1.
   • Total wait time: 23

   • Total runnint time: 20

   • Average wait time: 4.6

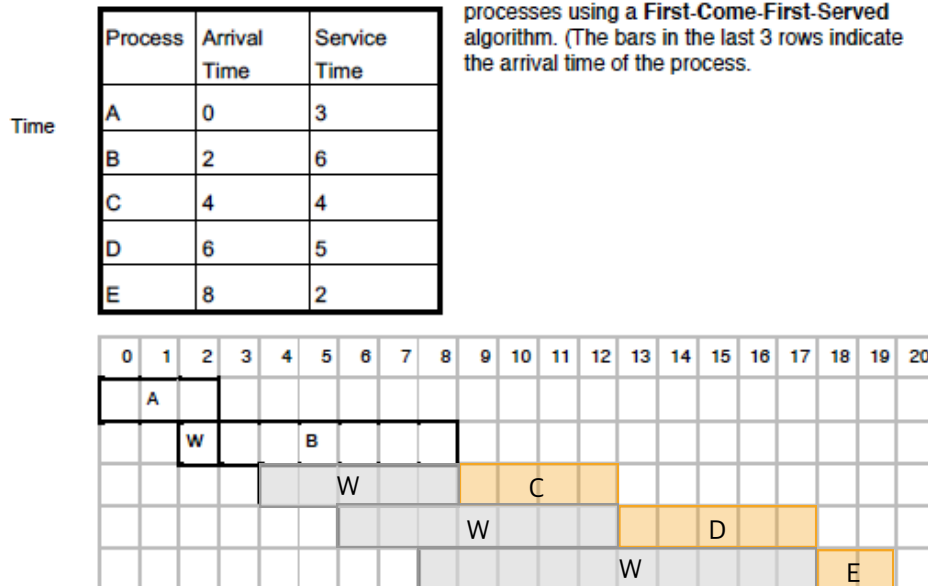   • Average time to completion: 8.6

CSC 369: Exercise 11   Scheduling

Consider the following list of processes:
If time starts at 0, then A arrives at time 0 and gets 3 time units of service. At this point
it is complete and leaves. B arrives at time 2, wajts 1 time unit, and then runs for 6 time
units. We assume that once a process has the CPU it runs to completion.

Q1. Fill in the chart below for the remaining 3
processes using a **First-Come-First-Served**
algorithm. (The bars in the last 3 rows indicate
the arrival time of the process.

Time

Process	Arrival Time	Service Time
A	0	3
B	2	6
C	4	4
D	6	5
E	8	2

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
	A																			
		W			B															
					W				C											
						W							D							
								W									E			

Total Waiting time: ___23___ time units

Total Running time: ___20___ time units

Average Wait time: ___4.6___ time units

2. Now create a schedule that **minimizes wait time**. You may not change the arrival time,

and once a process begins running, it runs to completion. How do you choose the next process to run?

Answer:

Shortest job First

From the tasks that are on schedule, choose one with the shortest job once a task finishes.

3.   • What is the minimum average waiting time?:

   • What is the average turnaround time?:

CSC 369: Exercise 11   Scheduling

Q2+3. Now create a schedule that **minimizes wait time**. You may not change the arrival time, and once a process begins running, it runs to completion. How do you choose the next process to run?

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
	A																			
		W				B														

Total Waiting time: _____ time units

Average Wait time: _____ time units

Average turnaround time: _____
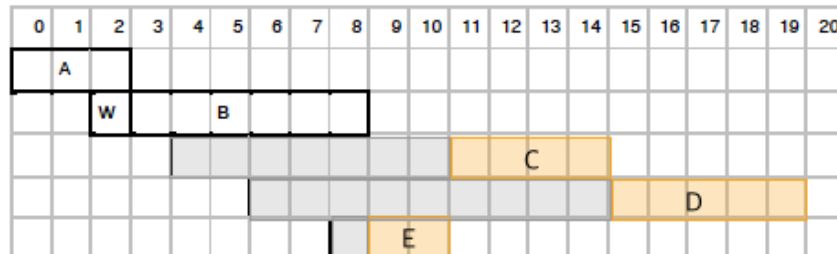Turnaround time = sum(completion time – arrival time)/ num processes

Answer:

CSC 369: Exercise 11   Scheduling

Q2+3. Now create a schedule that **minimizes wait time**. You may not change the arrival time, and once a process begins running, it runs to completion. How do you choose the next process to run?

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
	A																			
		W			B															
										C										
																D				
								E												

Total Waiting time: _____ time units

Average Wait time: _____ time units

Average turnaround time: _____
Turnaround time = sum(completion time − arrival time)/ num processes

- What is the minimum average waiting time?:
- What is the average turnaround time?: