07/03/21

EXPERIMENT 5 (B)
FCFS WITH ARRIVAL TIME

AIM
Implement a CPU scheduling program -FCFS with Arrival Time

ALGORITHM
STEP 0: START

STEP 1: Define a structure 'process' with variables to store information such as process no (pno), arrival time (at), burst time (bt), start time (st), completion time (ct), turnaround time (tt) and waiting time (wt).

STEP 2: variables are declared.
n → no of processes
i & j are loop counters
wt[10] & tat[10] are arrays to store waiting time & turnaround time. avgwt & avgtt variables are used to store average waiting time & average turn around time.

STEP 3: User is prompted to enter the number of processes (n). Arrival time & burst time for each process are input

and stored in the 'p' array of the structure

STEP 4: Implement a simple sorting algorithm to sort processes based on their arrival time in ascending order

STEP 5: Iterate through the sorted processes:
If its the first process or arrives after the completion of the previous process, set its start time (st) and completion time as (ct)
- Otherwise set start time as (st) as completion time of the previous process
- Calculate turnaround time (tt) and waiting time (wt) for each process

STEP 6: Calculate the average waiting time & average turnaround time

STEP 7: Print a table displaying process number, arrival time, burst time, completion time, turnaround time and waiting time for each process

STEP 8: Print the average waiting time & average turnaround time

STEP 9: Print the Gantt chart, showing the execution order of process over time.

STEP 10: END

RESULT

Experiment executed successfully & output obtained.