

Study Guide CSC 254

Final Exam, Fall 2021

- The exam will be on Thursday, December 16 10:30 a.m. – 12:30 p.m.
- The exam will be closed book.
- The majority of the exam will be objective questions.
- You will be expected to write code for part of the exam. You should be able to write the following:
 - A public class including
 - * Extending an existing class
 - * Implementing the `Comparable<...>` Interface
 - * Constructors (including a default constructor)
 - * Setters and Getters for the private fields
 - * `toString`
 - * `compareTo` (using simple string and/or integer comparisons)
 - * A specialized method relevant to that class.
 - * You will **not** need to implement `hashCode` and `equals` methods. But you should know what they do and how they may be generated in VS Code

I suggest you try to answer the questions while sitting at a computer. That way you can try things out with a little program.

For the checkpoint questions in the tables below, the page number is the starting page number. In many cases the problems flow onto the next page.

Chapter 4, Math functions, characters, strings

Page	Checkpoint	Notes
126	4.2.1	The functions that you should know are <code>sqrt</code> , <code>pow</code> , <code>round</code> , <code>floor</code> , <code>ceil</code> , and <code>random</code> (Random isn't in this section)
	4.2.2 - 2.2.7	(skip) Most of these are trig-related
130	4.3.1 - 4.3.2	
	4.3.3 - 4.3.8	(skip)
138	4.4.1 - 4.4.2	This is a large and important section. On question 4.4.2 it is important to know why you should not do statements such as <code>s1 == s2</code> and <code>s1 >= s2</code>

Page	Checkpoint	Notes
	4.4.3 - 4.4.4	(skip)
	4.4.5	
	4.4.6 - 4.4.7	(skip)

Chapter 5, Loops

Page	Checkpoint	Notes
163	5.2.1 - 5.2.3	
166	5.3.1	
168	5.4.1	(skip) I wish we had done this. You might want to skim through this section for future reference.
170	5.5.1	
172	5.6.1 - 5.6.2	<i>Also, what is the difference between a while loop and a for loop?</i> What is the general guide for when to use a for loop and when to use a while loop?
175	5.7.1 - 5.7.7	You may want to run a little program to test the results.
177	5.8.1 - 5.8.4	
179	5.9.1 - 5.9.2	
186	5.11.1 - 5.11.5	(skip)
188	5.12.1 - 5.12.4	I am including these because you should know how the break and continue statements work. Just remember that they are evil. Why are they evil?

Chapter 6, Methods

Page	Checkpoint	Notes
206	6.1.1	And important question!
208	6.2.1 - 6.2.2	
210	6.3.1 - 6.3.2	
212	6.4.1 - 6.4.5	
216	6.5.1 - 6.5.4	(skip)
219	6.6.1 - 6.6.2	
221	6.7.1	
223	6.8.1 - 6.8.2	
		We talked about this several times. Be sure to ignore it.
225	6.9.1 - 6.9.2	

Chapter 7, Arrays

Page	Checkpoint	Notes
255	7.2.1 - 7.2.11	
260	7.4.1	(skip)
216	7.5.1 - 7.5.2	(skip)
264	7.6.1	
265	7.7.1	(skip)
268	7.8.1 - 7.8.2	(skip)
269	7.9.1 - 7.9.2	(skip)
273	7.10.1 - 7.1.3	(skip)
274	7.11.1 - 7.11.2	
276	7.12.1 - 7.12.2	(skip)
278	7.13.1 - 7.13.2	(skip)

Chapter 8, Multidimensional Arrays

(Skip this chapter)

Chapter 9, Objects and Classes

Page	Checkpoint	Notes
331	9.3.1 - 9.3.4	This is important
331	9.4.1 - 9.4.4	
336	9.5.1 - 9.5.2	
	9.5.3 - 9.5.5	(skip)
339	9.6.1 - 9.6.3	(skip)
343	9.7.1 - 9.7.3	

Page	Checkpoint	Notes
349	9.9.1 - 9.9.3	
351	9.10.1 - 9.10.4	
355	9.11.1	
345	9.12.1 - 9.12.3	(skip)
358	9.13.1	

Chapter 10, Object-Oriented Thinking

Skip this chapter. We talked about many of the concepts, but they will not be explicit test questions.

Chapter 11,

Page	Checkpoint	Notes
418	11.2.1	(skip)
	11.2.2	
421	11.3.1 - 11.3.3	
422	11.4.1 - 11.4.4	
425	11.7.1	Know the meanings of encapsulation, inheritanc, and polymorphism. This section also touches on the “isa” relationship.
427	11.8.1 - 11.8.7	(skip)
432	11.9.1 - 11.9.4	(skip)
434	11.10.1	
	11.10.2	(skip)
439	11.11.1 - 11.11.5	(skip) This is useful, but there will not be any questions on it.