CS 200: Concepts of Programming with C++, Summer 2023

Schedule

Week #	Week of	Units	Due dates	Notes
1	June 5	• Unit 00: Welcome to the course! • Unit 01: Exploring software • Unit 02: main() - Intro to the structure of a C++ program • Unit 03: Variables - Storing data • Unit 04: cin/cout - Getting input and output from the console	This week's items are due on Thursday, **June 15**	June 5 - First day of classes
2	June 12	• Unit 05: if/else if/else - Branching if condition is true or false • Unit 06: switch - Branching for certain values • Unit 07: while - Looping while true	This week's items are due on Thursday, **June 22**	Aug 28 - Last day to drop and receive full refund
3	June 19	• Unit 08: Pointers and memory • Unit 09: Functions - Delegating tasks elseware	This week's items are due on Thursday, **June 29**	
4	June 26	• Unit 10: struct - Organize related data in a new type • Unit 11: class - Writing Object Oriented programs	This week's items are due on Thursday, **July 6**	
5	July 3	• Unit 12: for - Looping with a counter • Unit 13: Storing sets of data with Arrays, Dynamic Arrays, and Vectors	This week's items are due on Thursday, **July 13**	(Tues) July 4 - Independence day holiday, classes not in session.
6	July 10	• Unit 14: string - Working with text using the string library • Unit 15: ifstream and ofstream - File input and output with the fstream library	This week's items are due on Thursday, **July 20**	

Course info

Course
CS 200: Concepts of Programming with C++

Section
350, CRN 60371, Online only

Semester
Summer 2023

Dates
06/05/2023 - 07/27/2023

Instructor
R.W. Singh (they/them)

Email
rsingh13@jccc.edu

Office
RC 348H (Not on campus during Summer, except by appointment)

Links

Course Discord
https://discord.gg/jj7U6HtVeh

Course status
Grading/prep status

Book & Lectures

Course Policies

Quick Search

Quick Reference
- How to use Visual Studio
- How to use Code::Blocks
- How to use git
- C++ style guide
- C++ commands reference
- Coding Style Guide

JCCC Course Catalog

Week #	Week of	Units	Due dates	Notes
7	July 17	• Unit 16: Inheritance - More Object Oriented Programming • Unit 17: Searching and sorting - Where's my data?	This week's items are due on Thursday, **July 27**	
8	July 24	• Unit 18: Recursion basics - Another way to solve problems	This week's items are due on Thursday, **July 27**	July 27 - Last day of summer session. Grades entered by July 31.

🔗 Unit 00: Welcome to the course! (Week 1 - June 5th)

Hey there! I'm Rachel Wil Singh, aka R.W., and I will be your instructor for CS 200 this semester! Let's take a bit of time to get you acclimated to how my courses work, especially if you've never had one of my classes before.

First week of class!

- **SYLLABUS**
  Review the syllabus to learn about course layout and policies
- **👋 Introductions!**
  Get to know your teacher and classmates!
- **Student Group Discussion Board**
  Say "Hello!" to your teammates
- **📝 Notes - Course Notes [CS200.CN]**
  Throughout the course you will be submitting your notes (answers to questions) for a grade. This assignment has a downloadable version of the notes in .odt, .docx, and .pdf format, and you will submit your notes here throughout the semester for it to be reviewed.
  (You don't have to do anything with this assignment right now but download it to your computer.)
- Join the Discord! (optional but recommended)
  Discord is a chat program and I have a server set up for my courses. I will also have channels created for each team in the course so you can coordinate with classmates there.
- Make sure to continue on to Unit 01, 02, 03, and 04 for the first week!

🔗 Unit 01: Exploring software (Week 1 - June 5th)

During this unit we are going to learn a bit about software, run some command line programs and programs written in C++, and just generally explore.

Step 1: Learning new topics (solo effort) 🆕

Take notes while learning - resubmit your notes after completing the questions.

