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Analysis Report

The one where numbers needs to be sorted

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July 10, 2022

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1 Introduction

This report aim to solve a simple problem utilizing Polya's Problem Solving Technique. This method consists of first gathering an understanding of the problem, then a plan of how to solve it is devised. These steps constitutes the main focus of this report. Additionally with a plan at hand the last steps consists of execute according to the plan and reflecting whether the strategy sufficed to achieve a suitable solution to the problem.

2 Step 1

2.1 Rephrasing the problem

The task consists of reading two files containing a series of numbers and then sorting all the odd numbers from the first file and all the even numbers from the second file and displaying the result as one list in reverse order. A requirement is to use the bubble sort algorithm.

2.2 Understanding the words

Sometimes long texts explaining a task can be difficult to understand, but the dot list really helped to clarify what was expected and there wasn't anything particularly vague or difficult to understand in this task.

3 Devising a plan

3.1 Approach of choice

The rough idea of how to approach the problem can be illustrated with pseudo code. In very short terms the problem consists of solving the following parts:

```
# Store filenames as a list of strings
filenames = sys.argv[1:]

# Initializing list as empty
numbers = []

# Loop through each filename and perform a set of actions
  explained below.
for nbr, filename in enumerate(filenames):
```

```

    # Reads file filename and returns a list of it's numbers (
    assumes integers).
    nbrs = read_file(filename)

    # Filters out all numbers that are odd or even depending on if
    it's first or second file.
    nbrs = filter_odd_or_even(nbrs, nbr == 0)

    # Updates list with filtered numbers from one of the files for
    each iteration
    numbers.extend(nbrs)

# Takes in a list called numbers and returns the reversed bubble
  sorted list.
numbers = reversed_bubble_sort(numbers)

# Displays result to user
print(numbers)

```