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	HANDS-ON 2
	B. between charle are stample to tited at is will a
2.	Argueto remaining elements are already worted, & the drop remaining elements are now in in the first i elements are now in
	of use strongly i trib it notifier "It
Ary:-	blacking want is a simple writing algorithm that works by
	Selection sort is a simple sorting algorithme without works by repeatedly finding the minimum relement from the cursorted part of the array and swapping it with the first unsorted element.
	north of the array and swapping it with the first
	Univited element:
	3. Termination: After not iteration of the outer loop,
₩.	LOUP INVARIANT: It's war condition affect sholds true before and
	after each iteration rationa loop. For telection sort,
	Loop Invariant: It's a condition that sholds true before and after each iteration to five loop. For selection sort, we can define the loop invariant as follows:-
	J. Salar J.
- %-	INVARIANT: At ather boginning of of ceach of the outer loop, the so first it elements are in sorted order.
	Joop, the so first it elements are in worted order.
<u> </u>	Proof of Correctness;
	1- Initialization: Before the first iteration, i=1, and there are no elements in the sorted part of
	are no elements in the worked part of
	the array.
	Therefore, the loop invariant holds.
	y .
2.	Maintenance: - Here the inner loop finds the minimum element
•	among the elements from index i to n-1.
	=> ble then swap the minimum element with the element
	Maintenance: - Here the inner loop finds the minimum element among the elements from index i to n-1: > he then swap the minimum element with the element at index i', that inturn places the smallest remaining element in its correct position.
	element in its correct position.

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S NO -20MAT > Now, as the first i-1 elements are already sorted, &

the smallest remaining elementarism now placed at sort

it position the first i elements are now in

aborted torder intrisolo private elements are now in

Therefore it the norloop invariant inholder at the tribibeginning give

torial attachments has proved at the line of th 3. Terminotion: After n-1 iterations of the outer loop, tras and less that loop invariant rollholds. Any reference of the state of the superior of the state of the s Hence by winger the doop to invariant of we that array and work correctly with their array, good Greeness 1. driftiglization: Rota the first Heredian, int. and there are no elements in the worted part of Maintenance: - Here the ingen love sinds the minimum element common to make a to make the short with the element of index is first interest place the smallest remaining of index is first interest place the smallest remaining element in its correct positions