- **Notes - Course Notes [CS200.CN]**

Watch the following:

- **Lecture - Introduction (9:47)**

Read the following:

- Chapter 1: Introduction **the CS 200/235 textbook**

Review concepts
These assignments can be redone as many times as you'd like to get a better grade. But to start with, you might focus on doing them once and come back to them later because there are other units to complete!

- **Unit 01 - What's the point of computer programs? [CS200.U01CI1]** (Due Sunday, June 11th)
- **Unit 01 - How do computers store data? [CS200.U01CI2]** (Due Sunday, June 11th)

Step 2: Practicing new topics (group effort) 🏋️

First, you'll have to join the Replit team for this course. You can do that at this link: https://replit.com/teams/join/qnmgcojqmjmsmjqspztbndxcqvzptgqb-2023-06-CS200

- 🏋️ Unit 01 - Create a Replit and Exploring C++ [CS200.U01EX] (Due Sunday, June 11th)
  Documentation: **PDF file** / **LibreOffice file** / **MSWord file**
  Canvas assignment
  replit: U01EX - Exploring Software"

🔗 Unit 02: main() - Intro to the structure of a C++ program (Week 1 - June 5th)

For this unit we are going to learn to create very basic C++ programs. All C++ programs have a single starting point: The `main()` function.

Learning new topics (solo effort) 🆕

Take notes while learning:

- **Notes - Course Notes [CS200.CN]** - resubmit your notes after completing the questions.

Watch the following:

- **Lecture - C++ Basics (11:24)** (this video will apply for Unit 02, 03, and 04.)

Practicing new topics (group effort) 🏋️

- 🏋️ Unit 02 - main() - Intro to the structure of a C++ program [CS200.U02EX] (Due Sunday, June 11th)
  Documentation
  Canvas assignment
  replit: Assignment "U02EX - main()"

Read the following:

- Chapter 2: Writing programs from **the CS 200/235 textbook**

Review concepts

- **Unit 02 - Structure of a C++ program [CS200.U02CI1]** (Due Sunday, June 11th)
- **Unit 02 - Structure of a C++ program [CS200.U02CI1]** (Due Sunday, June 11th)

🔗 Unit 03: Variables - Storing data (Week 1 - June 5th)

We can use variables to store information for access later in our programs. In this section we'll learn about data types, declaring variables, and assigning values to them.

Learning new topics (solo effort) 🆕

Take notes while learning:

- **Notes - Course Notes [CS200.CN]** - resubmit your notes after completing the questions.

Watch the following:

- **Lecture - C++ Basics (11:24)** (this video will apply for Unit 02, 03, and 04.)

Read the following:

- Chapter 3: Variables and data types **the CS 200/235 textbook**

Review concepts (solo effort)

- **Unit 03 - C++ basics - Variables [CS200.U03CI1]** (Due Sunday, June 11th)
- **Unit 03 - C++ basics - Testing [CS200.U03CI2]** (Due Sunday, June 11th)

Practicing new topics (group effort) 🏋️

- 🏋️ Unit 03 - Variables - Storing data [CS200.U03EX] (Due Sunday, June 11th)
  Documentation
  Canvas assignment
  replit: Assignment "U03EX - Variables"

🔗 Unit 04: cin/cout - Getting input and output from the console (Week 1 - June 5th)

Let's learn more details about how we display text to the screen, as well as how to get input from the keyboard while the program is running.

Learning new topics (solo effort) 🆕

Take notes while learning:

- 🎯📝 **Notes - Course Notes [CS200.CN]** - resubmit your notes after completing the questions.

Watch the following:

- 📺 **Lecture - C++ Basics (11:24)** (this video will apply for Unit 02, 03, and 04.)

