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Worksheet 14 2/23/2025

9/9 Points

Attempt 1

Review Feedback

2/23/2025

Attempt 1 Score: 9/9



Anonymous Grading: no

Unlimited Attempts Allowed

∨ Details

Q1: Consider the following set of tracks to be serviced:

- 98, 183, 37, 122, 14, 124, 65, 67
- The head is initially positioned at 53.

What order will they be processed if we use shortest seek time first?

Q2: Think of the possible disadvantages of Shortest Seek Time First (SSTF)?

Answer1:

Given the order of the set of tracks,

98 183 37 122 14 124 65 6

We will sort the sequence first. Here is the sorted order for the set of tracks,



initial head = 53

According to the shortest seek time first algorithm, From initial head = 53, the shortest distant track is = 65

14	37	<mark>65</mark>	67	98	122	124	183
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1

Order of Processing:

65	
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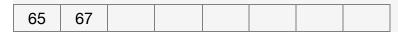
From 65, the shortest distant track is = 67

14 37 <mark>65 67</mark> 98 122 124 183

1

↑

Order of Processing:



From 67, the shortest distant track is = 37



↑

Order of Processing:

65	67	37					
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From 37, the shortest distant track is = 14

14	37	<mark>65</mark>	<mark>67</mark>	98	122	124	183

1

Order of Processing:

From 14, the shortest distant track is = 98

14	<mark>37</mark>	<mark>65</mark>	<mark>67</mark>	98	122	124	183
			1				

Order of Processing:

65	67	37	14	98			
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From 98, the shortest distant track is = 122

<mark>14</mark>	37	<mark>65</mark>	<mark>67</mark>	98	122	124	183
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Order of Processing:

67 65 37 14 98 122

From 122, the shortest distant track is = 124



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Order of Processing:



From 124, the shortest distant track is = 183



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Hence, the final order of processing (SSTF) is:

Answer2:

Disadvantages of Shortest Seek Time First (SSTF):

- Potential chance of starvation of certain blocks of tracks.
- Overhead of processing wait-time.

New Attempt