# Welcome to CMPT 295

*Introduction to Computer Systems*

My name is Anne Lavergne

Lecture 1 – Course Overview + Activity

# Today's Menu

- COVID Protocol
- What is CMPT 295?
  - What shall we learn in CMPT 295?
  - What should we already know?
  - Which resources do we have to help us learn all this?
- Activity
- Questions

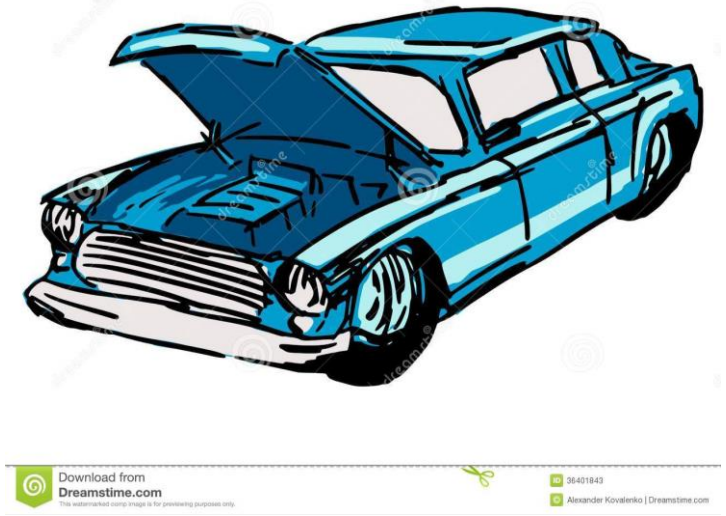
# COVID protocol – About masks!

Here is a message from Elizabeth Elle, SFU Vice Provost Learning & Teaching, based on the public health order:

- Unless we have an approved exemption, we are required to wear a mask in all indoor common and learning spaces, including classrooms. Please come to campus prepared with a non-medical mask.
  - If we forget our mask, disposable masks are available from Student Central in Burnaby and at the information desks in Vancouver and Surrey.
  - If we require a mask exemption in the classroom for medical reasons, please contact the Centre for Accessible Learning at cal_admin@sfu.ca for assistance.
  - If we are requesting mask exemptions on other protected grounds, such as religion, we can contact the Office of Student Support, Rights and Responsibilities at student_support@sfu.ca.
- And please remember to be kind to each other. If we see someone not wearing a mask, do not make assumptions or judgments as that person may be exempt.

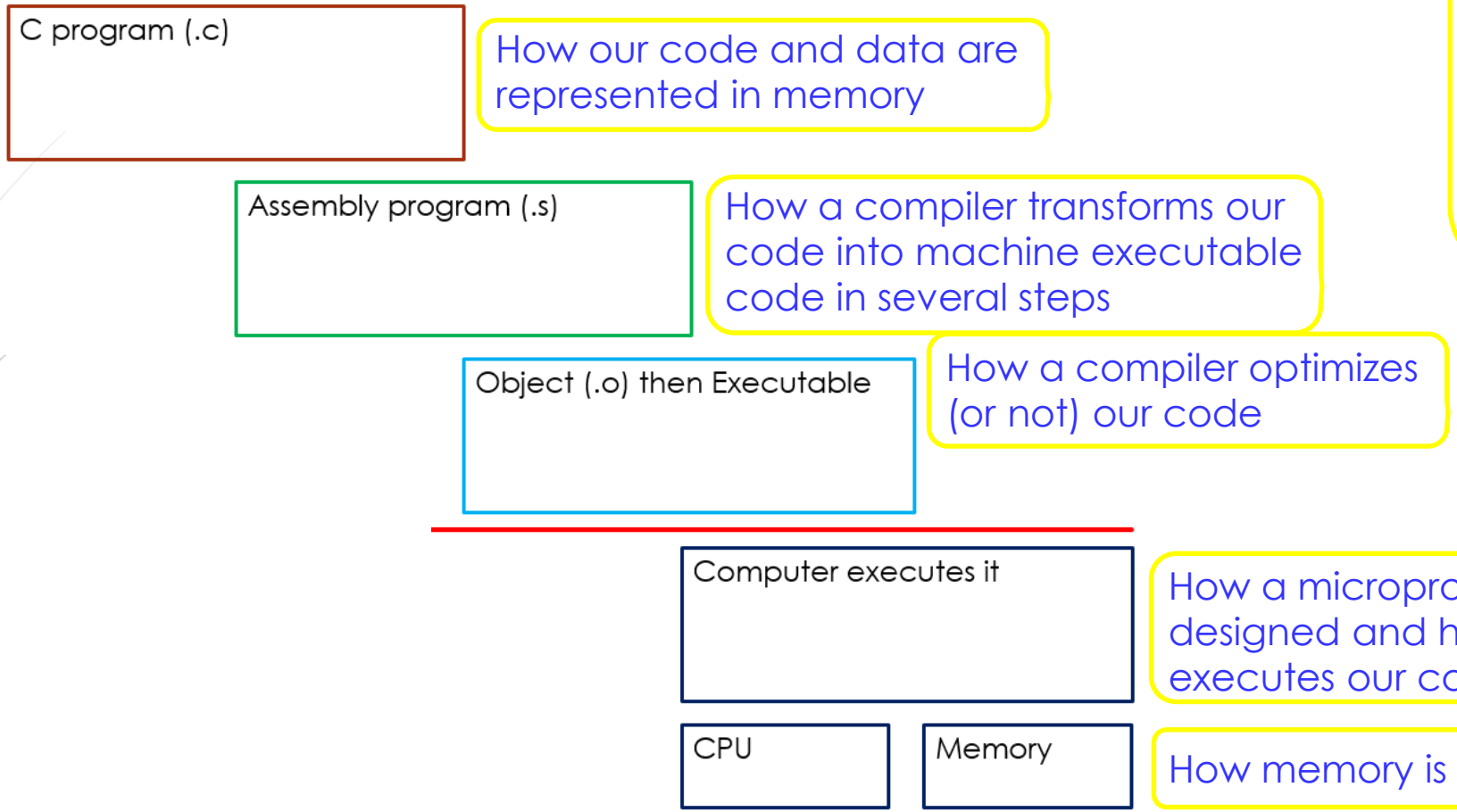
# What is CMPT 295?