Read the following:

- Chapter 4: Input and output **the CS 200/235 textbook**

Review concepts (solo effort)

- 🎯🆕 **Unit 04 - C++ basics - Console input and output with cin and cout [CS200.U04CI1]** (Due Sunday, June 11th)
- 🎯🆕 **Unit 04 - C++ basics - Debugging [CS200.U04CI2]** (Due Sunday, June 11th)

Tech literacy (solo effort)

- 🎯🧠 **Tech Literacy 1 - How computers and software work [CS200.TL1]** (Due Sunday, June 22nd)

Practicing new topics (group effort) 🏋️

- 🏋️ Unit 04 Exercise - cin/cout - Getting input and output from the console [CS200.U04EX]
  📄 **Documentation**
  🎯**Canvas assignment**
  replit: Assignment "U04EX - cin/cout"

Class archives (optional) 🎥

- 🎥 **Archive - C++ Basics (Summer 2021)**
- 🎥 **Archive - Variables (Spring 2021)**

Check in (solo effort) 🙋

Check-ins help me find out how you're doin gin the course, and if there are any adjustments that need to be made!

- 🎯🙋 **Week 01 Check-in**

🔗 Unit 05: if/else if/else - Branching if condition is true or false (Week 2 - June 12th) 🔺

Branching is a core part of computer programming. We need to be able to "branch" our program's flow depending on some test criteria, such as if one value is greater than another.

Learning new topics (solo effort) 🆕

Take notes while learning:

- 🎯📝 **Notes - Course Notes [CS200.CN]** - resubmit your notes after completing the questions.

Watch the following:

- 📺 **Lecture - Branching (14:53)**

Practicing new topics (group effort) 🏋️

- 🏋️ Unit 05 Exercise - Branching with if statements [CS200.U05EX] (Due Sunday, June 18th)
  📄 **Documentation** **(Will be posted soon!)**
  🎯**Canvas assignment**
  replit: Assignment "U05EX - if statements"

Read the following:

- Chapter 5.1: Boolean expressions, 5.2: Branching **the CS 200/235 textbook**

Review concepts (solo effort)

- **Unit 05 - Boolean logic [CS200.U05CI1]** (Due Sunday, June 18th)
- **Unit 05 - If/else statements [CS200.U05CI1]** (Due Sunday, June 18th)
- **Unit 05 - else if statements [CS200.U05CI2]** (Due Sunday, June 18th)

Class archives (optional)

- **Branching (Summer 2021)**
- **Truth tables (Spring 2021)**
- **If statements (Spring 2021)**

Unit 06: switch - Branching for certain values (Week 2 - June 12th)

> Switch statements are important in programming because they allow you to handle multiple cases or conditions in an efficient and easy-to-read manner.

Learning new topics (solo effort)

Take notes while learning:

- **Notes - Course Notes [CS200.CN]** - resubmit your notes after completing the questions.

Watch the following:

- **Lecture - Branching (14:53)**

Read the following:

- Chapter 5.1: Boolean expressions, 5.2: Branching **the CS 200/235 textbook**

Review concepts (solo effort)

- **Unit 06 - switch statements [CS200.U06CI1]** (Due Sunday, June 18th)

Practicing new topics (group effort)

- Unit 06 Exercise - Branching with switch statements [CS200.U06EX] (Due Sunday, June 18th)
  Documentation **(Will be posted soon!)**
  Canvas assignment
  replit: Assignment "U06EX - switch statements"

Class archives (optional)

- **Switch statements (Spring 2021)**

Unit 07: while - Looping while true (Week 2 - June 12th)

> A while loop in programming is a control flow statement that allows a block of code to be executed repeatedly, as long as a

certain condition remains true. The code block inside the loop will continue to execute as long as the specified condition is evaluated to true.

Learning new topics (solo effort) 🆕

Take notes while learning:

- 🎯📝 **Notes - Course Notes [CS200.CN]** - resubmit your notes after completing the questions.

Watch the following:

- 📺 **Lecture - Loops (16:22)**

Read the following:

- Chapter 5.3: Loops **the CS 200/235 textbook**

Review concepts (solo effort)

- 🎯🆕 **Unit 07 - While loops [CS200.U07CI1]** (Due Sunday, June 18th)

Tech literacy (solo effort)

- 🎯🧠 **Tech Literacy 2 - Navigating the command line [CS200.TL2]** (Due Sunday, June 29th)

Practicing new topics (group effort) 🏋️

- 🏋️ Unit 07 Exercise - Looping while true [CS200.U07EX]
  (Due Sunday, June 18th)
  📄 **Documentation** **(Will be posted soon!)**
  🎯**Canvas assignment**
  replit: Assignment "U07EX - while loops"

Class archives (optional) 🎥

- 🎥 **While loops (Summer 2021)**
- 🎥 **While loops (Spring 2021)**

Check in (solo effort) 🙋

Check-ins help me find out how you're doin gin the course, and if there are any adjustments that need to be made!

