2.1 Selection Sort Demo

click to begin demo
Selection sort

- In iteration $i$, find index $\text{min}$ of smallest remaining entry.
- Swap $a[i]$ and $a[\text{min}]$. 
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Selection sort
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\[ \text{in final order} \quad \text{remaining entries} \]
Selection sort

- In iteration $i$, find index $\min$ of smallest remaining entry.
- Swap $a[i]$ and $a[\min]$. 

\[ 
\begin{array}{cccccccc}
\text{i} & 10 & 5 & 3 & 8 & 4 & 7 & 9 & 6 \\
\text{min} & & & & & & & & \\
\end{array} 
\]
Selection sort

• In iteration $i$, find index $\min$ of smallest remaining entry.
• Swap $a[i]$ and $a[\min]$. 

```
in final order
\begin{array}{ccccccc}
i & 3 & 5 & 10 & 8 & 4 & 7 & 9 & 6 \\
\min & 3 & 5 & 10 & 8 & 4 & 7 & 9 & 6 \\
\end{array}
remaining entries```
Selection sort

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![Diagram of selection sort with playing cards showing the process of sorting with index $i$ and index $\text{min}$]
Selection sort

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![Diagram of selection sort with cards]
Selection sort

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![Diagram of selection sort with playing cards](image)
Selection sort

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![Diagram of selection sort process]

- in final order
- remaining entries
Selection sort

- In iteration $i$, find index $\min$ of smallest remaining entry.
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![Selection sort diagram]

- **in final order**
- **remaining entries**
• In iteration $i$, find index $\min$ of smallest remaining entry.
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![Diagram of selection sort with cards]
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Selection sort

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\[ \begin{array}{cccc}
\text{in final order} & \text{remaining entries} \\
\hline
\end{array} \]

\[ \begin{array}{cccc}
10 & 7 & 9 & 8 \\
\hline
\end{array} \]
Selection sort

• In iteration $i$, find index $\min$ of smallest remaining entry.
• Swap $a[i]$ and $a[\min]$.
• In iteration \( i \), find index \( \min \) of smallest remaining entry.
• Swap \( a[i] \) and \( a[\min] \).
Selection sort

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- Swap $a[i]$ and $a[\min]$. 

![Diagram of selection sort](image)
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\begin{array}{cccccccc}
\text{in final order} & \text{remaining entries}
\end{array}
\]
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---

$\text{in final order}$

$\text{remaining entries}$
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in final order
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