

Study Guide for Final Exam

Chapter 1

1. What are the 4 phases of programming?
2. What are Polya's 4 Steps for Problem Solving?
3. What are the different levels of computer programming languages?
4. What is an algorithm?
5. What are the properties of an algorithm?
6. What is a computer?
7. What are the different problem solving techniques?

Chapter 2

1. What are the 4 ways to structure a program?
2. What is an identifier?
3. What can an identifier reference?
4. How can you name an identifier?
5. What is a data type?
6. What does a namespace do?
7. What are the three different namespace selection procedures?

Chapter 3

1. How do you do math in C++?
 - a. Don't forget type coercion and type casting.
2. Precedence Rules
3. How do you format output?

Chapter 4

1. Input and output streams?
2. How do you open filestreams?
3. How do you use a string variable to open a file?

Chapter 5

1. What is flow of control?
2. What are two types of control structures?
3. Boolean logic; know it, love it...

Chapter 6

1. What are the three types of loops?
2. What are the phases of loop execution?
3. What are the different types of control loops?
4. What are the different types of looping subtasks?
5. How do you design a loop?

Chapter 7

1. What are the two types of functions?
2. When do you create functions?
3. How is flow of control altered when functions are used?
4. What are the two types of parameters or arguments?
5. Know about scope.
6. What are the types of parameter passing mechanisms?
7. What are the two key ideas in programming?
8. What are the three data flow directions for parameters?

Chapter 8

1. What is scope?
2. What is name precedence?
3. What are the scope rules?
4. What is a namespace?
5. What is the lifetime of a variable?
6. What are the rules of thumb for functions interface design?

Chapter 9

1. What is a switch and when might you use it?
2. What can be used as the switch parameter?
3. What is a do while loop?
4. How does it differ from a while loop?
5. What is a for loop?
6. How can you change while loop to a for loop and vice versa?
7. How do break and continue work?

Chapter 10 and 11

1. What is a typedef?
2. How do you create one?
3. What is an enum?
4. How do you create one?
5. Why might you want to create one?
6. What is a struct?
7. Why might you want to create one?
8. How do you create one?
9. How do you use one?
10. What is a union?
11. What is data abstraction?

Arrays of Structs

1. How do you create an array of structs?
2. How do access a particular field in a particular location of the array of structs?
3. How do you sort an array of structs?