- 🎯🙋 **Week 02 Check-in**

🔗 Unit 08: Pointers and memory (Week 3 - June 19th) 🔺

In C++, a pointer is a variable that stores the memory address of another variable. It allows direct access to the memory location of the variable it points to, providing the ability to manipulate the value of the variable indirectly.

Learning new topics (solo effort) 🆕

Take notes while learning:

- 🎯📝 **Notes - Course Notes [CS200.CN]** - resubmit your notes after completing the questions.

Watch the following:

- 📺 **Lecture - Pointers (22:47)**

Read the following:

Practicing new topics (group effort) 🏋️

- 🏋️ Unit 08 Exercise - Pointers and memory [CS200.U08EX]
  (Due Sunday, June 25th)
  📄 **Documentation**
  🎯**Canvas assignment**
  replit: Assignment "U08EX - Pointers"

- Chapter 14: Pointers, memory management, and dynamic variables and arrays **the CS 200/235 textbook**

Review concepts (solo effort)

- **Unit 08 - Pointers and memory [CS200.U08CI1]**
  (Due Sunday, June 25th)

Semester project (group effort)

- Project check in [CS200.P]
  Documentation
  Project check-in Versions for U01-U07, U08-U11, and U12-U15
  Peer review (rate your teammates)
  replit: Assignment "Semester project"

Unit 09: Functions - Delegating tasks elseware (Week 3 - June 19th)

Functions are an essential building block of programming because they allow programmers to break down a program into smaller, more manageable pieces of code.

Learning new topics (solo effort)

Take notes while learning:

- **Notes - Course Notes [CS200.CN]** - resubmit your notes after completing the questions.

Watch the following:

- **Lecture - Functions (43:48)**

Read the following:

- Chapter 9: Functions **the CS 200/235 textbook**

Review concepts (solo effort)

- **Unit 09 - Functions [CS200.U09CI1]** (Due Sunday, June 25th)

Tech literacy (solo effort)

- **Tech Literacy 3 - Data representation [CS200.TL3]**
  (Due Sunday, July 6th)

Practicing new topics (group effort)

- Unit 09 Exercise - Delegating tasks elseware with functions [CS200.U09EX] (Due Sunday, June 25th)
  Documentation
  Canvas assignment
  replit: Assignment "U09EX - Functions"

Semester project (group effort)

- Project check in [CS200.P]
  Documentation
  Project check-in Versions for U01-U07, U08-U11, and U12-U15
  Peer review (rate your teammates)
  replit: Assignment "Semester project"

Class archives (optional)

- **Functions (Summer 2021)**
- **Functions (Spring 2021)**

Check in (solo effort)

Check-ins help me find out how you're doin gin the course, and if there are any adjustments that need to be made!

- **Week 03 Check-in**

🔗 Unit 10: struct - Organize related data in a new type (Week 4 - June 26th)

With structs we can create our own data types. Structs are similar to classes in many ways, though classes are still used in C++, which we will cover later on. For now, we will keep our structs small and simple.

Learning new topics (solo effort) 🆕

Take notes while learning:

- Notes - Course Notes [CS200.CN] - resubmit your notes after completing the questions.

