

CS 261P Project #3: Zip Tree

In this project you are to implement the Zip Tree and Skip List structures.

Project Files:

You will need to download files for this project. Download the lab3-files-updated.zip file using this [canvas](#) link.

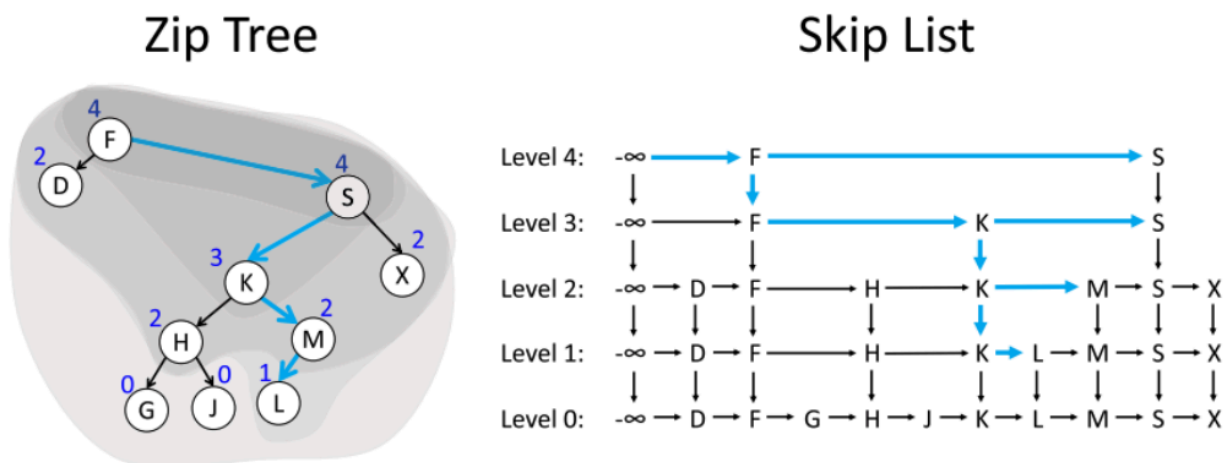
The zip file contains 3 files: `zip_tree.py`, `skip_list.py`, `project3_tests.py`, and `requirements.py`.

Project Specification:

The specification for the project is given in the file **requirements.py**. Read it carefully and completely before starting the project.

In addition to implementing the Zip Tree as described in lecture for `zip_tree.py`, you will implement the Skip List also. We suggest you finish implementing the Zip Tree first, then implement the Skip List. Both data structures should be implemented according to what was presented in lectures.

We also ask you to write a method to convert a Zip Tree to the equivalent Skip List. The following diagram shows the conversion process.



The project deliverables are the file **zip_tree.py** and **skip_list.py**, modified by replacing the code stubs of the required methods with working code.

Project Testing:

The file **project3_tests.py** contains a few tests that you can use to test your code. As stated there, these tests are just to get you started, and passing these tests does not mean that your

code is correct. We strongly recommend that you create more tests, with varying data structure sizes and operation sequences, to test your code more completely.

Project submission

The project is to be submitted to GradeScope. Instructions for what to submit are in the file **requirements.py**.

Project due date/time

The project is due on **Tuesday, March 20, at 11:59 PM PST**.

Late projects will be penalized 2.5% for every hour the project is late, rounded up to the nearest hour.

Miscellaneous notes

The projects are to be done **individually** or in **pairs (no groups of more than 2 students)** and there should be one submission per group. Make sure to indicate all members of the group when submitting on Gradescope.

If you have questions about the project of general interest, the best way to ask your question is on the Ed Discussion message board.