

First name (color-in initial)	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	section (2,3,or 9)	first name initial	last name initial
Last name (color-in initial)	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z			

# H06: Due Thu 01.26 in Lecture Total Points: 50

MAY ONLY BE TURNED IN DURING THE CLASS INDICATED ABOVE, or offered in person, for in person grading, during instructor or TAs office hours.

See the course syllabus at <https://foo.cs.ucsb.edu/56wiki/index.php/W12:Syllabus> for more details.

### Reading Assignment:

We are moving right along, reading two more chapters. The chapters are short, and a good bit of this is basic review of OOP concepts you may have already seen in CS24 (and possibly in CS32 if you took that, which is recommended, though not required, as a pre-req to CS56).

- HFJ, Chapter 7, **165** through 196 and reading notes HFJ:Chapter \_7
- HFJ, Chapter 8, **197** through 235. HFJ:Chapter \_8

(1) (10 pts) Fill in the information below. Also, fill in the A-Z header by

- **coloring in** the first letter of your first and last name (as it would appear in Gauchospace),
- writing **either 2, 3 or 9** to indicate your **discussion section** meeting time
- writing your **first and last initial** in large capital letters.

All of this helps us to manage the avalanche of paper that results from the daily homework.

name:	
uemail address:	@uemail.ucsb.edu

(2) (10 pts) Based on your reading in HFJ Chapter 7:

Complete the following exercise from p. 179, putting a check next to the relationships that make sense.

<input type="checkbox"/>	Oven extends Kitchen
<input type="checkbox"/>	Guitar extends Instrument
<input type="checkbox"/>	Person extends Employee
<input type="checkbox"/>	Ferrari extends Engine
<input type="checkbox"/>	FriedEgg extends Food
<input type="checkbox"/>	Beagle extends Pet
<input type="checkbox"/>	Container extends Jar
<input type="checkbox"/>	Metal extends Titanium
<input type="checkbox"/>	GratefulDead extends Band
<input type="checkbox"/>	Blonde extends Smart
<input type="checkbox"/>	Beverage extends Martini

(please turn over for more)

(4) (10 pts) Based on your reading in HFJ Chapter 7:

What does it mean to have a "polymorphic argument" or a "polymorphic return type" for a method? Explain with an example—but NOT using the example of Vets and Animals used in the book. Substitute your own example. Give a detailed enough description of the class hierarchy you have in mind to make it clear that you get the concept.

(5) (10 pts) Based on your reading in HFJ Chapter 8:

Briefly describe the difference between an abstract class and an interface.

(8) (10 pts) There is code on p. 103 for a class to "test" the first iteration of the "sink a dot com" game developed in Chapter 5. Rewrite this as a class that uses JUnit testing (as we did in our labs so far this quarter.)