A348 & A548 Midterm Exam

Fall Semester 2005

Geology Building Room 126

Read carefully the problem below. Then choose one of the four implementations we have studied so far this semester: client-side or server-side state, CGI/Perl or PHP. Choose the method that you are most comfortable with. Then write the program in the blue book provided. You have 75 minutes. This is an open-book and open-notes test, although no computers are allowed, and the only person you're allowed to exchange information with is the proctor. Good luck and do well!

Craps (A Game of Dice). Create an application that simulates playing the world-famous dice game "Craps". In this game, a player rolls two dice. Each die has six faces. Each face contains 1, 2, 3, 4, 5 or 6 spots. After the dice have come to rest, the sum of the spots on the two top faces is calculated. If the sum is 7 or 11 on the first roll, the player wins. If the sum is 2, 3 or 12 on the first roll (called "craps"), the player loses (the "house" wins). If the sum is 4, 5, 6, 8, 9 or 10 on the first roll, that sum becomes the player's "point." To win, a player must continue rolling the dice until the player rolls the point value. The player loses by rolling a 7 before rolling the point.

Your program must keep track of and report the number of games won by the user and the number of games won by the computer ("house"). The score should be 0-0 initially and must be updated after each game. The user only pushes the `Proceed` button, and doesn't provide any other input. It is the computer's task to generate random numbers for the user's game: use `int(rand(6)) + 1` in Perl and `rand(1, 6)` in PHP.