- The goal of this course is to give us, software developers, a look "under the hood" of a computer, i.e., to learn about Computer Systems => microprocessor, memory, …




- This knowledge will allow us to become more efficient/effective software developers

# In CMPT 295, we shall learn .. The Big Picture



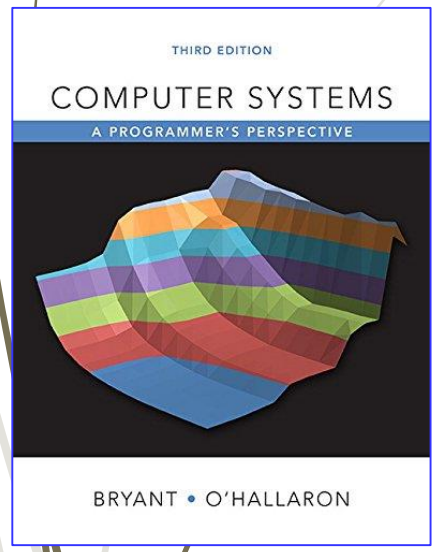

How all of this can impact the execution of our code
How to write more efficient and reliable code:

- Be able to find and eliminate bugs more efficiently
- Be able to ascertain program performance and tune it by optimizing our code

# What should we already know?

- Write correct ***C programs***
  - C constructs (variables, data types, pointers, if/else, switch case, for/while/do while, function calls, arrays, …)
- What a ***stack*** is and how it works
- ***Binary/decimal/hexadecimal*** numeral systems
  - How to convert from one numeral system to the others
  - Basic arithmetic
- Perform Boolean algebra using ***and***, ***or***, ***not***, ***xor***

# Which resources do we have?




- Course web site

https://www2.cs.sfu.ca/CourseCentral/295/alavergn/index.html

- Textbook
  - Computer Systems: A Programmer's Perspective, 3/E, Randal E. Bryant, David R. O'Hallaron, Pearson, 2016
- Labs in CSIL (Computing Science Instructional Lab)
  - *Target Machine*: CSIL workstation
    - Linux platform (or OS)
    - C programming language
    - x86-64 assembly language
    - gcc compiler
- Instructor and TAs - Office hours

# Activity - Discover our resources

- Instructions:

1. Form teams of 3 to 4
2. Do Lecture 1 Activity on CourSys
3. Time: about 30 minutes

# Question?

# Summary

- ✓ COVID Protocol
- ✓ What is CMPT 295?
  - ✓ What shall we learn in CMPT 295?
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- ✓ Activity
- ✓ Questions

# Next Lecture

- Data Representation
  - Representing information as bits
- To get ready for our next lecture:
  - *Optional*: Read Chapter 1 of textbook
  - *Not so optional*: Read Section 2.1 of Chapter 2
    - As we read sections of our textbook, we are strongly encourage to do the Practice Problems in each section
  - Download the partial lecture notes found under the column **Lecture** in the table on our course web site