Computability and Complexity	**Winter 2020**

Week 1/13 - 1/19 Report

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Intention

This is a set of ideas you can think about or use them while writing your report for each week's reading. Writing reports for our reading each week is not mean to make you take notes, but make you think about what we have read. However, you may still use your report as a reading notes, whichever helps you read better.

You may write whatever you think while reading, questions, complains, or whatever. This might become your research interests in the future (who knows).

Ideas

1. Besides what mentioned in the book, what others properties of a program are undecidable? Name at least one and prove them.

2. Are all Turing computable functions recursive?

3. What if we build a Turing Machine with more characters in its alphabet than just $\{0, 1, B\}$? Will this influence its running time? If so, how?

4. We know we can build a Turing Machine with unbounded space limitation, what if we build a Turing Machine with unbounded time limitation? Can we achieve it? If so, how? What problems we can solve using this Turing Machine we built?