Watch the following:

- Lecture (2022) - Introduction to Structs (4:18)
- Lecture - Intro and Structs (40:07)

Read the following:

- Chapter 10.1: Introduction to objects, 10.2: Structs the CS 200/235 textbook

Review concepts (solo effort)

- Unit 10 - Structs [CS200.U10CI1] (Due Sunday, July 2nd)

Practicing new topics (group effort) 🏋️

- Unit 10 Exercise - Organizing related data with structs [CS200.U10EX] (Due Sunday, July 2nd)
  - Documentation
  - Canvas assignment
  - replit: "U10EX - Structs"

Semester project (group effort) 💻

- Project check in [CS200.P]
  - Documentation
  - Project check-in Versions for U01-U07, U08-U11, and U12-U15
  - Peer review (rate your teammates)
  - replit: Assignment "Semester project"

🔗 Unit 11: class - Writing Object Oriented programs (Week 4 - June 26th)

In C++, a class is a user-defined data type that encapsulates data and functions that operate on that data into a single entity. It provides a way to organize and modularize code, enabling object-oriented programming (OOP) concepts such as inheritance, polymorphism, and encapsulation.

Learning new topics (solo effort) 🆕

Take notes while learning:

Practicing new topics (group effort) 🏋️

- Unit 11 Exercise - Object Oriented Programming with

- **Notes - Course Notes [CS200.CN]** - resubmit your notes after completing the questions.

Watch the following:

- **Lecture - Classes, part 1 (25:16)**
- **Lecture - Class Design (8:14)**

Read the following:

- Chapter 10.3: Classes **the CS 200/235 textbook**

Review concepts (solo effort)

- **Unit 11 - Classes [CS200.U11CI1]** (Due Sunday, July 2nd)

Tech literacy (solo effort)

- **Tech Literacy 4 - Jobs in tech [CS200.TL4]** (Due Sunday, July 6th)

Class archives (optional)

- **Classes (Summer 2021)**

Learning new topics (solo effort)

Take notes while learning:

- **Notes - Course Notes [CS200.CN]** - resubmit your notes after completing the questions.

Watch the following:

- **Lecture - Loops (16:22)**

Read the following:

- Chapter 5.3: Loops **the CS 200/235 textbook**

Review concepts (solo effort)

classes [CS200.U11EX] (Due Sunday, July 2nd)
Documentation
Canvas assignment
replit: Assignment "U11EX - Classes"

Semester project (group effort)

- Project check in [CS200.P]
  Documentation
  Project check-in Versions for U01-U07, U08-U11, and U12-U15
  Peer review (rate your teammates)
  replit: Assignment "Semester project"

Check in (solo effort)

Check-ins help me find out how you're doing in the course, and if there are any adjustments that need to be made!

- **Week 04 Check-in**

Unit 12: for - Looping with a counter (Week 5 - July 3rd)

In C++, a for loop is a control structure that allows a block of code to be executed repeatedly for a specific number of times. It has a syntax that consists of three optional statements in the initialization, condition, and update expressions, separated by semicolons, enclosed in parentheses, followed by a statement or a block of statements to be executed in the loop.

Practicing new topics (group effort)

- Unit 12 Exercise - Looping with for loops [CS200.U12EX] (Due Sunday, July 9th)
  Documentation
  Canvas assignment
  replit: U12EX - For loops

Semester project (group effort)

- Unit 12 - For loops [CS200.U12CI1] (Due Sunday, July 9th)

Class archives (optional)

- For loops (Summer 2021)
- For loops (Spring 2021)

- Project check in [CS200.P]
  - Documentation
  - Project check-in Versions for U01-U07, U08-U11, and U12-U15
  - Peer review (rate your teammates)
  - replit: Assignment "Semester project"

Unit 13: Storing sets of data with Arrays, Dynamic Arrays, and Vectors (Week 5 - July 3rd)

In C++, an array is a collection of elements of the same data type that are stored in contiguous memory locations. It can be initialized with a fixed size, and the individual elements can be accessed by their index position within the array.

Learning new topics (solo effort)

Take notes while learning:

- Notes - Course Notes [CS200.CN] - resubmit your notes after completing the questions.

