Homework #1
No Silver Bullet
Due In Your Lab, September 3, 2003

Name: _____

Lab Time: _____

Grade: _____/10

General Instructions

1. If you are not familiar with the Chemical Engineering Whitewater Lab please do the following: Visit the whitewater lab in ECCH 105. (This is located in the Chemical Engineering wing of the Engineering Center.) Lab sections will be held in this lab using the HP machines running RedHat Linux. Change your computer account password if you haven't already done so. Get an access card if you don't already have one and have it authorized to enter this lab. You need to purchase a card from CSOps. The CSOps office is located on the basement level of the engineering center next to the undergraduate labs. Go to the following web page to have your card authorized:

   `http://csel.cs.colorado.edu/cardform.html`

   .

2. The following is the location of the class web site.

   `http://www.cs.colorado.edu/users/kena/classes/3308/f03/`

   On this web site, most information is in HTML, but some items are in PDF. PDF files may not show up correctly on the netscape browsers in lab. If not, go to the `file` menu. Click `Save As...` and save the file. Then, go back to the shell window with your prompt and type

   `acroread `*`filename`*

   where *`filename`* is replaced with the name under which you saved the PDF file.

Reading

From your textbook read chapter 16, "No Silver Bullet–Essence and Accident", and chapter 17, "'No Silver Bullet' Refired". Answer the following questions:

3. Define the term *Essential Difficulties* as it is used by Brooks. (2 pts.)

4. Define the term *Accidental Difficulties* as it is used by Brooks. (2 pts.)

5. List the four essential difficulties of writing software that Brooks identifies. (2 pts.)

6. Brooks calls object oriented programming a brass bullet, why? This is a two part question.

   (a) In what ways does object oriented programming attack the essential difficulties of writing software? (2 pts.)

   (b) In what ways is object oriented programming not the "silver bullet" that would, by itself, provide an order-of-magnitude improvement in the software production process? (2 pts.)