



## Introduction to Computer Science for Engineers

# Quick-Sort

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This assignment **closed** November 25, 2024 at 23:15.

## Assignments

1. Implement the function `quick_sort(array: list) -> None`. It should sort the array `array` via quick-sort in-place.

For the next task you will need the external Python package `matplotlib`. It is available online via a package manager (e.g. PyPi). Install the package on your system, search for a tutorial online on how to install Python packages on your system, if necessary.

Place the script `animation.py` in the same folder as `insertion_sort.py` and run the script. It will generate two plots, the first one will visualize your sorting algorithm at different time steps. The second one will animate the sorting process.

2. Describe how quick-sort works with help of the two plots. Change the `animation.py` script to your needs.
3. Describe the **best**- and **worst**-case scenario for quick-sort.



## Template files

Get all files in an archive `templates.zip` or `templates.tgz`.

`animation.py`  
 `quick_sort.py`

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