

Japan Advanced Institute of Science and Technology

Information Science School

I116 – Fundamental Programing

**Final Assignment Report**

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**Introduction**

I use Jupiter notebook for writing code and presenting my idea for all final assignments

Some of advantages can be listed:

* **Suitable for presenting algorithm implementation**: write code (Python), documents (Markdown), show figures
* **Portable**: Run on browser, user only need a major browser to run and view a notebook
* **Not need to re-interpret source code for grading**

It’s better to view the compiled notebook on Github, I have a Github repository that contains all my notebooks: <https://github.com/m-inh/i116-final-assignment>

Some answers of the teacher’s requirements can be shown in notebook. The detailed answer is listed as below:

**1. BASIC INFORMATION**

This action is done in this report.

**2. PROBLEM STATEMENT**

This action is explained in all notebooks.

Every notebook has a short paragraph that describes the purpose of the program and contains teacher’s requirements.

**3. INPUT AND OUTPUT FORMAT**

This action is explained in all notebooks.

Every Python function in my notebooks has comments that declare what the input and output are. In some important functions, I have more detailed information why I do that, and how the function works.

**4. VARIABLE DESCRIPTION**

This action is explained in all notebooks.

Like the 3rd section.

**5. ALGORITHM DESCRIPTION**

This section is explained in all notebooks.

**6. STRUCTURE DIAGRAM**

This section is explained in this report.

**7. ERROR INDICATIONS**

This section is explained in this report. (if needed)

**8. HAND TRACE**

This action is explained in all notebooks.

I wrote functions in order of flow of my thinking. After each main block in notebooks, I wrote tests to ensure that every function in these blocks runs correctly.

**9. EXTRA CREDIT**

This section is explained in this report. (if needed)

**10. CORRECTNESS ARGUMENT**

This section is explained in this report. (if needed)

**11. LISTINGS**

All files are notebooks and this report.

**12. COMPILATION TYPESCRIPT**

Not need to conduct compilation. Because all blocks of code are run in previous session and printed out the result if needed.

**13. TEST DESCRIPTION**

This action is explained in all notebooks.

**14. TEST TYPESCRIPTS**

This action is explained in all notebooks.

**15. KNOWN BUGS**

This section is explained in this report. (if needed)

**16. POSSIBLE IMPROVEMENTS**

This section is explained in this report. (if needed)

**17. COMMENTS**

This section is explained in this report. (if needed)