

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 (10, or 11)	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			

H08: Due Thursday 04.18 in Lecture. Total Points: 50

Constructors, and Primitive Variables vs. Object References on the Stack and Heap (HFJ Ch9)

MAY ONLY BE TURNED IN DURING Lecture ON Thursday 04.18, 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/S13:Syllabus> for more details.

(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 10,11** 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:	
umail address:	@umail.ucsb.edu

Reading Assignment:

In HFJ, Review Chapters 7 and 8, then read Chapter 9, which describes a **major difference** between C++ and Java: the issue of **garbage collection**. This is a *crucial* chapter, so read it *carefully*.

- HFJ, Chapter 7, **165** through 196 and reading notes HFJ:Chapter_7
- HFJ, Chapter 8, **197** through 235. HFJ:Chapter_8
- HFJ:Chapter_9, **235** Life and Death of an Object (Constructors)
- If there are reading notes on the wiki, consult those too—sometimes they contain helpful hints.

(2) (4 pts) Under what conditions does the compiler create a no-arg constructor for you?

(3) (4 pts) Under what conditions does the compiler NOT create a no-arg constructor for you?

(4) (16 pts) Given the following code excerpts:

```

public class Person {
    private String name;
    public Person (String name) {this.name = name;}
    public String getName() { return this.name;}
}

```

Write a class for Student that extends Person. Include a private attribute perm of type int. Include a constructor with the following signature:

```
public Student(String name, int perm) { ...
```

Use the proper technique (pp. 250-257) for invoking the parent class constructor (with a parameter) to initialize the name attribute.