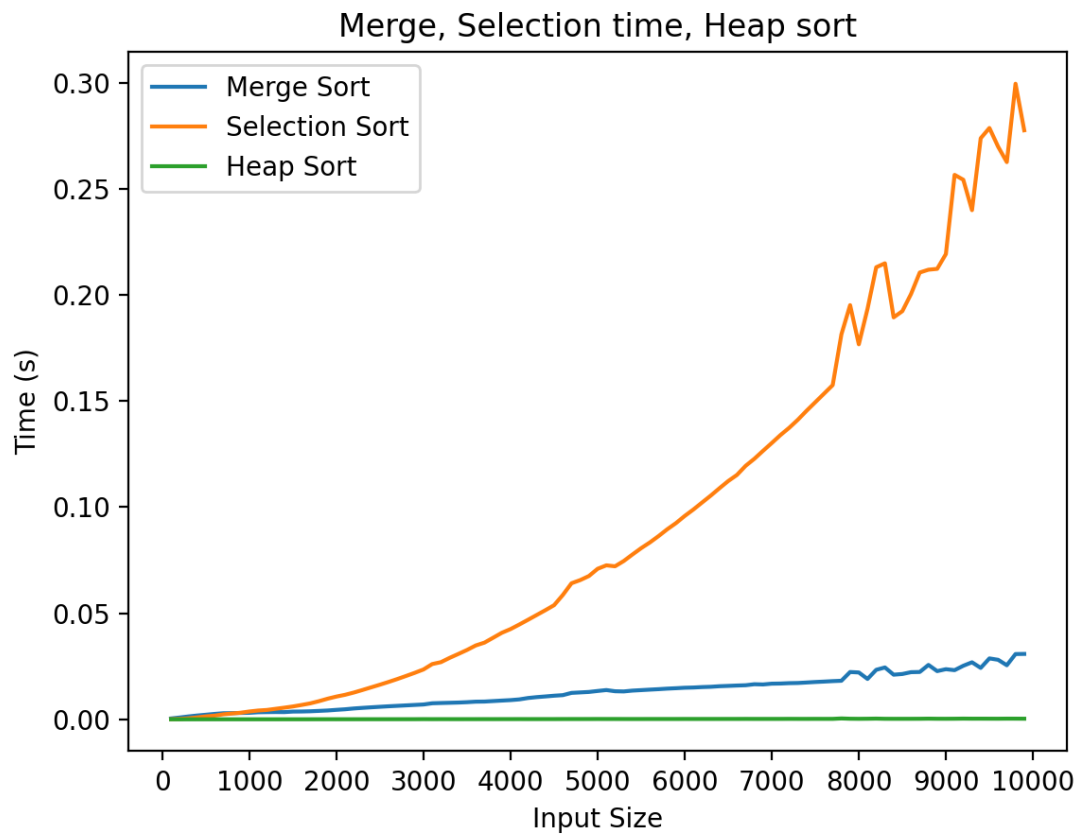


CS271 Project 3

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- Asymptotic time complexity of the heap sort algorithm on an array that is already sorted:
 - $\Theta(n \log n)$
- Asymptotic time complexity on an array that is in reverse order:
 - $\Theta(n \log n)$
- Best case asymptotic time complexity of heap sort
 - $\Theta(n \log n)$
- What kind of input does the best case asymptotic time complexity occur
 - Asymptotic time complexity of heap sort will always be $\Theta(n \log n)$, because the algorithm will carry on regardless of the order of the input list.