Watch the following:

- Lecture - Memory management (4:10)
- Lecture - Dynamic arrays and memory allocation (20:10)

Read the following:

- Chapter 14: Pointers, memory management, and dynamic variables and arrays, Chapter 18: The Standard Template Library the CS 200/235 textbook

Review concepts (solo effort)

- Unit 13 - Arrays and storing lists of data [CS200.U13CI1] (Due Sunday, July 9th)
- Unit 13 - Dynamic arrays [CS200.U13CI2] (Due Sunday, July 9th)
- Unit 13 - STL Array and STL Vector [CS200.U13CI3] (Due Sunday, July 9th)

Tech literacy (solo effort)

- Tech Literacy 5 - Bias and ethics in tech [CS200.TL5] (Due Sunday, July 13th)

Practicing new topics (group effort)

- Unit 13 Exercise - Storing sets of data with Arrays and Vectors [CS200.U13EX] (Due Sunday, July 9th)
  - Documentation
  - Canvas assignment
  - replit: U13EX - Data

Semester project (group effort)

- Project check in [CS200.P]
  - Documentation
  - Project check-in Versions for U01-U07, U08-U11, and U12-U15
  - Peer review (rate your teammates)
  - replit: Assignment "Semester project"

Check in (solo effort)

Check-ins help me find out how you're doin gin the course, and if there are any adjustments that need to be made!

- Week 05 Check-in

Class archives (optional) 🎥

- 🎥 **Arrays (Summer 2021)**
- 🎥 **Arrays (Spring 2021)**
- 🎥 **Functions, arrays, reference, const (Spring 2021)**

🔗 Unit 14: string - Working with text using the string library (Week 6 - July 10th)

In C++, std::string is a class in the Standard Library that represents a sequence of characters as a string object. It provides many built-in functions that allow manipulation of strings, making it a more flexible and powerful alternative to C-style character arrays.

Learning new topics (solo effort) 🆕

Take notes while learning:

- **Notes - Course Notes [CS200.CN]** - resubmit your notes after completing the questions.

Watch the following:

- 📺 **Lecture - Strings (3:46)**
- 📺 **Example code - Strings (10:26)**

Read the following:

- Chapter 7: Strings **the CS 200/235 textbook**

Practicing new topics (group effort) 🏋️

- 🏋️ Unit 14 Exercise - The string library [CS200.U14EX] (Due Sunday, July 16th)
  - **Documentation**
  - **Canvas assignment**
  - **replit**: U14EX - Strings

Semester project (group effort) 💻

- 💻 Project check in [CS200.P]
  - **Documentation**
  - **Project check-in** Versions for U01-U07, U08-U11, and U12-U15
  - **Peer review (rate your teammates)**
  - **replit**: Assignment "Semester project"

🔗 Unit 15: ifstream and ofstream - File input and output with the fstream library (Week 6 - July 10th)

Programs aren't very useful if they can't save data for later uses. In this section we will learn some basics of file input and output.

Learning new topics (solo effort) 🆕

Take notes while learning:

- Notes - Course Notes [CS200.CN] - resubmit your notes after completing the questions.

Watch the following:

- Lecture - File I/O (3:48)

Read the following:

- Chapter 8: File input and output the CS 200/235 textbook

Review concepts (solo effort)

- Unit 15 - Saving to text files with ofstream - [CS200.U15CI1] (Due Sunday, July 16th)
- Unit 15 - Loading text from files with ifstream [CS200.U15CI2] (Due Sunday, July 16th)

Tech literacy (solo effort)

- Tech Literacy 6 - Professional networking [CS200.TL6] (Due Sunday, July 20th)

Practicing new topics (group effort) 🏋️

- 🏋️ Unit 15 Exercise - File input and output with the fstream library [CS200.U15EX] (Due Sunday, July 16th)
  Documentation
  Canvas assignment
  replit: U15EX - File input/output

Semester project (group effort) 💻

- 💻 Project check in [CS200.P]
  Documentation
  Project check-in Versions for U01-U07, U08-U11, and U12-U15
  Peer review (rate your teammates)
  replit: Assignment "Semester project"

Class archives (optional) 🎥

- File input and output (Spring 2021)

Check in (solo effort) 🙋

Check-ins help me find out how you're doin gin the course, and if there are any adjustments that need to be made!

