3-> 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 4-> 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<n and i++

Set total\_wt = total\_wt + wait\_time[i]

Set total\_tat = total\_tat + tat[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 5-> 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)

Step 6-> Stop

FCFS Program :-

**#include <stdio.h>**

**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; i<n; i++) {**

**total\_wt = total\_wt + wait\_time[i];**

**total\_tat = total\_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[] = { 0, 1, 2, 3};**

**int n = sizeof proc / sizeof proc[0];**

**int burst\_time[] = {6, 8, 10, 11};**

**avgtime(proc, n, burst\_time);**

**return 0;**

**}**

FCFS Output :-

