



# Welcome to CMPT 225

*Data Structures and Programming*  
*and Data Collections*      *Software Development*

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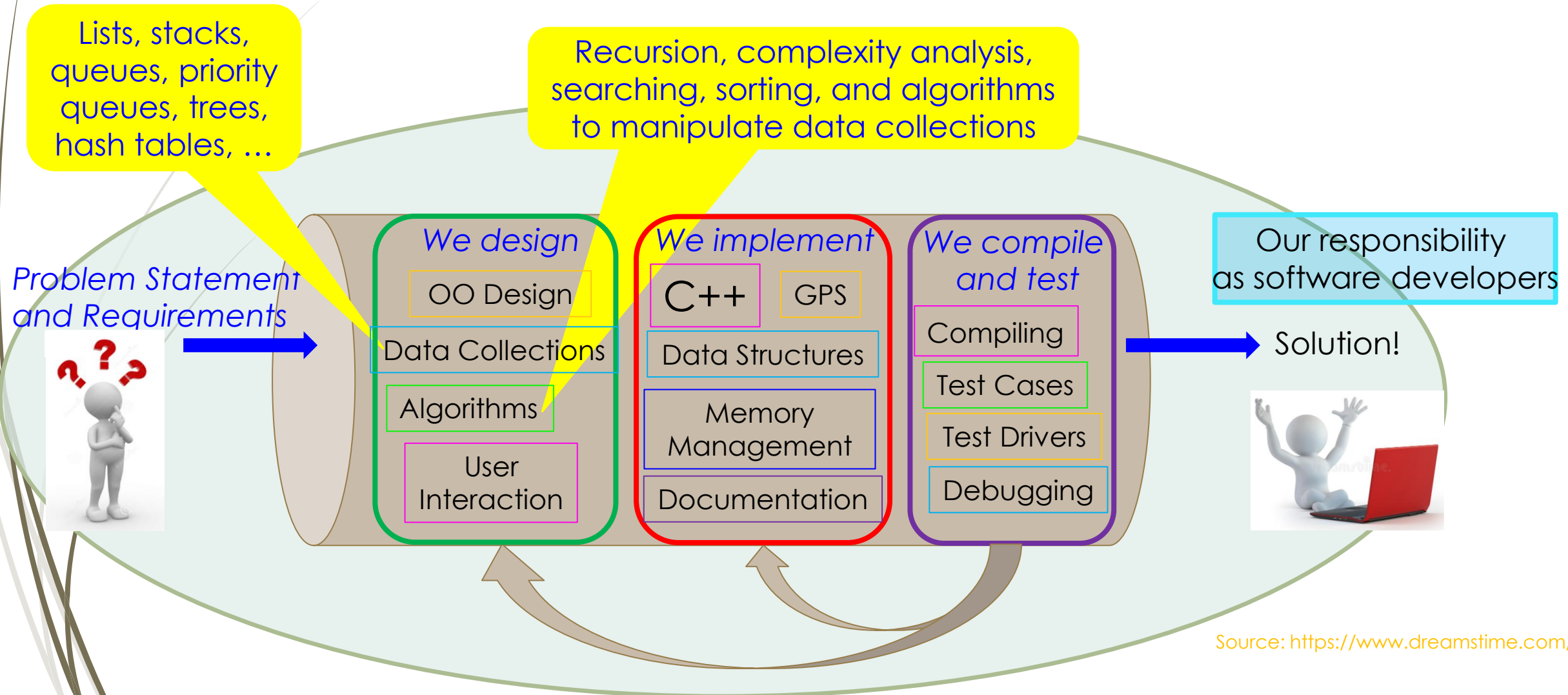
Feel free to call me Anne!

Lecture 1 – Course Overview + Activity

# Today's Menu

- What shall we learn in CMPT 225? -> *Learning Outcomes*
  - And what must we already know? -> *Learning Incomes*
- Which *resources* do we have to help us learn all this?
- Activity
- *Questions?*
- What are we doing *next lecture* and how to get ready for it!

# What shall we learn in CMPT 225?



# And what must we already know?

- Basic C++ syntax and control structures
  - Variables, data types, operations, conditions (Boolean), conditional statements (if/else), iterative statements (for and while loops), functions, classes, attributes and methods
- Data structures
  - Arrays and linked lists
- Basic algorithms
  - Linear and binary search as well as  $O(n^2)$  type of sorting
  - Recursion
  - Algorithm analysis and Big-O notation
- Basic principles of software development
  - Design, implementation, and testing

# Which *resources* do we have to help us learn all this?

- Course web site

<https://www.cs.sfu.ca/CourseCentral/225/alavergn/index.html>

- Reference Textbook

- No “required” textbooks – but a few references listed on our Course Outline and on the *Resources web page* of our course web site
- Reading the topics we cover in our lectures from various references before/after lectures highly recommended

- C++ language help

- Reference books, online resources listed on our *Resources web page*

- Labs in CSIL (Computing Science Instructional Lab)

- **Target Machine:** CSIL workstation
  - Ubuntu Linux platform (or OS)
  - C++ programming language, g++ compiler

- Instructor's and TAs' office hours and Discussion Forum on CourSys

# Lecture 1 - Activity

## ► Goals:

### ► For you to ...

1. Get to know some students in the class
2. Discover our resources – especially our course web site
3. Warm up your C++ programming skills
4. Provide feedback to the instructor
5. Get familiar with submitting work on [CourSys](#)

# Lecture 1 – Activity - Instructions

1. Form **teams of four** (4).
2. For enrolled students: Do **Lecture 1 Activity** on **CourSys** and submit your answers on **CourSys** by pressing the **Submit** button on the form.
3. For students on the waiting list: Access **Lecture\_1\_Activity.pdf** on our course web site – under **Lecture 1**.  
You will not be able to submit your answers to **Lecture 1 Activity**. That is fine - this activity is worth 0 marks!
4. As you are going through this activity, I recommend that you press the **Submit** button at the bottom of the page after answering each of its questions. This way, you can be sure that each of your answers have been submitted.
5. This activity ends at 2:13pm (+ 2 minutes of grace time). This means that after **2:15pm**, you will no longer be able to submit your answers.
6. Finally, make sure you answer all questions: there are 11 questions to answer in about 30 minutes. Plan your time accordingly.
7. Enjoy!

# Questions?

- Waiting list
  - Hang in there! 😊
    - Continue to come to lectures
    - No grade-based activities due during Week 1 and Week 2
    - Waiting lists will be resolved by the end of Week 1
      - If you have not been enrolled into CMPT 225 by Week 2, you may wish to try to enroll next semester.
    - Please, do not send emails to the instructor 😞
  - Good luck!



# Summary

- ✓ What shall we learn in CMPT 225?
  - ✓ And what must we already know?
- ✓ Which *resources* do we have to help us learn all this?
- ✓ Activity
- ✓ Questions?

# Next Lecture

What are we doing next lecture and how to get ready for it!

- Introduce the concept of **Abstract Data Type (ADT)**
- To get ready for our next lecture:
  - Download the partial lecture notes for Lecture 2 found under the column **Lecture** in the table on our course web site
  - Start learning C++
    - Lab 0 – Intro and testing
    - Lab 1 – C++ class
  - If you've never used Linux (**target machine**), go to CSIL this week (starting today is a good idea)
    - Do a **Linux command-line interface tutorial**