- Week 06 Check-in

🔗 Unit 16: Inheritance - More Object Oriented Programming (Week 7 - July 17th)

> In C++, inheritance is a mechanism that allows a new class to be based on an existing class, inheriting its data members and member functions. The derived class can then extend or modify the functionality of the base class, providing a way to reuse and extend existing code.

Learning new topics (solo effort) 🆕

Take notes while learning:

- Notes - Course Notes [CS200.CN] - resubmit your notes after completing the questions.

Watch the following:

Practicing new topics (group effort) 🏋️

- 🏋️ Unit 16 Exercise - Class inheritance [CS200.U16EX] (Due Sunday, July 23rd)
  Documentation
  Canvas assignment
  replit: U16EX - Inheritance

- 📺 **Lecture - Classes, part 2 (18:44)**
- 📺 **Lecture - Inheritance (19:55)**

Read the following:

- Chapter 11.6: Inheritance **the CS 200/235 textbook**

Class archives (optional) 🎥

- 🎥 **Inheritance (Summer 2021)**

Semester project (group effort)

💻

- 💻 Project check in [CS200.P]
  - 📄 **Documentation**
  - **Project check-in** Versions for U01-U07, U08-U11, and U12-U15
  - **Peer review (rate your teammates)**
  - **replit**: Assignment "Semester project"

🔗 Unit 17: Searching and sorting - Where's my data? 🔼

(Week 7 - July 17th)

Searching and sorting algorithms are fundamental concepts in computer science used to organize and retrieve data efficiently. Searching algorithms help to find specific items within a collection of data, while sorting algorithms arrange data in a specific order, such as numerical or alphabetical.

Learning new topics (solo effort) 🆕

Take notes while learning:

- **Notes - Course Notes [CS200.CN]** - resubmit your notes after completing the questions.

Read the following:

- Chapter 21.1: Searching, Chapter 21.2: Sorting **the CS 200/235 textbook**

Practicing new topics (group effort) 🏋️

- 🏋️ Unit 17 Exercise - Searching and sorting [CS200.U17EX]
  (Due Sunday, July 23rd)
  - 📄 **Documentation**
  - **Canvas assignment**
  - **replit**: U17EX - Searching and sorting

Semester project (group effort)

💻

- 💻 Project check in [CS200.P]
  - 📄 **Documentation**
  - **Project check-in** Versions for U01-U07, U08-U11, and U12-U15
  - **Peer review (rate your teammates)**
  - **replit**: Assignment "Semester project"

Check in (solo effort) 🙋

Check-ins help me find out how you're doin gin the course, and if there are any adjustments that need to be made!

- **Week 07 Check-in**

🔗 Unit 18: Recursion basics - Another way to solve problems (Week 8 - July 18th)

Recursion is a technique where a function calls itself repeatedly until a specific termination condition is met. It can be used to solve complex problems that can be broken down into simpler, similar sub-problems, making the code more concise and easier to read.

Learning new topics (solo effort) 🆕

Take notes while learning:

- **Notes - Course Notes [CS200.CN]** - resubmit your notes after completing the questions.

Watch the following:

- **Archived class - Recursion (Spring 2021)**

Read the following (optional)

- Chapter 17: Recursion **the CS 200/235 textbook**

Review concepts (solo effort)

- **Unit 18 - Recursion [CS200.U18CI1]** (Due Sunday, July 27th)

Tech literacy (solo effort)

- **Tech Literacy 7 - Practice between semesters [CS200.TL7]** (Due Sunday, July 27th)

Practicing new topics (group effort) 🏋️

We're going to be lazy and not have any coding assignments for this week. 😎

You'll be seeing Recursion again in Discrete Math and future programming courses, so it's good to at least watch the lecture!

Semester project (group effort) 💻

- Project check in [CS200.P]
  - **Documentation**
  - **Project check-in** Versions for U01-U07, U08-U11, and U12-U15
  - **Peer review (rate your teammates)**
  - **replit**: Assignment "Semester project"