**CCC (Canadian Computing Competition)**

Instructor

CCC Topics

selection  
repetition  
arrays  
string manipulation

data structures (e.g., lists, dictionary)

math problems

recursion  
sorting and searching

Syllabus

Class 1

* Introduction to CCC and format
* Concepts
  + Numbers and strings
  + Iterations (for, while loops)
  + Selections (if-else statements)
  + Lists and dictionary
* Practices
  + programming practices
  + Past tests

Class2

* Concepts
  + Review what is left from Class 1
  + Stack and Queue
  + Linked list and Tree
* Practices
  + Programming practices
  + Past tests

Class3

* Concepts
  + Review what is left from Class 2
  + Recursion
  + Sorting and Searching
* Practices
  + Programming practices
  + Past tests

Class4

* Concepts
  + Review what is left from Class 3
  + Combination of data structures
* Practices
  + Programming practices
  + Past tests

Class5

* Concepts
  + Final review what we learned in the past
* Practices
  + Final review on the questions in the past tests

| Lesson Day | Coverage from CCC | Topic |
| --- | --- | --- |
| Day 1 | Q1 and Q2 and Q3 | basic loops and conditions |
| Day 2 | Q3 and Q4 Part | some combination of loops, conditions and counting |
| Day 3 | Q4 and Q5 (part) | recursion, efficient sorting, clever algorithms |
| Day 4 | Q4 and Q5 | Combination of algorithms |
| Day 5 | Final Review |  |